King County

2017-2018 BIENNIAL TECHNOLOGY PROJECTS BENEFITS REPORT

OFFICE OF PERFORMANCE, STRATEGY AND BUDGET

APRIL 2019

Background

King County Code (KCC 2.16.025B.8(i)) requires the Office of Performance, Strategy and Budget (PSB) to submit a biennial report (in the odd-numbered years) on the benefits resulting from information technology (IT) projects.

All technology projects with a total estimated cost of $250,000, or more, are required to have a Benefit Achievement Plan (BAP). The BAP outlines the key benefits expected from the investment and defines how those benefits will be measured, with baselines and targets specified for each measure. Decision makers use the BAP to weigh the benefits of a technology investment before making that investment, to track progress toward the benefits while the project is in progress, and to evaluate a return on the investment after the project completion.

While the biennial technology project benefits report covers all projects, the report's primary focus is completed projects. Completed projects submit "final BAPs" as part of the investment closeout. Completed projects that require more time to measure the outcomes following completion are required to continue reporting in the subsequent years until a final BAP with final results is provided. Ongoing projects may propose revisions to the targets, measures, or benefits during the biennial BAP update but those changes must be supported with justifications.

2019 Experience with Benefit Achievement Planning & Reporting

Over the past five years since the BAP requirement was introduced, County departments and agencies have grown to recognize the value of having a BAP for every technology project and the importance of updating it biennially for the purposes of documenting the investment status and assessing the return on the investment upon project completion.

Agencies continue to voice a need for more training on how to better define benefits and identify proper metrics along with plans to measure those benefits. In addition, agencies and PSB continue to face challenges with the current way the BAPs are collected. Every project updates its BAP a number of times throughout the project's life: with every appropriation request and as part of biennial benefits reporting. Because BAPs are Word documents that reside in SharePoint under a particular ordinance, there is no easy way to keep track of the master version of a BAP without keeping track of when a given project last updated its BAP. The latter is a challenging task on its own, given the number of projects and the fluctuating project portfolio. In addition, there is no easy way to aggregate data by portfolio or analyze changes for a single project across BAP updates. PSB plans to work toward finding solutions to these challenges and intends to engage with Council staff to ensure that any proposed solutions still meet the County Council's needs in BAP reporting and facilitate Council staff review of BAPs.

The aggregate time spent by PSB, KCIT, and agency staff collectively on the benefits reporting is high. In PSB, all budget analysts are involved in review of BAPs prepared by the agencies to which they are assigned. While this approach requires more PSB staff hours to compile the report, this process assures BAP quality and contributes to PSB's budget monitoring efforts.

Future improvements to the way benefits data are collected and increased countywide competence in defining target outcomes and measures will help to make the technology benefits reporting easier, thus reducing the time that goes into it.

Summary Statistics

The 2017-2018 Biennial IT Benefits Report includes a set of 107 BAPs, an increase of 22 from 85 BAPs two years ago. Thirty seven of the 107 BAPs are for completed projects, of which 31 are final BAPs and 8 need more time to measure the benefits and hence will report again. Twenty (20) were for new projects that were approved in the 2019-2020 biennial budget cycle and another 48 are for projects that were still underway as of December 2018. The BAPs for the active projects provide a brief status update of the project, including key milestones achieved in the reporting period and updates to the timeline for achieving the benefits in cases of project delays.

Table A: Breakdown of BAPs by Type

BAP Type	Count	% of Total
Completed Projects - Final BAPs	31	29%
Completed Projects – Updated BAPs	8	7%
Underway Projects – Updated BAPs	48	45%
New Projects Approved in the 2019-2020 Biennial Budget	20	19%
TOTAL	**107**	**100%**

The technology projects are distributed across eighteen different departments. Four departments: King County Metro, King County Information Technology Department (KCIT), and the Department of Executive Services (DES), and the Department of Natural Resources & Parks (DNRP) account for 65 percent of the IT projects reporting in this cycle. Table B provides the breakdown by department.

Table B: BAPs by Department by Project Status

Department	Completed Projects		Underway & New Projects	Total Count
	Final BAPs	Will Report Again		
King County Metro	4	-	20	24
Information Technology (KCIT)	8	2	8	18
Executive Services (DES)	4	2	10	16
Natural Resources & Parks (DNRP)	3	1	8	12
Public Health	1	1	6	8
Community & Human Services (DCHS)	2	-	4	6
Other Departments	9	2	12	23
TOTAL	**31**	**8**	**68**	**107**

The BAP template asks agencies to select one out of four benefit categories:
  (1) Improved public services
  (2) Improved internal operations
  (3) Maintain service levels
  (4) Reduced costs

While many projects identify and track benefits from multiple categories, each identifies the primary benefit category. Table C below summarizes the portfolio breakdown by the project's primary category.

Table C: Project Distribution by Primary Benefit Category Over the Last 5 Years
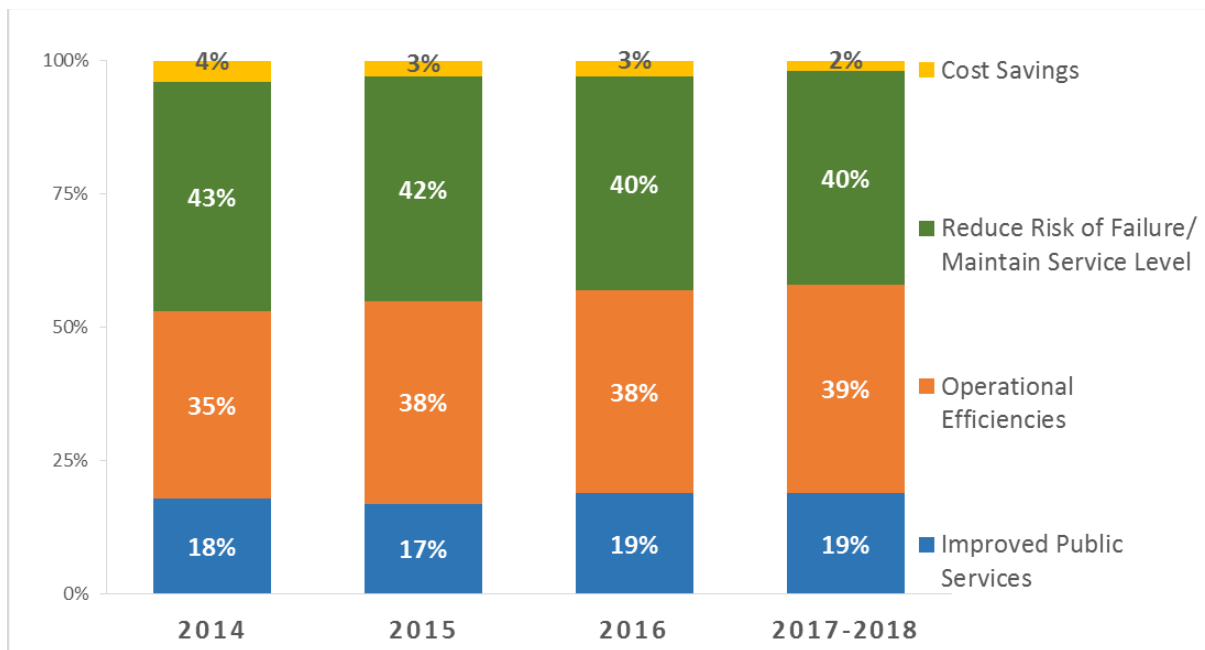
Consistent with the prior years, the primary drivers for the majority (79 percent) of technology projects in the 2017-2018 County portfolio were Improvement of Internal Operations and Maintaining Service Levels. Nineteen (19) percent of the projects were primarily intended to improve County services to the public.

The high percentage of projects aiming to maintain service levels or improve internal operations is reflective of the obsolescent state of the information technology systems used by departments and agencies to run their day-to-day operations. While the majority of the applications may be meeting current needs, they are becoming increasingly expensive to operate and may pose risks. For example, an aging critical system could break down and prevent the agency from delivering key services to the public. Old application programs may continue to be used restricting the agency's ability to have timely, cost-effective data for decision making and remain in compliance with changing regulations, industry standards, and business requirements.

Many projects target benefits from more than one benefit category. The BAP template asks the project to identify the primary and distinguish those benefits from the secondary benefit category.

Analysis of the Benefits Achieved In 2017-2018

The below series of four tables provide a summary of each of the 107 BAPs grouped by benefit category included in this report:

> **Table D:** Completed Projects Ready to Report Benefits (Final BAPs)
> **Table E:** Completed Projects That Need More Time to Achieve/Measure Full Benefits
> **Table F:** Projects That Are Underway (including Projects On-Hold)
> **Table G:** New Projects Approved in the 2019-2020 Biennial Budget

In summary, out of 31 final BAPs included in this report (see Table D for project detail):

- ❖ 15 projects have met or exceeded the target benefits
- ❖ 9 projects partially met the benefits
- ❖ 5 projects did not meet the target benefits and/or have been cancelled, including:
    - DHR Applicant Tracking System Replacement
    - DPH EMD-CPR Quality Improvement Application Replacement
    - KCSO Roaster Management System
    - KCSO Wireless CAD Upgrade
    - Transit HASTUS EPM
- ❖ 2 projects cancelled; benefits to be achieved through other projects or existing applications, including:
    - E-911 System Security
    - PSB Green Building Reporting Module

The County spent $76.5 million to implement these 31 projects (out of the approved budget of $87.3 million).

Table D: Completed Projects Ready to Report Benefits (Final BAPs)

Department	Project	Summary	#
Improved Public Services (Category 1)			
Executive Services	RALS Archives Collection Management System (1111670)	This project is complete and generally met its target benefits. The main benefit of the project is 24/7 public access to archival material.	1
	FBOD Countywide ePayment Implementation Support (1124170)	This project was completed at the end of 2018 and met most targeted benefits.	2
King County Information Technology	Text-to-911 (1127689)	The project was completed in 2018 and achieved the benefit of providing a new service to individuals who may have difficulty accessing the 911 system.	3
King County Metro	Mobile Ticketing Pilot-- Cashless Fare Technologies (1126580)	The project closed in early 2018 and a report was delivered to the Council. The project implemented a pilot based on which Transit rolled out a mobile ticketing technology, which allows customers to pay their transit fares using their smartphones.	4

Department	Project	Summary	#
Improved Operational Efficiencies (Category 2)			
Adult and Juvenile Detention	Roster Management System Employee Interface (1116898)	Project scope was changed to include just two DAJD divisions (CCD and Admin) and has now been closed (as of May 2018).	5
Community & Human Services	DMHP & Public Safety (1117281)	This project is completed. While the targets were only partially met, mobile devices (tablets and laptops) rolled out by the project resulted in an overall increase in the amount of time staff spend in the field, reducing the time they spend going to the office to look up client information.	6
Executive Services	Risk Management Risk Master Replacement (1126546)	This project was completed in early 2018 and met or exceeded all target benefits, resulting in agencies having better access to data, better data analysis tools, and Risk Management spending less time on non-value added work. This is the Final BAP.	7
Executive Office	PSB Budget System PIC 2014 Modifications (1121753)	The project is completed. One year after project completion users satisfied with the system increased from 15% to 79%. User training is also being provided, in part from time freed up from system improvement.	8
	PSB Green Building Reporting Module (1127457)	The project was cancelled in early 2018 upon determination that the DNRP PRISIM System can be used for Green Building data collection and reporting requirements.	9
Human Resources	Applicant Tracking System Replacement (1124179)	The vendor was unable to deliver as agreed to in the contract. The contract was cancelled in 2018. Benefits were not achieved. The project spent 58 percent of its budget ($674K).	10
King County Information Technology	KCIT Systems Management (1122188)	This project has increased visibility of major incidents. KCIT has started including targets for incidents and requests in its service level agreements with departments and agencies.	11
King County Metro	HASTUS EPM (1116893)	The project was cancelled due to prioritization of other projects requiring competing resources. Benefits were not achieved.	12
Prosecuting Attorney's Office	Integrated Document Exchange Project (IDX) (1111938)	This project was completed in 2017. It met the target benefits. Law Enforcement agencies use the new system and report satisfactions.	13
Public Health	EMD-CPR Quality Improvement Application Replacement (1123857)	The project was cancelled in 2018 as the objectives could be met through other quality improvement efforts.	14
Sheriff's Office	ATLAS Electronic Scheduling System (1111956)	The project closed in late 2017; anticipated benefits achieved. The new system allows for accurate collection and reporting of employee work and leave information, freeing up first-level supervisors and managers from the time consuming tasks of	15

Department	Project	Summary	#
		scheduling and resulting in better oversight of employees in the field.	
	Wireless CAD Upgrade (1116728)	The project was cancelled in 2018. Wireless CAD was implemented on all County-owned laptops assigned to Commissioned personnel. Deputies now have the ability to run license plates and names remotely through a laptop computer in their police car. The Fleet AVL project is expected to accomplish some of the things previously planned as the Wireless CAD project. No further benefits are expected from the Wireless CAD project.	16
Prevent Risk of Failure/Maintain Service Level (Category 3)			
Community & Human Services	Behavioral Health Integration (1126543)	This project was completed when Mental Health and Substance Use Disorder work was integrated. DCHS then quickly shifted the project and remaining funds to IMC, Integrated Managed Care, which went live on 1/1/2019.	17
Executive Services	BRC Oracle EBS 12.2 Upgrade (1126544)	The project was completed in 2017 and met all target benefits, resulting in improved EBS performance.	18
King County Information Technology	800 MHz Trunked Radio System Sprint/Nextel Re-banding (1047313)	This project was successfully completed in 2018. King County is in compliance with Federal Communications Commission's licensing regulation for the 800 MHz radio band used by King County police, fire and public works agencies.	19
	County Telephony System Replacement Phase 3e (Unified Communications) (1111962)	The project successfully replaced the County's 20-year-old phone system, which had been out of vendor support. The new system provides more functionality at a much lower cost. This project resulted in $2.5M annual savings (excluding cost avoidance), which was used to pay back the bond that had been issued to fund this investment. The 2017 survey showed a user satisfaction rating of 78% and a nearly 100% rate of successful online meetings (5 issues or less) in a 90-day period. The project fully met the target benefits and closed in early 2018.	20
	Enhance Wireless Connectivity, Phase I (1124574)	The project was completed early 2018 and all benefit targets were achieved. King County Courthouse and six District Court sites (Auburn, Bellevue, Burien, Issaquah, Redmond, Shoreline) now have enhanced wireless capability and are able to use applications and carry out--more effectively--tasks that depend on a wireless connection.	21
	IP Fax Service (1124575)	Completed in October 2017, the project partially met the target benefits (replacing old technology and reducing the risk of exposing confidential hard copy documents to unauthorized access). Overall, the County has converted 345 lines to IP Fax. Currently,	22

Department	Project	Summary	#
		97 POTS lines remained as dedicated fax lines.	
	Exchange to Office 365 - Pilot (1127266)	The pilot project has been completed. The project partially achieved the target benefits. Overall, users were satisfied with the migration and with the new Exchange Online service. The lessons learned from the pilot informed the second phase of the project, which is currently underway.	23
	E-911 System Security (1127690)	This project was cancelled. The scope of the project has been absorbed in other E-911 projects.	24
King County Metro	HASTUS Upgrade to 2014V (1111783)	The project closed in late 2017; the system upgrade was completed.	25
	Vanpool Information System Modernization (1123913)	This project updated and combined the Vanpool and Vanshare applications from outdated software that that could not be efficiently and safely maintained. The expected benefits have been achieved and the project was closed in early 2018.	26
Natural Resources & Parks	Solid Waste: Paradigm Upgrade (1124571)	The project is complete and resulted in reduced KCIT system support needed; no overtime to prepare EBS files; and no server failures in 2018.	27
	WTD West Section Control System Replacement (1038125; 1114374; 1114376)	The project was closed in early 2017. The project replaced an old control system technology that was failing and no longer supported by supplier with a new system that conforms to WTD standards. System failure, which would have resulted in permit violations, was prevented. The new system requires lower levels of maintenance to remain operating.	28
	WTD IBIS Phase 3 - Data Migration and KCIT System Retirement (1122195)	The project was completed in late 2018 achieving benefits of having access to historical financial data.	29
Prosecuting Attorney Office	Case Management Implementation (PROMIS Replacement) (1111941)	The project was completed in 2017. Benefits of customer satisfaction (PAO can do justice with more and better information) were exceeded, as measured by survey. The juvenile division did not complete formal surveys, but anecdotal evidence suggests similar satisfaction as other divisions.	31
Cost Savings (Category 4)			
King County Elections	Tabulation System Replacement (1129465)	The project has exceeded its primary benefit target by reducing the use of temporary labor during elections. Costs savings were incorporated into the 2019-2020 Biennial Budget.	31

Table E lists eight (8) projects that have been completed but need more time to either achieve or measure full benefits. The sponsoring agencies have plans to conduct surveys and measure the results in the course of 2019. The County spent $34.2 million across these eight projects (out of the approved budget of $40.6 million).

Table E: Completed Projects That Need More Time to Achieve and/or Measure Full Benefits

Department	Project Name	Summary	#
Improved Public Services (Category 1)			
Local Services	DPER Permit Integration (1028784)	While the Permitting Integration Project is completed, the external benefits accruing to permitting customers have not yet been fully obtained. As described in Section 6, the principal customer benefit of on-line permit application via MyBuildingPermit.com should be realized for most permit types by 2020.	1
Public Health	Health Information Technology Improvement 974 (1113974)	The project faced some delays but was completed in late 2018. Public Health will report next time on the outcomes.	2
Improved Operational Efficiencies (Category 2)			
Executive Services	Airport Maximo Upgrade (1028664)	Replacement system purchased and implemented; benefits expected to be achieved by year-end 2019.	3
	BRC BI Reporting (1126545)	The project was completed in October 2018. The benefits will be measured in 2019. This BAP update includes revised targets.	4
King County Information Technology	IT Cybersecurity Enhancement (1132331)	KCIT is still working through the logistics of operational response teams that would respond to the compromised system. This is the only target not achieved to date.	5
Prevent Risk of Failure/Maintain Service Level (Category 3)			
Executive Office	Hyperion Upgrade (1129910)	Project is complete. Some benefits have been achieved. Additional benefits anticipated in 2021-2022.	6
King County Information Technology	Exchange to Office 365 (Phase II) (1132332)	The project was completed in October 2018. KCIT will measure results in 2019, after a full year of operation. The project is expected to fully meet the target benefits.	7
Natural Resources & Parks	Parks Facilities Scheduling System (CLASS) Replacement (1124159)	The project was completed in 2017; it has addressed the risk of failure but is still working out errors in the accounting before time savings can be assessed.	8

Table F lists 48 technology projects still underway as of the time of this reporting and provides a brief summary of the status of each project. In aggregate, these projects have an approved budget of $409 million, of which $118 million has been spent to date.

Table F: Summary of the Projects That Are Underway (including Projects On-Hold)

Department	Project Name	Summary	#
Improved Public Services (Category 1)			
Community & Human Services	DCHS-DPH Data Integration (1129638)	This project is moving forward and the data hub will be functional for data analysts to use in Q1.2019.	1
	Physical Behavioral	Phase 1 of this project was completed on 1/1/2019	2

Department	Project Name	Summary	#
	Health Integration (1129637)	and the work is now moving into Phase 2.	
Executive Services	RALS For-Hire License System (1129863)	This project's implementation was delayed in 2018, therefore pushing back project completion to August 2019.	3
	RALS Records & Licensing Software Application (Anthem) Replacement (1124175)	Despite some setbacks, the project will meet its intended objective.	4
King County Metro	Real-Time Improvements (1124413)	This project will develop and execute a phased plan for implementing new and/or modifying existing systems and processes to improve the presentation of real time information to customers. This project was funded in the 2017-18 budget and is "Preliminary Design" phase. No change in expected benefits or timing.	5
	Regional Fare Coordination Enhancements (1028726)	This programmatic project is underway and has 6 sub-projects; 5 of which have achieved benefits and 1 is currently underway.	6
	Safety and Security Project (1129800)	Project is underway. External and internal benefits from improved safety monitoring and reporting are expected in Q2.2021.	7
Natural Resources & Parks	WTD Capacity Charge Escrow and Customer Add (1123931)	Project is on hold due to higher than estimated BRC and KCIT costs. WTD is in discussions with KCIT and BRC.	8
Public Defense	Case Management System Replacement (1133724)	This project was approved in the 2017-2018 3rd Omnibus and is in its early stages. The department has new leadership and substantially revised the primary and secondary benefits. The project remains on-schedule.	9
Public Health	eCBD/CAD Interface at Valley Communications	This IT project was approved as a capital project (1113977) in the 2009 budget but had to wait for major CAD/911 system upgrades at the dispatch centers to complete before implementing eCBD. That dependency could not be avoided because the eCBD program interfaces with the CAD/911 system. The capital project was closed in 2012 due to lapsed funds. DPH now anticipates completing development in 2020.	10
	EH Food Safety Rating System – Online Search Tool Enhancements	This project started in the 2017-2018 biennium and anticipates reaching targets in 2019.	11
Improved Operational Efficiencies (Category 2)			
Adult & Juvenile Detention	Distributed Antenna Network (DAN), Phase 3 (1129762)	Project benefits (800 MHz radio coverage throughout KCCF floors 1/11) are expected to be achieved by Q4.2019.	12
District Courts	Unified Case Management System	Parts of the project are currently operating and the rest of the system is expected to go live in Spring 2019.	13

Department	Project Name	Summary	#
	(1124157)	While some benefits have been modified, the project is largely expected to achieve the originally expected benefits.	
Executive Services	BRC PERS Retirement Bolt-On Rewrite (Operating)	This project is on hold due to Washington State DRS not confirming a new implementation schedule. The BRC cannot update the project's timeline without a new implementation schedule from DRS.	14
Executive Services	Fleet Auto Vehicle Location for Non-Revenue Vehicles (1129703)	This project is in its final stages. Vehicle data is being collected in the software. Testing is underway regarding interface to another Fleet software system and working with vendor to improve coding for Solid Waste tractors.	15
	FMD Comprehensive Facilities Asset Management System (1124148)	The project will automate manual processes used by King County to manage its real estate lines of business (acquisition, sales, leasing, property management, and overall inventory). The project is behind schedule and there has been turnover in the project manager position. The project is also experiencing a budget risk.	16
	RALS KC RMS Upgrade (1129348)	This project started in 2017, faced some obstacles in 2018, but is now on track to be completed by late 2019. The project will replace obsolete software (ARM) with a new solution that meets records management legal and best practice requirements and will provide County employees with an easy to use system that includes improvements for managing and searching records.	17
King County Information Technology	E-911 Platform Modernization (1133685)	This project was approved in the 2017-2018 3rd Omnibus and is in early stages. Phase 1 of the project will develop an RFP to modernize the current 911 system. The benefits of the full project, after Phase 2, include more efficient call routing to the public safety answering points and enhanced accuracy of wireless call location.	18
	KCIT Enhanced Wireless, Phase II (1132334)	The project is underway and will achieve full benefits with a 6-month delay. The delay in the schedule was due to the scope expansion to include additional buildings (DAJD facilities). Enhanced wireless in these buildings is critical for the implementation of the new Jail Management System.	19
King County Metro	4.9 Network and Mobile Access Routers Replacement (1124429)	The project will implement a new data communications network that supports the transit fleet, operating bases, and service corridors. The project is in final design phase and a year behind the initial schedule. No change in expected benefits.	20
	Capital Management and Reporting System (1028812)	The project will provide a single, Transit-wide repository of relevant, up-to-date capital project data. The system will be used by managers and project	21

Department	Project Name	Summary	#
		members to access the latest, relevant project data from a single, reliable source. The project encountered delays due to lack of staff resources but is now a high priority of the Capital Division. Benefits will be delayed by about one year.	
King County Metro	HASTUS Planning Module (1124415)	The project was initiated in summer 2018. It had been on hold waiting for completion of the HASTUS Upgrade project.	22
	Transit BI Resource Database (TBIRD) (1129801)	The project started in 2017 and is in the implementation phase. The project will significantly advance Transit's analytical capabilities to include data mining, data discovery, business intelligence and data visualization tools, and geo-spatial analysis and presentation. Full benefits are expected by 08/2020.	23
	TSP System Replacement (1124427)	The project is in the planning phase. The project was reset in May 2018. Benefits are expected in 2022.	24
	Vehicle Telematics for Transit Coaches (1129799)	The project started in 2017 and is in the implementation phase. The project will procure and install a vehicle telematics system that will provide KC Metro with automated, more accurate mileage and telematics data, which will allow for more efficient and effective vehicle maintenance. No change in expected benefits or timing.	25
Natural Resources & Parks	WLRD SWM Billing System Replacement (1129702)	This project is underway. The initial benefit of having SWM billing discounts included in the system has been achieved. Modeling benefits are anticipated in Q2.2020.	26
	WLRD SWSS Cityworks (1131430)	The project is underway. Updates were made to include targets in section #7 for the benefits achieved in this project. The targets for retiring old databases were missed and new timelines are provided.	27
	WLRD LIMS Replacement (1134076)	The project is underway (in implementation phase). There were administrative details changed and additional clarification was added in the project benefits and timing. The secondary benefit in category #4 was updated to reflect the uncertainty of expected cost savings in the project.	28
	WTD Document Management System (1038335)	The project was approved in 2018 and is currently in the implementation phase. The project is procuring and implementing a system that will allow immediate access to record drawings, eliminating inefficiencies from having to find or reproduce drawings.	29
Public Health	Jail Health Electronic Medication Administration Record (eMAR) (1116742)	The project was on hold for three years waiting for Epic to stabilize and then be upgraded in May 2017. It is underway now and expected to be completed in Q2.2020.	30

Department	Project Name	Summary	#
Prevent Risk of Failure/Maintain Service Level (Category 3)			
Adult & Juvenile Detention	Jail Management System (1129763)	The project is in preliminary design phase. The expected completion date was changed from July 2020 to January 2021 to incorporate the time required to decommission the legacy systems that will be replaced by this project.	31
Assessor's Office	Property Tax Administration System (PTAS) (1123944)	This project will begin the implementation phase in April 2019, once a contract is finalized with the solution vendor.	32
Executive Services	Airport PIDS (1129960)	Project completion and benefits achievement are expected by year-end 2019.	34
	FMD-KCIT In Building Radio Coverage (1132306)	The consultant report was completed on schedule and cost estimates are under review. The project is likely to be completed before PSERN, as planned.	35
Judicial Administra-tion	DJA Systems Replacement (1123900)	The new system successfully launched in November 2018, but all benefits have not yet been achieved/ measured. Currently double data entry is required due to the state interface not being ready, which is a risk for additional cost to the County.	33
King County Information Technology	E-911 Map Modernization (1133686)	This project was approved in the 2017-2018 3rd Omnibus and is in early stages. The project will replace a system that has been in use since 2002 and is no longer supported by a vendor. The new application will automate the process for updating maps leading to increased map accuracy and operational efficiencies.	36
	Puget Sound Emergency Radio Network (PSERN) (1126875)	The project is in Phase IV (implementation). Final system design was completed in 2017. Due to delay in getting the site leases executed, radio site development has been behind schedule in getting radio sites ready for system equipment deployment. PSERN Joint Board added in-building coverage to the project scope for Downtown Seattle, Downtown Bellevue, and South Lake Washington Renton. The project is scheduled to transition all dispatch centers to new PSERN core in Oct. 2019.	37
	Radio Infrastructure Risk Reduction (1133711)	The project is on track to achieve its target benefits. The project started in Q2.2018, no significant purchases were made in 2018.	38
King County Metro	Customer Information Systems (1111785)	The project is underway and on track. Continued system refreshes in 2019.	39
	ORCA Replacement Planning (1124456)	The project is underway. No change in expected benefits or timing.	40
	Rider Information Systems - TABS Replacement (1028651)	The project is underway and on track. It is expected to be completed by year-end 2019.	41
	Transit Data Infrastructure	The project is underway but has encountered delays. The currently estimated end date is summer 2019.	42

Department	Project Name	Summary	#
	Replacement (1112007)		
King County Metro	Vehicle Maintenance Dispatch Replacement (1125054)	The project is on hold while additional analysis is performed. No change to anticipated project benefits, but achievement of benefits will be delayed.	43
Public Health	Jail Health Digitizing X-Rays (1111943)	The project started in 2013. The project is evaluating whether to lease or purchase equipment. It is expected to be completed in 2019.	44
	MEO Case Management System Upgrade (1132329)	The project has faced some delays, driven largely by the vendor. The new expected completion date is June 2019.	45
Sheriff's Office	KCSO AFIS Replacement (1133726)	The project was approved in the 2017-2018 3rd Omnibus. It is in early stages (preliminary design).	46
Sheriff's Office	IRIS/TESS Replacement (1111808)	The project's schedule was re-baselined, pushing the end date from December 2017 to December 2019. The project is on track to achieve benefits after conversion of legacy data in late 2019.	47
Cost Savings (Category 4)			
King County Metro	TDC On-Board Camera Management System (1129798)	The project is underway; cost savings are expected to be realized in Q4.2019 or once the system is fully operational.	48

Table G lists 20 new technology projects approved in the 2019-2020 biennial budget, along with a brief summary of target benefits. In aggregate, these projects have an approved budget of $33.7 million.

Table G: New Projects Approved in the 2019-2020 Biennial Budget

Department	Project Name	Summary	#
Improved Public Services (Category 1)			
King County Metro	TDC ONLINE REDUCD FARE REG (1134101)	This project will design and implement a web-based application that will allow customers to enroll and prove their reduced fare pass eligibility online, where they can choose the type of pass/permit needed (low-income, youth, senior, or disabled), enter their personal information, and upload their documentation and photo online. Once implemented, all reduced fare programs - including low-income and disabled - will be available online.	1
Public Health	EHS Envision Cloud (1134305)	This project will upgrade the work management system used by the County's Environmental Health Services (EHS), which is no longer supported by the vendor. An enhanced platform will enable EHS and the County's Permitting Division to offer a unified public portal, which will streamline the permitting process for customers who currently have to navigate separate systems administered by Permitting and EHS.	2

Department	Project Name	Summary	#
Superior Courts	Jury Management System Replacement (1134041)	This is a new project that will be starting in Q2.2019. The project will improve juror experience and encourage participation in the judicial system. The improved jury technology will support increased efficiency and data driven planning.	3
Improved Operational Efficiencies (Category 2)			
Community & Human Services	DCHS Client Level Program Performance Reporting Tool-CORE (1134636)	This project starts in 2019. The new reporting tool will enable operational efficiencies from automating labor-intensive reporting functions, improving the quality of DCHS program performance data. DCHS will be able to meet its legally mandated commitments to provide client level outcome data. Client data will be visible across multiple programs and provider agencies, creating a comprehensive view of the client experience supported by DCHS.	4
Community & Human Services	DCHS Case Management Tool Modernization (1134637)	This project will begin in Q3.2019. This project will replace outdated technologies that are expensive to maintain and modify with more modern technology that will be fully supported by the County's central IT department. The merging of two distinct databases will reduce the number of "data silos" within DCHS by creating a single system which will track data from multiple programs.	5
Executive Services	FBOD Procurement Sys Modernization (1133879)	This is a new project that starts in 2019. The project will replace and supplement the systems currently used to support the procure-to-pay value stream, transforming the way in which participants in this value stream interact. County departments will gain transparency into the status of procurement requests. Suppliers will have a single point of entry for registering to do business with the County, applying for certification, reporting data for contract compliance purposes, submitting invoices, obtaining public procurement records, and signing contracts.	6
	OEM AV Sys Modernization (1133880)	This is a new project that starts in 2019. The project will upgrade the audio-visual system in the Emergency Operations Center in Renton. The current system is inadequate for providing situational awareness to staff managing incidents, which directly impacts public safety.	7
King County Metro	TDC COMFORT STAT MGMT SYS (1134110)	This project will provide modern, sustainable tools to support more effective planning, scheduling, and management of restroom facilities for operators (comfort stations) along Metro Transit routes. Adding comfort station data to HASTUS, including GIS location and comfort station hours of operation, will enable effective data management and improved restroom access for approximately 4,600 transit operators.	8

Department	Project Name	Summary	#
King County Information Technology	KCIT Network Security Plan (1134699)	The project will develop a plan for the implementation of network capabilities within the data center in order to provide modern network technologies that are dynamic, manageable, cost-effective, and adaptive. The planned capabilities will provide network segmentation, which addresses a 2018 audit finding in both PCI and HIPAA external audits.	9
Natural Resources & Parks	Parks Asset Management System (1124055)	This project will allow the Parks Division to more efficiently and accurately identify and prioritize repair and replacement of parks assets using data driven decisions.	10
Natural Resources & Parks	WTD Computer Maintenance Management System Upgrade (1134070)	The project will replace the existing obsolete software in use since 1996. A new system will improve the accuracy of financial data and allow asset management to make more informed budgeting and asset life-cycle decisions and allow WTD to comply with the independent audit recommendations commissioned by a King County Council Administrative Order following the West Point Treatment Plant Failure in February 2017.	11
Prevent Risk of Failure/Maintain Service Level (Category 3)			
King County Information Technology	E-911 Call Reporting Upgrade (1133687)	The project will replace the outdated call reporting system used at thirteen 9-1-1 call answering centers. The current system has been discontinued by the manufacturer, with support ending in 2019. King County E-911 is legally required to have a call reporting system that accurately reports the number of emergency calls received, answered, and transferred as well as time-to-answer statistics.	12
	KC.Gov Web Presence (1134308)	New project approved in the 2019-2020 budget. The project will upgrade the obsolete version of the SiteCore platform used by the County for managing content on its website. The project is set to start in Q2.2019.	13
King County Metro	TDC EL SIGN IN FOR OPRTORS (1134108)	The project will implement hardware and software to ensure compliance with relevant federal and state mandates for wage and hour practices, ensure timely and accurate reporting, and streamline business processes required to track and manage transit operations costs.	14
	TDC FARE ENFORC ENHANCMTS (1134106)	This project will replace the portable fare transaction processors (PFTPs) which have reached end of life, are out of warranty, and no longer manufactured. In addition, they are heavy, bulky and limited in function to the point that the fare enforcement program cannot modernize business processes or achieve cost efficiencies while they are in use.	15
	TDC HASTUS UPGR FROM V2014 (1134104)	The project will update a mission critical system, HASTUS, to the latest version for additional functionality, better performance, and improved stability. Upgrading this system at a regular cadence will help mitigate the risks of	16

Department	Project Name	Summary	#
		an inherently complex system upgrade and increase the likelihood of success.	
Local Services	Roads IT Systems Replacement (1134094)	This is a new project in the 2019-2020 budget. The project will evaluate and implement a solution to replace five obsolete legacy applications currently used by the Roads Division. These systems are no longer supported by KCIT, expensive to support, and increase the Roads Division's business risk.	17
Natural Resources & Parks	WTD Pretreatment Info Management Sys Replacement (1134301)	The project will develop a new database system that supports the day-to-day operations of WTD's Industrial Waste unit, with enhanced features, and retire the legacy system (PIMS).	18
Prosecuting Attorney's Office	PAO Data Modernization (1133959)	This is a new project that will be starting in Q2 of 2019. The project will consolidate 18 disparate data sources housed on outdated technology into a single data store, enabling reduction of the risk inherent with outdated technology and operational efficiencies related to maintaining and analyzing the information contained in these data stores.	19
Superior Courts	Courtroom Recording Replacement (1134042)	This is a new project that will be starting in Q2.2019. The project will replace aging hardware, software and audio equipment that captures the official record of all Superior Court proceedings. The project will address the risk of system failure.	20

The following section includes a complete set of the 107 BAPs.

List of Benefit Achievement Plans (BAPs) in the 2017-2018 Technology Benefits Report

#	Department	Project Name	Project Status	Primary Benefit Category	Page
1	Assessor's Office	Property Tax Administration System (PTAS)	Underway (Active)	Risk of Failure Prevention	1
2	DAJD	DAN Phase III	Underway (Active)	Operational Efficiencies	9
3	DAJD	Jail Management System	Underway (Active)	Risk of Failure Prevention	15
4	DAJD	Roster Management System Employee Interface	**Completed (Final BAP)**	Operational Efficiencies	31
5	DCHS	Behavioral Health Integration	**Completed (Final BAP)**	Risk of Failure Prevention	38
6	DCHS	Case Management Tool Modernization	New Project	Operational Efficiencies	45
7	DCHS	Client Level Program Performance Reporting Tool (CORE)	New Project	Operational Efficiencies	52
8	DCHS	Physical Behavioral Health Integration (FIMC Phase 1)	Underway (Active)	Improved Public Services	59
9	DCHS	DCHS-DPH Data Integration	Underway (Active)	Improved Public Services	66
10	DCHS	DMHP & Public Safety	**Completed (Final BAP)**	Operational Efficiencies	72
11	DES	Airport Maximo Upgrade	**Completed**	Operational Efficiencies	81
12	DES	Airport PIDS	Underway (Active)	Risk of Failure Prevention	88
13	DES	BRC BI Reporting	**Completed**	Operational Efficiencies	94
14	DES	BRC Oracle EBS 12.2 Upgrade	**Completed (Final BAP)**	Risk of Failure Prevention	108
15	DES	BRC PERS Retirement Bolt-On Rewrite	Underway (On Hold)	Operational Efficiencies	115
16	DES	FBOD Countywide ePayment Implementation Support	**Completed (Final BAP)**	Improved Public Services	122
17	DES	FBOD Procurement System Modernization	New Project	Operational Efficiencies	138
18	DES	Fleet Auto Vehicle Location for Non-Revenue Vehicles	Underway (Active)	Operational Efficiencies	149
19	DES	FMD Comprehensive Facilities Asset Management System	Underway (Active)	Operational Efficiencies	158
20	DES	FMD-KCIT In Building Radio Coverage	Underway (Active)	Risk of Failure Prevention	167
21	DES	OEM AV System Modernization	New Project	Operational Efficiencies	173
22	DES	RALS Archives Collection Management System	**Completed (Final BAP)**	Improved Public Services	180
23	DES	RALS For-Hire License System	Underway (Active)	Improved Public Services	189
24	DES	RALS KC RMS Upgrade	Underway (Active)	Operational Efficiencies	197
25	DES	RALS Software Application (Anthem) Replacement	Underway (Active)	Improved Public Services	206
26	DES	Risk Management Risk Master Replacement	**Completed (Final BAP)**	Operational Efficiencies	215
27	DHR	Applicant Tracking System Replacement	**Completed (Final BAP)**	Operational Efficiencies	222
28	District Courts	Unified Case Management System	Underway (Active)	Operational Efficiencies	231

#	Department	Project Name	Project Status	Primary Benefit Category	Page
29	DJA	Systems Replacement	Underway (Active)	Risk of Failure Prevention	250
30	DLS	DPER Permit Integration	**Completed**	Improved Public Services	261
31	DLS	Roads IT Systems Replacement	New Project	Risk of Failure Prevention	267
32	DNRP	Parks Asset Management System	New Project	Operational Efficiencies	275
33	DNRP	Parks Facilities Scheduling System (CLASS) Replacement	**Completed**	Risk of Failure Prevention	283
34	DNRP	Solid Waste: Paradigm Upgrade	**Completed (Final BAP)**	Risk of Failure Prevention	290
35	DNRP	WLRD SWM Billing System Replacement	Underway (On Hold)	Operational Efficiencies	296
36	DNRP	WLRD SWSS Cityworks	Underway (Active)	Operational Efficiencies	303
37	DNRP	WLRD LIMS Replacement	New Project	Operational Efficiencies	312
38	DNRP	WTD Capacity Charge Escrow and Customer Add	Underway (On Hold)	Improved Public Services	320
39	DNRP	WTD Computer Maintenance Management System Upgrade	New Project	Operational Efficiencies	326
40	DNRP	WTD Document Management System	Underway (Active)	Operational Efficiencies	336
41	DNRP	WTD IBIS Phase 3: Data Migration & KCIT System Retirement	**Completed (Final BAP)**	Risk of Failure Prevention	344
42	DNRP	WTD Pretreatment Information Mgmt Sys Replacement	New Project	Risk of Failure Prevention	354
43	DNRP	WTD West Section Control System Replacement	**Completed (Final BAP)**	Risk of Failure Prevention	363
44	DPD	Case Management System Replacement	Underway (Active)	Improved Public Services	366
45	Elections	Tabulation System Replacement	**Completed (Final BAP)**	Cost Savings	375
46	Executive Office	Green Building Reporting Module	**Cancelled (Final BAP)**	Operational Efficiencies	380
47	Executive Office	PSB Budget System PIC 2014 Modifications	**Completed (Final BAP)**	Operational Efficiencies	388
48	Executive Office	PSB Hyperion Upgrade	**Completed**	Risk of Failure Prevention	396
49	KC Metro	4.9 Network and Mobile Access Routers Replacement	Underway (Active)	Operational Efficiencies	404
50	KC Metro	Capital Management and Reporting System	Underway (Active)	Operational Efficiencies	411
51	KC Metro	Customer Information Systems	Underway (Active)	Risk of Failure Prevention	419
52	KC Metro	HASTUS EPM	**Cancelled (Final BAP)**	Operational Efficiencies	427
53	KC Metro	HASTUS Planning Module	Underway (Active)	Operational Efficiencies	434
54	KC Metro	HASTUS Upgrade to 2014V	**Completed (Final BAP)**	Risk of Failure Prevention	442
55	KC Metro	Mobile Ticketing Pilot--Cashless Fare Technologies	**Completed (Final BAP)**	Improved Public Services	446
56	KC Metro	On-Board Camera Management System	Underway (Active)	Cost Savings	455
57	KC Metro	ORCA Replacement Planning	Underway (Active)	Risk of Failure Prevention	463
58	KC Metro	Real-Time Improvements	Underway (Active)	Improved Public Services	472
59	KC Metro	Regional Fare Coordination Enhancements	Underway (Active)	Improved Public Services	480

#	Department	Project Name	Project Status	Primary Benefit Category	Page
60	KC Metro	Rider Information Systems - TABS Replacement	Underway (Active)	Risk of Failure Prevention	490
61	KC Metro	Safety and Security	Underway (Active)	Improved Public Services	496
62	KC Metro	TDC COMFORT STATIONS MANAGEMENT SYSTEM	New Project	Operational Efficiencies	509
63	KC Metro	TDC EL SIGN IN FOR OPRTORS	New Project	Risk of Failure Prevention	515
64	KC Metro	TDC FARE ENFORC ENHANCMTS	New Project	Risk of Failure Prevention	522
65	KC Metro	TDC HASTUS UPGR FROM V2014	New Project	Risk of Failure Prevention	529
66	KC Metro	TDC ONLINE REDUCD FARE REG	New Project	Improved Public Services	535
67	KC Metro	Transit BI Resource Database (TBIRD)	Underway (Active)	Operational Efficiencies	542
68	KC Metro	Transit Data Infrastructure Replacement	Underway (Active)	Risk of Failure Prevention	551
69	KC Metro	TSP System Replacement	Underway (Active)	Operational Efficiencies	558
70	KC Metro	Vanpool Information System Modernization	**Completed (Final BAP)**	Risk of Failure Prevention	565
71	KC Metro	Vehicle Maintenance Dispatch Replacement	Underway (On Hold)	Risk of Failure Prevention	571
72	KC Metro	Vehicle Telematics for Transit Coaches	Underway (Active)	Operational Efficiencies	577
73	KCIT	800 MHz Trunked Radio System Sprint/Nextel Rebanding	**Completed (Final BAP)**	Risk of Failure Prevention	586
74	KCIT	County Telephony Sys Replacement Phase 3e (UC)	**Completed (Final BAP)**	Risk of Failure Prevention	591
75	KCIT	E-911 Call Reporting Upgrade	New Project	Risk of Failure Prevention	599
76	KCIT	E-911 Map Modernization	Underway (Active)	Risk of Failure Prevention	606
77	KCIT	E-911 Platform Modernization	Underway (Active)	Operational Efficiencies	612
78	KCIT	E-911 System Security	**Cancelled (Final BAP)**	Risk of Failure Prevention	620
79	KCIT	E-911 Text-to-911	**Completed (Final BAP)**	Improved Public Services	625
80	KCIT	Enhanced Wireless Connectivity, Phase I	**Completed (Final BAP)**	Risk of Failure Prevention	631
81	KCIT	Enhanced Wireless, Phase II	Underway (Active)	Operational Efficiencies	637
82	KCIT	Exchange to Office 365, Phase I (Pilot)	**Completed (Final BAP)**	Risk of Failure Prevention	645
83	KCIT	Exchange to Office 365, Phase II	**Completed**	Risk of Failure Prevention	655
84	KCIT	IP Fax Service	**Completed (Final BAP)**	Risk of Failure Prevention	662
85	KCIT	IT Cybersecurity Enhancement	**Completed**	Operational Efficiencies	668
86	KCIT	KC.Gov Web Presence	New Project	Risk of Failure Prevention	676
87	KCIT	Network Security Plan	New Project	Operational Efficiencies	683
88	KCIT	Puget Sound Emergency Radio Network (PSERN)	Underway (Active)	Risk of Failure Prevention	690
89	KCIT	Radio Infrastructure Risk Reduction	Underway (Active)	Risk of Failure Prevention	697
90	KCIT	Systems Management	**Completed (Final BAP)**	Operational Efficiencies	704

#	Department	Project Name	Project Status	Primary Benefit Category	Page
91	PAO	Case Management (PROMIS Replacement) Implementation	**Completed (Final BAP)**	Risk of Failure Prevention	718
92	PAO	Integrated Document Exchange (IDX)	**Completed (Final BAP)**	Operational Efficiencies	726
93	PAO	PAO Data Modernization	New Project	Risk of Failure Prevention	735
94	Public Health	eCBD/CAD Interface at Valley Communications	Underway (Active)	Improved Public Services	743
95	Public Health	EH Envision Cloud	New Project	Improved Public Services	750
96	Public Health	EH Food Safety Rating System Enhancement	Underway (Active)	Improved Public Services	759
97	Public Health	eMAR	Underway (Active)	Operational Efficiencies	766
98	Public Health	EMD-CPR Quality Improvement Application Replacement	**Cancelled (Final BAP)**	Operational Efficiencies	772
99	Public Health	Health Info Technology Improvement 974	**Completed**	Improved Public Services	781
100	Public Health	Jail Health Digitizing X-Rays	Underway (Active)	Risk of Failure Prevention	791
101	Public Health	MEO Case Management System Upgrade	Underway (Active)	Risk of Failure Prevention	797
102	Sheriff's Office	AFIS Replacement	Underway (Active)	Risk of Failure Prevention	804
103	Sheriff's Office	ATLAS Electronic Scheduling System	**Completed (Final BAP)**	Operational Efficiencies	810
104	Sheriff's Office	IRIS/TESS Replacement Project	Underway (Active)	Risk of Failure Prevention	816
105	Sheriff's Office	Wireless CAD Upgrade	**Cancelled (Final BAP)**	Operational Efficiencies	824
106	Superior Courts	Courtroom Recording Replacement	New Project	Risk of Failure Prevention	830
107	Superior Courts	Jury Management Sys Replacement	New Project	Improved Public Services	837

King County

2017-2018 BIENNIAL TECHNOLOGY PROJECTS BENEFITS
SPRING 2019 REPORT

SET OF 107
BENEFIT ACHIEVEMENT PLANS

OFFICE OF PERFORMANCE, STRATEGY AND BUDGET

APRIL 2019

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/ Agency Name	DOA
Project Title	KC Interagency Property Tax Accounting System (PTAS)
Project Number	1123944
Project Timeframe	Jan 1, 2017 – Dec 31, 2021

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Al Dams, Chief Deputy Assessor (al.dams@kingcounty.gov; 206-263-2255)

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Al Dams	Chief Deputy Assessor	Business Owner
Don Saxby	IT PPM I	Project Manager
Brendan Camarda	Budget Coordinator	Budget coordination with PSB
Jonathan Larson	PPM IV	Project Support
Richard Watson	Administrative Services Division Director	Business/Procurement Support
Ken Guy	FBOD Director	Business Owner

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in Section 5. If there are no changes, type "None."

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process	06/16/16	Rich Watson, Al Dams, Brendan Camarda, Jonathan Larson	New, initial draft	1.5 hrs.
Budget Process	06/17/16	Rich Watson, Brendan Camarda	New, initial draft	2.0 hrs.
Budget Process	08/25/16	Rich Watson, Brendan Camarda, Al Dams	New, Initial draft	2.0 hr.
Budget Process	09/16/16	Rich Watson, Al Dams, Brendan Camarda, Jonathan Larson	New, Initial draft	1.0 hr.
Budget Process	10/03/16	Rich Watson, Al Dams, Brendan Camarda, Jonathan Larson	New, Initial draft	2.0 hr.
2016 Annual Report	06/16/17	Andrew Cronholm	Minor updates (Section 6)	15 min
2017 2nd Omnibus	07/10/17	Rich Watson, Al Dams, Brendan Camarda, Jonathan Larson	Revised the entire BAP	4.0 hrs
2017 2nd Omnibus	9/1/2017	Andrew Cronholm and Gauhar Serikbayeva	Revised the entire BAP	4.0 hrs
2017 2nd Omnibus	9/1/2017	Rich Watson, Brendan Camarda, Iris Hoffner	Review Revised BAP	1.0 hr
2019-2020 Budget Process	7/23/2018	Al Dams, Andrew Cronholm, Gloria Allmon, Victoria Williams	Update BAP for 2019-2020 full budget request	1.5 hrs
Spring 2019 BAP Report	1/23/ 2019	Al Dams, Janielee Amina Osborne	Reviewed. One adjustment.	.5 hrs

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☒
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☒

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The current system is highly cumbersome and inefficient, which results in inordinate customer service wait times for taxpayers and jurisdictions needing information and transactions. In addition, the State Auditor has cited the County a number of times for lack of precision in levy rate calculation.

   The new PTAS will be a Cloud-based system reliant on state of the art computing programming language, architecture, and updated business processes. It will have features and new functionalities that will allow DOA and Treasury to improve its property tax services to jurisdictions. For example, DOA and Treasury intend for the system to calculate with greater accuracy the levy rate for

distribution to taxing jurisdictions. DOA and Treasury also anticipate the system will provide forecasting and query tools that will enable the County to respond faster to queries from taxing jurisdictions, hence supporting budget development of those jurisdictions.

In summary, Category 1 Benefits include:
- Improved accuracy and fairness of the County's distribution of the property tax revenue to taxing jurisdictions and to address State Auditor's Office (SAO) audit recommendations.
- Taxing jurisdictions receive a timely response to their budget request prior to tax roll certification thanks to seamless operation of the property tax assessment, administration and collection system.
- Taxing jurisdictions receive levy rate calculations in less time.
- Streamlined application processes offering transparency to taxpayers on application status and reduced calls to public information staff regarding application status through online tracking dashboards.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Category 1 Measure 1. Level of precision of levy rate calculations (in decimal points)
   Category 1 Measure 2. Number of days for taxing districts to receive a response to their budget request prior to the tax roll certification.
   Category 1 Measure 3. Cycle time to provide taxing jurisdictions with levy rate calculation/ property tax budget information.
   Category 1 Measure 4. Processing of applications, refunds, et. al is significantly reduced.

3. *What is the current baseline for this measure?*
   1) Five (5) decimal places
   2) Taxing jurisdictions receive their budget request information approximately 30 - 45 days prior to receiving a certified tax roll
   3) Levy rate cycle currently takes ten (10) weeks.
   4) Applications, refunds et. al typically take 2 to 4 months.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   The following targets are tentative and will be finalized after the vendor is selected.
   1) Ten (10) decimal places
   2) Taxing jurisdictions receive their budget request information approximately 7 – 10 days prior to receiving a certified tax roll
   3) Levy rate cycle completed within two (2) weeks.
   4) Applications, refunds et. al processed within 4 to 6 weeks.

5. *When is the benefit likely to be achieved?*
   The benefits will be achieved at the end of the first tax roll cycle following the implementation of the new PTAS system.

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for

1) *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The current system is cumbersome, inefficient, and places costly demands on the staff and IT support services to DOA and FBOD. It relies on paper handoffs and the batch processing of many jobs to administer property tax accounts. The new PTAS will be a Cloud-based system reliant on state of the art computing programming language, architecture, and updated business processes. It will automate many of the tax collection management processes and integrate with the County's accounting system. The benefits below will be realized after full project implementation:
   1) Increased period for appraisers to capture new construction revenue in the current fiscal year.
   2) Timely production of the tax roll and tax bills by the Assessor's Office and Treasury thanks to prevented failures of property tax assessment, administration, and collection system.

2) *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Category 2 Measure 1. Number of days added to new construction collection period
   Category 2 Measure 2. Number of business days between the date the tax roll is certified by the Assessor and the Treasury tax bill mail due date
   Category 2 Measure 3. Tax bill mailing date

3) *What is the current baseline for this measure?*
   - June to August
   - Tax roll is certified and sent to Treasury one (1) day prior to Treasury's tax bill mail due date.
   - Tax bill mailing date at mailing deadline.

4) *What is the target for this measure? (How much improvement will this project achieve?)*
   - Number of days added to new construction documentation = 30
   - Tax roll is certified and sent to Treasury at least five (5) business days prior to Treasury's tax bill mail due date
   - Tax bills mailed at least one (1) day prior to mailing deadline.

5) *When is the benefit likely to be achieved?*
   These benefits will be achieved at the end of the first tax roll cycle following the implementation of the new PTAS system.

CATEGORY #3: **Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.**

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   This is the *primary* benefit category for this project. The current PTAS is over 40 years old and has grown from a database and software stored on the County's mainframe. While it has been re-hosted on virtual machines, it remains a collection of incompatible software components that cannot answer to new integrated services required by taxpayers. There is no single "system of record" which contributes to errors and inefficiencies in business processes. Furthermore, it replicates the old business processes from the mainframe and therefore requires a lot of maintenance and labor to keep up the basic operations.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   By retiring the old system and migrating to new system, the County will prevent failure of its property tax assessment, administration and collection system. The current system experiences approximately 20–25% downtime. This poses significant risks for Treasury of not meeting the tax bill mail due date. The target for the new PTAS is <1% downtime.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
   King County's construction boom in the recent years has put significant demands on the County's property appraisal operation due to increased parcel count, exemptions, and appeals. Grave inefficiencies of the current PTAS system further challenge DOA's capacity to manage this volume of appraisal work. While DOA continues incorporating the LEAN principles into its business processes, upgrading the current system will be the single biggest solution that will allow DOA to absorb the increased volume of property appraisal without adding new FTEs.

   Hence, the Category 4 benefit of this project includes:

- Avoid increasing the FTE to effectively absorb increased parcel count, exemptions, and appeals work product volume.
- Avoid non-value added system patches and repair costs due to aging infrastructure.

2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
   - Number of new FTE to meet increased demand for appraisal

3. ***What is the current baseline?***
   - No new FTEs for parcel count increases

4. ***What is the target for this measure? (How much savings will this project achieve)***
   - No new FTEs for parcel count increases

5. ***When is the cost reduction likely to be achieved?***
   - Savings will begin after full implementation.

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

1/23/2019: This is an ongoing project that will transition to the implementation phase in March/April 2019, once the contract is finalized with the solution vendor. 2018 milestones include the completion of the proof of concept in March of 2018 and the successful running of the RFP process through the end of 2018.

Metric Description	Metrics	Baseline	Target	Actual
External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.	• Level of precision of levy rate calculations (in decimal points) • Number of days for taxing districts to receive a response to their budget request prior to the tax roll certification. • Cycle time to provide taxing jurisdictions with levy rate calculation/ property tax budget information. • Processing of applications, refunds, et. al is significantly reduced.	• Five (5) decimal places • Taxing jurisdictions receive their budget request information approximately 30 - 45 days prior to receiving a certified tax roll • Levy rate cycle currently takes ten (10) weeks. • Applications, refunds et. al typically take 2 to 4 months.	• Ten (10) decimal places • Taxing jurisdictions receive their budget request information approximately 7 – 10 days prior to receiving a certified tax roll • Levy rate cycle completed within two (2) weeks. • Applications, refunds et. al processed within 4 to 6 weeks.	
Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.	• Number of days added to new construction collection period • Number of business days between the date the tax roll is certified by the Assessor and the Treasury tax bill mail due date • Tax bill mailing date	• June to August • Tax roll is certified and sent to Treasury one (1) day prior to Treasury's tax bill mail due date. • Tax bill mailing date at mailing deadline.	• Number of days added to new construction documentation = 30 • Tax roll is certified and sent to Treasury at least five (5) business days prior to Treasury's tax bill mail due date • Tax bills mailed at least one (1) day prior to mailing deadline.	
Risk reduction by decreasing system downtime	• System downtime	• 20-25% downtime	• <1% downtime	
Avoid increasing FTEs to effectively absorb increased parcel count, exemptions, and appeals work product volume. **Avoid non-value added system patches and repair costs** due to aging infrastructure.	• Number of new FTE to meet increased demand for appraisal	• No new FTEs for parcel count increases • Baseline O&M costs TBD	• No new FTEs for parcel count increases • Reduced O&M costs	

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Adult and Juvenile Detention
Project Title	Distributed Antenna network (DAN) Phase III
EBS Project Number	1129762

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

William Hayes, Director, Department of Adult & Juvenile Detention

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Gordon Karlsson	Commander, KCCF, DAJD	Business Representative
Mike Holland	IT SDM, KCIT-DAJD	KCIT Coordination
Tony Minor	Radio Manager, KCIT	800 MHz Radio Manager
John Slomnicki	IT Sr. LAN Admin, KCIT-DAJD	800 MHz Radio Consultant
Scott Peterson	IT PM	IT Supporting PM
Latasha Battle	IT PM	Supporting PM
Captain Manning	Adminstrative Captain, KCCF	Business Support

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP

form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process	5/2/16	Mike Holland, Commander Karlsson, Tony Minor	New, initial draft	2 hours
Budget Process	8/24/16	Mike Holland, Commander Karlsson	Added additional project benefits to Category #2.	1 hour
Budget Process	5/21/18	Latasha Battle	Added additional project benefits to Category #3.	1 hour
2019 Biennial Report	1/14/19	Captain Manning	Annual review and update	1 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐   Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☑ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐   Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   This project is simply the continuation of the work already performed from DAN Phase I and Phase II. In Phase I, enhanced 800 MHz radio coverage in the King County Correctional Facility (KCCF) was deployed to floors 1-3. Phase 1 went very well and we are already enjoying the benefits of seamless service and improved safety on these floors.

   In Phase II, enhanced 800 MHz radio coverage in KCCF was deployed to floors 5-7. Phase II was completed in July 2016 as planned and within budget. All anticipated benefits for DAN Phase II were realized. <u>Note:</u> The hardware vendor that was used in Phase I and II went out of business in October 2016 and the equipment is no longer supported.

   The DAN Phase III project will complete the 800 MHz communication upgrade on the remaining floors (4 & 8 – 11) of KCCF. This project will also replace the equipment that is no longer supported on floors 1-3 and 5-7. Once completed, the entire facility will have seamless radio coverage throughout all floors, including the elevators and emergency stairwells. Complete radio coverage is

important to DAJD staff because it allows them to be clearly heard on the radio when they are providing location and incident information to Central Control which then communicates the information to responding supervisors and other officers.

Also, depending on the extent of the implementation, additional customer groups will be served as well. Potentially the Seattle Police Department, King County Sherriff's office staff, Seattle Firefighters, and other King County law enforcement agencies could also leverage the enhanced coverage due to the Phase III link into the Seattle Simulcast System (SSS). Today the KCCF 800 MHz signal originates from the King County Courthouse router. This router only supports eight (8) channels or talk-groups while the SSS will support a maximum of twenty (20) channels. With the limitation we have today, Seattle and King County first responders (SFD, Medic 1, SPD, & SWAT) are not able to use their talk group within the KCCF facility. These agencies are unable to communicate using their radio with themselves or other units while inside the facility. They have to use phones to communicate. Once DAN Phase III is in place, this talk-group limitation issue will no longer be present.

<u>End Result</u>: This project will significantly improve the safety of our operations. Minor emergencies occur daily in a correctional setting within DAJD facilities. The DAN Phase I and Phase II projects have already improved safety and shortened response times in the courtrooms and booking areas of the building. Still, the system is not ready for a major emergency. To standardize the 800 MHz communication capabilities within KCCF, DAN Phase III must be completed. This project will upgrade floors 1-11 which allows KCCF to be connected to the Seattle Simulcast system that provides the capacity to support our broader set of customers including Seattle Police or King County Sheriff / SWAT, Seattle Firefighters, or other broader emergency services. Depending on budget, a change request may be submitted during this project to upgrade floor 12.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
We will know if these benefits have been achieved if radio coverage is available in all locations on floors 1-11 and if we have the capacity to support the additional user groups mentioned above.

At the beginning of DAN Phase I, a comprehensive set of metrics were documented that reflected the 800 MHz capabilities and voids within KCCF. At the conclusion of DAN Phase II, this set of metrics were again documented. At the conclusion of Dan Phase III, these metrics will again be measured to confirm that the 800 MHz goals have been fully realized.

In addition to having a comprehensive 800 MHz signal, DAN Phase III will also increase the available talk-groups from 8 to 20 channels. Bottom line, all law enforcement/emergency responders coming into KCCF will be able to communicate on their 800 MHz devices.

3. ***What is the current baseline for this measure?***
There is currently no reliable radio coverage throughout floors 4 & 8-12, the equipment on floors 1-3 and 5-7 are unsupported, and the user groups mentioned above cannot be supported due to capacity issues.

Today, the maximum 800 MHz talk-groups/channels available for use is 8. Upon connecting to the SSS, this will increase to 20 channels.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
- The benefit will be achieved when radio coverage is available on floors 4 & 8-11 as well as the

related stairwells and elevators.
- Vendor support will be available for the equipment on floors 1-11 and potentially floor 12.
- Talk groups will increase from 8 to 20 channels.

5. ***When is the benefit likely to be achieved?***
Achievement of the benefits is anticipated by Q4 / 2019.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
This project will replace the equipment that was installed in Phase I & II. The hardware vendor for floors 1 - 3 and 5 - 7 filed for bankruptcy and then went out of business in October 2016. The equipment on these floors is no longer supported and there is no support for the configuration changes that are required to transition to PSERN in 2020. There is also no support available in the event that the equipment needs to be repaired or replaced.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 % of purchases are receiving prompt payment discounts* • *$200,000 savings*

IT Project Benefits Achievement Plan

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For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits as the project moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Adult and Juvenile Detention (DAJD)
Project Title	DAJD Jail Management System
Project Number	1129763

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Brenda Bauer – Interim Director, Department of Adult and Juvenile Detention (DAJD)

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Brenda Bauer	Interim Director - DAJD	Business Owner, Steering Committee Member/ Leader
Hikari Tamura	Assistant Director - DAJD	Business Sponsor, Steering Committee Member/Leader
Steven Larsen	Chief Administrative Officer – DAJD	Business Sponsor, Steering Committee Member/Project Leader
Jim Keller	Service Delivery Manager – KCIT	Steering Committee Member/ KCIT
Hugh Furubayashi	Project Program Analyst - DAJD	Business Analysis
Allan Browning	Senior Business Analyst - DAJD	Senior Business Analyst

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document

to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Request	June 2016	Mike Holland, Steve Larsen, Hugh Furubayashi	New Initial Draft	21 hours
Budget Request	May 2018	Allan Browning Steve Larsen	Updates to categories	15 hours
2019 Biennial Report	January 2019	Allan Browning Steve Larsen	Updated Project Owner and SDM	1 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

1) *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

   In reviewing the potential public benefits of implementing a New Jail Management System (JMS), it is difficult to identify a singular benefit that would result from such an implementation. There are however many individual benefits that in totality, would provide manifold benefits to individual detainees and by extension, the public at large. Potential benefits include:

   a) Improved ability to produce accurate and reliable reports and metrics across all DAJD Business Processes.
   Currently DAJD does not have integrated data for an individual who has participated in a combination of Juvenile Detention, Adult Detention, and/or Community Corrections so it is difficult, if not impossible, for DAJD to follow an individual through all potential services provided by DAJD. The new JMS will have a single database system that will integrate data across all DAJD services.

   b) Reduction in time for detainee identification and verification resulting in reduced intake and release time.
   The new JMS will provide the ability to generate reports with accurate times these processes require from start to finish.

   c) Enhanced management of detainee property providing a reduction in detainee personal property claims.
   The new JMS will provide the ability to record detailed description of detainee personal property as well as take photographs of said property and attach it to the detainee's booking record.

   d) Acceleration and enhanced management of detainee grievances.
   Current detainee grievances are managed through a paper process requiring long turnaround times and difficulty with managing thousands of grievances annually. The new JMS will provide the detainees the ability to submit grievances electronically which will initiate a workflow process that can be managed by the JMS which will reduce the turnaround time for these items and enable the generation of accurate reporting to identify frequent grievances enabling DAJD to provide proactive measures to reduce grievances.

   e) Acceleration and enhanced management of detainee kites/requests.
   Current detainee kites/requests are managed through a paper process requiring long turnaround times and difficulty with managing thousands of kites/requests annually. The new JMS will provide the detainees the ability to submit kites/requests electronically which will initiate a workflow process that can be managed by the JMS which will reduce the turnaround time for

these items and enable the generation of accurate reporting to identify frequent kites/requests enabling DAJD to provide proactive measures to reduce kites/requests.

f) Enhanced management and continuity of Public Health Services and detainee health care.
The new JMS will provide the ability for DAJD to work with an individual at any point throughout all DAJD business processes from Juvenile to Adult and all Community Corrections programs. This will enable DAJD to provide continuity of its portion of health services for individuals at all times for individuals being provided services by DAJD.

g) Ability to provide holistic management of detainees throughout all divisions of DAJD from Juvenile to Adult to Community Corrections.
The new JMS will provide the ability for DAJD to work with an individual at any point throughout all DAJD business processes from Juvenile to Adult and all Community Corrections programs. This will enable DAJD to provide continuity of its portion of services such as education, classification, property, and other services at all times for individuals being provided services by DAJD.

2) *What is the current baseline for this measure*

a) Improved ability to produce accurate and reliable reports and metrics across all DAJD Business Processes.
Current data systems do not provide adequate infrastructure to produce this type of reporting.

b) Reduction in time for detainee identification and verification resulting in reduced intake and release time.
DAJD does not have accurate, current numbers for this metric as there is no effective way to generate this metric.

c) Enhanced management of detainee property providing a reduction in detainee personal property claims.

Year	Total Loss	# Claims Paid	# Claims Unpaid	# Claims	Average Loss
2015	$ 9,091.51	10	80	90	$ 101.02
2016	$ 4,067.68	14	97	111	$ 36.65
2017	$ 975.48	4	55	59	$ 16.53

h) Acceleration and enhanced management of detainee grievances.

Year	# Grievances	Avg. Resp. Days
2015	2815	7
2016	2897	6
2017	2615	5

i) Acceleration and enhanced management of detainee kites/requests.
DAJD estimates it processes between 80,000 to 100,000 kites per year combined for just the KCCF and MRJC facilities. In 2015, it was taking between 2 to 10 days to process and respond to kites for those kites requiring an actual response.

j) Enhanced management and continuity of Public Health Services and detainee health care.
Current data systems do not provide adequate infrastructure to produce this type of reporting.

k) Ability to provide holistic management of detainees throughout all divisions of DAJD from Juvenile to Adult to Community Corrections.
Current data systems do not provide adequate infrastructure to produce this type of reporting.

3) *What is the target for this measure? (How much improvement will this project achieve?)*

a) Improved ability to produce accurate and reliable reports and metrics across all DAJD Business Processes.
With a modern JMS, DAJD will be able to provide metrics about individuals at any point they interact with a DAJD business processes and perhaps more importantly, DAJD will be able to provide metrics for an individual throughout ALL DAJD business processes. This will enhance the ability of legislators' and policy makers' ability to have access to accurate data when making decisions and developing future programs including diversion programs that impact detention.

b) Reduction in time for detainee identification and verification resulting in reduced intake and release time.
Currently DAJD performs manual identification of individuals during intake and release, once the new JMS is in place, identification will be significantly automated using biometric processes including fingerprints and potentially image recognition which will accelerate both processes.

c) Enhanced management of detainee property providing a reduction in detainee personal property claims.
In the three years of 2015|2016|2017 DAJD received a total of 260 property claims. Only 28 of these claims were determined to have merit for a total of $14,134.67. While the total claim amount paid for those three years was not significant, all 260 claims required many man hours of research to determine their merit which is a significant cost to DAJD. The man hours needed to research claims will be significantly reduced with a new JMS because a modern system will allow DAJD to take photos of incoming property and link it to the detainee using scanning and bar codes to store the property. This will also reduce the number of claims where a detainee's property was mistakenly given to another detainee who had a similar name because detainee identity will be tied directly to scan and bar coded systems.

d) Acceleration and enhanced management of detainee grievances.
In the three years of 2015|2016|2017 DAJD received an approximate total of 8,327 grievances with an average initial response back to the detainee of 6 days. Much of the time lag in the process is due to the processes currently being a paper/manual process. It can take as much as a full day for a grievance to seen by a corrections officer and then it may take another day for the detainee to receive a response in a best-case scenario. Of course most grievances must be seen by several DAJD staff members and each step can take significant time. A modern JMS would allow a detainee to enter a grievance using a kiosk or tablet and that grievance would be instantly routed to the appropriate staff member. The staff member could respond immediately, or if needed immediately forward the request to another staff member. Also, many grievances submitted by detainees are not valid. By providing kiosks or tablets, the detainee would receive an immediate response for items that are not valid saving both the detainee and DAJD significant time.

e) Acceleration and enhanced management of detainee kites/requests.
DAJD estimates it processes between 80,000 to 100,000 kites per year combined for just the KCCF and MRJC facilities. Most kites/requests are for information that a new JMS would have immediately available such as a detainee's expected release date, next court date, next medical appointment, etc. Currently these kites/requests are made using a paper form that must be read

by a corrections officer who then must research the kite/request and manually respond to the detainee. A new JMS would enable DAJD to provide kiosks and/or tablets that could be used by the detainee and would enable the detainee with instant access to most of the data requested by these types of kites/requests. This would virtually eliminate the need for a corrections officer to manually research and return this information.

f) <u>Enhanced management and continuity of Public Health Services and detainee health care.</u>
Currently, if an individual receives services from Juvenile Detention, then is moved to Adult Detention, and eventually is a participant in Community Corrections, DAJD cannot provide uninterrupted services related to health care such as medication disbursement because the current systems are not directly integrated.

g) <u>Ability to provide holistic management of detainees throughout all divisions of DAJD from Juvenile to Adult to Community Corrections.</u>
Currently DAJD is not able to provide holistic services to individuals who receive services from DAJD. With a modern JMS, utilizing a single database, DAJD will be able to provide services to individuals at any point they interact with a DAJD business processes and perhaps more importantly, DAJD will be able to maintain continuity of services for an individual throughout any/all DAJD business processes.

4) ***When is the benefit likely to be achieved?***
Most of the above mentioned benefits would be realized almost immediately upon new JMS implementation. Statistical reporting would be available quickly since the project expects to be able to convert and combine current data from DAJD's Juvenile, Adult, and CCD platforms but would become more accurate over time.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

Executive Summary: As discussed in our submitted Conceptual Review and JMS Business Case, DAJD finds itself with outdated jail management applications and workflow processes that handles short-term, tactical needs sub-optimally while holding jail operations and Criminal Justice partners from scaling efficiently over the long term. The group of outdated, loosely connected, silo applications, inhibits flexibility and reliability, while increasing the cost of maintenance.

A modern and comprehensive Jail Management System (JMS) would, for the first time, allow DAJD to be managed and supported in a holistic manner. The JMS would directly support all five DAJD divisions using one primary system. This holistic approach would also include the Juvenile and Community Corrections Divisions. Today, DAJD makes use of siloed systems to support their various lines-of-businesses and divisions. As an example, today 51 unique applications are used to support DAJD operations. Once our JMS is fully implemented, our new system will fully or partially replace 33 of these existing applications.

In summary, a new, modern Jail Management System (JMS) will allow DAJD to redesign current business work processes with a streamlined, fully integrated business processes that ensures:
   A. Process efficiency across jail operations
   B. Elimination of disparate standalone systems and risk reduction from legacy system failures
   C. Improved visibility to operational data
   D. User Driven process changes
   E. Reduction in integration complexity and cost
   F. Support the transition from paper to electronic

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   A. Process efficiency across jail operations – a common trait of older, legacy jail systems is the disjointed combination of applications and manual processes. As a result, employees are bogged down with inefficient processes, increasing the chance of data entry errors and taking time away from their more important core duties. Important processes such as property, booking, classification, housing, court detail, and releasing, to name a few, can take longer to complete. For instance, correction officers spend hours entering inmate information in the booking system, while other employees reenter the same information into pre-trial or classification systems. Reconciling data changes or correcting data entry errors is time consuming and labor-intensive. Inmate property tracking is done on paper, making it difficult to sift through in cases of disputes. New jail management systems automate such processes, with much tighter integration between core jail operation processes reducing time that would otherwise be required to manage these processes.

   B. Elimination of disparate, standalone systems – the current DAJD jail management processes consists of a combination of disparate inventory of application and systems, some using web services, others ACCESS database. For instance, adult detention core processes including Booking, Pre-trial Management, Classification, among others, reside on web services migrated from the mainframe. While Juvenile, Roster Management, and Staff scheduling reside on separate platforms. Key inventory, lockers, diet management, criminal investigations, to name a few, are managed in ACCESS databases. Time and cost to maintain any integrity or integration between them is significant. Failures in these legacy systems could put the department/county at risk. New jail management systems come with a robust set of integrated jail functions, while being able to tailor processes and applications for comprehensive jail operations.

   C. Improved visibility to operational data – as mentioned above, when processes lack integration, you have multiple, overlapping database, and cannot easily get a complete view of operational data. For instance, staff work schedules are managed in one application, adult inmate booking and charges in another, while juvenile information, in another. The business spends countless hours trying to source, extract, analyze and tie together data for business and operational purposes. New jail management systems, with comprehensive set of integrated functions, allow

information to be accessed instantly, without wasting time on data extraction and tying data from different sources together, employees and management are better informed.

D. <u>User Driven Process Changes</u> – currently, tailoring processes and applications requires database and application changes, and extensive, time-consuming development by KCIT. For example, adding a new Classification process step require database and application change, extensive testing and implementation planning. Modern jail management systems have configurable workflow capabilities, offering a step-by-step path to follow from booking to release that validates processes based on operational specifications.

E. <u>Reduction in integration complexity and cost</u> – our current set of loosely-connected, diverse group of applications and platforms, utilize outdated messaging software to facilitate exchange of information between systems. For example, adding new fields to files shared with other criminal justice agencies requires time-consuming design, development and testing. Modern jail management applications utilize the National Information Exchange Model (NIEM) whose focus is to format and disseminate data in a consistent manner. With KCIT no longer having to maintain multiple systems as well as various integrations between them, operational costs can be reduced.

As outlined in the associated Benefit Worksheet in the JMS Cost-Benefit Analysis document, moving to an integrated JMS will simplify the DAJD maintenance support model that is in place today. Several of the systems used today by DAJD will no longer be required resulting in a substantial savings to their KCIT operations & maintenance budget. It is forecast that $770,218 will be saved in 2021 – the first full year that the JMS will be fully operational. This $770,218 includes the elimination of applications plus the associated infrastructure costs of supporting these applications at the Sabey Data Center. Detailed information is available in the Cost-Benefit Analysis document. However, these cost savings are off-set by the cost of supporting the new JMS.

F. <u>Support the transition from paper to electronic workflow</u> – currently, as offenders are booking in jail, various paper forms containing charges, property, medical, offender interviews, mug shots, etc., some forms requiring supervisor signatures, are placed in a "packet". The "packet" of forms and documents is circulated manually causing delays and limits trace-ability. Paper processes can also result in loss and mistakes that perpetuate risk to the county. Modern Jail Management Systems use automated electronic workflow to create electronic folders, eliminate manual routing, allow digital signatures to documents, and improve trace-ability, reducing delays in the process as well as lowering storage costs of paper documents and less exposure to loss/risk.

In conclusion, due to loosely-connected set of functional systems causing process bottlenecks and staff productivity issues, jails are using sophisticated jail management applications to meet internal and external expectations. A modern, integrated JMS will automate and speed up repeatable processes; readily exchange data with - and learn from - other law enforcement communities; provide better accountability while identifying bottlenecks in the process; enhance fact-driven, real-time decision making with comprehensive set of information; while driving jail staff to focus on higher-value activities.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   In summary, benefit(s) will be achieved when we have the ability to:

- Better utilize jail operations staff through reduction of clerical time spent entering redundant data, fixing data entry errors, and locating pertinent offender information found on paper documents or log books.
- Reduce the amount of filing, printing and manual routing of paper forms by utilizing automated workflow, digital document capture and electronic signature saving time by electronically moving documents around (e.g., booking "packets").
- Easily modify workflow processes and components to accommodate changing business practices, especially in areas of booking, classification, inmate movement, housing and release.
- Reducing potential losses and risk to the county both in terms of modern process improvements that align with the acquisition of a modern system.
- Reduce time spent manually managing data requiring separate data entry. For example, Jail operation staff independently manage stand-alone applications for Booking and Referrals, Inmate Temporary Movement, and Staff Scheduling.
- Integrate stand-alone applications including, but not limited to, key and locker management, facility access, fixed asset management, diet meal management, incident tracking, etc., into a single Jail Management System.
- Reduce Commitment, Classification and Court Screeners time spent determining accurate inmate good time calculations, inmate classification assessment, and offender risk assessment, respectively.
- Conform to data sharing technologies and standards that both, facilitate and expedite, sharing of pertinent information between all our criminal justice agencies including Department of Public Defense, Sheriff's office, Prosecutor's Office, Courts, as well as vendors such as Keefe (commissary) and WSP.
- Utilize adaptable reporting tools that leads to more timely analysis of routine inmate tracking, housing and operational issues, staff and resource utilization, as well the extraction and sharing of information servicing the public.
- KCIT Operations & Maintenance budget reductions will be realized once the JMS is fully implemented and operational. The existing legacy applications will then be sunset and will no longer require support.

As mentioned in the Conceptual Review and JMS Business Case, in 2010, DAJD documented the majority of the current business and process workflows that support jail operations. This was a comprehensive effort and addressed four of the five DAJD divisions (excluded Juvenile) that culminated with a document that identified 2,849 "opportunities for business improvement" that could be realized once a comprehensive Jail Management System was in place.

Below is a sampling of core, repeatable functions targeted for improvements:

Pre-Booking/Property – The benefit will be achieved through reduction of time spent accessing detailed property information when settling disputes. We will measure time spent locating detailed property information for settling inmate disputes.

Booking – Better utilization of operational staff through reduction of time spent completing, filing and printing paper forms, reduction in training time as well as time spent fixing errors. We will measure time spent processing and tracking offender "booking packets" in the system.

Health Screening – This benefit will be achieved with the ability to capture health alerts that are made easily available to other operational staff including classification, court detail, and kitchen services increasing accuracy in housing assignments, transport alerts, and inmate food services. We will measure time spent by food services on identifying medical special diet orders.

Classification – This benefit will be achieved when we have the ability to assign inmates to housing based on department defined criteria, and questionnaire based assessment tool that is objective versus subjective. We will measure the amount of time spent determining inmate placement using subjective methods.

Pre-Trial Screening – This benefit will be achieved upon comprehensive workflow and tighter integration between internal functions such as intake and classification as well as external such as prosecutor's office and court services. We will measure number of missing PR screening assessments.

Court Detail Services – Benefit realization will be achieved when court detail personnel have accurate, timely access to data and helping to simplify the scheduling of inmate movements for events such as court appearances and medical treatments. We will measure the number of medical alerts associated with inmate movements for court appearances. We will also measure the number of discrepancies between court and facility inmate pick-up schedules.

Commitments – This benefit will be achieved upon receiving of accurate, timely data from courts/booking/classification and through the automation of sentence calculations, reducing time spent on manual calculations. We will measure time spent locating booking packets. We will also measure time spent calculating sentence adjustments.

Temporary Location – Benefit realization will be achieved with detailed and timely recordings (e.g., scanning) of all external/internal, scheduled and un-scheduled movements. We will measure transport activity durations by location, method, date and time.

Food Services – This benefit will be achieved upon receiving of timely jail counts at defined periods during the day from operational staff and health services. We will measure time spent obtaining inmate jail location and meal counts.

Facility Visitors – Benefit realization will be achieved with detailed and timely records of inmate visitors and schedules. We will measure the number of inmate visitors as well as visitor authorization, and date/time/duration of visit.

Grievances and Incidents – This benefit will be achieved with ability to capture and manage inmate grievance and incident records electronically, and track staff members involved with filed grievances and incidents. We will measure the time spent responding to grievances and incidents. We will also measure jail areas that receive high levels of incidents.

Releases – This benefit will be achieved with a detailed check list/work flow to manage inmate releases, reducing time spent entering missing data. We will measure time spent entering release data into the system (e.g., release charges, booking, etc.).

Flexible Notes/Comments Throughout system – This benefit will be achieved with increased response to incidents, grievances or inmate caution messages. We will measure time spent making prosecution decision about incidents in the jail.

Alerts, Flags, Indicators – Benefit realization will be achieved with the ability to flag person records that match defined criteria (e.g., health issues, persistent offender, behavioral problems) for a user-specified length of time. We will measure the number of inmate housing

misplacements due to behavior problems. We will also measure the number of incidents due to keep separate indicator.

Report Writing – Benefit realization will be achieved by the ability for staff to generate ad-hoc reports. We will measure time spent generating ad-hoc reports of simple complexity using Report Writer tool.

Electronic Documents – Better utilization of operational staff through reduction of time spent entering data, reduction in training time while increasing data accuracy and reducing amount of time spent fixing errors. We will measure time spent locating and reviewing information in booking packets. We will also measure time spent locating inmate related documents such as incidents, grievances, kites, etc.

Data Dashboard – Benefit realization will be achieved by the ability for management to quickly assess the status and performance of the unit. A data dashboard contains a set of critical graphs and charts designed to assess key jail workloads and performance indicators. We will display data related to average daily populations and facility totals, average length of stay, arresting agencies, booking or admissions, charge related information, classification, health/medical related information, incidents and rule violations, inmate profiles/demographics, jail bed days, jail recidivism, and release related information.

3. *What is the current baseline for this measure?*
At this time, we lack metrics and reports to measure and evaluate process efficiencies due to loosely connected core system supporting inmate booking, criminal history, classification, housing, temp location, staff schedules, release management mixed with manual processes for inmate property, incident tracking, and food services, to name a few.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
It is anticipated that the quality of service, safety, service capacity and efficiency of service will improve in many of the areas of DAJD Operations. However, until a specific vendor proposed solution is selected and fully evaluated it is difficult to determine the precise total improvements that would be realized by the department.

5. *When is the benefit likely to be achieved?*
The actualized benefits of a new Jail Management System will be quantifiable the year after the system is fully deployed into production status. The cumulative benefits will continue to accrue as the system is utilized in production in an ongoing manner and as our external customers become more aware of the greater quality of service and improved data access/accuracy/completeness afforded by the new JMS.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS)

1. Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.

DAJD's current Jail Management System (JMS) consists of a variety of applications developed over the past 40 years, many of which are still fundamentally utilizing software coded in COBOL. These systems are disjointed, lack functionality, are poorly integrated and have limited functionality compared to a modern JMS and yet form the core of DAJD's business process automation.

Key functionality that would significantly enhance today's work flows are not present in the current system forcing many work flows to be a disjointed mix of computer and hand-written steps. Jail personnel are currently required to hand-key data into the JMS from hand-written forms which requires duplicate work, generates errors and reduces data entry. These issues make data analytics difficult and often prevents DAJD from being able to generate integrated metrics across the full spectrum of DAJD business processes.

The Mainframe Re-host Project which was completed in November 2015 moved DAJD's applications/systems away from the Mainframe environment and into modern, up-to-date technologies. However, the Re-host was primarily a hardware upgrade, and the database design and functionality were not improved. DAJD still operates using the same business functions and work-flows based on mainframe programming technology. Integrated data to support reporting and analysis remains fragmented, impeding business process automation and system analytics.

It is difficult to put an estimate on the average life cycle for DAJD's current JMS because it encompasses many roles within the organization. Gartner, Inc., a respected research and advisory firm, identified an approach to reclassify ERP systems and applications based on the role they play in the organization to help develop a level of abstraction and conceptualize ERP roles. Gartner classifies the roles into three groups with an average life cycle to each:

Systems of Record — These are systems that form the foundation for DAJD and manage the information necessary to run our business. Portions of SIP/SeaKing fall within this category. SIP/SeaKing is transaction oriented and are core to financial reporting and regulatory compliance. Systems of Record are most frequently delivered on premises as is the case with SIP/SeaKing. The pace of change for Systems of Record is slow, with a life span that can be measured in one to two decades.

Systems of Differentiation — These are systems that help drive process flow throughout the organization. These systems connect to customers and partners. DAJD uses interfaces with partners such as the Courts, PAO, LEAs, PHS, etc., developed by KCIT. DAJD has also incorporated in-house developed systems such as JIMS, Classification, PTM, and CommCor to expand its capability in developing workflow effectiveness. These systems are more collaborative in nature, and while they leverage data from Systems of Record, they capture and maintain additional information. They're relatively stable and have a life span of anywhere from three to 10 years.

Systems of Transformation — These systems create innovation for the organization. They're often developed out of ad hoc processes and tied to specific initiatives, so they can have very short life cycles. They're driven, developed and funded out of business budgets. They're also highly collaborative and involve both structured and unstructured data. At this time, DAJD is not able to leverage these types of systems. Life cycle is project dependent.

2. If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.

The risk of imminent system failure is a primary catalyst for this project. DAJD estimates that the current SIP/SeaKing systems are reaching a critical stage. These 40 year old systems were developed using the COBOL programming language and developed for mainframe data systems. Neither of these technologies are supported by mainstream developers.

Currently KCIT supports these systems internally, however, the key personnel performing this support are nearing retirement or have the potential to leave KCIT employment at any time. The loss of this support would be problematic for DAJD and the agencies integrated with SIP/SeaKing.

COBOL currently ranks 28th on the TIOBE Programming Community index. The TIOBE Programming Community index is an indicator of the popularity of programming languages. The index is updated once a month. The ratings are based on the number of skilled engineers world-wide, courses and third party vendors. Popular search engines such as Google, Bing, Yahoo!, Wikipedia, Amazon, YouTube and Baidu are used to calculate the ratings. It is important to note that the TIOBE index is not about the best programming language or the language in which most lines of code have been written. The index can be used to check whether a developer's programming skills are still up to date or to assist organizations to make a strategic decision about what programming language should be adopted when starting to build a new software system.

Rank	Language	Ratings	Rank	Language	Ratings
1	Java	16.38%	26	Dart	0.86%
2	C	14.00%	27	Lisp	0.85%
3	C++	7.67%	28	COBOL	0.85%
4	Python	5.19%	29	LabVIEW	0.70%
5	C#	4.40%	30	Bash	0.69%
6	Visual Basic .NET	4.12%	31	D	0.68%
7	PHP	3.32%	32	Logo	0.58%
8	JavaScript	2.92%	33	Scratch	0.54%
9	SQL	1.99%	34	Prolog	0.52%
10	Ruby	1.18%	35	Erlang	0.51%
11	R	1.18%	36	Awk	0.50%
12	Delphi/Object Pascal	1.01%	37	Clojure	0.48%
13	Assembly language	1.00%	38	Alice	0.47%
14	Go	0.97%	39	Lua	0.42%
15	Objective-C	0.94%	40	Fortran	0.42%
16	MATLAB	0.93%	41	OpenCL	0.42%
17	Visual Basic	0.92%	42	ABAP	0.41%
18	Perl	0.91%	43	REXX	0.38%
19	Swift	0.91%	44	Scheme	0.38%
20	Scala	0.90%	45	ML	0.38%
21	Apex	0.90%	46	Julia	0.34%
22	PL/SQL	0.90%	47	ActionScript	0.32%
23	Transact-SQL	0.88%	48	Haskell	0.32%
24	Ada	0.87%	49	Kotlin	0.29%
25	SAS	0.86%	50	RPG	0.28%

It should also be noted that most universities no longer offer COBOL courses which has a significant impact on the number available developers with COBOL programming skills.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
   The proposed new Jail Management System (JMS) will reduce IT investment costs by reducing the current number of applications and systems currently in use by DAJD that have O&M cost incurred from KCIT. The critical systems that are scheduled to be replaced are SIP/SeaKing, Classification, Jail Management Movement (JAMMA), Temp Location, Juvenile Inmate Management (JIMS), Community Corrections (ComCor), Juvenile Inmate Management System (JIMS) – Detention functionality only, and a portion of the Roster Management System that handles Incident Management and Inmate Scheduling/Transport.

   In addition to the critical systems listed above, the JMS will be used to replace several additional peripheral applications which includes a collection of vendor solutions, custom development and MS Access databases. These include systems related to inmate data ranging from inmate classification, location, movements, property, trust fund, and diet.

2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
   DAJD should realize an actual reduction in costs incurred for O&M by KCIT. The metric for this delta will be seen in the difference between current KCIT O&M expenditures and the reductions in those costs once the systems identified for replacement are no longer being maintained by KCIT.

3. ***What is the current baseline?***

#	Potential DAJD Systems to be Replacement by new JMS	Total O&M
1	800 Mhz	$ 2,288.94
2	Access Management (Access DB)	$ 17,295.68
3	Biztalk Platform	$ 8,175.50
4	Booking and Referral System BARS	$ 27,613.74
5	Booking and Referral System BARS (Part of LSJI)	$ 2,277.75
6	Classification	$ 9,835.60
7	COMCOMCOR Community Corrections (RFS 2422)	$ 28,184.56
8	COMCOMCOR Community Corrections (RFS 2422)	$ 17,470.38
9	CRM - DES - Public Records Group	$ 88.68
10	DAJD Access Databases (Parent)	$ 6,272.41

11	eSuperform (Part of LSJI)	$	15,334.07
12	FP DAJD-Adult And Juvenile Detention	$	24,673.86
13	Ingress (Part of LSJI)	$	533.31
14	Jail Inmate Lookup Service	$	21,634.39
15	Jail Inmate Lookup Service (Part of LSJI)	$	779.32
16	JAMMA	$	58,386.40
17	JEMS / CRIMES MugShot (RFS 2378)	$	15,194.93
18	LSJI Application	$	23,018.03
19	LSJ-I Application - DAJD (RFS 3682)	$	22,612.33
20	Pretrial Management	$	7,437.87
21	Quiz	$	15,348.52
22	Sea-King Alert - ACCESS	$	3,067.47
23	SIP/SeaKing	$	925,251.61
24	Temp Location	$	71,553.35
25	WSP WACIC – State/Federal Criminal Justice repository	$	198.57
26	CRIMES (DAJD)	$	5,954.21
27	IIU Case Management System (Access DB)	$	4,099.62
28	Ingress	$	11,031.71
29	zzDPH Jail Inmate Lookup Serv(JILS) -JHS -DECOMMISSION	$	835.13

Current Estimated KCIT Annual Cost $ 1,346,447.96

4. *What is the target for this measure? (How much savings will this project achieve)*
   DAJD should realize an estimated saving of $500,000.00 annually. The logic for this savings is derived by subtracting the estimated annual new JMS O&M costs from current KCIT cost with a small amount retained to cover future KCIT O&M cost needed for working with the new JMS.

Current Estimated KCIT Annual Cost	$ 1,346,447.96
Estimated JMS Vendor Annual Cost	$ -556,800.00
Total Potential Annual Savings	**$ 789,647.96**
Residual annual KCIT cost for replaced systems*	$ -289,647.96
Total Anticipated Annual Savings	**$ 500,000.00**

   *The new JMS will incur residual KCIT costs due to the need to manage integration of JMS with other agencies such as the Courts, PAO, PHS, and other points of integration.

5. *When is the cost reduction likely to be achieved?*
   DAJD should realize these saving within the first year of new JMS implementation planned for 4th Quarter 2020.

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. *For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.*

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *$100,000 savings*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update of 3/18/2019 - Currently the new Jail Management System has begun initial development. During 2018 the project vendor, DXC was on-boarded and initial plans and documentation were developed and delivered. The project plans to begin initial design during the first half of 2019 with UAT testing to begin during 4th quarter 2019. During UAT, the project should be able to begin developing metrics in order to assess future benefit achievements.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Adult and Juvenile Detention
Project Title	RMS Employee Interface
EBS Project Number	1116898

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. **Business Owners are required to be at the deputy department director or higher.**

William Hayes, DAJD Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Steve Larsen	DAJD Chief Admin Officer	Provide supervision of the DAJD IT project manager assigned to this project. Ensure overall business objectives of project are achieved.
~~Jason King~~ ~~Pat Presson~~	~~DAJD Finance Manager~~	~~Ensure changes in payroll and financial reporting processes are consistent and support objectives of efficient and effective process flow.~~
~~Linnaea Joblonski~~ ~~Cynthia McNabb~~	~~DAJD DSM H/R~~	~~Ensure changes in leave management processes and reporting are consistent with management objectives. As a key business representative for DAJD FMLA/Light Duty/Leave Management LEAN event, incorporate LEAN outcomes where appropriate in application process design.~~
~~David Weirich~~	~~DAJD ITR/Admin Captain~~	~~Evaluate workload impacts on leave, annual processing of staff assignments. Provide feedback during development and rollout of project products~~
~~Roderick Dreyer~~	~~DAJD MRJC Administrative Sergeant~~	~~Evaluate workload impacts on his ability to manage officer leave, FMLA/KCFL and assignment reporting and record keeping. Provide feedback during development and rollout of project products~~
~~Cathy Bossett~~	~~DAJD KCCF Administrative Specialist~~	~~Evaluate workload impacts on her ability to manage daily leave, overtime and time reporting and updates for 435 employees. Provide feedback during development and rollout of project products.~~

Section 4. When should the BAPbe started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Examples: conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2014 Budget process	10/25/13	Don DiJulio	Required replacement of 2013 Benefit Realization Report with a new form	10 hours
2014 Q1 Budget Supplem	12/04/13	Don DiJulio	Reviewed only	.25 hours
2014 Annual BAP Reporting	3/9/2014	Don DiJulio	Updated to reflect change in project scope – no IVR phone option; Re-categorized to internal service benefit.	.75 hours
2015 Annual BAP Reporting	2/5/2015	Don DiJulio	Reviewed – Sec#3, New DSM-H/R and updated planned implementation date, from Oct 2014 to Q2-2015	.25 hours
2016 Annual BAP Reporting	2/10/16	Don DiJulio	Reviewed-Sec#6,5 when benefits to be achieved	.5 hours
2016 Annual Report-Update for an ongoing project	2/2/2017	Steve Larsen	Provided comments to Section 6.	.5 hours
Final BAP Reporting	2/7/19	Steve Larsen	Adding details for project close out	.5 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits:** Improving the quality or quantity of services provided to the public
2) **Internal service benefits:** Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

✓ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Updated 2/7/19: Project was scheduled to be closed out in 2017 but due to other priorities wasn't closed out until May 29, 2018 with final closeout report from Latasha Battle. Lessons learned include:
- Need for business Operations representation on oversight committee
- Pilot project proved beneficial is reinforcing "real" business situations versus theoretical ones
- Pilot project proved beneficial in the discovery of business scenarios that people still disagree (e.g., Automatic Leave approval rules)
- Pilot project proved beneficial in identifying gaps in roles and responsibilities (e.g., Emp Leave advisory/supervision)
- Pilot project proved beneficial in identifying alignment gaps between DAJD HR/Payroll/Finance
- Pilot project proved beneficial in identifying additional improvements to the solution before roll out
- **DAJD will explore a new project for submission in 21-22 budget.**

Updated: 02/02/2017: No updates to benefits or targets. The project benefits as outline below are accurate and supported by DAJD. The project is striving to move into full production mode later this year.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The most significant benefit of the project is the efficiencies gained through employee self-entry of requests and the self-management of these requests to keep the information current. Employee self-entry will replace data entry and updates made by supervisor, timekeepers and payroll staff. The change is expected to increase data accuracy and to allow DAJD supervisors, timekeepers and payroll clerks to perform higher valued tasks. The higher value tasks being their primary essential duties of their classifications, supervision, records and payroll reporting and accuracy.

   The empowered employee must address the constraints associated with their leave balance; enter leave types appropriate for leave status; schedule leave within contractual leave limits; and manage their current overtime availability status and preferences for assignment during annual assignment and open transfer periods.

   Operational business needs of DAJD cannot be met by leave entry directly into to PeopleSoft timesheets for a number of reasons. The leave information impacts assignment schedules and assignment backfill needs of operational sections. Most effective and efficient information flow is derived from leave entered directly into a scheduling system that interfaces with the central payroll system. DAJD has implemented and maintained this efficient information flow since the late 1980's.

In addition, most of DAJD payroll information is derived from its scheduling system, the Roster Management System (RMS), to include work hours and schedules, overtime rate determinations for excess hours worked, assignment premiums and holiday accruals among others.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
RMS reporting features will be used to generate a report to count records entered by or modified by employee verses records entered or modified by another user. In simple terms, the higher the involvement of DAJD employees in self-management of these data entry tasks, the greater the benefit. These entries can be counted since RMS tracks all users and their data entry activity.

3. ***What is the current baseline for this measure?***

Description	Baseline
Leave Records Entered by Employee	0%
Leave Modifications by Payroll Clerks	1,100 records/month
Dream Sheet Preferences Entered by Employee	0%
Tracking of Overtime Availability Notice	0%
FMLA Tracking	0%

4. ***What is the target for this measure? (How much improvement will this project achieve?)***

Description	Target
Leave Records Entered by Employee	85%
Leave Modifications by Payroll Clerks	500 records/month
Dream Sheet Preferences Entered by Employee	85%
Tracking of Overtime Availability Notice	Yes Tracking Occurs
FMLA Tracking	75%

5. ***When is the benefit likely to be achieved?***
Majority of the efficiency benefit target levels are expected to be achieved within three years of web interface implementation. Application is currently being piloted by 2 DAJD divisions. Plan is to complete implementation to all divisions by ~~June 2016~~ the end of 2017.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project	*Processing time, annual savings,*	• *10 days processing time*	• *1 day processing time*	• *2 day processing time*

| | reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts. | rece pay and percentage of purchases iving prompt | • 1 a di • 0% of purchases re receiving scount | • 30% of purchases are receiving prompt payment discounts • $400,000 savings | • 20% of purchases are receiving prompt payment discounts • $200,000 savings |

Update of 2/7/2019: This is a final BAP. No further benefits will be achieved at this time since project was closed out in 2018 after implementation in the 2 pilot divisions (CCD and Admin). The DAJD divisions that have implemented the tool have seen efficiencies and can demonstrate self-help with their leave. Role/responsibilities and labor related issues will need to be analyzed before starting again.

Description	Baseline	Target	Result
Leave Records Entered by Employee	0%	85%	Less than 10% - only divisions using leave
Leave Modifications by Payroll Clerks	1,100 records/month	500 records/month	using EI require only Bulk of department still using paper so
Dream Sheet Preferences Entered by Employee	0%	85%	No, 0%
Tracking of Overtime Availability Notice	0%	Yes Tracking Occurs	No, 0%
FMLA Tracking	0%	75%	No, 0%

IT Project Benefits Achievement Plan (Version 2)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
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3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	DCHS
Project Title	Behavioral Health Integration
Project Number	1126543

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Kelli Nomura, DCHS-BHRD Interim Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Susan McLaughlin	Health and Human Services Integration Manager, DCHS/BHRD	Project Sponsor
Michael Csendes	IT Supervisor, DCHS	Technical Lead
Geir Engelsvold	KCIT SDM	IT Lead
Kelli Nomura	Interim Division Director, BHRD	Articulate and lead vision for how this system functions
Juliette Peze	KCIT	Business Analyst
Karen Spoelman	BHRD	Subject Matter Expert
Michael Reading	BHRD	Chief of Operations

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

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Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual Review	04/20/15	Ron Bishop	New	
Budget Process	8/12/15	Susan McLaughlin, Latasha Battle	Update	2 hours
2016 Annual BAP Report	1/30/17	Susan McLaughlin	BAP update for a completed project. Updated Sections 3 and 7.	1 hour
2019 Annual BAP Report	2/6/2019	Michael Reading	BAP update in Sections 2, 3 and 7. Met all targets, remaining funds will be used for the required and mandated work as a Mid-Adopter and the work of IMC.	1 hour
2019 Biennial BAP Report	3/22/19	Emmy McConnell	Finalized Section 7	30 min

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
   1) **External service benefits**: Improving the quality or quantity of services provided to the public
   2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
   3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
   4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Complete, accurate and timely information is critical to the management of all aspects of the Behavioral Health Organization in King County. The integrated data consolidation project provides the infrastructure and technology for providers to submit, in specific and required formats, all necessary mental health and substance abuse treatment service data for reporting, payment, and quality management. This project will benefit both the providers and the individuals they serve by ensuring timely payment, and by allowing access to integrated data about a client to ensure a holistic approach to care.

   Benefit #1 (B1) – Accurate and timely payment to providers. Receiving payment in a timely manner is critical to the operations of our behavioral health network. Providing the infrastructure for providers to easily submit electronic data for both MH and SUD services will ensure that payments can be processed quickly and providers can be paid in a timely manner.

   Benefit #2 (B2) – Improved coordination of care. Having a data system that integrates mental health and substance abuse data, and ultimately other data sets, gives providers more comprehensive information about the individuals they are treating so that they can provide better, more coordinated services. This will lead to better outcomes for our clients as they receive more holistic

services that address their full range of needs and not just a set of specific symptoms.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   B1 Measure –Percent of providers paid within 60 days of required data submission.
   MHCADSD will track the percent of providers who are paid within 60 days of their submission of required data to ensure timely payment to the provider network. We will also track the reasons providers are not paid within the timeframe so that any necessary adjustments or improvements can be made.

   B2 Measure – The percent of providers who access and utilize integrated client data to coordinate care for individuals enrolled in service. MHCADSD will review provider coordination of care during annual site visits beginning in 2017.

3. *What is the current baseline for this measure?*
   B1 Baseline –Percent of providers paid within 60 days of required data submission.
   We do not currently measure this metric.

   B2 Baseline – Percent of providers who access and utilize integrated client data to integrate care for individuals enrolled in service. Currently MHCADSD reviews provider coordination of care during annual site visits but it is a manual process because providers do not have access to electronic information about a client's services being provided by other systems

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   B1 Measure Target – 100% of contracted behavioral health providers who submit required data receive payment within 60 days.
   B2 Measure Target – During the 2017 site visits, 50% of contracted behavioral health providers will demonstrate evidence of coordinated services for individuals with co-occurring mental health and substance abuse disorders. This target will increase by 25% in the subsequent years.

5. *When is the benefit likely to be achieved?*
   B1 Measure target date: For existing providers, the measure target will be tracked monthly and we expect to meet the measure target by 6 months after project implementation (October 2016). For new providers, we anticipate a learning process will be necessary to become familiar with required data submissions, and so plan to meet the 100% measure target within 1 year (April 2017) and will track progress monthly toward that goal.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators

at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   This project will expand the existing mental health data system to include substance abuse data which will allow King County to comply with the requirements of operating a Behavioral Health Organization as defined in Engrossed Second Substitute Senate Bill 6312 and our state contract with the Division of Behavioral Health and Recovery effective April 1, 2016. If King County does not implement this change by April 1, 2016, we will no longer be eligible for Medicaid funding for mental health or substance abuse funding, which totals about $300 million per biennium.

   This project will upgrade the current mental health database from Informix to SQL Server. This upgrade is necessary to bring the database in alignment with KCIT standards.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

Category #4: Reduced cost to produce service (external or internal) or cost avoidance. This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to

less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing time, annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving prompt payment discounts* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *Savings of $400,000*	• *2 days processing time* • *20% of purchases are receiving prompt payment discounts* • *Savings of $200,000*

Update of March 2019: This is a final BAP. This project met the target benefits. One target measure was fully met (accurate and timely payment to providers) as originally described. The other target benefit (improved coordination) was not measured as originally planned, because site visits were not conducted in 2017. Instead, DCHS has provided a different measure that shows improved client coordination.

Metric Description	Metrics	Baseline	Target	Actual
Accurate and timely payment to providers.	Percent providers who are paid within 60 days of submission of required data.	This metric is new and no baseline data was available	100% of contracted behavioral health providers who submit required data receive payment within 60 days	100% of contracted outpatient behavioral health providers who submit required data received payment within 60 days.
Improved coordination of care for people with co-occurring mental health and substance use disorders.	Percent providers who access and utilize integrated client data to coordinate care for individuals enrolled in mental health and substance use disorder treatment.	No baseline data available. Providers do not currently have electronic access to information about a client's services being provided by other systems.	During the 2017 site visits, 50% of contracted behavioral health providers will demonstrate evidence of coordinated services for individuals with co-occurring mental health and substance use disorder. This target will increase by 25% in the subsequent years.	~~2017 provider site visits have not started yet. The BHO has been operating for less than a year so no data is available yet.~~ Clients enrolled in both a MH and SUD outpatient benefit increased from 926 on 4/1/2016 to 1,612 on 2/6/2019. Clients enrolled in a co-occurring disorder benefit increased from 27 on 10/1/2017 to 92 on 2/6/2019. Additionally, increased integrated client data is available for providers to access to increase coordination of care.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Department of Community and Human Services
Project Title	DCHS Case Management Tool Modernization
Project Number	1134637
Project Timeframe	2019-2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Josephine Wong, Deputy Director, Department of Community and Human Services

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Bryan Fry	Special Projects Manager III, DCHS	Subject Matter Expert
Jennifer Coldiron	Chief of Performance Measurement and Evaluation, DCHS	Primary Business Contact
Leo Flor	Director, DCHS	Subject Matter Expert
Jennifer Hill	PPM III, Work Training Program, DCHS	Subject Matter Expert
Greg Demieville	Application Developer, KCIT	Subject Matter Expert
Josephine Wong	Deputy Director, DCHS	Business Owner/Sponsor

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.

5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-2020 Budget Process	5/21/18	Jennifer Coldiron	New draft	1 hour
2019-2020 Budget Process	7/24/18	Jennifer Coldiron	Updated sections 5, 6 and 7	1 hour
2019-2020 Budget Process	9/7/18	Emmy McConnell	Minor editing changes	1 hour
2019 BAP Report	2/8/19	Josephine Wong	Minor editing changes	1 hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
 1) **External service benefits**: Improving the quality or quantity of services provided to the public
 2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
 3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
 4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☒
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Employment and Education Resources (EER) and the King County Veterans Program (KCVP) both provide direct services to clients. These programs are currently using applications running on outdated IT platforms to manage their client information. These outdated platforms do not easily facilitate reporting and analyzing data internally within DCHS, and KCIT is needed to support many of the data and reporting requests for these programs.

   The data collected using a modernized client information management system would be able to be more easily managed and reported on by DCHS evaluation staff, and to be extracted and uploaded into internal program performance reporting tools for eventual consolidated reporting.

   The expected benefits would include:
   - KCVP will be able to efficiently report data for Veterans, Seniors and Human Services Levy (VSHSL) reporting requirements.
   - EER youth programs that are funded by the Best Starts for Kids (BSK) Levy will be able to efficiently report data for BSK reporting requirements.
   - KCVP and EER staff will have access to a modern information management system that offers flexible and real-time access to data reports useful for case management and program improvement
   - DCHS evaluation staff would be able to have broader access to relevant program data and be able to support the data needs of program staff

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Please see Section 7.

3. *What is the current baseline for this measure?*
   Please see Section 7.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   Please see Section 7.

5. *When is the benefit likely to be achieved?*
   By the end of 2020.

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
KCVP and EER will be able to efficiently meet	# of sites that have internal reporting automated or easily	Neither program	Both programs	12/31/2020

internal reporting requirements	managed by DCHS staff without KCIT assistance			
Modern data system that facilitates efficient reporting and analysis	% of staff who have access to up-to-date data via an easily accessible and flexible dashboard	30%	100% of staff	12/31/2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   Employment and Education Resources (EER) and the King County Veterans Program (KCVP) both provide direct services to clients. These programs are currently using applications running on outdated IT platforms to manage their client information. We need to modernize this process, by replacing the outdated applications with applications running on current technologies.

   Currently, KCVP and several EER programs (Career Connections and the King County Jobs Initiative) provide case management to clients using the VIBE application. Case managers use VIBE to conduct assessments, record case notes, service encounters, and record client outcomes. The VIBE application is built in Power Builder and is maintained by KCIT.

   For similar case management needs, the EER youth programs use WTP, a database built in Microsoft Access.

   Since KCIT will no longer support Power Builder or Microsoft Access in the future, both VIBE and WTP need to be replaced by a new client information management system. If these tools fail or need to be altered and are not being maintained by KCIT, the programs will cease to be able to provide services to their clients and/or staff will be extremely burdened with having to find workarounds to broken systems.

   The expected benefit would be:
   - KCIT will be able to support the IT tools that DCHS staff use for direct service provision to clients

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
   The probability of the system becoming inoperable is extremely high as web browsers and operating systems continue to get updated, interoperability becomes a concern. Additionally, if the programs need additional features or requirements, KCIT would not be able to address them.

3. Summary Table for Benefit Category #3:

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
KCIT will be able to support the IT tools that DCHS staff use for direct service provision to clients	% of client information management tools supported by KCIT	KCIT planned to phase out older platforms (0%)	100%	By 12/31/2020

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update of March 2019: This is a new project that has not yet started. It will begin in Q3 2019.

Metric Description	Metrics	Baseline	Target	Actual
KCVP and EER will be able to efficiently meet internal reporting requirements	# of sites that have internal reporting automated or easily managed by DCHS staff without KCIT assistance	Neither program (0%)	Both programs (100%)	
Modern data system that facilitates efficient reporting and analysis	% of staff who have access to up-to-date data via an easily accessible and flexible dashboard	30%	100%	
KCIT will be able to support the IT tools that DCHS staff use for direct service provision to clients	% of client information management tools supported by KCIT	KCIT planned to phase out older platform (0%)	100%	

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/ Agency Name	Department of Community and Human Services
Project Title	Client Outcomes Reporting Engine (CORE) [formerly Client-Level Program Performance Reporting Tool (CLPPRT)]
Project Number	1134636
Project Timeframe	2019-2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Josephine Wong, Deputy Director, Department of Community and Human Services

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Jennifer Coldiron	Chief of Performance Measurement and Evaluation/DCHS	Primary Business Contact
Noa Kay	VSHSL Evaluator/DCHS	Subject Matter Expert
Emily Greenberg	BSK Evaluator/DCHS	Subject Matter Expert
Michael Della Santa	MIDD Evaluator/DCHS	Subject Matter Expert
Glen Beckman	Database Specialist/DCHS	Subject Matter Expert
Elena Romani	DDD Evaluator / DCHS	Subject Matter Expert
Yvonne Humenay Roberts	DCHS Initiatives Evaluation Manager	Subject Matter Expert
Magan Cromar	Division Director / Developmental Disabilities, DCHS	Subject Matter Expert
Meghan Humphries	KCIT Project Manager	KCIT Project Manager
Alex Jacobson	KCIT Business Analyst	KCIT Business Analyst
Geir Engelsvold	KCIT Service Delivery Manager	KCIT Service Delivery Manager

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Biennial Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-2020 Budget Process	3/23/18	Jennifer Coldiron	New draft	2 hours
2019-2020 Budget Process	7/24/18	Jennifer Coldiron	Updated section 6; Completed section 7	1 hour
2019-2020 Budget Process	9/7/18	Emmy McConnell	Minor editing changes	1 hour
2019 BAP Report	1/31/19	Jennifer Coldiron	Edited Section 3 of those involved in the BAP, project title	1 hour

Section 6. Description of Project Benefits

Identify the category(-ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   DCHS's three levies (Best Start for Kids (BSK); Veterans, Seniors and Human Services Levy (VSHSL); and Mental Illness Drug Dependency (MIDD)), as well as the Developmental Disabilities Division (DDD) need a scalable means to capture data required from the contracted agencies and compare contractual targets to real performance measures.

   As the number of contracted agencies increases throughout the tenure of the BSK and VSHSL levies, more and more data will need to be validated and measured against contractual obligations. Without the implementation of a data collection system and reporting solution, the already stretched-thin DCHS evaluation staff will be further bogged down with more of the same manual processes. Acquiring a data collection system and reporting solution will allow staff to focus their efforts instead on making DCHS programs better for the constituency. This is a high priority because in October, the VSHSL data will begin to arrive to DCHS staff with only a very manual solution to process the data. BSK data is also about to greatly increase as new strategies and associated providers are launched.

   DDD has similar manual steps in their reporting and payment processes.

   The expected benefits would include:
   Benefit #1 (B1) – Facilitate the evaluation of client-level outcomes and trends, and thus have better assessment of program impact and ability to hold agencies accountable for performance.
   Benefit #2 (B2) – Streamline data acquisition activities and reduce manual manipulation of the data.
   Benefit #3 (B3) – Modernize current data systems, allowing for better and more efficient analysis and reporting, as well as data integration across programs, divisions, and departments.
   Benefit #4 (B4) – Ability to comply with Council's Consolidated Reporting Proviso.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   See Section 7

3. ***What is the current baseline for this measure?***
   See Section 7

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   See Section 7

5. ***When is the benefit likely to be achieved?***

Benefits will likely be achieved by the end of the first year after data system implementation, and especially once a full calendar year of client-level data has been collected in the system and can be fully utilized for annual reporting. Easing of burden on providers will happen as soon as they have converted to the new system, and providers and program staff will have near immediate benefits of having more timely and transparent access to the data that has been submitted to DCHS.

CATEGORY #3: **Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.**

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

CATEGORY #4: **Reduced cost to produce service (external or internal) or cost avoidance**
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

<u>Update of March 2019: This is an ongoing project that is just beginning. It is currently on track (updated 3/1/2019).</u>

Metric Description	Metrics	Baseline	Target	Actual
Ability to evaluate client-level outcomes and trends, specifically for VSHSL	% of VSHSL strategies that report activities and outcomes at a client level	0% of VSHSL strategies	100% of VSHSL strategies deemed appropriate for client-level reporting	
Streamlined data acquisition activities, specifically for BSK, DDD, and MIDD	% of providers that submit spreadsheets or other data that require manual processing and checking by DCHS staff	• 100% of DDD providers • 100% of BSK providers • 50% of MIDD providers	• 0% of DDD providers • 0% of BSK providers • 0% of MIDD providers	
Modern data system that facilitates efficient reporting and analysis	% of program areas for which program and provider staff have access to up-to-date data via an easily accessible dashboard	0% of program areas	100% of program areas that require client-level data submission to DCHS	

Ability to consolidate reporting for BSK, VSHSL, and MIDD	Production of a consolidated annual report across the three programs	There is no baseline.	By 2022 BSK, VSHSL, and MIDD will be able to produce a consolidated report of their impact on King County residents

IT Project Benefits Achievement Plan (Version 2)

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For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/ Agency Name	DCHS/ Behavioral Health Recovery Division (BHRD)
Project Title	Integrated Managed Care (IMC) Phase 1 (previously: Physical Behavioral Health Integration (PBHI))
Project Number	1129637

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Kelli Nomura, Behavioral Health and Recovery Division Interim Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Josephine Wong	DCHS Deputy Director	Project Contact
Michael Csendes	IT Supervisor, DCHS	Technical Lead
Geir Engelsvold	KCIT SDM	IT Lead
Kelli Nomura	BHRD Interim Director	Articulate & lead vision for how this system functions
Karen Spoelman	BHRD, Chief of Contracting	Subject Matter Expert
Michael Reading	BHRD, Chief of Operations	Subject Matter Expert

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.

4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process	7/1/16	Susan McLaughlin	New Initial Draft	4 hours
2016 Annual BAP Report	1/30/17	Susan McLaughlin	No major changes, only names in Section 3.	1 hour
2019 BAP Report (completed project, not final BAP)	2/12/19	Michael Reading	Section 6 updated to reflect current project scope.	2 hour

Section 6. Description of Project Benefits

Identify the category(-ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

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CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

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1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

Integrated physical and behavioral health care produces the best outcomes and is the most effective approach to caring for people with complex ~~health and~~ behavioral healthcare needs. If approved, the physical and behavioral health integration (PBHI) data project will provide the infrastructure and technology for King County to operate as ~~a fully integrated~~an integrated ~~managed care organization~~care network (ICN)~~, assuming full risk and responsibility for the Medicaid physical and behavioral health care programs for the region~~. This includes creating mechanisms for providers to submit, in specific and required formats, all necessary ~~health and~~ behavioral health (~~including~~mental health and substance use disorders) service data for reporting, payment, and quality management. Furthermore, it will create pathways for seamless exchange of ~~physical and~~ behavioral health care data with ~~other~~ the five managed care entities for purposes of billing, payment, quality management, and client care coordination.

The expected benefits would include:

Benefit #1 (B1) - Accurate and timely payment to providers
As ~~the role and associated responsibilities~~ a mid adopter, ~~for King County expands to include physical health care,~~ it will be imperative that the County's data systems can interact with and exchange data with the five~~other~~ managed care organizations to assure billing, payment, service encounter and quality management for the entire continuum of care can be processed and managed in a timely way. ~~If the~~The County ~~takes on~~continues with the responsibility ~~for physical and~~ behavioral healthcare services for the Medicaid program, the number of covered lives would increase significantly as would the number of service encounters that would need to be processed. Receiving payment in a timely manner is critical to the operations of an integrated treatment system.

Providing the infrastructure for providers to easily submit electronic data for physical and behavioral health will ensure that claims can be processed quickly and providers can be paid in a timely manner.

Benefit #2 (B2) - Improved coordination of care
Having a data system that ~~integrates physical and behavioral health data and~~ seamlessly exchanges information with ~~other~~ the managed care organizations ~~gives~~ will provide more comprehensive information about the individuals they are treating so that they can provide better and ~~, more~~ coordinated services. This will lead to a more holistic approach to client care resulting in improved health and a better experience for clients as well as reduced costs to the system.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   B1 Measure – Percent of providers paid within 60 days of valid encounter data submission
   BHRD will track the percent of providers who are paid within 60 days of their submission of valid encounter data to ensure timely payment to the provider network. We will also track the reasons providers are not paid within that timeframe so that any necessary adjustments or improvements can be made. Beginning one year after the implementation date, BHRD will conduct an annual provider survey to determine provider satisfaction with the billing and payment system and timeliness of payment.

   B2 Measure – The percent of providers who access and utilize integrated client data to coordinate care for individuals enrolled in services
   BHRD will review provider coordination of care during annual site visits beginning one year after the implementation date. This measure will be further refined in subsequent years with implementation of a more outcome oriented measure of success by year 3.

3. *What is the current baseline for this measure?*
   B1 Baseline –Percent of providers paid within 60 days of valid encounter data submission (BHRD does not currently exchange data with or pay for services directly to community health centers so we do not have a baseline for this measurement. However, for similar functions for our behavioral health network today, we currently pay 100% of providers within 60 days of valid encounter data submissions to BHRD.)

   B2 Baseline – Percent of providers who access and utilize integrated client data to integrate care for individuals enrolled in service submission (BHRD does not currently contract with community health centers and therefore they do not have access to the behavioral health client data base.)

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   B1 Measure Target – 100% of contracted behavioral health providers who submit valid encounter data receive payment within 60 days.

   B2 Measure Target – During the first scheduled site visits, 50% of contracted behavioral health providers will demonstrate evidence of coordinated services for individuals with co-occurring mental health and substance abuse disorders. This target will increase by 25% in the subsequent years.

5. *When is the benefit likely to be achieved?*
   B1 Measure Timeline – within ~~6~~ 12 months of implementation

B2 Measure Timeline – initial target within ~~one year~~18 months of implementation with ongoing improvement over time

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
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CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
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Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

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3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

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Example:

Metric Description	Metrics	Baseline	Target	Actual

Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings
Update of March 2019: This project was completed at the end of 2019. Benefits will be measured during 2019 and reported on in next year's annual report.				

IT Project Benefits Achievement Plan (Version 2)

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4. To ensure that benefits are achieved

King County Department/ Agency Name	DCHS, PHSKC (DPH)
Project Title	Data Integration DCHS & DPH
Project Number	1129638

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Leo Flor (DCHS);   Patty Hayes (PHSKC)

Section 3. Who is involved in developing the BAP?

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Name	Title / Agency	Project Role
Josephine Wong	Deputy Director, (DCHS)	Project Co-Contact
Marguerite Ro	Chief, Assessment, Policy Development and Evaluation Unit (PHSKC)	Project Co-Contact
Amy Laurent	Epidemiologist III (PHSKC)	Project rep
Carolina Johnson	Behavioral Health Innovations Evaluator (DCHS)	Project rep
Debra Srebnik	Population Health Specialist (DCHS)	Clinical use consultant
Gier Engelsvold	KCIT – Services Delivery Manager (DCHS)	SDM rep for DCHS
Diep Nguyen	KCIT – Services Delivery Manager (PHSKC)	SDM rep for PHSKC
Mike West	PPM IV (DAJD)	Privacy/security of DAJD data
Monika Tzoneva	PPM III (DCHS)	Compliance / Privacy officer
Mary Jane Alexander	Compliance Manager (PHSKC)	Privacy officer
Charlie Bozonier	KCIT – Business Analysis Services Owner	Lead business analyst
Krutika Nagar	KCIT – Business analyst	

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
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5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

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Conceptual review	6/14/16	Debra Srebnik	New, initial draft	2 hours
Funding release	10/1/16			
Clarified BAP	10/5/16	Debra Srebnik	Focused on primary benefit, clarified benefits and targets	2 hours
2016 Annual Report	1/23/17	Debra Srebnik	BAP update for a new project that starts in 2017. Updated sections 3 and 6.	1 hour
2019 BAP Report	1/22/2019	Carolina Johnson	BAP update for project in development in 2018, continuing into 2019. Updated sections 2, 3, 6	1 hour

Section 6. Description of Project Benefits

Identify the category(-ies) of benefits your project will provide and include narrative descriptions of estimated

benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1: External service benefits: Improving quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   With limited exceptions (e.g., high utilizer database, ECLS, etc.), DCHS and PHSKC data systems are largely not integrated. As a result, providers do not have information needed regarding client housing, health, and behavioral healthcare utilization to make appropriate and efficient care decisions. Treatment plan and care coordination opportunities are missed, and clinical efforts are often duplicated and misaligned.

   King County already serves as the repository for cross-sector health and human services data (detailed in #2 below). The proposed project will integrate client-level data that is already stored within DCHS, PHSKC, and DAJD. It will build on existing tools to access the integrated data to (a) enable individual client "lookup" for direct care coordination and (b) identify high risk groups, based on flexible criteria, for system-level care coordination.

   The data system function of (a) enabling individual client lookup will promote whole person care,

avoid care gaps that could present health risks, avoid duplication of effort, and alert providers to take action for sentinel events (e.g. hospitalization, loss of housing, incarceration). The system's ability to assist with (b) identifying high risk groups would help meet state managed care/behavioral health organization (MCO-BHO) requirements for care coordination, aims of the related federally-required performance improvement project, and aims of planned MCO-Jail Health collaboration to conduct care coordination.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
One measurable outcome will be user reported satisfaction with the integrated data system to access relevant data sources for care coordination. Users will be the clinical line staff accessing the integrated data platform. A second measurable outcome will be the number of datasets integrated and available to users.

3. *What is the current baseline for this measure?*
We will obtain a baseline measure of user satisfaction via a satisfaction survey of intended clinical staff users (behavioral health provider network, Jail Health Service staff, Managed Care Organization (MCO) healthcare care coordinators). The survey will assess user baseline satisfaction with their ability to access relevant data sources that show care providers with whom clients are connected (e.g., healthcare providers, behavioral health providers, housing providers, etc.). Based on key informant interviews that have already been conducted, baseline user satisfaction is very low, and this information has informed initial conceptual work and prioritization of datasets for integration.

Our baseline datasets integrated and available to users currently include only behavioral health care provider connections (mental health, sobering center, outpatient substance use treatment).

During fall 2016, KCIT business analysts led an initial scoping process to ascertain use cases from nearly 100 key informants including clinical line staff, housing providers, criminal justice stakeholders, and data analysts from both DCHS and PHSKC. Their input has established the boundaries of the work and set the stage for baseline measurement of user satisfaction.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
The target for the user satisfaction survey will be a 60% rating of "satisfied' or 'very satisfied' with their ability to access relevant information for care coordination during the first year after project completion, 70% during the second year and 80% during the third year.

The target for the number of datasets integrated to support the users will be the addition of the following three datasets that show connections to additional health, behavioral health and housing providers:
- Medicaid eligibility files - that shows MCO and healthcare provider connections
- ~~Jail Health Services~~
- Behavioral Health authorizations and service data (updated 1/22/19)
- HMIS – that shows connection to housing providers

5. *When is the benefit likely to be achieved?*
KCIT estimates that the final end-to-end testing and transition to operations and maintenance of the backend database will be complete by March 14, 2019, with user access to individual integrated client data available by March 30, 2019. ~~KCIT estimates that the project will take ~18 months to complete i.e., by June 30, 2018.~~ Satisfaction data from all users will be collected, analyzed and

summarized during the first, second and third years after project completion. ~~date – i.e., by June 30, 2019, 2020 and 2021. Determination of the whether the project has reached its target of integrating the three additional datasets will be made by June 30, 2018.~~ (updated 1/22/19)

CATEGORY #2: **Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.**

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

CATEGORY #3: **Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.**

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

CATEGORY #4: **Reduced cost to produce service (external or internal) or cost avoidance**
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

This is an ongoing project. Much of the work was completed in 2018, and the project will be operating by the end of Q1 2019. (updated 3/5/2019).

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	DCHS
Project Title	DMHP and Public Safety Project
Project Number	1117281

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Kelli Nomura, Interim Division Director, Behavioral Health and Recovery Division, King County Department of Community and Human Services (DCHS)

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Kelli Nomura	Interim Division Director, Behavioral Health and Recovery Division/ DCHS	Project Sponsor
Brad Finegood	Assistant Division Director, Behavioral Health and Recovery Division/DCHS	Additional Sponsor
Diane Swanberg	Coordinator, Crisis and Commitment Services/ DCHS	BAP updates

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there

are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Annual report	01/24/14	Cherie Jones	New - Initial draft	6 hours
2014 Annual Report	10/16/15	Diane Swanberg	Updated benefit achievement results.	
2015 Annual Report	2/26/16	Diane Swanberg	Reviewed BAP update from 10/16/2015 to ensure it was still accurate. No changes were made.	1 hour
2016 Annual Report	2/1/2017	Diane Swanberg	BAP updated for completed project	1 hour
2017 Annual Report	3/6/2018	Diane Swanberg	BAP updated for completed project. Final BAP.	1 hour
2019 BAP Report	3/4/2019	Emmy McConnell	Review only	½ hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

	Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The Crisis and Commitment Services (CCS) files used by Designated Mental Health Professionals (DMHPs) are currently paper-based and reviewing them is a time-consuming process, often requiring a return trip to the Chinook Building from the field to search in clinical records for important client information. This situation can result in either a delayed response, putting the safety of the public at risk, or a response with incomplete information, putting the safety of both the public and the DMHP at risk.

   The clinical record for a client includes the following safety-related information:
   - Previous incidents in which the client posed a danger to others
   - Previous incidents in which the client posed a danger to themselves
   - Previous incidents in which the client wielded a weapon
   - Mentally Ill Offender history, including history of violent acts
   - Date of last homicide inflicted by the client
   - Date of last non-fatal injury inflicted by the client
   - Date of last attempted suicide
   - Date of last property damage inflicted by the client

   The DMHP and Public Safety Project will implement a solution that will provide the DMHPs with mobile access to clinical records, including scanned clinical and electronic court documents. The project will improve the safety of the public and the DMHPs by providing the DMHPs with the information they need to move forward with psychiatric detentions quickly and appropriately.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   While the ultimate achievement of increased safety is difficult to measure, this benefit should be evident through a substantial reduction in the number of times a DMHP responds to a client evaluation call without the opportunity to review the case file prior to response. This occurs most often during the night and weekend shifts. During regular business hours staff in the office can provide the DMHPs with client history over the phone if needed.

   Staff working night and weekend shifts will track the number of times in a 7-day period they respond to a client evaluation call without the opportunity to review the case file prior to response. This

count will be conducted prior to implementation of the DMHP Mobile Solution to establish the baseline and again 3 months after implementation to assess improvement.

3. ***What is the current baseline for this measure?***
Prior to implementation of the DMHP Mobile Solution, staff working night and weekend shifts responded to a client evaluation call without the opportunity to review the case file prior to response a total of 28 times in a 7-day period.

Baseline

28

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
While occasional scheduled or unexpected downtime of the DMHP Mobile Solution will prevent a complete elimination of responding to a client evaluation call without first reviewing the case file, such instances should be extremely rare. The target for this measure is no more than 1 occurrence in a 7-day period.

Target

1

5. ***When is the benefit likely to be achieved?***
The benefit should be achieved within 3 months of implementation. Nevertheless, full realization of this benefit is dependent on consistent, uninterrupted service from the KCIT Enterprise network, VPN, and EDMS solutions. Any downtime, however brief that downtime may be, will detract from project benefits and jeopardize the safety of both the DMHPs and the general public.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
The Crisis and Commitment Services (CCS) files used by Designated Mental Health Professionals (DMHPs) are currently paper-based and reviewing them is a time-consuming process, often requiring a return trip to the Chinook Building from the field to search in clinical records for important client information. Even when the DMHP is able to obtain the needed information over the phone rather than returning to the office, productivity suffers as a staff member in the office needs to set aside their own work, look up the information needed, and then read it to the DMHP over the phone. The DMHP and Public Safety Project will implement a solution that will provide the DMHPs with mobile access to clinical records and an extensive repository of resources, including policies and procedures, statutes, protocols, contact information, court calendar information, and treatment facility information. All resource information can be centrally updated and immediately available to all staff, eliminating the need to distribute notices and/or updated printed versions of resources

whenever anything changes. The project will increase staff efficiency by providing DMHPs with the information they need to move forward with psychiatric detentions quickly and appropriately.

When working in teams, staff will be able to review case files in the car en route to the client rather than spending time in the office reviewing case files prior to leaving, and a DMHP can review case files for new assignments while out in the field. Additionally, having a mobile device will allow a DMHP to make effective use of time that is currently spent waiting for various other professionals, such as police, emergency transport, admission screeners, etc. by allowing the DMHP to review the file for an upcoming case, write up their case notes, update system data or notes, or perform a variety of other tasks that are currently performed in the office.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The primary benefit of increased staff efficiency will be evident through a number of measures. Implementation of the DMHP Mobile Solution will reduce the number of return trips the DMHPs make from the field to the office and the number of times the DMHPs call the office to obtain needed information over the phone. Staff will track the number of times in a 7-day period they return to the office from the field during a work shift for the specific purpose of reviewing a case file or call the office to obtain case or resource information. This count will be conducted prior to implementation of the DMHP Mobile Solution to establish the baseline and again 3 months after implementation to assess improvement.

   The ability to perform work during time that is currently spent waiting for other professionals should increase the percentage of staff time spent in the field vs. in the office during a client evaluation/ outreach work shift. Using a survey questionnaire, each DMHP will be asked to estimate the average amount of time spent in the office during a client evaluation/outreach work shift, including:
   - Time spent in the office between receiving an assignment and going into the field (reviewing the case file, etc.)
   - Time spent in the office reviewing a case file if a return trip is necessary mid-shift
   - Time spent in the office at the end of a shift (writing up case notes, updating system data or notes, etc.)

   This survey will be conducted prior to implementation of the DMHP Mobile Solution to establish baseline practices and again 6 months after implementation to assess changes.

3. *What is the current baseline for this measure?*
   Prior to implementation of the DMHP Mobile Solution, staff returned to the office from the field during a work shift for the specific purpose of reviewing a case file or called the office to obtain case or resource information a total of 15 times in a 7-day period.

   Baseline
   15

   Prior to implementation of the DMHP Mobile Solution, staff spent an average of 60 minutes in the office during a client evaluation/outreach work shift.

   Baseline
   60

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   While occasional scheduled or unexpected downtime of the DMHP Mobile Solution will prevent a complete elimination of return trips to the office or phone calls to the office to obtain case or resource information, such instances should be extremely rare. The target for this measure is no more than 1 occurrence in a 7-day period.

   Target
   1

With the ability to use time in the field more productively, the target for this measure is a 30% reduction in the amount of time spent in the office, which equates to a target of 18 minutes.

Target
18

5. ***When is the benefit likely to be achieved?***
The benefit of a reduction in the number of times staff return to the office from the field during a work shift for the specific purpose of reviewing a case file <u>or</u> call the office to obtain case or resource information should be achieved within 3 months of implementation. Nevertheless, full realization of this benefit is dependent on consistent, uninterrupted service from the KCIT Enterprise network, VPN, and EDMS solutions. Any downtime, however brief that downtime may be, will detract from project benefits and impede staff efficiency.

As DMHPs will require some time to learn all the ways in which they can use their time in the field more productively and adapt their work processes accordingly, the benefit of an increase in the percentage of staff time spent in the field vs. in the office during a work shift will likely be achieved 6 months or more after implementation.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
The existing application, known as Lola, is built on a PowerBuilder platform, which is based on traditional desktop-based client-server technology. Client-server technology, however, is cumbersome in comparison to web-based technology. It requires software to be installed on each machine from which a user would access the application. Any change, even a very small change, requires recompilation of the code and deployment of the new version to each machine that has the application. Conversely, a web-based application only requires that a web browser be installed on the user's machine. The new version of an application is simply loaded on the web server and all users immediately have access to it.

As an organization, King County Information Technology (KCIT) is moving away from desktop-based client-server applications in favor of web-based applications because of the great benefits that can be realized using web-based technology solutions. A .NET web-based application would align with King County IT standards and roadmaps for the future. The migration to a newer technology is inevitable, but proactively choosing to transition to .NET now avoids a forced and potentially ill-timed migration in the future.

The development of a view-only, web-based, .NET application would not only meet the

requirements of this project, but it would also be the first step in a complete transition of the full Lola application to an updated technology platform. Although it may require several project phases over several years, as an increasing amount of functionality from the existing Lola application is incorporated into the web-based application, the Lola application could be replaced in its entirety by the new solution.

The Lola application was first developed in 1998 and has evolved over time to meet the business needs. The average life cycle replacement for a PowerBuilder application is unknown, however, PowerBuilder's market share is substantially diminished from what it was in 1998 as it has failed to keep pace with the evolution of technology.

2. If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

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To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the 5 five years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood

of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing time, annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

<u>Update of March 2019: This is a final BAP. This project partially met the target benefits. See below for more information.</u>

Metric Description	Metrics	Baseline	Target	Actual
Reduce the # of times a DMHP responds to a client evaluation call without the opportunity to review the case file prior to response	# of times in a 7-day period	28 times in a 7-day period	1 time in a 7-day period	11 times in a 7-day period. 3 months after implementation.
Reduce the # of times staff return to the office from the field during a work shift for the specific purpose of reviewing a case file or call the office to obtain case or resource information	# of times in a 7-day period	15 times in a 7-day period	1 times in a 7-day period	10 times in a 7-day period 3 months after implementation
Increase the % of staff time spent in the field vs. in the office during a work shift	Average # of minutes a DMHP spends in the office during a client evaluation/ outreach work shift	60 minutes	30% reduction or 18 minutes reduction	<u>30</u>% or 1<u>8</u> minutes reduction 6 months after implementation <u>Target met (updated 3/6/18)</u>

The results reflect improvement in the areas identified as the stated goals continue to be the target. The adoption of the new technology presented some unique implementation challenges. Using the new technology was a significant departure from the usual business practice and highlighted difference in the staff's level of comfort transitioning from a historical paper based system to mobile applications. A tremendous amount of staff embraced the technology shift while maximizing the utility of making the information they needed more accessible. Other staff presented opportunities for leadership to craft

and mold a training system to cater to those who had not historically utilized mobile information tools.

Once staff was trained there were some unanticipated on-going difficulties between our base applications and the Windows 8 operating system. These difficulties were eventually addressed with a roll back to Windows 7 operating system in February 2015. This also resulted in increased comfort and staff use.

Another challenge was the actual tablets themselves. There were issues both using the tablets in the field as well as connections to the permanent work station. There were issues with the wireless connectivity that prevented reliable use in the field. The results of the challenges led to a decision to replace the tablets with a laptops starting in August 2015, which is continuing to improve the utility of the project.

The opportunity to implement this project has been a great learning experience for the division and has led to streamlined ability to access imperative information in the field. Although there have been challenges, the positive movement in meeting our measures indicates the value and potential for achieving our goals. Recent equipment changes and an increased effort to better train staff in the use of the technology point to our meeting the desired goals and increased utilization of the technology going forward.

2/1/2017: The DMHPs are using the laptops as their primary computers. About 50% of the DMHPs are taking the laptops into the field with them on a consistent basis and utilizing the project to research information on patients and to obtain resources. Some of the resistance has come from equipment unreliability early in the project. This has stabilized and we now have reliable equipment. This coming year we will focus on additional trainings and addressing any barriers to encourage 100% compliance.

3/6/2018: The DMHPs are using the laptops as their primary computers and the DMHPs have achieved 100% compliance when responding to a crisis in order to access safety risk information.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	King County International Airport
Project Title	Maximo Upgrade
Project Number	1028664

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

~~Robert I. Burke~~ ~~Randall D. Berg~~ John Parrott, Airport Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Michael Colmant	Deputy Director	~~Project Manager~~ Project Sponsor
~~Joel Abanes~~ Tamara Davis	~~Info Systems Specialist~~ KCIT IT Services Manager	Provide technical assistance on ~~Maximo~~ Cityworks
~~Kent Sherburne~~ ~~Vacant~~ Morlene Mitchell	Finance & Administration Services Manager	Provide assistance to Project Manager
Cheryl Boudreau	KCIT Project Manager	Assist KCIA with project management activities
Vanessa Chin	Business Information Management Manager	Airport's Business Lead and/or Cityworks Subject Matter Expert

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.

5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only."*	*How long did it take to complete or revise the form at this stage?*
Budget Process	2013	Gary Tripp	Added the additional budget of $278,640 received in the 2013-14 budget ordinance.	2 hours
Update (2/6/15): Conceptual Review	Feb, 2015	~~Kent Sherburne~~ Retired Recruitment in process	KCIT assisted KCIA in conducting a solutions analysis of existing KC asset management systems. Spent $58,000 on this stage that went from April 2014 to Jan 2015. Since no system has yet to be chosen or implemented it will be another 1-2 years before benefits will start to be achieved.	1 hour
Update: Annual Report	Feb 12, 2016	Cheryl Boudreau	Azteca was recently chosen as vendor to implement City/Works as asset management solution.	.5 hour
Update: Annual Report	Feb 15, 2017	Mike Colmant, Cheryl Boudreau	2016 - BAP update for an ongoing project Updating Finance Administrative Service Manager, Morlene Mitchell Updating KCIT technical services manager, Tamara Davis Added update to Section 7- Benefit Achievement Summary	.5 hour

Revised 2017 Annual Report	August 4, 2017	Mike Colmant, Morlene Mitchell, Cheryl Boudreau	Updated Category #2 responses to provide more quantifiable measurement.	2 hours
2019 BAP Report (closed project, not final BAP)	Feb. 6, 2019	Mike Colmant, Vanessa Chin, Morlene Mitchell	Updated Sections #6 and 7 responses to provide an accurate closeout status for the end of the 2017-2018 biennium.	1 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
    The investment will improve internal processing and reporting, functionality, and the accuracy of the data. The current system's reporting capability has declined. For example, the cost roll-up feature does not work anymore so supervisors have to try to piece together different data on an excel spreadsheet; the inventory report does not pick up all of the data you need extracted so you have to manually intervene to piece together the right data. There are database capacity limitations on the system that is slowing the response time down significantly so supervisors and those inputting data are spending more time with the system.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
    The benefits will be achieved if the system saves labor in producing reports, enhances data accuracy since errors are more likely when piecing together reports from different fields and files, and reduces the labor time in inputting and extracting data.

3. ***What is the current baseline for this measure?***
    a) Time spent in extracting data and producing a report from current system can take several hours instead of minutes. Depending on the requested report the Inventory Specialist spends about 10 hours per week entering data, 5 hours per week extracting data and 3+ hours a week generating reports. The F, Fiscal Specialist and Work Order Analyst can spend up to six hours per person per week inputting, gathering and extracting data. The Work Order Analyst spends up to 30 hours per week entering data, extracting and manipulating data through Microsoft Excel's Query functionality to produce the desired reports which then needs to be manipulated through Microsoft Excel's Query functionality to produce the desired report. These actual roles will not change, however implementing Cityworks will allow staff personnel to be more efficient in incorporating analytics in their reporting output and in performing studies on managing

workloads**.** In addition, Cityworks will allow the Inventory Specialist to have several Store Rooms, instead of just one main room. This will allow for ease in inventory planning, tracking, and updating. We are currently in the process of establishing several store rooms at the maintenance facility in preparation for migrating to Cityworks. What is germane here is the Cityworks inventory accountability functions will allow improved efficiencies with the trades person and the inventory specialist being able to readily track, maintain and order up to date parts and supplies.

b) Data accuracy of standard reports further manipulated outside the system introduces risks to data integrity.

c) Maximo does not support extracting data to provide customized reporting.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***

a) The target is to spend approximately 50% less time inputting data into the system and extracting reports. The quantitative element is in the "input" of data for reports generation. Cityworks allows direct interfacing from all sections, i.e. Operations, Safety, Admin, and Maintenance (over 40 staff) can enter data directly into the system, without data loss and with "ALL" being able to see and use the data. Currently an Operations staff person calls in work orders and or sends an email to Maintenance Admin for reportable items. Then a person has to decipher and enter it into one of the files (an example is environmental work orders). With the implementation of Cityworks, Operations would directly input data into the system and all would see it, without a middle person and the potential for information loss. In addition, it is estimated that the new system will cut data entry, system utilization for inventory and purchasing and report generation allowing the Inventory Specialist more dedicated time for parts and material research, acquisition and most importantly timely distribution.

b) Data accuracy will be enhanced by the ability to pull data directly out of the system and yield better results for analysis of material handling, parts ordering, and payments against work orders. Since the tools to produce reports will be more refined, it will allow the Maintenance Section staff the ability to provide Airport management with reports that can more accurately track work order fulfillment and asset management as well as perform trend analysis and more accurate forecasting**.** Data accuracy and timeliness are expected to enable just-in-time reordering thereby reducing inventory cost.

c) Cityworks data querying and exporting functionality will enable users to extract and integrate data into customizable reports.

5. ***When is the benefit likely to be achieved?***

~~Within 3 months after installation and training in the new system.~~ Go-live for Cityworks occurred at~~is scheduled for end of Q4 2017~~the beginning of Q2 2018. Initial benefit w~~ill be~~as achieved within the first 90 days after migration and the start of daily use by employees. It may take one and a half years ~~between 3 months and 6 months~~ to fully maximize the benefit of Cityworks, as data input from all sections within the Airport ~~begin implementing~~continue with using the system. Currently, ~~the Maintenance Shop meets weekly with the individual Trades and Utilities to strategize implementation and migration of Maintenance Plans (daily, monthly, quarterly, annuals, Work Orders, Ready Spare Parts Inventories, Technical and Mechanical libraries, Inspections, etc.)~~the Airport is reviewing and improving our business processes that affect Cityworks data input and output. It will take a while to work through the "challenges" with the old and new in each area, streamline the information for Cityworks usage and then fully utilize it

in the Cityworks system. The full benefit should be achieved by the end of Q4 2019.at the 6 month point.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please

include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update of 2014: Benefits have not been achieved because the project has not started.

Update (2/6/15): Benefits have not been achieved because project is at the stage of evaluating three replacement systems (EAM, M5, and City/Works) to meet KCIA's functional requirements.

Update (2/12/2016): Benefits have not been achieved because the project just recently chose replacement system City/Works. Contract negotiations in process.

Update (2/15/2017): Benefits have not been achieved because project has not implemented system and provided training. Accomplishments since last update:
- Contract negotiation completed May 20, 2016
- Set-up IT environment and install software on test system October 27, 2016
- Requirements gathering complete December 30, 2016
- Final Design and Implementation activities are in process

Updated (8/4/2017): Benefits have not been achieved because project has not implemented system and provided training. Expected go-live at end of Q4 2017.

Updated (2/6/2019): This is not a Final BAP. Benefits to be fully achieved by end of Q4 2019 where the Airport would be able to use Cityworks for data-driven decision-making and performance measures for Tier Boards.

IT Project Benefits Achievement Plan (Version 2)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
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4. To ensure that benefits are achieved

King County Department/ Agency Name	King County DOT/Airport
Project Title	Perimeter Intrusion Detection System (PIDS)
Project Number	~~112732~~3 1129960

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Business Owner Name and Title: ~~Randall Berg,~~ John Parrott, Director King County Airport (Sponsor) ~~Michael Colmant, Deputy Director King County Airport~~

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Michael Colmant	Deputy Director, KCIA	Project contact, deputy to project sponsor
Charity Catalfomo	Safety and Security Program Manager/KCIA	Subject matter expert, steering committee member
Cheryl Boudreau	IT Project Manager/KCIT	Project manager
John Parrott	Director, KCIA	Project Sponsor

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

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Once the project is complete and benefits are achieved and reported, no additional reporting is required.

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Section 5.   How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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Initial project request	6/30/16	Michael Colmant	New, initial draft	2 hours
2016 Annual report- BAP update for ongoing project	2/15/2017	Mike Colmant/ Cheryl Boudreau	"No changes" BAP for a new project	.5 hour
2019 BAP Report – BAP update for ongoing project	2/8/2019	Mike Colmant/ Stephanie MacLachlan/ Cheryl Boudreau	Modifications to answers in Category 2 - Internal Service Benefits and Section 7.	3 hours

Section 6.   Description of Project Benefits

Identify the category(-ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1)   **External service benefits**: Improving the quality or quantity of services provided to the public
2)   **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3)   **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4)   **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the _primary_ type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

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The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. _Describe why you expect the proposed IT investment to produce the benefit(s)._
2. _How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)_
3. _What is the current baseline for this measure?_
4. _What is the target for this measure? (How much improvement will this project achieve?)_
5. _When is the benefit likely to be achieved?_

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

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The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. Describe why you expect the proposed IT investment to produce the benefit(s).
This project will improve access control to the KCIA

2. How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)
Reduced occurrences of unauthorized access – verified through random field checks.

3. What is the current baseline for this measure?
Information available from KCIA

4. What is the target for this measure? (How much improvement will this project achieve?)
- Know with ~~100 percent~~ increased certainty who is on the airfield and how they got there
- Establishing alerts for unauthorized access attempts
- Be able to immediately lock down KCIA controlled gates and revoke badges

5. When is the benefit likely to be achieved?
Upon project implementation end of ~~2018~~ 2019.

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U.S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.
The Airport conducted an independent security assessment last year that identified a lack of proper access control as a primary shortcoming in KCIA's security capabilities. Specifically, the Airport is unable to accurately identify the means vehicles and personnel of accessing or leaving the secured airfield. Existing access control mechanisms and technology leverage only one method of authentication: generic PIN codes distributed via physical cards. These codes can be freely passed to unauthorized personnel and remain functional until KCIA updates PIN codes for all gates. In addition, because a number of gates are not connected to a local network, KCIA staff must manage access codes for these gates by interfacing with the access control system at each gate individually. This process is very time consuming and lessens the Airport's security effectiveness – especially if an immediate lock down is needed.

KCIA installed the C*Cure identity management system (software and hardware) in 2006 and expanded it to additional gates throughout 2007 and 2008. The lifecycle for this hardware is five

years but KCIA has been using this hardware for more than eight years. Software support for the C*Cure system will end in mid-2017. This mission-critical system is at end of life.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

With the exception of physical security patrols and challenging un-badged personnel, it is impossible for KCIA to accurately report the frequency of unauthorized access to KCIA facilities or the airfield. Based on the experiences of KCIA personnel, a majority of these incidents involve minor policy or process violations (e.g., unauthorized limousine drivers parking on the tarmac) and do not present a danger to KCIA or its tenants. However, several incidents have involved unauthorized actors who could've damaged KCIA property and/or disrupt operations if not for KCIA's swift response.

KCIA's risk exposure is strongly influenced by the ease of unauthorized access to KCIA facilities. The probability of unauthorized personnel damaging KCIA or tenant property is low but given the types of activities, businesses and tenants at KCIA – not to mention KCIA's proximity to Seattle – an unauthorized actor with dangerous intentions could have an enormous impact.

The primary reason for the project is to improve Airport security, consistent with current industry standards and to meet stakeholder expectations. Such enhancements to Airport physical security are supported by King County Risk Management and KCIA's aviation insurers as well as tenant representatives on the Airport Security Workgroup.

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

2019 BAP Report:
This is not the Final BAP. Benefits are on track to be achieved by year-end 2019. There has been a delay by one year due to previous unresponsive bids. During this past reporting period requirements were gathered, design was completed and Invitation For Bid (IFB) was sent to Procurement. Advertisement is expected in mid-February 2019. Project completion is expected in December, 2019.

IT Project Benefits Achievement Plan
To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Name	Department of Executive Services/Business Resource Center
Project Title	ERP BI/Analytics Project (entire project BAP)
Project Number	1126545

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Ken Guy, Director of FBOD; Jay Osborne, Director, DHR;   Carmel Call, Director of BRC

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Carmel Call	Director of BRC	Project Sponsor
Cheryl Lee	Chief Accountant	FBOD Business Owner
Marjorie Mills	BRC Shared Services Manager	IT Manager: supporting upgrades to Reporting, DBA services and BRC coordination of hardware/infrastructure replacement
Rita Popp	Enterprise Resource Planning Project Manager, DES - BRC	Program Manager
Laura Federighi	Administrative Services Manager – Transportation	Product Evaluation Team – Agency Representative
Jim Walsh	Section Manager - PSB	Product Evaluation Team – PSB Representative & Hyperion System Owner
Greg Brant	Enterprise Architect, Department of IT	Product Evaluation Team – KCIT Representative
Brent Veenstra	IT Manager – KCIT	Product Evaluation Team – KCIT Representative
Mike Betschart	IT Manager – BRC PeopleSoft	PeopleSoft System Owner
Mark Foote	BFO IV - Transportation	Product Evaluation Team – Agency Representative
DeWayne Pitts	CFO – Public Safety	Product Evaluation Team – Agency Representative
Max Foster	Business & Finance Officer IV – Natural Resources & Parks	Product Evaluation Team – Agency Representative

Eben Sutton	Controller – FBOD	Product Evaluation Team – Agency Representative

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	5/26/2015	Rita Popp	New, initial draft	3 hrs
Supplemental Budget Review	11/24/15	Pat Deasy/ Rita Popp	Additional budget request for Phase 2 – Proof of Concept, Data Governance 2016	3 hrs
Supplemental Budget Review 2/28/2016	4/21/16	Pat Deasy/ Rita Popp	Updated for Acquisition & Implementation Additional budget request for Phase 3 – Acquisition & Implementation	5 hrs
2016 Annual Report	2/3/2017	Rita Popp	BAP update for an ongoing project	2 hrs
BAP Update	3/2/2018	Rita Popp	Confirm Benefits and Plan still valid	1 hour
2019 BAP Report	1/14/2019	Pat Deasy	Business Owner Name changes; Section 7 - Confirm Benefits still valid and list time to realize	2 hours

	2019 BAP Report	2/7/2019	Rita Popp	Edits to Section 3; DHR to DHR; edits to section 7	3 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

2016 Annual Report: The planned Release 1 (of 3) Go Live date of the ERP BI/Analytics project is on schedule for March 13, 2017. At the time of this report, all target benefits are still reasonable. Benefits will not be able to start to be realized until the new ERP BI/Analytics service is available for use starting on March 13, 2017. The 2017 Annual Report should include 2016 benefits achieved. Currently the target completion date of Release 2 of the ERP BI/Analytics project is September, 2017 and the target completion date of Release 3 of the ERP BI/Analytics project is March, 2018 at which point all of the benefits listed below will be able to be realized.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Omnibus Request - Requirements Gathering May 2015
   The project Omnibus budget request includes activities to identify the BI/Analytics business drivers and priority requirements from each agency as well as capture an accurate baseline and measured target benefits.

   Clear detailed requirements and priorities will also support detailed scoping and approach for BI/Analytics product acquisition and implementation activities. The detailed requirements and priorities have a target due date of October 31, 2015 and are not finalized at the time of the mid-biennium budget request. An update to this document will be provided upon completion of approved scope for the ERP BI Project.

   Mid-Biennium Request – Proof of concept, data governance and stewardship November 2015
   The efforts in completing a proof of concept with Oracle Business Intelligence products, conducting data readiness and remediation, and establishing data governance has long term value and benefits for King County. It identifies both business policy, process and system improvements in EBS, PeopleSoft & Hyperion (ERP source systems). This work is value add regardless of a BI product implementation. BI consulting resources are required to continue to augment BRC staff team as well as provide the expertise and guidance to lead the initial planning

and scoping work. The mid-biennium budget request will fund the ERP BI/Analytics Project from January 1, 2016 through December 31, 2016.

Supplemental / Biennium Request – Software Acquisition and Implementation
The Supplemental / Biennium request is for the product acquisition and implementation including training, communication and change management.

Benefit #1. Faster, more accurate answers with better quality data for improved visibility and productivity. Improve and automate the existing very manual data manipulation and report production processes to eliminate the errors in the current agency produced excel reports.

Management will have improved visibility into material events and financial and budget performance across the agencies. Data transparency and more timely, accurate and consistent information will support proactive decisions, increase the speed to respond to emerging situations, and mitigate the risk of inaccurate compliance reporting to external agencies.

For example: Automate the Schedule of State Financial Assistance (SSFA) and the Schedule of Expenditures of Federal Awards (SEFA) reports by reducing the manual hours and error correction rework by agencies and Central Finance. By providing automated pre-defined supporting SSFA/SEFA reports and ad hoc analysis capabilities to the agencies and Central services staff they will have accurate information from the start of the SSFA/SEFA process. This will enable them to focus their analytical skills on the content and correction of the information before it is published.

Benefit #2. Improve operational efficiencies by reducing and removing the need for business analysts to manually extract and manipulate information from the three ERP systems to produce their regular operational and performance exception reports and their mission critical reports.

Provide a user friendly, self-service reporting solution that will provide unified data for EBS, PeopleSoft and Hyperion. There is no reporting solution that unifies data from these systems today. Currently King County Financial, HR and Budget analysts spend over 10,000 hours per month just preparing their own data silos by manually extracting and manipulating information from these systems. Reports are then manually produced, formatted and distributed from these data silos.

In addition, with the proposed solution and the availability of integrated data it is expected agencies will be able to redirect much of the time saved to data-led information discovery and more value added work. Some examples of these value-added activities are:

FBOD:
- Increase time spent training staff on allowable costs and other compliance rules to prevent audit findings, questioned costs to pay back federal grantors and decrease risk of reduction in future grant funding
- Increase time spent on researching, testing and implementing allowable cost schedules and other functionality that currently is not robustly used (if at all) that could increase the accuracy of the SEFA report
- Increase time spent on conducting internal audits of federally-funded programs.
- Reduce our reliance on contracted internal auditor whose work ensures a high-quality SEFA

DHR:
- Automated reports on the number of hours STT (Short Term Temporary) employees have historically worked in various areas; their testing scores and their availability will provide robust data to place the most qualified applicants in the best work groups. Analysts can spend their time identifying and placing the returning employees. Time saved can be used to revise testing and interview practices and better analyze how to place new STT's to align with their current needs and skills.

Agencies:
- Labor/Employee Hours & Cost by Project – King County uses this detail information for a variety of purposes, including billing calculations, third party invoicing and project cost analyses. Not all expenses are eligible for capital project grants which are reimbursed to the agency from the state or federal governments. If expenses are not correctly charged to capital grant projects, agency reimbursement of costs may be impacted. Analysts need time to monitor as well as access to timely, accurate data that will provide them the opportunity to analyze both the quantitative and qualitative causes of variances in cost re-imbursements.

Benefit #3. Improve diversity hiring in the county. DHR's experience is that currently, it is very challenging and time consuming for managers to pull data showing where diversity falls off in the recruitment process. In a recent example, it took several weeks. Because managers are pulling from various sources and have varying degrees of skills with our systems, this also leads to inconsistent reporting across agencies. BI will enable automatically pulling this information at any time for reporting from individual departments.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   B1: A survey of financial analysts and Central finance staff will be used to determine if the quality and accuracy of the data from the agencies in the now automated reports has improved. The survey will capture information both generally : "do you think the information quality has improved and is more accurate in the BI automated Agency reports" and in regards to specific reports such as SSFA and SEFA: " were fewer error correction cycles required to get the SSFA/SEFA correct." ; "were there fewer internal audit issues identified".

   The questionnaire will also ask users their degree of satisfaction on system ease-of-use. Survey questions will also ask finance managers the extent to which the BI tool has been used to provide new analyses and insight to support senior level decision making, including whether staff are in fact using the powerful analytical capacity of this tool in ways they could not have done before to inform key decisions related to their business operations and ERP source system data.

   B2: A survey will be used to collect information from departments and central service agencies on how they are using the additional time saved from the implementation of the BI solution. The survey will collect the amount of time that was re-directed to value add activities; what those activities are; and what business value and improvements are being gained through those value add activities.

   FBOD: Questionnaire will ask to what extent they were able to redirect hours towards the value added work they had hoped to perform , including but not limited to:

- Increased time spent training staff on allowable costs and other compliance rules to prevent audit findings, questioned costs to pay back federal grantors and decrease risk of reduction in future grant funding
- Increased time spent on researching, testing and implementing allowable cost schedules and other functionality that currently is not robustly used (if at all) that could increase the accuracy of the SEFA report
- Increased time spent on conducting internal audits of federally-funded programs
- Reduced reliance on contracted internal auditor whose work ensures a high-quality SEFA

DHR:
- Questionnaire will ask to what extent staff is able to redirect hours towards the value added work they had hoped to perform, including but not limited to revised testing and interview practices and better analysis of how to place new STT's to align with their current needs and skills and match with business needs.

Agencies:
- Questionnaire will ask: "were they able to get their cost reimbursement variance reports generated within the 5 days before the end of the month" and "did the analysts perform the cost variance analysis and research "during that period.

B3: Survey will measure DHR diversity hiring analysis by asking: "did the DHR analysts spend time analyzing diversity fall off reasons" and "did DHR improve their diversity rate?"

3. *What is the current baseline for this measure?*
   B1 Baseline: Larger agencies spend over 120-150 hours per agency to prepare their SSFA/SEFA and go through an average of 5 error correction cycles with central finance. Central Finance spends a minimum of approximately 320 - 400 hours/year on SSFA/SEFA preparation, review, error correction, technical assistance and internal audit issues coordination of SSFA/SEFA review processes.

   Based on feedback from the BI Analytic workshops and the response from a FBOD 2013 'Listening Tour' with King County agencies, the users are 'very dissatisfied' with Discoverer ease-of-use.

   B2 Baseline: Currently King County Financial, HR and Budget analysts spend over 10,000 hours per month manually extracting, manipulating information from these systems.

   FBOD value-added activities current baseline:
   - Increase time spent training staff on allowable costs and other compliance rules to prevent audit findings, questioned costs to pay back federal grantors and decrease risk of reduction in future grant funding – 10hrs/month spent now
   - Increase time spent on researching, testing and implementing allowable cost schedules and other functionality that currently is not robustly used (if at all) that could increase the accuracy of the SEFA report – 0 (zero time spent on this now)
   - Increase time spent on conducting internal audits of federally-funded programs. – 0 (zero time spent on this now – contracted out)
   - Reduce our reliance on contracted internal auditor whose work ensures a high-quality SEFA - 8 weeks of contractor time plus 30k /year

DHR value-added activities current baseline:
- Currently spend 2.5 months on collecting data and performing limited STT placement analysis.

Agency value-added activities current baseline:
- Currently, analysts receive reports 60 days late. Qualitative "why" variance analysis is limited and information is too late to take up front corrective action.

B3 Baseline: The current King County rate of diversity is 34.3%. Manual creation of diversity report is several weeks. Diversity fall off reason analysis very limited.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
B1 Target: The target for determining if the quality and accuracy of the data from the agencies has improved will be if the response to the survey questions from the agency financial analysts and Central finance indicate: 80% of the responses were positive that the quality of the data in the agency produced reports had improved; there was a reduction of at least 80% in the number of error-correction cycles they had to execute when producing the SSFA/SEFA financial reports; and there was a reduction of at least 75% in the number of internal audit issues identified.

The target for determining system "ease-of-use" is if 75 % of respondents respond 'satisfied' for ease-of-use on the new reporting solution.

The target for recognizing the ability to fully utilize the analytic capabilities of the tool is if 50% of the respondents respond 'satisfied' for ability to utilize tool's analytic capability in the first year in production and if 75% of the respondents respond 'satisfied' for ability to utilize the tool's analytic capability by year 2 in production.

B2 Target: Reduce the manual effort required to produce EBS, PeopleSoft & Hyperion data related to operating, management and executive reports by 50%.

FBOD targets for each of the following:
- Increase time spent training staff on allowable costs and other compliance rules to prevent audit findings, questioned costs to pay back federal grantors and decrease risk of reduction in future grant funding – increase time allotted by 50%
- Increase time spent on researching, testing and implementing allowable cost schedules and other functionality that currently is not robustly used (if at all) that could increase the accuracy of the SEFA report – increase time allotted to at least 10 hours/month.
- Increase time spent on conducting internal audits of federally-funded programs – increase time allotted to at least 10 hours/month
- Reduce our reliance on contracted internal auditor whose work ensures a high-quality SEFA – eliminate the need for the contractor and the 30K cost.

DHR targets:
- Target is to reduce data preparation cycle to 2.5 weeks to collect data and thus increase analyst time spent revising testing and interviewing practices and conducting better analysis of how to place new STT's to align with their current needs and skills.

Agencies targets:

- Target is to receive reports at least 5 days before end of month so reasons for variances can be detected and preventive/correction actions can be taken by the analysts thus ensuring timely and proper cost re-imbursement to the County. Analysts responded positively to performing proactive variance analysis during this period.

B3 Target: Providing automated diversity reports on demand and analysts performing research on the agencies' information showing where diversity falls off in the recruitment process will help improve the diversity hiring rate. It is expected that with this proactive oversight that the diversity rate can be increased to achieve the 38.5% target set by DHR.

5. ***When is the benefit likely to be achieved?***
   B1: The goal of realizing faster, more accurate reporting with 50% better quality agency data; a 50% reduction in number of error correction cycle; and 75% fewer internal audit issues is expected to occur during the first year after the BI solution is placed in production. An additional 30% data quality improvement and 30% reduction in error correction cycles are expected in year 2. The goal for system ease of use is to realize a 'satisfied' response from 75% of the users in 2 years.

   B2: The goal is to realize the 50% reduction in time spent doing manual data manipulation within 1 year after BI solution is in production. The goal to achieve the targets identified by FBOD, DHR, and major agencies is within 1 year after BI solution is in production.

   B3: DHR achieving their diversity target will likely require 2 years from when BI solution placed into production.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

2016 Annual Report: The planned Release 1(of 3) Go Live date of the ERP BI/Analytics project is on schedule for March 13, 2017. At the time of this report, all target benefits are still reasonable. Benefits will not be able to start to be realized until the new ERP BI/Analytics service is available for use starting on March 13, 2017. The 2017 Annual Report should include 2016 benefits achieved. Currently the target completion date of Release 2 of the ERP BI/Analytics project is September, 2017 and the target completion date of Release 3 of the ERP BI/Analytics project is March, 2018 at which point all of the benefits listed below will be able to be realized.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

Replace the Oracle Discoverer ad-hoc reporting tool for EBS data because it is going off support from Oracle in 2017. Implementing a new Business Intelligence (BI) product as soon as possible will provide King County the continued ability to obtain information out of the EBS application and mitigate the risk of Discoverer tool system failure and/or potential financial audit findings.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

The probability the risk is high. Oracle requires that routine patches be applied to the EBS applications. As new patch release sets are applied to the EBS applications, the risk of the Discoverer tool becoming incompatible with the Oracle applications increases. It is estimated that by 2017 the Discoverer tool will be incompatible with future release patch sets.

If FBOD and agencies no longer have access to an ad hoc reporting tool like Discoverer, there is the high risk of not being about to ensure the timeliness and the validity of financial data included in key financial reports including: the Comprehensive Annual Financial Report (CAFR); the Schedule of Expenditure of Federal Awards (SEFA); and the Schedule of State Financial Assistance (SSFA). These financial reports provide the foundation for required state and federal audits, federal grant awards, and the County's triple A bond rating. Without any ad hoc reporting capability, the probability of this risk occurring is very likely.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please

include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

1/14/2019 for 2018 Reporting Period: The ERP BI/Analytics Project benefits identified in this BAP are expected to begin to be realized from 6 months forward after the project implementation is complete. The completion date was October 31, 2018. The list below summarizes those benefits and the expected time to realize. This is not a final BAP. All content below is new for the 2017-2018 Reporting period.

Metric Description	Metrics	Baseline	Target	Expected Time To Realize
Benefit 1: Improve operational efficiencies by reducing and removing the need for business analysts to manually extract and manipulate information from the three ERP systems to produce their regular operational and performance exception reports and their mission critical reports.				
A questionnaire will be used to collect information from departments and central service agencies on how they are using the additional time saved from the implementation of the BI solution.	The survey will collect the amount of time that was re-directed to value add activities; what those activities were; and what business improvements were gained through those value add activities.	Currently King County Financial, HR and Budget analysts spend over 10,000 hours per month manually extracting, manipulating information from these systems.	Reduce the manual effort required to produce EBS, PeopleSoft & Hyperion data related to operating, management and executive reports by 50%.	By October 2020: 50% reduction in time spent doing manual data manipulation

Benefit 2: With integrated data it is expected agencies will be able to redirect much of the time saved to data-led information discovery and more value added work. Examples of these value-added activities are:				
FBOD: • Increase time spent training staff on allowable costs and other compliance rules to prevent audit findings, questioned costs to pay back federal grantors and decrease risk of reduction in future grant funding	FBOD: Questionnaire will ask to what extent they were able to redirect hours towards the value added work they had hoped to perform , including but not limited to:	FBOD value-added activities current baselines:	FBOD targets for each of the following:	By October 2020:
• Increase time spent on researching, testing and implementing allowable cost schedules and other functionality that currently is not robustly used (if at all) that could increase the accuracy of the SEFA report	• Increased time spent training staff on allowable costs and other compliance rules to prevent audit findings, questioned costs to pay back federal grantors and decrease risk of reduction in future grant funding	• Increase time spent training staff on allowable costs and other compliance rules to prevent audit findings, questioned costs to pay back federal grantors and decrease risk of reduction in future grant funding – 10hrs/month spent now	• Increase time spent training staff on allowable costs and other compliance rules to prevent audit findings, questioned costs to pay back federal grantors and decrease risk of reduction in future grant funding – increase time allotted by 50% • Increase time spent on researching, testing and implementing allowable cost schedules and other functionality that currently is not robustly used (if at all) that could increase the accuracy of the	• Increase time allotted for training by 50%
• Increase time spent on conducting internal audits of federally-funded programs. • Reduce our reliance on contracted internal auditor	• Increased time spent on researching, testing and implementing allowable cost schedules and other functionality that currently is not robustly used (if at all) that could increase the	• Increase time spent on researching, testing and implementing allowable cost schedules and other functionality that currently is not robustly used (if at all) that could increase the		• Increase time to verify SEFA by 10 hours/mo nth

whose work ensures a high-quality SEFA	accuracy of the SEFA report • Increased time spent on conducting internal audits of federally-funded programs. • Reduced reliance on contracted internal auditor whose work ensures a high-quality SEFA	accuracy of the SEFA report – 0 (zero time spent on this now) • Increase time spent on conducting internal audits of federally-funded programs. – 0 (zero time spent on this now – contracted out)	SEFA report - increase time allotted to at least 10 hours/month • Increase time spent on conducting internal audits of federally-funded programs - increase time allotted to at least 10 hours/month • Reduce our reliance on contracted internal auditor whose work ensures a high-quality SEFA – eliminate the need for the contractor help and the 30K cost	• Increase time conducting internal audits of federally-funded programs SEFA by 10 hours/ month eliminate the need for auditor contractor
DHR: With the time saved in gathering manually manipulating data, HR Analysts can spend more time working with Executive Leadership to further develop answers to key business driven questions and metrics.	DHR: Questionnaire will ask to what extent they were able to redirect hours towards the value added work they had hoped to perform:	DHR: Currently spend 2.5 months on collecting and preparing data in order review and analyze key information that drive business decisions.	DHR: Target is to reduce data preparation cycle to 2.5 weeks to collect data and thus increase analyst time spent revising testing and interviewing	By October 2020: reduce DHR data and STT placement analysis to 2.5 weeks
Agencies: Analysts need time to	Agencies:	Agencies:	Agencies:	By October 2019:

monitor as well as access to timely, accurate data that will provide them the opportunity to analyze both the quantitative and qualitative causes of variances in cost re-imbursements.	Questionnaire will ask: "were they able to get their cost reimbursement variance reports generated within the 5 days before the end of the month" and "did the analysts perform the cost variance analysis and research" during that period.	Currently, analysts receive reports 60 days late. Qualitative "why" variance analysis time is limited and information is too late to take up front corrective action.	Target is to receive reports at least 5 days before end of month so reasons for variances can be detected and preventive/correction actions can be taken by the analysts thus ensuring timely and proper cost re-imbursement to the County. Analysts responded positively to performing proactive variance analysis during this period.	Agencies receive their variances report within 5 days before end of month
Benefit #3: Improve diversity hiring in the county.				
DHR's experience is that currently, it is very challenging and time consuming for managers to pull data showing where diversity falls off in the recruitment process. In a recent example, it took several weeks. Because managers are pulling from various sources and have varying degrees of skills with our systems, this also leads to inconsistent reporting across agencies. BI will enable automatically pulling this information at any time for reporting from individual departments	Survey will measure DHR diversity hiring analysis by asking: "did the DHR analysts spend time analyzing diversity fall off reasons"? and "did DHR improve their diversity rate?"	The current King County rate of diversity is 34.3%. Manual creation of diversity report is several weeks. Diversity fall off reason analysis very limited.	Providing automated diversity reports on demand and analysts performing research on the agencies' information showing where diversity falls off in the recruitment process will help improve the diversity hiring rate. It is expected that with this proactive oversight that the diversity rate can be increased to achieve the 38.5% target set by DHR.	By October 2020: DHR achieves their 38% diversity rate.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Executive Services/Business Resource Center
Project Title	Oracle EBS R12.2 Upgrade
Project Number	1126544

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Ken Guy, Director of FBOD

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Eric Polzin	EBS Finance Lead, DES - BRC	Test Lead
Shan Daniels	EBS Development Lead, DES - BRC	Development Lead
Geoff Campbell	DBA Supervisor, DES - BRC	DBA Lead
Rita Popp	Enterprise Resource Planning Project Manager, DES - BRC	Program Manager
R Prasad	Contractor, DES - BRC	Project Manager
Marjorie Mills	BRC Shared Services Manager	IT Manager: supporting upgrades to Reporting, DBA services and BRC coordination of hardware/infrastructure replacement

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	3/13/2015	R Prasad	New, initial draft	3 hours
2016 Annual Report	2/10/2017	T Betterman	BAP update for an ongoing project	1 hour
2017 Annual Report	02/13/2018	T Betterman	Final BAP for a completed project	30 minutes
2019 BAP Report	2/6/2019	C Hellner	Final BAP for a completed project	30 minutes

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

X Category #3: Maintaining service levels by replacing or upgrading older technology

Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*

	5. When is the benefit likely to be achieved?
	Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories. *Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.* *Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.*

1. Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.

Oracle EBS 12.1.3 will enter extended support in January 2017. King County implemented Oracle EBS 12.1.3 in 2012 and needs to upgrade to the current release to keep current and ensure maximum benefit to the county for its investment in Oracle EBS. Oracle follows a 5 year/3 year support policy, meaning that they provide premiere support for 5 years from the general availability release date followed by 3 years of extended support for an additional cost. Incremental cost increases are applied each year extended support is leveraged

Server and storage hardware for the Oracle EBS system was purchased in 2009 with the exception of a few production servers purchased in 2011 shortly before the ABT Go Live. The KCIT standard for expected life of servers and storage is 5 years. The existing hardware will be replaced by this project after it has exceeded its life expectancy.

2. If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.

The Oracle EBS hardware and storage system is or will be past its life expectancy by 2016. This presents the possibility of the following types of risks:
- Degraded performance during peak periods
- No ability to expand storage (currently at maximum disk capacity)
- Without an upgrade, the EBS reporting tool Discoverer will continue to require Java version 7 which is no longer the current version of Java. This requirement may cause compatibility issues with other county software requirements. Also, KCIT prefers to keep Java versions current to avoid potential security vulnerability.
- Requires KCIT to retain skillsets on older technology. May require additional KCIT time to support. Vendor support costs may increase due to hardware age.
- Increased risk of software compatibility conflicts, where versions of operating system, firmware, middleware and application software no longer align.

2016 Annual Report: The Oracle EBS reporting tools and applications were upgraded in May 2016 and July 2016 respectively. The benefits from those upgrades are noted below. The planned Go-Live date to transition onto new hardware is February 27, 2017. The 2017 Annual Report will contain benefits achieved from the new hardware.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time	*Processing time, annual savings, and percentage*	• *10 days processing time*	• *1 day processing time*	• *2 day processing time*

from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*of purchases receiving prompt payment discounts*	• *10% of purchases are receiving discount* • *Savings of $100,000*	• *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

2016 update note: Another update will follow after the last phase of the project (hardware implementation) is complete in June 2017.

2017 update: project is complete and benefits achieved are outlined below.

2/6/2019 2018 Update: This is the final BAP. This project met or exceed all target benefits.

Continued vendor support
Premier vendor support for Oracle EBS 12.1.3 release level was scheduled to end in January 2017. This meant that patches, data fixes, tax and regulatory updates, and enhancements would no longer be available to King County. In additional, King County would have incurred additional Oracle support fees and annual maintenance costs beyond the amount budgeted by the BRC. With the upgrade of Oracle EBS from 12.1.3 to 12.2.5 in July 2016, King County continues to receive Premier Oracle support.

Upgrade Discoverer and BI Publisher
Discoverer has been King County's ad-hoc financial reporting tool since 2012 and had never been upgraded. The older version of Discoverer has limited King County from updating to and standardizing the roll-out of the current release of Java 8. The upgraded version of Discoverer (implemented in July 2016) is now compatible with Java 8 and has made it possible for KCIT to reduce security risks associated with older Java versions and minimize Java variations on standard desktop images,

Metric Description	Metrics	Baseline	Target	Actual
Continued Premier Support	Upgrade Oracle EBS from 12.1.3 to 12.2	12.1.3	12.2.4 July 2016	12.2.5 July 2016
Upgrade BI Publisher and Discoverer reporting tools	Upgrade from version 11.1.1.5 to 11.1.1.7	11.1.1.5	11.1.1.7 July 2016	11.1.1.7 May 2016
Upgrade Oracle database	Upgrade Oracle database from version 11 to version 12	11	12 July 2016	12.1.2 Sept 2015
Upgrade middleware	Upgrade SOA to 11.1.1.9	11.1.1.7	11.1.1.9 July 2016	11.1.1.9 July 2016
Create User Guides for core financial, procurement modules, and BI Publisher	# of User Guides	1	7 July 2016	9 July 2016
Reduce ABT conversion programs and expired custom objects	% of 125 conversion and expired customizations removed	0%	90% July 2016	100% July 2016

Replace Oracle EBS Infrastructure
The Oracle EBS hardware and storage system was past its life expectancy in 2016. It had reached its maximum disk capacity and experiencing degraded performance levels during peak periods, especially through financial year-end processes. Oracle Engineered hardware was procured and sized to provide

additional disk and storage capacity for future business needs. In addition, the new hardware was leveraged for use with the Oracle BI Analytics project, reducing the costs of hardware for Oracle BI. The transition to the new hardware occurred in February 2017. The old hardware was also decommissioned.

We have experienced stable performance through peak processing periods and improvements in overall Oracle EBS responsiveness. Benefits have included:

- Significant improvement of system performance including improved reporting performance and reduction in time to complete EBS jobs
- Drastic reduction in backup and clone times, increasing nightly throughput to provide flexibility to add nightly processes that were previously constrained
- Flexibility to add new EBS instances for testing and patch/upgrade projects
- Improved availability of reporting (Discoverer, BI Publisher and reporting databases)
- A consolidated platform and virtualized Apps Tier
- New hardware support model has reduced infrastructure management costs for BRC while improving response times for hardware configuration changes
- Reduced support requirements for KCIT
- Ability to license on demand, limiting costs to only what is needed
- Ability to scale up additional performance capacity as needed
- The intelligent storage server software has drastically improved database performance; Automatic Server Management (ASM) reduces storage maintenance work
- Broader visibility for the DBAs to monitor system performance and provide greater flexibility to manage databases and virtual machines to meet ongoing business demands
- Improved tools and visibility to developers to maximize performance results for custom code

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Name	Department of Executive Services / Business Resource Center
Project Title	PERS Retirement Bolt-On Rewrite
Project Number	Operating project

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Ken Guy, Finance Director, DES

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Mike Betschart	IT Enterprise Manager II	Management
Sherry Schroeder	Sierra Cedar	Benefits Functional Analyst
Kimberly Fleming	Project Program Mgr. III	Subject Matter Expert

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual Review	7/17/17	Sherry Schroeder	New, initial draft	2 hours
Update for the Spring 2019 BAP Report	1/10/2019	Chauntelle Hellner	Update	15 minutes

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☒
Category #4: Reduced cost or cost avoidance to produce services	☐	☒

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: *If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.*

Example: *If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	% of customer satisfaction (to be determined through a survey)	45%	95%	By 12/31/2018
Example: Reduced time for customers to obtain a license	# days it takes to issue licenses	5 business days	1 business day	By 09/30/2018

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   If this project to rewrite the PERS bolt-on is approved, the legal responsibility to correctly report compensation, hours and contributions to the state will be fulfilled. In addition, the Retirement staff will be able to work more efficiently by not having to perform work arounds currently required. Both the BRC functional and development staff will not need to devote as much time to managing tickets and specifications in an attempt to "patch" a broken system.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The benefits of implementing this change will be measured in the following fashion:
   - Reduced number of records rejected by DRS due to incomplete or inaccurate data
   - Reduced number of hours spent in work-around activities performed by benefits support team
   - Reduced number of defects logged against the refactored bolt-on system

3. *What is the current baseline for this measure?*
   The past 3 years of transmittals and their edit messages; the number of Verifications from the State

4. *What is the target for this measure? (How much improvement will this project achieve?) – see table below*

5. *When is the benefit likely to be achieved?*
   We will see benefits with the first payroll run once the new program is running in production.

   1/10/2019: Update for Spring 2019 BAP: This project was to start on March 29, 2018, but is now on hold due to the Washington State DRS not confirming the new implementation schedule. The BRC cannot update the project's milestone timeline without a new implementation schedule from DRS.

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Decrease in risk of incorrect employee retirement contributions being reported to DRS	# of reject and edit messages from the State Department of Retirement	2016 Semi-Monthly 64 2016 Bi-Weekly 1544	SM – 19 BW - 460	By 10/31/2018

Decrease in the number of requests from the state for verification of data	# of requests from the State Department of Retirement	2016 – 584 2015 - 650	470	By 10/31/2018
Decrease in errors from the transmittal process related to payroll data (such as retro pay and pay period splits etc.)	# of decrease in errors from the on cycle, off cycle, member and arrears edit reports	2016 SM-688 2016 BW-6459	SM-206 BW-1937	By 10/31/2018
Increased Retirement Staff Productivity	Reduce the number of days of manual work it takes to produce a transmittal	SM – 2.04 days BW – 3.52 days	SM – 1 day BW – 2 days	By 10/31/2018
Decrease in the number of tickets and CSRs that need to be managed by the BRC	# of tickets logged and CSRs opened	20 – 30 per year	2 per year	By 10/31/2018

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	# of system outages per month	5 outages	No outages	By 06/30/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of

annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: <u>Cost Avoidance.</u> Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

1/10/2019 Update for Spring 2019 BAP: This project was to start on March 29, 2018, but is now on hold due to the Washington State DRS not confirming the new implementation schedule. The BRC cannot update the project's milestone timeline without a new implementation schedule from DRS.

Metric Description	Metrics	Baseline	Target	Actual
Decrease in risk of incorrect employee retirement contributions being reported to DRS	# of reject and edit messages from the State Department of Retirement	2016 Semi-Monthly 64 • 2016 Bi-Weekly 1544	SM – 19 • BW - 460	• TBD
Decrease in the number of requests from the state for verification of data	# of requests from the State Department of Retirement	2016 – 584 • 2015 - 650	• 470	• TBD
Decrease in errors from the transmittal process related to payroll data (such as retro pay and pay period splits etc.)	# of errors from the on cycle, off cycle, member and arrears edit reports	2016 SM-688 • 2016 BW-6459	SM-206 • BW-1937	• TBD
Increased Retirement Staff Productivity	# of days of manual work it takes to produce a transmittal	SM – 2.04 days • BW – 3.52 days	SM – 1 day • BW – 2 days	• TBD
Decrease in the number of tickets and CSRs that need to be managed by the BRC	# of tickets logged and CSRs opened	• 20 – 30 per year	• 2 per year	• TBD

IT Project Benefits Achievement Plan (Version 4)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Executive Services
Project Title	Countywide Electronic Payment Implementation Support
Project Number	1124170

Section 2. Business Owner

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Ken Guy, Finance Director, DES

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Margaret Brownell	IT Service Delivery Manager / DES	Project oversight
Ken Guy	Finance Director / DES	Project sponsor
Scott Matheson	Treasury Manager / DES	Project manager
Syd Phillips	Business Analyst / KCIT	BA (during budget submittal process)
Anthony Laberge	Electronic Payments Coordinator / FBOD	Project lead

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	3/21/14	Syd Phillips	New, initial draft	2 hours
Benefits Achievement Plan	5/13/14	Syd Phillips, Margaret Brownell	New, initial draft	30 minutes
Benefits Achievement Plan	5/15/14	Syd Phillips	Update	1 hour
Business Case	5/13/14	Syd Phillips	Initial draft	1 hour
Business Case	5/30/14	Ken Guy / e-payment team	Update draft	5 hours
Benefits Achievement Plan	6/3/14	Syd Phillips	Update	2 hours
Benefits Achievement Plan	6/5/14	John Backman	Update	1 hour
Benefits Achievement Plan	6/6/14	Scott Matheson	Update	1 hour
Benefits Achievement Plan	3/16/15	Tony Laberge	Update	30 minutes
Benefits Achievement Plan	6/7/16	Tony Laberge	Update	2 hours
2017-18 Budget Request	9/26/16	Karl Nygard	Update	1 hour
2017-18 Budget Request	11/1/16	Tony Laberge	Update	1 hour
2016 annual report (BAP update for an ongoing project)	1/24/17	Tony Laberge	Updated Section 6 Category 1	45 minutes
2019 BAP Report	1/30/19	Tony Laberge	Update	3 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underline primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

	Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services
	Category #3: Maintaining service levels by replacing or upgrading older technology
	Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Current electronic payment policies and management plans create barriers to the expansion of electronic payment options for County services. This investment will update electronic payment policies, develop a new strategic plan, guide the selection of a new enterprise electronic payment solution, and provide support to agencies seeking an electronic payment solution.

   This project will:
   - Meet the needs and expectations of the County's customers by making it easier and more convenient for customers to use credit cards and other electronic payment methods when conducting their County business
   - Develop new electronic payment policies and establish a management framework which will accommodate the very broad range of agency needs for electronic payment implementations
   - Provide direct and targeted support to agencies for the analysis, planning and implementation of electronic payments
   - Provide an enterprise level electronic payment solution(s)

   This approach will significantly lower barriers to the adoption and implementation of new electronic payment channels. Agencies will be incentivized to adopt new payment options through a combination of funding, knowledgeable support and access to a broader range of technical solutions.

   Update 6/7/2016: Key documents published in the course of this project:
   - Executive policy FIN 8-5-1-EP, Accepting Electronic Payments, effective March 3, 2016.
   - Electronic Payment Management Plan, effective March 2016, superseding the eCommerce Management Plan (September 2004).
   - RFP 1007-16-PCR, advertised April 21, 2016 for an enterprise-level e-payment services provider; proposals due June 16, 2016.
   - Update 1/24/2017: Contract #5899650 signed January 18, 2017.

2. **How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)**
Benefits will be measured by:
- Meeting customer expectations for offering electronic payments, similar to a retail business (Soliciting feedback from citizens or businesses regarding their level of satisfaction with electronic payment methods may prove helpful, but this is primarily a customer expectation now and customers are frustrated that the County does not have consistent electronic payment methods in place for all services/products).
- Adoption of a revised Electronic Payment Strategic plan and a revised electronic payment policy
- An increase in the number of agencies that offer electronic payments to customers
- An increase in the number of County products and services that offer electronic payment options
- Of the agencies that currently offer electronic payment methods to customers (e.g. only credit cards), increase in the number of electronic payments methods offered (e.g. credit cards, debit cards, and e-checks)
- Expanding electronic payment channel options, including point-of-sale (i.e. counter), online, mobile and IVR[1].
- An increase in the annual number of electronic payment transactions
- An increase in the portion of revenue collected from electronic payment transactions (e.g. if 20% of all revenue is collected via electronic payment transactions, 30% of all revenue will be collected via electronic payment transactions by end of 2016.)

3. **What is the current baseline for this measure?**
As of May 2014:
- About 25% of County agencies that accept payments offer customers electronic payment options either online or at point-of-sale transactions. An inventory of County payments is in progress and this will be used to confirm baseline trends and to assess where there are new opportunities for electronic payments.
- Approximately 20% of County products and services (e.g. court fines, pet licenses, birth/death certificates, property taxes and transit fares) offer electronic payment options
- Of the agencies that currently offer electronic payment options, the primary methods offered are credit card and/or e-check. Only two agencies currently accept debit card payments
- The number of electronic payment transactions in 2013 was 1.38 million
- The revenue collected via electronic payment transactions in 2013 was $263.3 million

4. **What is the target for this measure? (How much improvement will this project achieve?)**
Update 6/7/2016: The following program metrics are updated as adopted in the Electronic Payments Management Plan (completed March 2016):
- **Standardized payment acceptance for county agencies**. Citizens will be able to use payment methods that they are accustomed to using in their daily lives.
- Increase in the number services accepting credit card/debit card/eCheck payments
- Increase in the number of agencies accepting credit card/debit card/eCheck payments
- Annual growth in electronic payment volume

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[1] IVR – Interactive Voice Response, telephone based services using touch-tone or voice commands

- Increase in the proportion of customer transactions paid electronically (credit/debit cards, eChecks) vs. cash/check

Measures of Effectiveness and Success (Annual Targets)							
	2014	2015	2016	2017	2018	2019	2020
No. services accepting credit/debit cards/eChecks	35% (42/122)	37%	40%	50%	60%	70%	80%
No. agencies accepting credit/debit cards/eChecks	42% (16/38)	47%	55%	60%	65%	72%	80%
Volume of electronic payment transactions[1]	~906,000	+8-10%	+8-10%	+8-10%	+8-10%	+8-10%	+8-10%
Percentage ~~Proportion~~ of transactions paid electronically ~~vs. cash/check~~[2]	35%	38%	41%	44%	51%	58%	66%

[1] Annual e-payment volume projected to increase 8-10% based on experience 2012-2013 (7.7% 2013, 11.3% 2014).
[2] Updated 1/24/2017: Percentage of all transactions (cash/check/eCheck/credit card/debit card) paid by customers using eChecks or credit/debit cards.
Determined by agency-reported volume of transactions collected electronically or via cash/check in 2014. E-payment data also collected directly from FIS DataPointe customer website. Computation excludes ORCA/DOL payments. Annual e-payment volume estimated to increase 8% based on experience 2012-2013; total volume of all transactions (cash and e-payments) by 2% based on 7.7% population growth of King County 2010-2014 per 2014 U.S. Census Bureau report (average ~2% per year)

- ~~**Number of agencies that offer electronic payment options.** An increase from 25% to 33% by the end of 2014, 60% by the end of 2015, and 80% by the end of 2016. After completion of the strategic plan, we will be able to refine the expectations.~~
- ~~**Number of products and services that offer electronic payment options.** An increase from 20% to 30%~~
- ~~**Of the agencies that currently offer electronic payment methods, increase the number of electronic payment options that they offer.** Of the nine agencies that offer electronic payment options, at least 30% (three) will increase the type of electronic payment options by at least one option (e.g. three agencies will offer debit cards in addition to credit cards).~~
- ~~**Number of annual electronic payment transactions.** Increase from 1.38 million to 1.79 million~~
- ~~**Amount of revenue collected via electronic payment transactions.** Increase from $263.3 million to $342.3 million~~

Actual 2015 performance metrics are as follows:
- Increase in the number services accepting credit card/debit card/eCheck payments from 42 to 49. Overall the percentage *decreased* from 35% to 34% since a greater number of services were identified in 2015 (145 vs. 122 in 2014).
- Increase in the number of agencies accepting credit card/debit card/eCheck payments from 16 to 19 out of 41 (42% to 46%).
- Annual growth in electronic payment volume from ~906,000 to greater than 1.1M (excluding ORCA and DOL transactions), a ~25% increase.
- Increase in the proportion of customer transactions paid electronically (credit/debit cards, eChecks) vs. cash/check from 35% to ~42% on e-payment sales of ~$380M.

5. *When is the benefit likely to be achieved?*

Benefits will be achieved incrementally over the two-year life of the project. The project is intended to be an intense two-year effort to expand electronic payments methods across the County and to migrate current applications to a vendor-supported enterprise system.

Update 6/7/2016: The Electronic Payments Management Plan projects benefits for a longer period, through 2020, with a goal of 80% e-payment utilization across the county by 2020.

Update 3/16/2015:
New e-payment services installed:
    Point-of-sale, Superior Court (FCO/JCS), January 2015

New e-payment service installation in progress:
    Point-of-sale, Judicial Administration
    Point-of-sale, RALS For Hire Vehicle & Operator Licenses

New e-payment services Business Case under review:
    DNRP/Parks, Facility Scheduling System Replacement Project
    District Court, Unified Case Management System (UCMS) project
    KCGIS, Registration System project

Update 6/7/2016:
New e-payment services installed:
    Point-of-sale, Judicial Administration
    Point-of-sale, RALS For Hire Vehicle & Operator Licenses
    Point-of-sale, RALS Archives
    Point-of-sale, RASKC
    Point-of-sale, DOT Fleet Administration
    Point-of-sale (mobile), DNRP Parks
    Online, KCGIS, Registration System project
    Online, DPER

New e-payment service installation in progress:
    Employee Giving Program
    DNRP/Parks, Facility Scheduling System Replacement Project
    District Court, Unified Case Management System (UCMS) project
    DJA Superior Court Management Information System (SCOMIS) replacement
    RALS software application replacement project

New e-payment services Business Case under review:
    DOT Community Vans Project
Updated 1/24/2017: DOT Vanpool

Update 1/30/2019
New e-payments services rollouts completed since last update:
- Employee Giving Program, online and point-of-sale
- DNRP/Parks, Facility Scheduling System Replacement Project, online and point-of-sale
- District Court, UCMS project completion planned March 31, 2019 (no KCIT support required)
- DJA, SCOMIS replacement, online and point-of-sale

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The addition of electronic payments <u>may</u> produce operational and/or financial benefits for individual agencies or departments.

   Update 6/7/2016: Modernizing the County's approach to accepting electronic payments are expected to produce the following benefits:
   - Establishing a unified and standardized approach for the management and implementation of electronic payments services across County agencies;
   - Reduction of the County's Payment Card Industry (PCI) compliance risk going forward;
   - Streamlining operations of County agencies by requiring the use of a standard payment processor (i.e. for payment processing, settlement, and reporting), unless granted an exception to the County's executive policy;
   - Offering agencies the flexibility to make strategic investments in electronic payment options for County products and services through various payment channels, such as point-of-sale, interactive voice response, Web/online applications; and other emerging channels such as mobile phone payments.

   Accrual of benefits will depend on a wide range of factors. Potential areas of savings include reductions or possibly elimination of cash handling, shifting payments from in-person transactions to online services, options to convert paper based invoicing to electronic invoicing and other direct and indirect benefits.

   Update 1/30/2019

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
FBOD expects that individual agency and department electronic payment business cases will assess and quantify expected benefits. FBOD ~~will be hiring a TLT~~ has hired a Special Assignment electronic payment coordinator to help agencies with business plan analysis and implementation.

Updated 6/7/2016: The external service-level benefits will be measured based on the metrics table documented in Category #1. In addition, the internal benefits for agencies include:
- Validating the reduction in PCI risk. When the new consolidated storefront and vendor payment gateway are in place, we can fill out the PCI compliance documents and note how risks are reduced using the new solution framework.
- Ease of implementing new or expanding existing electronic payments applications. We can conduct a survey of agencies asking them about their level of satisfaction in moving forward with electronic payments.
- Documenting the benefits of a standard reporting environment. We can ask agencies about the ease of processing settlements, chargebacks and reporting compared to the prior electronic payment environment.
- Use the external metrics noted in Category #1. A key goal of this project is to make it easier for customers to make electronic payments when conducting their business with the County. Implementing new or expanded e-payments services already benefits customers by allowing them to pay as they are accustomed to in a modern business environment. Current electronic payment limitations conflict with the County Executive's stated goal of being a "Best-Run Government." The underpinnings of the Electronic Payments Expansion Project can be found in the 2010-2014 King County Strategic Plan, which specifically endeavors to "deliver services that are responsive to community needs" and "improve the effectiveness and efficiency of County programs, services and systems."

3. *What is the current baseline for this measure?*
As each agency implements electronic payments, it will develop a baseline for the efforts required prior and post implementation of the electronic payments.

Updated 9/20/2016:
FBOD will work with agencies to determine potential baselines, as appropriate, and report them in subsequent BAP updates. However, these ancillary measures will largely be designed for agency consumption, in that the Electronic Payments Management Plan defines a broader strategic approach to expanding electronic payments across the county. The overall success of the program will be measured against the metrics outlined in Category 1. The current baselines for this measure are established with electronic payment data compiled from 2014.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
As each agency implements electronic payments, it will develop targets for the improvements expected post implementation of the electronic payments.

Update 9/20/2016:

FBOD will work with agencies to determine potential targets, as appropriate, and report them in subsequent BAP updates. However, these ancillary measures will largely be designed for agency consumption, in that the Electronic Payments Management Plan defines a broader strategic approach to expanding electronic payments across the county. The overall success of the program will be measured against the metrics outlined in Category 1. The program's target is to make electronic payments the norm for customers conducting business with the county, with a goal of 80% e-payment utilization across the county by 2020.

5. ***When is the benefit likely to be achieved?***
Achievement of benefits will vary depending upon when the electronic payment implementation occurs. Each project will identify when any expected benefits will occur.

Updated 9/20/2016**:**
FBOD will work with agencies to identify and report benefits, as appropriate, in subsequent BAP updates. These will be reported in the broader context of the Electronic Payments Management Plan, which defines a broader strategic approach to expanding electronic payments across the county. The program's target is to make electronic payments the norm for customers conducting business with the county, with a goal of 80% e-payment utilization across the county by 2020.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
Update 11/1/2016: Key elements of the Electronic Payments Management Plan, as approved by the project's Steering Committee, include:
   - Allowing agencies increased flexibility to establish "storefront" applications that meet customer needs at the front-end of the payment process. These storefronts can be supported and maintained by either the County or a vendor. As part of the Project, the County's IT team will develop a consolidated storefront and eCommerce API for eleven current agency payment applications that have historically relied on the County's custom built storefront and payment gateway software.
   - Transitioning the County's payment gateway function, which is the hand-off between the front-end and the back-end of the payment process, to a single vendor supported gateway function. The County will phase out its in-house payment gateway, which will lower the County's risk and avoid future costs in meeting Payment Card Industry (PCI) standards for data security and privacy.
   - Standardizing the back-end of the payment process by mandating the use of a County designated electronic payment services provider—the back-end refers to the portion of the payment process handled by a vendor after the customer places an order. This is expected to

create efficiencies and ease of administration across the County for enterprise reporting, account reconciliations, settlements, refunds, and chargebacks.

At the inception of the project, developing a new consolidated storefront was not conceived. The initial concept was that the 11 current payment applications would each need to be connected separately to the future vendor payment processor. But careful consideration by the project team and Steering Committee determined that an in-house developed consolidated storefront and an eCommerce API for the applications provided the most cost effective and efficient means to meet the benefits noted earlier in Category #2. As a result, to ensure sufficient funding to cover the cost of developing the new consolidated storefront and eCommerce API, and the transition of agency storefront applications from the existing payment gateway, an additional allocation to the capital budget already approved for the 2015-16 biennium budget will be requested for 2017-18.

The new budget allocation will also support the in-house development of a high priority online e-payment application that arose after project inception: the Employee Giving Program portal that will enable employees to donate via credit/debit cards to provide relief funds in response to local, regional or worldwide natural disasters and other emergencies. Note that the development of this portal is expected to be only $10,000 or less and the main reason for the budget increase is due to the development of the consolidated storefront involving the 11 current applications.

Updated 11/1/2016:
If the Countywide Electronic Payments Implementation Support Project does not receive the additional $358,000 appropriation as requested for the 2017-2018 budget, the fallback plan will be as follows:

- We will continue to move forward with a new vendor-supported payment gateway and payment processor. This is critical for the County to reduce the growing risk associated with Payment Card Industry (PCI) compliance.
  - What is PCI compliance? The PCI Security Standards Council provides technical and operational requirements designed to protect cardholder data. In the last year, the County had just over one million electronic payment transactions which moved us from a Level 3 to a Level 2 merchant under the PCI standards. PCI standards can be grouped into six areas:
    - (1) maintaining a secure network and system;
    - (2) protecting cardholder data;
    - (3) maintaining a vulnerability management program (e.g., protect against malware and viruses);
    - (4) implementing strong access control measures;
    - (5) regularly monitoring and testing networks; and
    - (6) maintaining an information security policy, including staff education/training.

    Under Level 2 the County must complete an annual self-assessment and a quarterly network scan. Under Level 2, there are additional requirements added to the Level 3 requirements including passing an annual accreditation program and conducting on-site assessments. With the vendor supported payment gateway, the County is able to transfer a larger share of its risk as a Level 2 merchant to the vendor.

- With reduced funds, the project will not be able to complete either the new consolidated storefront or the new eCommerce API for existing payment applications and forthcoming new applications. Instead, we will implement a less costly fallback option and develop a new "bridge

API" to convert all existing storefronts to the County's new payment processing vendor (see summary chart below). This bridge API (Application Programming Interface) is a program that exchanges data between existing County storefront applications and the new payment processing vendor's program.

What benefits do we forego (i.e., what risks are incurred) by implementing this fall back option?

- o <u>Forego improved security controls</u>. Current storefronts have varying security controls in place, with no consistency or guarantee that they are staying up to date to protect against threats.
- o <u>Forego improved audit trails</u> by logging all events in a single repository. This will avoid problems that have occurred, such as when County staff could not find evidence that a candidate for public office had made a payment when filing.
- o <u>Forego a consistent look and feel for all County storefronts.</u> This will give our customers confidence that they are on an authentic County site where their payment is safe. Currently, some County storefronts do not provide this reassurance. This will have the potential impact of reducing public confidence when making payments to the County and may hamper the project's ability to meet its goals of increasing the widespread use of electronic payments.
- o <u>Forego up-to-date technology that keeps pace with industry best practices and avoids becoming obsolete.</u> The current storefronts and County-supported gateway (which is over 10 years old) have lagged behind in a number of areas such as data access and the development environment.
- o <u>Forego the ability to respond to business needs quickly.</u> With the added $358K in funding, a new storefront can be stood up significantly faster, in as little as a month from conception to production for simple cases. More complex storefronts can reuse components and reduce time to market by a month or more. Also, with the fallback option, we forego the ability to make a change once and have it apply to all the storefront modules in the consolidated storefront.
- o <u>Forego lowering of ongoing costs</u> for hosting an application, because modules are sharing components.

Summary chart reflecting how connections to the Vendor Payment Gateway and Payment Processor will change if additional funds are not approved:

Agency	Applications	Exec Proposed Scope	Scope of Fallback Plan w/o $358K
Department of Executive Services (DES) Regional Animal Services	Pet Licensing* and Pet Donations*	Consolidated Storefront	Bridge API
Department of Natural Resources and Parks (DNRP) Wastewater Treatment Division (WTD)	Capacity Charges*	Consolidated Storefront	Bridge API
DES FBOD Treasury Operations	Property Taxes*	Consolidated Storefront	Bridge API
DES FBOD	Employee Giving Program	Consolidated Storefront	Bridge API
Elections	Candidate Filing Fees*	eCommerce API	Bridge API
Department of Public Health, Environmental Health Services Division	EH Portal Permits*	eCommerce API	Bridge API

District Court	Ticket Payments* and Records Online (Dcor)*.	eCommerce API	Bridge API	
Dept of Judicial Admin	E-Filing Payments*, Electronic Court Records Online (ECR)*, and Court Records*.	eCommerce API	Bridge API	
DNRP	DNRP - Parks System Replacement. Recreation management system.	eCommerce API	Bridge API	
DES Records and Licensing Services (RALS) Division	Records and licensing management system replacement project.	eCommerce API	Bridge API	
Department of Permitting and Environmental Review (DPER)	Permitting System	eCommerce API	Bridge API	

* Indicates applications that currently use the current KCIT payment gateway

Update 1/30/2019
- KCIT developed Consolidated Storefront/eCommerce API fully implemented, for: Treasury/Property Tax, Employee Giving, WTD Capacity Charges, PH/Environmental Health, and Dept of Judicial Admin.
- Following agencies successfully transitioned to vendor-supported web platform: Regional Animal Services (HLP Chameleon), DNRP Parks (PerfectMinds), RALS Recorder's Office (Landmark), and DPER (Accela).
- KCIT Bridge API still operational for Elections and District Court; planned phase out prior to the end of 2019.

NOTE: This is the last BAP update for Project #1124170. KCIT closed this project and cost center December 31, 2018. KCIT will make available a "Countywide Electronic Payments Project, Project Close-out Report" for additional information.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
   Updated 9/20/16:
   Although the primary reason for the project is to make it easier for customers to use electronic payments, the project should also reduce the risk tied to PCI compliance. This will be measured by evaluating the County's compliance every year (or every other year) based on the PCI compliance questionnaire. The questionnaire is constructed in such a way that the County's percentage of overall compliance can be determined from year to year.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: <u>Reduced cost to produce service</u>. *If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual*

1. *Describe why you expect the proposed IT investment to reduce costs?*
Updated 9/20/16:
Although the project is not expected to result in immediate cost savings, the project consultant (FIS) estimates average cost savings of $.40 to $.50 for each manual transaction converted to an electronic payment method. Using a $.40 per transaction cost savings rate, County agencies could save $268,000 by 2020. To validate this savings over time, more data will need to be collected from agencies to compare the cost of processing checks/cash versus the cost of processing electronic payments. In addition to these cost savings, there are other costs avoided for customers when using electronic payments including reduced parking and transportation costs to go to physical payment locations in County buildings.

~~Updated 6/7/2016: FIS, the project consultant, estimates an average cost savings of $0.40-$0.50 for each manual transaction converted to an electronic payment method. In 2015, the volume of electronic payments processed by County agencies exceeded 1.1M. Even a modest projected increase of 10% per year through 2020 may produce sizeable cost savings. Using a $.40 per transaction cost savings rate, this could result in a cumulative savings of $268,000 by 2020.~~

~~Improving efficiency through reducing manual processing will also allow for a shift in labor to accomplish other tasks, such as providing for customer service needs.~~

~~Other social benefits and cost savings that may be realized through expansion of online services:~~
~~☐ Customers no longer need to go to physical locations to pay for County products/services (reduced traffic and congestion)~~
~~☐ Reduced transportation costs for customers~~
~~☐ Reduced parking costs for customers~~

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
~~Updated 6/7/2016: Document how electronic payments are more efficient than processing cash through:~~
~~☐ Partnering with select agencies to collect data to validate cost savings~~
~~☐ Analyzing vendor electronic payment transaction data (volume and amount)~~
~~☐ Customer comments~~

3. *What is the current baseline?*

4. *What is the target for this measure? (How much savings will this project achieve)*

5. *When is the cost reduction likely to be achieved?*
~~Updated 6/7/2016: Determined on an agency-by-agency basis.~~

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: *This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.*

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing time, annual savings, and % of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *$100,000 savings*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update 1/30/2019: This is the final BAP. This project, overall, met the target benefits and was successful. The very few areas that were below target will continue to be improved on during the operations phase over the next few years as new installations are activated.

Metric Description	Metrics	Baseline	Target	Actual
Meet the needs and expectations of the County's customers by making it easier and more convenient for customers to use credit cards and other electronic payment methods when conducting their County business	Increase volume of e-payment transacitons. Increase county locations where customers can make e-payments.	See chart Category 1, Section 4: baseline is CY 2014 e-payments data.	See chart Category 1, Section 4: Annual targets are listed. These include: Increase in number of county services accepting credit cards for payment.	Number of county services accepting credit cards for payment remained static at 35% through 2018, below target, as the emphasis during this phase of the project was conversion of old systems.

			Increase in the number of agencies that accept creduit cards for payment of services.	Number of agencies accepting credit cards for payment of services increased modestly from 45% to 50% through 2018, below target, as the emphasis during this phase of the project was conversion of existing systems.
			Increase the Volume of e-payment transactions	Volume of e-payment transactions have increased by 8% or greater per year through 2018
			Increase the Percentage of transactions paid electronically	Percentage of transactions paid electronically have met the goal as of 2018, reaching 50%.
Develop new electronic payment policies and establish a management framework which will accommodate the very broad range of agency needs for electronic payment implementations	Update county e-payment policy and E-Payments Management Plan	Old policy and Plan (outdated, circa 2005).	Develop and approve new executive policy	New policy, FIN-8-5-1-EP, approved by executive, March 2016
			Develop and approve new E-Payments Management Plan	New E-Payments Management Plan approved by E-Payments Steering Committee, March 2016
Provide direct and targeted support to agencies for the analysis, planning and implementation of electronic payments	Hire an Electronic Payments Coordinator (principal focus to manage the county's Electonic Payments Program.	Previous position and committee did not exist.	Hire an Electronic Payments Cooridinator.	Electronic Payments Coordinator hired January 2015.
	Establish an Electronic Payments Steering Committee to provide authoritative program oversight and decision-making.		Establish a Electronic Payments Steering Committee.	Seven-member Electronic Payments Steering Committee established June 2015 (now E-Business Steering Committee).
Provide an enterprise level electronic payment solution(s)	Publish RFP and award contract to	Replace old e-payment processors, FIS and Bank of	Award new contract by June 2016.	RFP published June 2016; contract

| | new e-payments services provider. | America (contracts expiring) | | awarded January 2017. |
| | Convert 100% of designated e-payment systems to new e-payments services provider | | Complete conversion of old e-payment systems to new e-payment services provider by 12/31/2018 | Conversion of old systems to new e-payment services provider completed 12/31/2018 |

Countywide Growth, King County

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DES/FBOD
Project Title	Procurement Technology Modernization
Project Number	1133879
Project Timeframe	2019-2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Ken Guy, Director, FBOD

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Carmel Call	Director/BRC	Technical Sponsor
Tanya Hannah	CIO/KCIT	Technical Sponsor
Ken Guy	Director/FBOD	Business Sponsor
Eunjoo Greenhouse	Deputy Director/FBOD Chief Procurement Officer/FBOD	Business Sponsor
Rita Popp	BI Program Manager/BRC	Project Manager

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Conceptual Review	4/24/18	Danielle Hinz	New, initial draft	8 hours
2019 – 2020 Budget Process	8/13/18	Karl Nygard	Updates based on IT investment review	15 mins
2019 BAP Report	1/31/19	Karl Nygard	No material updates from the version submitted with budget	15 min

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)

Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☒
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Note to Reader: There are a total of six key benefits associated with this project and they are discussed out of order in this document so they are in alignment with the relevant benefit category.
   Note to Reader 2: Benefit #7 is new to this document as of Aug 2018.

   Benefit #6: Stakeholders will have easier, self-service access to public information.

   Current State: In most instances, stakeholders who want to have access to public documents submit a Public Disclosure Request (PDR) which is then handled by staff. To mitigate the high volume of PDRs handled in P&P, staff has implemented processes to proactively publish highly requested documents on the website. All of these processes are manual and cumbersome, so only the highest value/lowest effort items are handled in this manner.

   Future State: Because the majority of documentation associated with a procurement and contracting process will be created and stored within the Oracle system, it will be easier to make information public. Staff dedicated to responding to P&P PDRs will be able to spend their time on the more complex requests from the public as well as other value-added activities.

   Benefit #3: A single point of entry will be created for suppliers interested in doing business with the County, and those that are interacting with the County on a contract. Suppliers will have self-service availability of access to contracts, purchase orders, and payments; suppliers will also be able to maintain their account information including addresses, phone numbers, etc.

Current State: For a small supplier to do business with the County, they need to complete up to four disparate applications: 1) Online Vendor Registration (OVR) to receive notification of solicitation opportunities; 2) King County W-9 process to be entered as an active supplier into Oracle to transact business; 3) Small Contractor and Supplier (SCS) application to apply for certification; and 4) Roster application to be on the list to compete for small construction or engineering consulting contracts. Different County staff review these disparate applications and so may be having separate conversations with the supplier in order to review and process their request. This causes confusion and frustration with suppliers and deters them from taking advantage of doing business with the County, especially for small businesses where constrained resources exist. This ultimately costs the County more money for products and services and makes it more difficult to meet County procurement goals.

Future State: Suppliers would have access to register with the County via a user-friendly online application process which would include all the various elements needed to take full advantage of what the County can offer, including registering to transact business with the County, receiving email notices of available bidding opportunities, the SCS and roster applications, and submitting invoices. Additionally, suppliers will have self-service access to the status of their contracts, purchase orders, and payments.

2. **How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)**
   Benefit #6: P&P will track the number of PDRs received to measure this benefit.
   Benefit #3: Suppliers will benefit with a reduction in failure rate (a failure is any incomplete application) for applying to get solicitation notices from the County. Failures generally show the intent of a firm to register to do business with the county, and failures mean the firm cannot, even if they expected to. County staff will also spend less time maintaining supplier records.

3. **What is the current baseline for this measure?**
   Benefit #6: The baseline measure is number of PDRs received annually.
   Benefit #3: Baseline measure is 70% failure rate for suppliers attempting to register on OVR.

4. **What is the target for this measure? (How much improvement will this project achieve?)**
   Benefit #6: The target is 48 PDRs for information that is available via self-service.
   Benefit #3: Target is 5% failure rate, which would be easily actionable by staff.

5. **When is the benefit likely to be achieved?**
   Benefit #6: Benefit will be achieved after phase 1 implementation, scheduled for 2020.
   Benefit #3: Benefit will begin to be achieved after phase 1 implementation, however this benefit will be positively impacted with strong change management for the supplier community and therefore may take up to 12-24 months after implementation to fully realize.

6. **Summary table for Category #1:**

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Decrease the number of PDRs submitted to P&P	# PDRs for self-service information	120	48	Annually beginning 12/31/2020
Supplier registration failure rate	% failure of suppliers attempting to register	70%	5%	Annually beginning 12/31/2020

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

    Benefit #1: The County's investment in Oracle systems will be leveraged to provide Internal County stakeholders visibility and access to information regarding the procure-to-pay process. Most procure-to-pay business processes will be handled through additional Oracle Procurement modules giving customers self-serve access to see where their procurement is in process.

    Current State: A County agency customer enters a request for service from Procurement and Payables (P&P) staff through the stand-alone Service Request Module (SRM). The lack of integration means that as P&P takes action on the request, the customer has no knowledge about the activity absent a phone call or email with P&P staff.

    Future State: The County stakeholder will be able to use Oracle Sourcing to enter a request, and since the activity will then take place within Oracle, the agency customer will be able to see who in P&P is handling the request and track its progress.

    Benefit #2: Elimination of disparate systems will streamline processes and reduce errors throughout the procurement and contracting process.
    By implementing additional Oracle Procurement modules, activities across the procure-to-pay business process will be handled with one system. This will eliminate extra steps currently taken to replicate data entry between multiple systems.

    Current State: Opportunities for suppliers to bid on County contracts are currently published using the Online Vendor Registration (OVR) system. In order to do so, the County agency submits a request through the SRM (see above benefit). P&P then assigns that request to the appropriate staff member who will provide the service. The responsible staff member then contacts the agency contact to get more information (because the SRM does not include sufficient fields to collect all the needed information). Typically, this is done either using a SharePoint collaborative site or by trading a series of emails to produce final documents in Word, Excel, Adobe, and/or other formats. These

final documents are then handed off to administrative staff using a Work Order system in SharePoint for final review and posting to the website via OVR. The exchange of documents in this manner allow room for error and duplication of data entry as information is transferred from one mode to another.

Future State: Initial information will be submitted by the County agency through the Oracle Sourcing module on the front end of the process; that information will travel through the modules of Oracle through the entire process including publishing the solicitation documents to the web, submittal of responses by the supplier community, evaluation of responses by County agency stakeholders, creation and execution of the resulting contract, and submitting and paying the invoice.

Benefit #4: The County's travelers will have an end-to-end solution for requesting pre-travel authorization, reconciling applicable credit card transactions, and requesting reimbursement.

Current State: Each County agency manages their own process for pre-travel authorization often using disparate paper and/or electronic forms to communicate travel purpose and approximate trip costs. These paper and/or electronic forms are then stored with the agency until after the trip when they are routed with the Oracle request for reimbursement. Any travel-related expenses paid for with the County's travel card are reconciled separate from the employee reimbursement without in-line visibility to the traveler's approver. This process increases opportunities for errors. Due to the various modes by which documentation is kept and routed, missing documents are more likely.

Future State: As Oracle is not investing in the long-term improvement of the iExpense module (currently used for employee reimbursement and County credit card reconciliation), this project will implement a proven industry standard travel solution offering a fully integrated approach to pre-travel authorization, booking and tracking planned travel, accounting for trip expenses, reconciling credit card charges, and requesting reimbursement. Tracking and retention of documentation will be improved by the availability of electronic integration with travel providers and camera-capture for receipts during the trip. It will be easy for County agency approvers to see all applicable approvals, expenses, and documentation for each trip. P&P will be able to easily reconcile and audit travel expenses to expedite employee reimbursement.

Benefit #5: Stakeholders will have easier, self-service access to public information.

Current State: In most instances, stakeholders who want to have access to public documents submit a Public Disclosure Request (PDR) which is then handled by staff. To mitigate the high volume of PDRs handled in P&P, staff has implemented processes to proactively publish highly requested documents on the website. All of these processes are manual and cumbersome, so only the highest value/lowest effort items are handled in this manner.

Future State: Because the majority of documentation associated with a procurement and contracting process will be created and stored within the Oracle system, it will be easier to make information public. Staff dedicated to responding to P&P PDRs will be able to spend their time on the more complex requests from the public as well as other value-added activities.

Updated 8/13/2018: Benefit #7: Internal Efficiencies, Improved Reporting and Revenue Enhancements

Current State: The Oracle system implemented with ABT in 2012 is stable and has been serving us reasonably well, but it is incomplete. The inefficiencies in the systems used for procurement now prevent significant improvements in processes and dramatically limit the revenue growth opportunities. We are underutilizing our investment in Oracle because we are only using iProcurement and iExpense and trying to make these products work with five outdated side systems (i.e., the Service Request Module, Online Vendor Registration, Roster Contracts, Goods & Services database, and Design and Construction database). The five outdated side systems are not integrated with the Oracle products. As a result, staff are required to enter, copy and upload data multiple times in multiple systems, which is prone to error and increased staff time. The lack of integration also means reporting and data analysis is very difficult for internal customers, which hinders our ability to analyze County spending patterns and to use procurement for meeting the Executive's goals for social and environmental responsibility.

Future State: Because the new system will integrate and streamline processes and systems, FBOD will gain approximately 4.0 FTE worth of efficiencies, approximately $100,000 of further cost savings, and $300,000 of new revenue derived from P-Card rebates. This almost entirely offsets the ongoing costs of the project, and doesn't consider the efficiencies gained in agencies outside FBOD nor suppliers. Further, an integrated system, will facilitate improved reporting and analysis of County spending patterns, which will lead to better decision making for saving taxpayer dollars. Improved reporting will also allow the County to monitor the effectiveness of high priority procurement initiatives involving small business contracting opportunities, sustainable (green) purchasing, and local purchasing.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***

Benefit #1: The benefit will be achieved when customers are able to check on status of their procurement activity without needing to contact P&P. The metric will be measuring contacts through the main phone line and general inboxes in P&P. Staff that manage these communication methods will be responsible for tracking number and type of contacts. This will also result in increased customer satisfaction which will be measured by surveying internal County stakeholders.

Benefit #2: This benefit will be measured by reduced cycle time for procurements and invoice payments. Cycle time for appropriate procurement activities will be collected via Oracle using dates collected as part of the process.

Benefit #4: Benefit will be measured by:
- Decreased error rate on travel reimbursements – staff and/or system will track errors (rejected reimbursements)
- Improved satisfaction by credit card (P-card and Travel Card) reconcilers – this will be assessed via survey
- Decreased time to reimburse employees – cycle time from reimbursement request through payment issued.

Benefit #5: P&P will track the number of PDRs received to measure this benefit.

<u>Benefit #7:</u> Internal Efficiencies and Revenue Enhancements will be tracked with the expenditures from the procurement group and those costs related to the new procurement system. Additionally, the P-Card revenue is a standard metric that FBOD tracks, so this increase will be both significant and obvious.

3. ***What is the current baseline for this measure?***
   <u>Benefit #1:</u> Customer satisfaction baseline will be determined via survey in late-2018.
   <u>Benefit #2:</u> Baseline measure is 71 days for small works contracts, 183 days for A&E contracts, and 99 days for construction contracts. Currently no baseline for Goods and Services contracts due to the significant variation in the type of product for contract.
   <u>Benefit #4:</u> This benefit will not be realized until phase 2 of the project, so baseline measures will be established prior to implementation.
   <u>Benefit #5:</u> Baseline measure is 120 PDRs received annually.
   <u>Benefit #7:</u> Internal Efficiencies and Revenue Enhancements baseline is status quo, or zero.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   <u>Benefit #1:</u> Target will be that contacts will be de minimis for information offered through self-service. Target for customer satisfaction will be developed once baseline is known.
   <u>Benefit #2:</u> Target cycle times are: 45 days for small works contracts, 150 days for A&E contracts, and 100 days for construction contracts. Currently no target for Goods and Services contracts due to the significant variation in the type of product for contract.
   <u>Benefit #4:</u> Targets will be established once the baseline is known.
   <u>Benefit #5:</u> Target is 48 PDRs for information that is available via self-service.
   <u>Benefit #7:</u> Internal Efficiencies and Revenue Enhancements target is 4.0 FTEs in efficiencies and a further $400,000 in new revenue and cost savings.

5. ***When is the benefit likely to be achieved?***
   <u>Benefit #1:</u> Benefit will be achieved after phase 1 implementation.
   <u>Benefit #2:</u> Benefit will begin to be achieved after phase 1 implementation, however this benefit will be positively impacted with strong change management and therefore may take up to 12-24 months after implementation to fully realize.
   <u>Benefit #4:</u> Benefit will begin to be achieved after phase 2 implementation, however this benefit will be positively impacted with strong change management and therefore may take up to 12-24 months after implementation to fully realize.
   <u>Benefit #5:</u> Benefit will be achieved after phase 1 implementation, scheduled for 2020.
   <u>Benefit #7:</u> Internal Efficiencies and Revenue Enhancements likely to be achieved in the FBOD operating budget beginning in 2021 after the system is complete.

6. ***Summary Table for Benefit Category #2:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Self-service availability for procurement status	# contacts to P&P % customer satisfaction	TBD after survey is complete	De minimis TBD after baseline is established	By 12/31/2020

Reduced cycle time of procurements	# average days for procurement process	71 days for small works contracts, 183 days for A&E contracts, and 99 days for construction contracts.	45 days for small works contracts, 150 days for A&E contracts, and 75 days for construction contracts.	Annually beginning 12/31/2020
Reduce error rate for travel reimbursements	% errors in reimbursements	TBD closer to implementation	TBD once baseline is established	Annually beginning 12/31/2021
Increase customer satisfaction with card reconciliation	% customer satisfaction	TBD closer to implementation	TBD once baseline is established	Annually beginning 12/31/2021
Decrease time to reimburse employees	Cycle time for reimbursements	TBD closer to implementation	TBD once baseline is established	Annually beginning 12/31/2021
Decrease the number of PDRs submitted to P&P	# PDRs for self-service information	120	48	Annually beginning 12/31/2020
Internal Efficiencies and revenue enhancements	P-Card Revenue	1.3M	1.6M	Annually beginning in 2021.

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	# of system outages per month	5 outages	No outages	By 06/30/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form.

Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

3/4/2019 Update: This is a new project that started in January 2019. FBOD is currently working on the request for proposal, as well as the project charter and statement of work. There are currently no concerns on cost, schedule, or budget.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/ Agency Name	Department of Executive Services / Fleet Services Division
Project Title	Automatic Vehicle Location for Non-Revenue Vehicles
Project Number	1129703

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Jennifer Lindwall, Division Director, Fleet Services Division

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the benefit achievement plan below:

Name	Title / Agency	Project Role
Jennifer Lindwall	Division Director, Fleet	Business Owner
Nora Jagielo	Project Manager III, Fleet	Fleet Lead / Project Coordinator
Mike Berman	DOT IT Service Delivery Manager/KCIT	Project Oversight
Scott Niskanen	KCIT Project Manager II	Project Manager (Jan–Aug 2017)
Tim Morrow	IT Service Delivery Manager	Project Oversight
Janielee Osborne	KCIT Project Manager III	Project Manager (Jun 2018–Feb 2019)

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process	5/24/16	Nora Jagielo	New, initial draft	2 hours
Budget Process	6/7/16	Nora Jagielo	Revision after early feedback	2 hours
Budget Process	8/31/16	Nora Jagielo	Revision after rater's group feedback	1 hour
Budget Process	9/13/16	Nora Jagielo	Revision after Council staff feedback	1 hour
Annual Report	7/11/17	Scott Niskanen	Revision after Council staff feedback	2 hours
Annual Report	8/3/17	Nora Jagielo	Revision after Council staff feedback	1 hour
2019 BAP Report	2/4/19	Nora Jagielo	Update for Annual Report; Not a Final BAP; Administrative/reorg updates to Sections 1-3; Updated Section 2, Category 2 benefits and targets; Added status update for each measure in Section 7	1 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

<u>Category #1</u>**: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.**

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Implementing Automatic Vehicle Location (AVL) will yield significant benefits including access to web-based vehicle use information that can be used to make transparent decisions regarding King County's non-revenue vehicle operations.

   A. **Access to Vehicle odometer readings & frequency of use information**
      a. ***Status quo:*** Odometer readings are captured when the driver manually enters the current reading when obtaining fuel or when the vehicle is brought in for service. Fleet ~~Administration~~ Services (updated 2/4/19) (Fleet) averages approximately 75 fuel transaction errors per week that must be manually resolved. Fuel transactions are migrated into FASTER (Fleet's asset management system) on approximately a two week delay and in most cases vehicles come in for service only a couple of times per year. Additionally, the number of days vehicles are used is captured by agencies with assigned vehicles in various formats including hand-written logs or online calendars. There is no centralized database that captures and stores frequency of use information.

      b. ***After implementation:*** AVL will provide real-time access to accurate non-revenue vehicle odometer readings and will feed directly into FASTER along with vehicle usage data. This will allow Fleet to schedule preventative maintenance (oil changes and safety inspections) more proactively and increase the reliability of vehicle replacement projections. **Agencies can then use this information to rotate, pool, or downsize vehicles to distribute usage evenly across their fleet.**

   B. **Remote vehicle diagnostics**

a. ***Status quo:*** Vehicle repair codes are downloaded using a diagnostics computer when the vehicle is in the shop for service. We do not have the ability to capture vehicle errors or repairs codes remotely at this time.

b. ***After implementation:*** **AVL will provide access to remote vehicle engine diagnostics in real-time (e.g., check engine light or other error codes) and will facilitate prompt repair scheduling before larger, more costly issues arise**.

C. **Vehicle idling**

a. ***Status Quo:*** Only a subset of vehicles and equipment are capable of tracking the total hours spent idling. If the asset does track it, the information can be gathered when the vehicle is in the shop for service using a diagnostics computer. Some of the newer vehicles track the cumulative "idle hours" on the on-board computer system. This information is captured manually by the technician on a work order. We do not have the ability to capture and report aggregate vehicle idling information at this time.

b. ***After implementation*:** AVL has the capability to track the total hours a vehicle spends idling, alert managers when vehicles are idling for prolonged periods, and store the information in a reportable database. The hardware is able to track when an engine is running but not accumulating mileage. **We expect to see a decrease in vehicle idling when agencies use this information to quantify potential fuel savings and implement anti-idling strategies and best practices**.

D. **Determining asset location**

a. ***Status Quo:*** If a vehicle is lost or stolen, we can extrapolate information from its last known location, but it is often anecdotal and imprecise. If a vehicle breaks down, the driver must verbally describe their location to the shop or tow truck driver.

b. ***After implementation:*** **If a vehicle or piece of equipment is lost, stolen, or broken down we will be able to locate it immediately on a map and take the appropriate actions to recover it.** Geo-fences can be programmed to track how often vehicles leave and enter pre-defined areas (i.e. King County, a park, etc.).

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

A. **Use of vehicle odometer readings and frequency of use information to improve utilization rates:** This benefit will be achieved when real-time vehicle odometer readings feed directly into FASTER and agencies are using the accurate vehicle odometer and frequency of use data to improve utilization rates. Utilization rates will be measured as part of the biennial budget cycle.

B. **Remote vehicle diagnostics:** This benefit will be measured by capturing the number of remote error codes generated and the number of repair appointments that are scheduled as a result.

C. **Vehicle idling:** This benefit will be achieved when vehicle idling is reduced.

D. **Determining asset location:** This benefit will be achieved when we have the ability to locate lost or stolen assets that are equipped with AVL.

3. *What is the current baseline for this measure?*

A. **Use of vehicle odometer readings and frequency of use information to improve utilization rates:** A new baseline for annual vehicle mileage and days of use will be established at the end of year 1.
B. **Remote vehicle diagnostics:** The current baseline is not captured and will be established at the end of year 1.
C. **Vehicle idling:** The current baseline is not captured because we do not have the ability to capture idle hours unless the vehicle is in the shop for service. The baseline will be established at the end of year 1.
D. **Determining asset location:** The current baseline is zero because we do not have the ability to determine an assets geographic location remotely.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   A. **Use of vehicle odometer readings and frequency of use information to improve utilization rates:** The target for light duty vehicles is 7,200 miles per year or used on 70 percent of available working days.
   B. **Remote vehicle diagnostics:** The target is to have immediate access to remote vehicle diagnostics information and schedule appointments for vehicles transmitting ==urgent (updated 2/4/19)== error codes within three business days. A goal will be established after the baseline is defined.
   C. **Vehicle idling:** The target is to have access to vehicle idling information in real-time. Fleet will also include the total idle hours for each agency as part of the quarterly performance measures. A goal will be established after the baseline is defined. Fleet will work with agencies to establish goals as part of the baseline process. We believe a 5 percent reduction is possible in year 2, however, this estimate may change in year 1 as more accurate data becomes available.
   D. **Determining asset location:** The target is to have the precise location of a lost or stolen asset.

5. *When is the benefit likely to be achieved?*
   ~~The monetary benefits associated with canceling the existing AVL subscriptions in Roads Services and Solid Waste will be realized no later than June 30, 2018. The go-live for these two groups will be prioritized due to their emergent needs.~~ ==(updated 2/4/19)==

   ==Many of the projects technical benefits have been achieved.== ~~by December 31, 2018. This will allow us to ensure the data is being collected properly, the reports are working as intended, and users are able to access the information.~~ ==(updated 2/4/19)==
   Benefits related to reduced idling, ==vehicle utilization,== and decreased fuel consumption will vary by agency, but we expect to start realizing these benefits as early as Q1 2019, however, more complete results are expected in 2020.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
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Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

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2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional five years. This project is currently functioning at 99.999% up-time and will report annually for the next five years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	Processing Time annual savings, and percentage of purchases receiving prompt payment discounts	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

This is not a final BAP. Fleet needs more time to monitor and measure the benefits for this completed project.

Metric Description	Metrics	Baseline	Target	Actual
Use of vehicle odometer readings and frequency of use information to improve utilization rates	Annual mileage, days of use/ utilization rates for all vehicles in LiGO	• TBD after year 1	• 7,200 miles per year or used on 70 percent of available working days.	• TBD
Remote vehicle diagnostics	Number of engine codes captured and resulting repair appointments for all vehicles in LiGO	• TBD after year 1	• Schedule appointments for vehicles transmitting URGENT error codes within 3 business days	• TBD

Vehicle idling	Idling duration (hours) for all vehicles in LiGO	• TBD after year 1	• 5 percent reduction in idling in year 2	• TBD
Determining asset location	Real time location, date last "seen" or driven for all vehicles in LiGO	• No baseline, new functionality	• Capture real-time vehicle location	• Location is captured for vehicles with AVL installed

Status updates for each of the measure as of 2/4/19:

A. **Use of vehicle odometer readings and frequency of use information to improve utilization rates:** Real time odometer readings are being captured for vehicles in LiGO. We are currently in the process of testing and setting up the necessary infrastructure for the meter integration with FASTER. The integration methodology and test results will be reviewed at the Implementation Readiness Review (IRR) meeting on February 26. Utilization data (days of use, trips, average trip distance) is actively being captured for vehicles in LiGO. We expect this data to be insightful and informative for agencies and ultimately lead to more efficient vehicle use across the county.

B. **Remote vehicle diagnostics:** Diagnostic trouble codes are actively being captured and transmitted wirelessly for light-duty vehicles and most heavy-duty trucks. We are still working with the vendor to tweak the transmission of trouble codes on the Solid Waste tractors for usability by the shops.

C. **Vehicle idling:** Vehicle idling information (engine on, vehicle not moving) is actively being captured for vehicles in LiGO.

D. **Determining asset location:** Vehicle locations are being captured for vehicles in LiGO.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.

For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Name	Department of Executive Service / Facilities Management Division
Project Title	Comprehensive Facilities Asset Management (CFAM)
Project Number	1124148

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Caroline Whalen, County Administrative Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Glenn Evans	PPM IV, FMD	IA Lead
~~Loren Klabunde~~ Indira Hiremath	Project Manager, KCIT	KCIT Lead
Andy Kim	Business Analyst, KCIT	KCIT Support
~~Gail Houser~~ Bryan Hague	~~Former~~ RES Manager, FMD	SME – RES
Michael Kulish	Permits & Acquisitions Supervisor, FMD	SME - RES
~~Tom Paine~~ Julie Porter	~~Acting~~ Leasing Supervisor, FMD	SME - RES
Jim Loveless	Sales Supervisor, FMD	SME - RES
Jim Burt	Capital Planning and Development Section Manager, FMD	Provide expertise and staff for SME input
Leo Griffin	~~Assistant Operations Section Manager and~~ Acting Planning & Operations Section Manager, FMD	SME - Operations and internal service issues and Provide expertise and staff for SME input
Kamma Kure	Operations Section PPM, FMD	SME – Space & move management
Hanh Mai	Financial Unit Manager, FMD	SME – Operating costs
Ameer Faquir	Building ~~Services~~ Operations Section Manager, FMD	Provide expertise and staff for SME input Building operations & maintenance, security
~~Denise Gregory Wyat~~ Jeff Gregory	HR SDM, FMD	SME – HR/Labor impacts
Gail Snow	Manager, RALS Archives, Records Management, & Mail Services	Review & advise on compliance with WAC 434.663 (retention & disposition of digital records)

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual Review	3/25/15	Glenn Evans	New, initial draft	8 hours
Conceptual Review	4/2/15	Molly Cherkin	Review & feedback	3 hours
2017-18 Budget (review)	5/30/16	Anthony Wright	Review & feedback	2 hours
2017-18 Budget Revisions	7/2/15	Glenn Evans	Revision & thinning of Section 6 for Budget Process	5 hours
2017-18 Budget Revisions	10/8/15	Glenn Evans	Responding to Council staff comments and questions	8 hours
2017-18 Budget Revisions	4/27/16	Glenn Evans	Overall review & updated Section 3 for Budget Process	1 hour
2017-18 Budget Revisions	5/31/16	Glenn Evans	Revised participants in Section 3 for Budget Process	1 hour
2017-18 Budget Revisions	6/23/16	Glenn Evans	Revised Section 6 for Budget Process	2 hours
2016 Annual Report	10/10/16	Glenn Evans	Revised section 6 to incorporate Council Staff suggestions	6 hours
2016 Annual Report	6/12/17	Glenn Evans	Incorporate Council staff input	16 hours
2019 Biennial Report	2/21/19	Glenn Evans	Update	3 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait

time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

    Facilities Management Division (FMD) – Real Estate Services (RES) section's current issues include:
    - Reliance on outdated and inefficient business processes using multiple non-integrated systems such as Excel spreadsheets,
    - Paper-based leases and physical filing methods without any structured digital data which make it difficult for agents to manage leases and quickly analyze key lease information, and
    - Siloed and non-standardized RES workflows which reduces flexibility for FMD to manage overloads and backlogs.

    The above issues have impaired real estate transactions and property management responsibilities with incomplete and inaccurate data, exposing the county to risks from ownership-related liability, increased costs, and lost revenues from expired or unadjusted leases. In addition, a 7/26/2016 County Auditor report confirmed these inadequacies and recommended RES to develop a more complete and reliable inventory of the county's real estate portfolio. CFAM is a tool that will facilitate industry standard procedures and best practices, which are not currently incorporated in most of RES's processes, and will provide the following four benefits:

    A. <u>Improve Operational Efficiency</u> – The CFAM project will transform the RES operation from a paper-based system to a structured data software system. Since these software systems are designed based on facilities management/real estate industry best practices, establishing data standardizations and workflow standardizations for RES will be an inevitable outcome. Data standardizations will eliminate time-wasting activities such as fixing data errors, searching for lease information through physical files, and producing manual reports and allow staff to reallocate their saved time to either address backlogs, improve business processes, and/or seek new business opportunities. Workflow standardizations will also eliminate individual workflows (silos) and provide flexibility for management to reallocate staff to address chronic backlogs.

    B. <u>Reduce Costs on Leases</u> – The ability to quickly search for lease information along with robust reporting capabilities will reduce late payment penalties on leases.

    C. <u>Increase Revenue on Leaseholds</u> – The ability to quickly search for lease information along with robust reporting capabilities will allow staff to ensure rents are adjusted to market rates for leased County properties.

    D. <u>Establish Data-driven Decision Capabilities</u> – By providing the ability to consolidate and cross-correlate the majority of FMD's currently disparate facility-related data and workflows, CFAM will provide decision-makers with tools to better understand the characteristics, costs, and current and potential future uses of all real property asset within FMD's responsibility. Edit

6/12/17: In addition, the ability to track actual time and cost of RES's various workflows will help inform decisions relating to program staffing, project planning and prioritization, and fee structures.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

   A. Improve Operational Efficiency – Edit 6/12/17: ~~During the planning process, RES will identify major processes that are currently facing backlog, quantify the amount of backlog of each process, and set targets for reducing the backlogged work. In other words, RES will measure the work that can be accomplished with the more efficient process and the freed up workload.~~ RES will track the reduction in backlogs of tax title and surplus property sales and of expired leases; the number of "side systems" used for tracking and reporting on inventories; and the number of new and existing lease and other contract documents that are stored and used in digital rather than paper form.

   B. Reduce Costs on Leases – Reduced percentage of leases where County is paying late penalties.

   C. Increase Revenue on Leaseholds – Reduced percentage of County leaseholds where market rate adjustments are either not applied or delayed.

   D. Establish Data-driven Decision Capabilities – Edit 6/12/17: ~~During the planning process, RES will identify the types of information and analytical questions that can be used to help decision makers better manage the County's real property assets. These should align with RES strategic goals.~~ While the quality improvement from better decisions will be difficult to quantify (because there will be no corresponding worse decisions to compare to), an increase in the number of new analytical tools and their frequency of use will be considered indicators of improved decision quality.

3. *What is the current baseline for this measure?*
   Baselines for many of these measures will be established in 2017 as RES implements the actions recommended in the Line of Business Plan.

   A. Improve Operational Efficiency – Edit 6/12/17: ~~During the planning process, RES will identify major processes that are currently facing backlog, and quantify the amount of backlog (i.e. # of transactions, # of leases, etc.) due to each process.~~ RES's work backlog of approximately 1,200 tax title properties, 80 surplus properties, and 20 expired leases will be used as a baseline for workflow efficiencies; there are currently effectively no working lease and contract documents stored or used in digital form.

   B. Reduce Costs on Leases – Currently estimated that approximately 15% of leases are currently paying late penalties (Existing data is not reliable and this baseline will need to be refined).

   C. Increase Revenue on Leaseholds – Currently estimated that approximately 15% of leaseholds are currently not paying market rate rent (Existing data is not reliable and this baseline will need to be refined).

   D. Establish Data-driven Decision Capabilities – Edit 6/12/17: ~~During the planning process, RES will identify the types of input (or data) currently used to make decisions, and describe the effort it takes to produce reports that use this data.~~ RES currently uses market driven "comparable

property" data, assessor and appraisal data, FMD historical and projected cost data, and (tenant) Agency metrics to assess space needs and develop real property strategy. Gathering and compiling the data required for the analyses needed to support real estate decisions currently takes an estimated 25% of an FTE's time annually. With the exception of property sales, there are no existing tools for gathering RES's labor and other cost data for negotiating and managing leases, purchasing property, or processing permits, so "zero tools" would be a baseline for those workflows.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   - Improve Operational Efficiency – Edit 6/12/17: ~~During the planning process, RES will quantify goal for reduction of backlogs (i.e. # of transactions, # of leases, etc.).~~ Reduce tax title, property surplus, and expired lease backlogs by 5% each in the first full year of implementation; 50% of all new leases and contracts and their abstracts used as working files will be in digital form after two full years of implementation; 5% of existing paper leases and contracts will be digitized and/or have digitized abstracts after two full years of implementation.

   - Reduce Costs on Leases – Reduce the number of leases paying late penalties by Edit 6/12/17:1/3 ~~5%~~ every 2 years, until reaching 0% over 6 years.

   - Increase Revenue on Leaseholds – Reduce the number of leaseholds not paying market rate rent by Edit 6/12/17: 1/3 ~~5%~~ every 2 years, until reaching 0% over 6 years.

   - Establish Data-driven Decision Capabilities – Edit 6/12/17: ~~During the planning process, RES will identify the number of new reports and the strategic goals that will be impacted with this new tool. The types of reports and the decision descriptions should also be identified.~~ FTE effort for gathering data in support of real estate decisions should decline to nearly zero. Activities performed and recorded inside the system during the course of normal workflows will inform new tools (reports) counting, measuring, and predicting metrics such as (at a minimum):
     a. Number of leases executed per period, by Real Property Agent, and by County (tenant) Agency;
     b. Time required for each property transaction by type, phase, and County Agency;
     c. Number of property sales and purchases per period, by Real Property Agent and County Agency, and FMD labor time for each transaction;
     d. Permits per period by type, and FMD labor time for each permit and permit type.

   These metrics will allow identification and prediction of resource and budget needs, average transaction time by type and Agent, cost of each transaction, and transaction volumes by Agent, to help identify areas where policy, process, or performance improvements are needed.

5. *When is the benefit likely to be achieved?*
   A. Improve Operational Efficiency – Edit 6/12/17: ~~During the planning process, RES will identify target date of when benefit will be achieved.~~ Edit 2/21/2019: Beginning Q1 ~~2019~~2020, first benefit achieved Q1 ~~2020~~2021.

   B. Reduce Costs on Leases – Edit 2/21/2019: Beginning Q1 ~~2019~~2020, with full ~~implementation~~ benefit realization by 2024.

   C. Increase Revenue on Leaseholds – Edit 2/21/2019: Beginning Q1 ~~2019~~2020, with full ~~implementation~~ benefit realization by 2024.

Establish Data-driven Decision Capabilities – Edit 6/12/17: ~~During the planning process, RES will identify target date of when benefit will be achieved.~~ Edit 2/21/2019: Beginning Q1 ~~2019~~2020, first benefit achieved Q1 ~~2020~~2021.

Summary Table:

Benefits & Measures	Baseline	Target	Edit 2/21/2019: Actual as of 12/2018
Benefit A: Improved Operational Efficiency (Edit 6/12/17)			
a) ~~TBD (# of transactions, # of leases, etc.)~~ Reduced backlogs in tax title and surplus sales; b) Reduced expired lease count; c) Reduced "side system" use; d) Create digitized "working" versions of contracts, leases, and abstracts.	a) Backlogs of 1,200 tax titles, 80 surplus properties; b) 20 expires leases; c) Unknown – at least 8; d) Zero ~~TBD~~	a) Reduce by 5% per year; b) Reduce by 1/3 each year c) Zero d) 50% of new (post adoption) and 5% of existing ~~TBD~~ documents, two years after adoption.	n/a
Benefit B: Reduced Costs on Leases (Edit 6/12/17)			
Reduced number ~~%~~ of leases where County is paying late penalties	Approx. 15% of leases are paying late penalties ~~(the baseline is to be refined)~~	~~5%~~ 1/3 reduction every 2 years until reaching 0% over 6 years	n/a
Benefit C: Increased Revenue on Leaseholds (Edit 6/12/17)			
Reduced number% of County leaseholds where market rate adjustments are either not applied or delayed	Approx. 15% of leaseholds are not paying market rate rent ~~(the baseline is to be refined)~~	~~1/3~~5% reduction every 2 years until reaching 0% over 6 years	n/a
Benefit D: Established Data-driven Decision Capabilities (Edit 6/12/17)			
~~TBD types of information and analytical questions that can be used to help decision makers better manage the County's real property assets~~ Increased number and utility of internal, integrated tools for a) decision-making, and b) process, cost, and other process and workflow metrics	a) .25 FTE annually for data gathering; b) Zero ~~TBD~~	a) Nominal effort; b) Approximately six metric tools per line of business ~~TBD~~	n/a

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support

for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
3. ***What is the current baseline?***
4. ***What is the target for this measure? (How much savings will this project achieve)***
5. ***When is the cost reduction likely to be achieved?***

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional five years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing

time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to less than one allowing us to take advantage of prompt payment discounts.	*Processing time, annual savings, and % of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update of 2/22/19: This is an on-going project that is still planned to achieve the target benefits, however, the primary concern is that the implementation date and associated benefits have been delayed as described above.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Executive Services (DES) – Facilities Management Division (FMD)
Project Title	FMD-KCIT Radio In-Building Coverage: Phase I (Planning & Design only)
EBS Project Number	1132306
Project Timeframe	Phase I: November 1, 2017 – April 30, 2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: Anthony Wright, Director, DES-FMD

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Bill Kehoe	Director, KCIT	Business Representative
William Hayes	Director, DAJD	Business Representative
Mark Batey	Project Manager, FMD	Project Coordination
Tony Minor	Radio Manager, KCIT	800 MHz Radio Manager
John Slomnicki	IT Sr. LAN Admin, KCIT-DAJD	800 MHz Radio Consultant
Sean Douglas	IT Systems Specialist, KCIT	PSERN Representative
Sid Bender	PSB	PSB Analyst assigned to FMD

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

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5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

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Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process (original submittal)	7/20/2017	Mike Holland, Commander Hyatt, Tony Minor	New, initial draft	2 hours
Budget Process (update)	7/20/2017	Tanya Hannah	Update	3 hours
Budget Process (update)	8/16/2017	Tanya Hannah	Update	2 hours
2019 BAP Report	2/22/19	Sid Bender	Update	1 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits:** Improving the quality or quantity of services provided to the public
2) **Internal service benefits:** Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underline primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: *If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.*

Example: *If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: *If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.*

Example: *If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.*

Example: *The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

   This is the initial planning and design for a project that will address the upgrade of three existing 800 MHz in-house radio systems. Two systems are used primarily by DAJD and those are located in the King County Court House (KCCH) and the Maleng Regional Justice Center (MRJC). The third is used by KCDC and KCSC located in the court rotunda area of the MRJC. All three of these "in-house" 800 MHz radio systems require upgrading prior to the final implementation of the PSERN Project go-live date of May 2020.

   If these "in-house" radio systems are not upgraded, these locations will have reduced functionality after PSERN goes live. Law and public safety entities operating within these facilities use radios as their primary communication tool. Reduced radio coverage will result in safety hazards for local jurisdictions that use these facilities as part of their daily business operations. Approximately, 255 officers from DAJD/KSCO and 50 officers from 10 jurisdictions come in to MRJC or KCCH on a given day. **Therefore, the upgrade project is a life/safety initiative.**

   Funding for the PSERN project specifically excluded the upgrading of "in-house" systems.

   1. KCCH Upgrade: Today there is an 800 MHz Repeater on the top of the KCCH. This repeater supports 800 MHz radio traffic for all radios users within the 12 floors of the Court House. It supports DAJD's Court Detail operations on the 12th floor, Work Education Release (WER) operations on the 10th and 11th floors, the DAJD ADMIN Division on the 2nd floor, and FMD and Court House Security throughout the building. Also, the Emergency Response Center connects into the Regional Communications & Emergency Coordination Center (RCECC), which houses the King County Sheriff 911/Dispatch and King County Emergency Operations Center. This upgrade also supports 800 MHz within the tunnel connecting the Court House to the Admin Building. Multiple regional partners include Seattle Police and Fire Departments, EMTs, etc. use this facility. Early analysis by the KCIT Radio Section indicate that the building upgrade must also include the replacement of all existing wiring/infrastructure. The selected radio consultant will include this item in their analysis and recommendations.

   2. MRJC Detention Upgrade: Today there is an 800 MHz Bi-Directional Antenna (BDA) tied into a trucked radio system that supports DAJD operations. Early analysis by the KCIT Radio Section indicates that the building upgrade must also include the replacement of all existing wiring/infrastructure. The selected radio consultant will include this item in their analysis and recommendations.

   3. MRJC Court Rotunda Upgrade: Today there is another 800 MHz Bi-Directional Antenna (BDA) that is configured into a Distributed Antenna Network (DAN) that supports the Courts' area of the MRJC. The hardware supporting this DAN is outdated and not compatible with PSERN and must be upgraded. Early analysis by the KCIT Radio Section indicate that the building upgrade

must also include the replacement of all existing wiring/infrastructure. The selected radio consultant will include this item in their analysis and recommendations.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

It's 100% certain that after PSERN goes live, the current in-house radio systems in the MRJC and the Courthouse buildings will have a reduced functionality.

Reduced functionality refers primarily to the rate of successful radio transmissions in a building. Below is the estimated impact of PSERN implementation with and without the proposed Radio In-Building Coverage (RIBC) project:

Area	Coverage Area		
	Current (w/o PSERN)	Without Upgrade (w/ PSERN)	With Upgrade (w/ PSERN)
KCCH	90-95%	40%	90-95%
MRJC Detention	90-95%	10-20%	90-95%
MRJC Court area	90-95%	50-60%	90-95%

3. *Project completion:*

Phase I (planning and design) is expected to complete in April 2019

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of

the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	*• 10 days processing time* *• 10% of purchases are receiving discount* *• Savings of $100,000*	*• 1 day processing time* *• 30% of purchases are receiving prompt payment discounts* *• $400,000 savings*	*• 2 day processing time* *• 20% of purchases are receiving prompt payment discounts* *• $200,000 savings*

2/22/19 Update:
This is an on-going project. The planned benefits are unchanged. A consultant was procured to analyze radio system infrastructure needs. The consultant report was received on schedule, in early February 2019. The report is being reviewed and a preliminary cost estimate will be developed to be reviewed within FMD and then by PSB before a potential supplemental budget request is prepared. Based on current information, the project will be completed prior to PSERN implementation. The project received an additional appropriation in the 2019-2020 biennial budget. The additional funding was secured to ensure that this high priority life safety project can proceed on an expedited schedule and to reserve the $2.5 million of revenue backing that has been identified and pledged to this project.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DES/OEM
Project Title	AV Update
Project Number	1133880
Project Timeframe	2019-2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Tom Koney, Deputy Director, Department of Executive Services

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Amy Gillespie	Senior Ops Manager, OEM	Management
Veronica Hill	BFO, OEM	Finance
Jason Shirron	EMPC, OEM	Implementation

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Conceptual Review	2/13/18	Jason Shirron	New (Initial draft)	4 hours
2019 BAP Report	2/20/2019	Veronica Hill	Minor update for reporting requirement	10 minutes

Section 6. Description of Project Benefits

Clearly identify the primary category (only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☒
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☒
Category #4: Reduced cost or cost avoidance to produce services	☐	☒

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national

and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   This project as proposed will fund the planning for and implementation of an upgrade to the audio-visual system in the Emergency Operations Center. The current system is inadequate and unable to provide situational awareness to staff managing the incident, which directly impacts public safety and the public's perception of the County.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The benefit (ability to share information and manage a catastrophic incident) will be addressed in King County Office of Emergency Management after-action reports of EOC activations. When two sequential AARs note that all displays and audio systems worked as intended, the benefit will be considered achieved.

3. *What is the current baseline for this measure?*
   The current system is non-functioning. AARs produced in the last five years for incidents, planned events, and exercises state that the failure of this system caused significant impacts to our ability to operate.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   State of the art audio-visual system capable of supporting first responder life safety operations.

5. *When is the benefit likely to be achieved?*
   The benefit to our first responders and other regional partners will be achieved once the proposed AV upgrade is funded and implemented.

6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Ability to provide situation awareness support to operations	AARs citing AV system as impediment	**All**	**0**	2-5 years after implementation.

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   This project as proposed will fund the planning for and implementation of an upgrade to the audio-visual system in the Emergency Operations Center. The current system is inadequate and unable to appropriately support first responders conducting life-saving operations after a disaster. The project as approved by Gate 1 funds only the planning portion and is unlikely to directly produce any benefit until further funding for implementation is approved. We expect that with full implementation funding, we will be able to install an AV system that allows us to share information and manage catastrophic incidents.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The benefit (ability to share information and manage a catastrophic incident) will be addressed in King County Office of Emergency Management after-action reports of EOC activations. When two sequential AARs note that all displays and audio systems worked as intended, the benefit will be considered achieved.

3. *What is the current baseline for this measure?*
   The current system is non-functioning. AARs produced in the last five years for incidents, planned events, and exercises state that the failure of this system caused significant impacts to our ability to operate.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   State of the art audio-visual system capable of managing first responder life safety operations.

5. *When is the benefit likely to be achieved?*
   The benefit to our first responders and other regional partners will be achieved once the proposed AV upgrade is funded and implemented.

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Plan for new AV system	Implementation plan	No plan	Complete plan	RFP + 120 days
Functioning projection displays	# of displays without visual artifact	0 displays	7 displays	Implementation funding + 270 days
Ability to view news broadcaster information	# of simultaneous channels viewable.	0 channels	9 channels	Implementation funding + 270 days.

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   The current system was installed at building construction and is generally around 15 years old. Some parts were transferred from previous locations and may be older; the primary projectors were replaced 6 years ago on an emergency replacement basis. In general, industry recommends that AV systems be refreshed every 5-7 years, so almost every piece of the current system is out of date. In particular, the assistive listening sub-system has failed entirely, meaning OEM is unable to comply with ADA requests. Updates to the AV system are required to have a functioning EOC.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
   Risk reduction is not the primary reason for this project.

3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
ADA compliance	Assistive listening system functional for EOC responders	0%	10%	Implementation funding + 270 days.

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

1. *Describe why you expect the proposed IT investment to reduce costs?*
   Part of the plan produced will include an ongoing replacement and upgrade plan to avoid future instances of total system replacement.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   Not currently measured.

3. *What is the current baseline?*
   No data

4. *What is the target for this measure? (How much savings will this project achieve)*
   None

5. *When is the cost reduction likely to be achieved?*
   Unknown

6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did

not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update 2/20/2019: This is new project that was approved as part of the 2019-2020 budget process and starting in January 2019. OEM will address the four CIO and PSB Critical Success Factors and Conditions before requesting full project (implementation) funding during the 2019-2020 2nd Omnibus or during the 2021-2022 budget process.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.

For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Name	Executive Services, Records and Licensing Division, Archives and Records Management Section/Archives
Project Title	King County Archives Collection Management System
EBS Project Number	1111670

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Deborah Kennedy, DES/RALS Archives, Records Management, and Mail Services (ARMMS) Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Carol Shenk	Archivist/KC Archives	Business Owner
Donna Frisk	Project Manager/KCIT	Project Manager
Deborah Kennedy	Archives, Records Management, and Mail Services Manager	Project Sponsor
Sean Bouffiou	DES/RALS Interim Deputy Director	Participate, advise, and contribute

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Funding release	12/5/13	Carol Shenk	New, initial draft	3 hours
2016 Annual Report	3/1/16	Carol Shenk	Post Implementation	.5 hours
2017 Annual Report	2/16/17	Carol Shenk, Sean Bouffiou, Deborah Kennedy	BAP Update for a completed project	3.5 hrs
2018 Update	2/27/18	Carol Shenk	BAP Update for a completed project	4 hrs
2018 Update	2/27/18	Sean Bouffiou	BAP Update review	.5 hours
Spring 2019 BAP Report (final BAP)	2/8/19	Deborah Kennedy, Jill Anderson,	BAP update	4 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underlined primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.\

Primary project benefit? (Check only one)

X Category #1: External service benefits: Improving the quality or quantity of services provided to

the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The public cannot currently search the Archives collection database and must rely on browsing lists and narrative finding aids posted to the Archives' Web site. These finding aids only cover a portion of the Archives' holdings and new finding aids are created infrequently because they are not integrated into our existing systems and must be separately developed and published. Thus the current online content does not reflect the Archives' entire holdings and researchers do not know of many of the records held in the Archives and how those records may be of use. The proposed Collection Management System (CMS) will allow the public to search current data on Archives holdings and will allow increased direct online access to individual Archives records. Also, with the entire collection searchable, enhanced description, and increased direct availability of records online, patrons will be able to conduct more of their own research and more accurately determine whether or not the Archives has the records or information they are seeking before they contact us, saving them time.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   1) Usage of the CMS: Stats from the CMS will show how many users searched the database and Web stats will show how many unique visitors there were to the site.
   2) Numbers of requests generated based on CMS research: staff will inquire (for phone/email contact) and direct request from online interface will indicate whether the patron searched the CMS before contacting us.
   3) An overall increase in requests relating to non-recorded archival records (we anticipate that the number of requests for recorded documents will stay stable, as these are already publicly searchable in Anthem). This can be measured by tracking requests in reference request module.

4) Feedback in an online usability survey will rate user experience and inform how the system is being used and potential improvements.

3. *What is the current baseline for this measure?*
   1) Usage of the CMS can be compared to traffic on Archives' current Web site *(awaiting Web stats from KCIT)*.
   2) The Archives receives approximately 100 research requests relating to non-recorded archives records each year. (This number also excludes requests for records not held at the Archives that are referred to other agencies).
   3) Baseline is zero.
   4) Baseline is zero.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   1) Twice as many visits to the CMS site as compared to Archives site (pre-CMS)
   2) 10% increase in requests relating to non-recorded Archives records
   3) 30% of requests relating to non-recorded Archives records come from patrons who initially searched CMS.
   4) 80% average positive (Satisfactory, Good, or Excellent) customer ratings on online survey.

5. *When is the benefit likely to be achieved?*
   ~~By 12/2015. Knowledge of the resources available will gradually grow after the online CMS is in place.~~
   2/29/16 Update: The site went live on 2/2/2016, and includes 200,000 database records describing the collection. Archives staff reviewed and performed quality control on database records and added physical descriptions, titles, and other information where missing in records. The Archives has publicized the site through a press release, through Twitter, in the Seattle Area Archivists' newsletter, through the Association of King County Heritage Organizations' news board, and KCTV is producing a 5-minute piece on the Archives and the new search site. We anticipate it will take 10 months to achieve the expected benefits regarding customer use of the site.

   2-16-17 Update: The Archives has been using the application in production and adding descriptions to records. There are now over 283,000 individual records in the database. The public and County staff have been using the application to conduct research, but not at the rate we had projected. For the first criteria, we used our 2015 Web site statistics as a baseline and projected that use of the search site would be double that base line. Search sessions for the year 2016 were approximately half the number of visits to the Archives' Web site in 2015. This difference is in part due to the fact that the application was not rolled out until February 2016, and it has taken time for users to learn about the site's availability. We anticipate that with continued outreach and by continuing to add useful content to the database, including links to scanned photographs and documents, the use of the site will grow. Measures 2 and 3 need to be recalculated, with confirmed baselines and criteria, as calculations were found to be inconsistent. A new customer survey will be conducted in Spring of 2017 to answer #3 and a new online survey will be posted for #4.

   2/22/2018: In 2017 Minisis upgraded the application to a 2.0 version in order to resolve technical issues and to enhance the public search site interface.

Archives staff continue using all functions of the application including adding descriptions of records to the online public access catalog (OPAC). Customers, both public and County, continue using the application to conduct research. Compared to no public catalog with just a few public finding aids, having a publicly available tool that people can use to learn about the Archives collections and where digitized records can be linked so that people can access them instantaneously and in a way that they expect, has been hugely important for the Archives visibility and reference functions. Digitization is now a regular part of our operations. Archives staff do refer customers to the OPAC, but those referrals depend on both the customer and the question. The application is less than intuitive to navigate or to search.

1) Usage of search site compared to Archives home page: comparing 2015 to 2016

Measure Usage of search site compared to Archives home page	Goal is for search site to double use of Archives Web site prior to existence of search site	Baseline: Visits to King County Archives site in 2015 (counting landing pages only, not navigation within the Archives site)	Number of visits	Percentage achieved toward goal	Goal vs. Actual
2016	200%	41,862	22,118	26%	-74%
2017	200%	41,862	78,281	93%	-7%
2018	200% (2 X 41,862= 83,724)	41,862	55,113	55,113 divided by 83,724 =0.66 66%	(55,113 - 83,724) / 83725 = -.34 -34%

This measure was established based on experience at the Seattle Municipal Archives, where the search site experiences significantly more traffic than the archives' web site. In hindsight, this metric may not be useful because of the difference in the Web sites of the two institutions. The home page of the Seattle Municipal Archives is much sparser, with fewer research guides and exhibits (see **http://www.seattle.gov/cityarchives**), than is the King County Archives site (**http://www.kingcounty.gov/archives**), which we are continually developing to be both functional and engaging, and which consists of some 100 distinct pages. Thus the King County Archive site receives more traffic. However, we continue to add images to the online database so that clients can directly access records there, that over time will increase traffic.

2) Requests for archival records that are not recordings

Measure Requests for archival records that are not recordings	Goal Increase count of non-recording requests per year by 10%	Baseline:	Actual	Change 2016 non-recorded requests	Goal vs. Actual
2016	+10% (110)	100 2014 non-recorded requests per year	419	+380%	+370%
2017	419 +10% (460)	419	1277	+305%	+295%
2018	1277 +10% (1405)	1277	1,453	(1453/1405) 103%	(1453-1405)/1405 3%

*4 months total non-recordings archival requests was 100. Extrapolated for annual average (100 *

3) Requests for non-recordings research from patrons who initially searched the collection management system

Measure Requests for non-recordings research from patrons who initially searched the CMS	Goal	Baseline: 0	Actual	Change	Goal vs. Actual
2016	30%	0%	+16%	16%*	-14%
2017	30%	0%	+36%	36%**	+6%
2018	30%	0%	Manual tracking process not maintained for 2018		

   *Percentage derived from five-month period in Summer/Fall 2016
   **Percentage from survey conducted   April-July 2017

4) Percentage of users rating site as Satisfactory, Good or Excellent
    2016: No data. Survey posted November 1 - November 30 2016 on search site. No responses.

    Search site design revisions were rolled out December 2017

    New survey posted February 1, 2018. As of Feb 22, 2018: 2 responses, one (50%) positive, one (50%) poor. The "poor" response came from a user who was looking for a record that is not available in the online search system. Although only one response, this did point to the fact that our search site does not make any reference to how users might go about locating recorded documents, which cannot be searched in this system. We will be revising our search site to link to the **recordings request form** that was developed by KCIT's Web Team in 2017. Due to a lack of response in the 2018 survey, Archives is considering changing the survey, but was not able to do so prior to updating this BAP form for 2019.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older

technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated

benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing time, annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

2-8-2019: This is the Final BAP. The project, on the whole, met the targets. The new system allows the public online access 24/7 and allows archives staff to upload images, thereby increasing the online accessibility to imaged documents.

Metric Description	Metrics	Baseline	Target	Actual
Measure Usage of search site compared to Archives home page	Goal is for search site to double use of Archives Web site prior to existence of search site	• 2016 – 41,862	• *200% of 41,862 = 83,724*	• *55,113*
Measure Requests for archival records that are not recordings	Goal Increase count of non-recording requests per year by 10%	• 2016 – 100 • 2017 – 419 • 2018 – 1,277	• 2016 – 110 • 2017 – 460 • 2018 – 1,277	• 2016 – 419 • 2017 – 1,277 • 2018 – 1,453
Requests for non-recordings research from patrons who initially searched the CMS	Requests for non-recordings research from patrons who initially searched the CMS	• 2016 – 0% • 2017 – 0% • 2018 – 0%	• 2016 – 30% • 2017 – 30% • 2018 – 30%	• 2016 – 16% • 2017 – 36% • 2018 – no data (manual tracking process not maintained in 2018)
Percentage of users rating site as Satisfactory, Good or Excellent	Going into 2016, there was no data. The survey was posted November 1 - November 30, 2016 on search site and there were no responses. Search site design revisions were rolled out December 2017 and the new survey was posted on February 1, 2018. As of February 22, 2018, there were 2 responses, one (50%) positive, one (50%) poor. The "poor" response came from a user who was looking for a record that is not available in the online search system. Although only one response, this did point to the fact that our search site does not make any reference to how users might go about locating recorded documents, which			

cannot be searched in this system. We will be revising our search site to link to the **recordings request form** that was developed by KCIT's Web Team in 2017. Due to a lack of responses in the 2018 survey, Archives is considering changing the survey, but was not able to do so prior to updating this BAP form for 2019.

The project ultimately achieved:

Usage of search site
Archives achieved a 132% increase from 2015 through 2018 (41,862 to 55,113); under the forecasted 200% annual increase. The 200% annual growth may have been overly optimistic.

Requests for archival records
Archives achieved an average of 262% annual increase from 2016 through 2018 (419 to 1,453) significantly more than the 10% annual growth originally anticipated. Given that the 3 years of actual growth far exceeded expectations, this target was achieved.

Requests research, after initially searching the Collection Management System
Archives achieved a 36% increase in 2017, exceeding the original goal of 30%. Archives discontinued the manual tracking for this measure once the goal had been met.

User Satisfaction Rating
The online survey approach did not yield meaningful feedback, and experienced limited participation. Future efforts may considered a new online survey to identify potential improvements.

Achieved a goal for customers to conduct online searches that were not available prior to the new system AND it allows us to add images to increase what is available online.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DES-Records and Licensing Services
Project Title	FH Licensing System Collaboration Project
Project Number	1129863

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Sean Bouffiou, Acting Deputy Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Sean Bouffiou	Acting Deputy Director	Project Owner – Subject Matter Expert (SME)
Eddie Cantu	Licensing Manager	Section Manager and SME
Marcia Thomas	For-hire Licensing Supv.	Unit Supervisor and SME
Sean Cockbain	Licensing Inspector	SME

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
CR-BC Development	9-03-15	Sean Bouffiou	Initial Draft	3 Hours
CR-BC development	6-28-16	Sean Bouffiou	Update for current submittal, edit per JG comments made in 2015	3 hours
Budget Process	10-31-16	Sean Bouffiou & Andrew Cronholm	Update to reflect council feedback	1 hour
2016 Annual Reporting	1-10-17	Andrew Cronholm	Update for 2016 Annual Reporting; no changes made, new project for 2017	25 mins
2016 Report (Implementation)	6-19-17	Sean Bouffiou	Updated for target dates	15 mins
2018 Update (Implementation)	2/27/18	Sean Bouffiou	Update for 2017 Annual Reporting;	1 hour
2019 BAP Report (Implementation)	2/7/19	Sean Bouffiou	Update	1 hour

Section 6. Description of Project Benefits

Identify the category(-ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The existing systems were designed to meet internal business needs, and were not intended for web-based customer portals, eCommerce transactions, large-file data sharing with multiple companies, or for handling the complexity of license types and their associated processes. City and County staff viewed product demonstrations from vendors with current technology systems that have been or can be configured to meet the needs of regulators of the for-hire industry and can be optimized to leverage a variety of electronic solutions our customers and policy makers expect. While the system will establish new access and the opportunity to complete licensing processes online, changes to King County Code and Seattle Municipal code will be needed to more fully leverage the benefits of a new system. The new system will facilitate automated data ingestion, verification and validation, via integration and/or designed compatibility with TNC driver application data.

   Update 2-7-19: This project was initiated in 2017. In 2018, the project team began planning for two releases. Release #1 focused on functionality the City of Seattle needed to prioritize due to impending annual licensing deadlines for for-hire vehicle owners. Release #2 includes additional functionality for the City, and the functionality RALS needs for licensing drivers and regulatory enforcement. Due to delays related to version upgrades at the enterprise level, the project's release #1 was delayed and is now scheduled for March, 2019. Release 2 is now scheduled for August, 2019. For the County, RALS, KCIT and SEAIT successfully completed a proof of concept solution for driver photo identification using the Accela system. The test confirmed product compatibility with a third party ID card printing solution using data from the Accela test database.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

Improving external customer satisfaction:
   A. A new system will have customer facing portals for for-hire drivers, vehicle owners, and service providers.
   B. A new system will allow for online payment of fees from drivers, vehicle owners, and companies.
   C. A new system will allow for a fully electronic application process for drivers and eliminate the need for maintaining paper-based driver folios.

Gauging external customer satisfaction:
   D. Holding focus groups pre-public launch to test user interface design and configuration
   E. Tracking key metrics on amount and quality of use (e.g., are customers still coming into the RALS counter for service versus using customer facing online portal)

3. *What is the current baseline for this measure?*
   A. Does not exist in current King County System, a vehicle safety inspection reporting system for approved mechanics is a separate side system recently developed by the City of Seattle.
   B. On-line "eCommerce" is not available with the existing systems.
   C. The current system relies on a paper-based workflow for application processing. Folios for each driver are maintained and must be manually retrieved and filed when not moving through the manual review steps. Customers are not able to track their application status without calling or visiting the office in person.
   D. Target Metrics
      a. 0% of FH vehicle licenses renewed online
      b. 0% of FH Driver Licenses Initiated online
      c. 0% of license fees paid online
      d. 100% of FH transactions processed via the customer counter (driver)

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   A. A new system will have customer facing portals for for-hire drivers, vehicle owners, and service providers.
   B. Ability to process payment transactions online, 24/7, for drivers, vehicle owners, and companies.
   C. Fully electronic application process with no paper-based requirements. Customer access to real-time application status, license verification, etc.
   D. Target metrics (i.e., key data points) for improvement will be identified and realized over time as customers learn to use the system.
      a. 50% of FH Vehicle Licenses renewed online
      b. 50%% of FH Driver Licenses Initiated online
      c. 50% of license fees paid online
      d. 50% of FH transactions processed via the customer counter (driver)

5. *When is the benefit likely to be achieved?*
   A. For Drivers and Vehicle Owners upon implementation and go-live of the initial system. Company related portals will depend on the project schedule. (Estimated August, 2019)
   B. Upon system implementation and go-live. (Estimated August, 2019)
   C. Upon system implementation and go-live. (Estimated August, 2019)

D. Upon completion of an annual licensing cycle (August 2020) (a-d)

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   The current system does not meet current business needs. A consolidated system would place driver and vehicle information together in one system. In addition, company licensing data may be maintained electronically as well. A shared system will overcome the challenges of two separate systems with staff from one side (jurisdiction) not having access to information in the other jurisdiction's system and, as such, produces many new benefits. However, some operational improvements are also possible. For example, the new system will reduce or eliminate inefficiencies related to paper-flow issues. Electronic web-based applications will allow for simultaneous access to for-hire applications, records, etc., thus streamlining the process and reducing processing bottlenecks.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

   A. A new system will allow for more efficient data transfers of large files between the City/County and regulated companies

   B. A new system, if shared between the City and County, would allow both jurisdictions access to the same system and data, rather than having to rely on two separate systems with different functions and limited access.

   C. A new system will provide greater opportunities to integrate third party data sources into the application process to validate accuracy and status at or near the point of entry, avoiding downstream errors and increasing efficiency and timeliness

   D. A new system would include production management tools, including multi-level dashboards for status and performance monitoring. This provides for better visibility of production work, estimating work in progress, analyzing work performance for quality and quantity.

   E. A new system would include more robust operations reports and an ad-hoc data query and report writing capabilities. This makes responding to public disclosure requests more efficient.

   F. A new system will include tools for batch processing of For-hire Permit applications, primarily for data ingestion and data validation, replacing manual processes with automated

verification and validation functions, limiting the number of manual tasks necessary for issuance of a for-hire license and/or permit.

G. A new system will allow for a fully electronic application process for drivers and eliminate the need for maintaining paper-based driver folios. Time currently spent filing and retrieving paper documents will be reprioritized for value added work such as reviewing and processing application materials. Access to files will be immediate.

3. *What is the current baseline for this measure?*
   A. SFTP web portal for manual data transfer to confidential user accounts.
   B. Staff (Seattle or KC) must request updated files or data ad hoc from the other jurisdiction's system.
   C. No integration with existing systems
   D. No dashboards or production management tools exist in the existing systems
   E. Ad-hoc reports must be created by KCIT programmers
   F. No batch processing tools exists in the current systems; batch processing is handled via a "side system" of Excel based review spreadsheets and control logs (batch processing requirements may not remain due to proposed changes in licensing requirements). All validation is manually set up and triggered, with some streamlined lookup tools for manual validation.
   G. Application data is maintained in the existing county system, applications and supporting materials are maintained in individual paper based folios. Folios must be filed and retrieved in order to review and process. Some folios must be requested from the Records Center.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   A. Direct access to all system functionality and data are available to staff of both agencies without having to request it from the other jurisdiction.
   B. Direct access to all system functionality and data are available to staff of both agencies without having to request it from the other jurisdiction.
   C. Integration with VSID (Seattle's Vehicle Safety Inspection Database), integrated or simplified data exporting and uploading for background checks, Driver's abstract report, etc.,
   D. Production dashboards provide current work in progress status; summary reports for weekly/monthly/annual production exist and can be schedule.
   E. Agency staff can create and schedule regular reports; individual production performance can be monitored and audited.
   F. Applications can be automatically uploaded and processing can be done in batch efforts that eliminate unnecessary process overhead on an individual application basis (as an example, opening and closing files or applications, only to move to the next document review). This target may be adjusted to reflect system capabilities. Some added overhead for less efficient navigation may be traded for the entire removal and automation of certain other steps, for an overall more efficient processing.
   G. Applications and accounts (Driver, Vehicles, Owners, etc.) are maintained electronically, no more filing and retrieving paper files. Multiple staff can access accounts simultaneously.

5. *When is the benefit likely to be achieved?*
   A. Upon System implementation (Estimated August 2019)
   B. Upon System implementation (Estimated August 2019)
   C. Upon System implementation (VSID), background checks and driver abstract data (TBD) (Estimated August 2019)

F. Upon Systems implementation (if batch processing remains a business need) (Estimated August 2019)
G. Upon Systems implementation (Estimated August 2019)

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
3. ***What is the current baseline?***
4. ***What is the target for this measure? (How much savings will this project achieve)***
5. ***When is the cost reduction likely to be achieved?***

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

2/7/19 Update: This is an ongoing project. 2018 highlights include the attempted #1 technology release, which was delayed due to version issues and is now set for March 2018. Hopefully, there are no additional timeline delays.

Metric Description	Metrics	Baseline	Target	Actual
Gauging Customer Satisfaction	• New customer-facing online portals • New online fee payment options • Reduction in the use of paper-based driver folios • TNC driver and vehicle application integration	• Zero • Zero • Zero • No integration, manual batch transmittal	• Fully functioning portals for all customer types • Ability to process payment transactions online 24/7 for all customer types (except TNC drivers and vehicles) • Fully electronic application process with no paper-based requirements • Integrated batch file or web service file transfer between TNC's and Accela System	• Pending Implementation • Pending Implementation • Pending Implementation • Pending Implementation

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Executive Services/Records and Licensing Services Divisions/Archives, Records Management and Mail Services
Project Title	King County Records Management System Upgrade
Project Number	1129348

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Caroline Whalen, Director Department of Executive Services

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Norm Alberg	DES Records and Licensing Services Director	Project Sponsor
Deborah Kennedy	Archives, Records Management and Mail Services Manager	Project Contact
Gail Snow	Records and Information Manager	Project lead, subject matter expert
Sean Bouffiou	DES Records and Licensing Service Finance Manager	Participate, advise, and contribute
Selected Public Records Committee Members	Various Agencies, Agency Records Officers	Participate, advise, and contribute
Shelby Miklethun	Public Records Program Manager, DES Office of Civil Rights and Open Government	Participate, advise, and contribute

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.

5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	3/23/16	Deb Kennedy/ Gail Snow	New, initial draft	1.25 hours
Business Case		Marivic Kokorowski	New, initial draft	
BAP Revision	6/27/16	Deb Kennedy	Revisions in response to early feedback	1 hour
BAP Revision	9/26/2016	Deb Kennedy	Revisions in response to council staff comments	
2016 Annual Report	1/10/2017	Andrew Cronholm	Review as required for 2016 Annual Reporting; no changes made, new project for 2017	20 mins
Implementation	6/16/2017	Sean Bouffiou, Gail Snow	Added target dates to anticipated benefits	60 Minutes
2019 BAP Report	2/8/2019	Deborah Kennedy, Dan Anderson	Revised target dates to anticipated benefits. Explained need to pushout go live date	90 minutes

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

- ☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public
- ☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services
- ☐ Category #3: Maintaining service levels by replacing or upgrading older technology
- ☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   This project will replace the obsolete King County Electronic Records Management System with a new system better able to meet King County's records management needs while ensuring the continued capture, maintenance, access, and disposition of more than 8 million electronic records and the inventory of more than 120 thousand boxes managed by the system. In addition, a newer technology will be able to support integration with existing and planned enhancements to the county's IT environment and will provide improved usability including integrated records and document management software solution that includes workflow and business process automation.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   <u>Usage of the new system</u>: Statistics from the new solution will show how many users and documents are filed to the system quarterly and how many new boxes of inactive physical records are sent to the King County Records Center for storage.

   <u>Requests</u>: Statistics will be gathered to track customer requests for circulating boxes of physical records as well as number of electronic record searches and exports.

   <u>Disposition</u>: Additional statistics will track the number of records—both electronic and physical—that reach the end of their retention period and are disposed of either by destruction or transfer to the King County Archives.

Customer feedback: Feedback from a usability survey will rate user experience and inform how the system is being used and potential improvements.

Number of document management, workflow, and business process automated using the system.

3. **What is the current baseline for this measure?**
   - Usage statistics will be compared with statistics from the current system.

   - Request statistics for physical records will be compared with statistics from the current system. The baseline for request statistics of electronic records is zero.

   - Disposition statistics for physical records will be compared with statistics from the current system. The baseline for disposition statistics of electronic records is zero.

   - Baseline for customer feedback is zero.

   - Baseline for document management, workflow, and business process automation using this system is zero.

4. **What is the target for this measure? (How much improvement will this project achieve?)**
   - The target for increased usage is 45%.

   - The target for request statistics is status quo for physical records. For electronic records the target is an increase of 10% per year.

   - The target is 75% of disposition eligible records dispose of annually.

   - 20% of customers responding to usability survey.

   - Five document management, workflow, or business processes are automated using the system tools.

5. **When is the benefit likely to be achieved?**
   One year after close of project.

   Update February 8, 2019:
   - Usage of the system – Target Usage Goal Date: August 19, 2020 (go live plus one year)
   - Request Statistic –Target Goal is to establish a baseline December 31, 2019 (date to be revisited once the new system has been implemented for all existing users.
   - Disposition – Currently unable to disposition records from the legacy system. Target Goal Date: December 31, 2019
   - Baseline for customer feedback – Target Goal Date: Survey completed by December 31, 2019.
   - Five (5) automated processes completed – Target Date December 31, 2019.

   The project team found it necessary to push the go live date out to August 19, 2019 due to the vast differences between the current KCRMS (ARM) and the new systems (Content Manager) data schemas and security architectures it was deemed a critical requirement after the first and second data migration to perform a third migration. The third migration was also required due to the way the current system was implemented using non-standard custom data fields that was not a recommended approach and created mapping issues to the new system.

The first data migration was a prototype that only contested of a subset of metadata and associated documents to determine the new systems structure, configuration, data referential integrity and how to apply the access controls/security.

The second data migration consisted of all of the metadata and documents. The project team and vendor made extensive progress during each migration but there were still some outstanding critical business requirements and security/access control issues that needed to be resolved. This required extensive updates to the pre-migration scripts, the vendor migration utility and post migration scripts/configurations.

Without the first and second data migrations the project team/vendor would not have been able to determine what was required and outstanding that the third data migration needed to address. The third data migration is now completed and has resolved all the outstanding issue and critical business requirements. After some delays due to losing some key vendor resources the project team/vendor now has a fully completed migration plan that is solidified and approved by the business to be apply for the final (fourth) data migration and preparation for go live.

The Steering Committee and the IT Project Manager met with KCIT contracts and PAO to recommend a plan to address this issue. It was decided best approach was the meet with vendor (Micro Focus) upper management. The vendor was able to re-hire the resources as a sub-contractors. The project team required a letter of commitment stating that the current assigned resources would remain on the project and are committed to the schedule and a successful go live.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   The text below was stricken in Fall of 2016 after PSB determined the primary benefit category was #2. RALS is keeping the text below for reference.
   This project will replace the obsolete King County Electronic Records Management System (KC ERMS) software, Autonomy Records Manager (ARM), vendor is terminating support as of February 28, 2017, with a new system that is better able to meet King County's records management needs while ensuring the continued capture, maintenance, access, and disposition of more than 836 million electronic records and the inventory of more than 120 thousand boxes currently managed by the system. In addition, a newer technology will be able to support integration with existing and planned enhancements to the county's IT environment and will provide improved usability. The new solution will continue to support best run and transparent government by:
   1. Providing a centralized, secure, and economical repository for the storage of the county's electronic records throughout their lifecycle (i.e. from the time the records are created, through their active use until completion of the disposition process)

2. Managing the inventory, circulation, and disposition of physical records in inactive records storage at the King County Records Center
3. Facilitating the response to public records requests and litigation discovery actions through robust search capabilities.
4. Supporting compliance with RCW 40.14 Preservation and Destruction of Public Records, WAC 434-663 Imaging Systems, Standards for Accuracy and Durability, and WAC 434-662 Preservation of Electronic Public Records.

These benefits will be achieved at close of project December 31, 2018.

Measure	Baseline	Target	Benefit
Number of document management, workflow, and business processes automated and made more efficient using the system. Several records management processes require multiple approvals from multiple programs automating these workflows will eliminate forms, facilitate tracking, and speed approvals.	Baseline for document management, workflow, and business process automation using this system is zero. These are new functions becoming available with the new system. Baseline will be set one year after close of project.	Five document management, workflow, or business processes are automated using the system tools resulting in operational efficiencies for users.	1, 2, & 4
Requests: Statistics will be gathered to track customer requests for circulating boxes of physical records as well as number of electronic record searches and exports.	Request statistics for physical records will be compared with statistics from the current system. The baseline for request statistics of electronic records is zero. Baseline will be set one year after close of project.	The target for request statistics is status quo for physical records, which shows maintenance of current level of service. For electronic records the target is an increase of 10% per year.	2 & 3
Disposition: Additional statistics will track the number of records—both electronic and physical—that reach the end of their retention period and are disposed of either by destruction or transfer to the King County Archives.	Disposition statistics for physical records will be compared with statistics from the current system. The baseline for disposition statistics of electronic records is zero. Disposition of electronic records has not been implemented in current system. Baseline will be set one year after close of project.	The target is 75% of disposition eligible records dispose of annually.	1 & 2
Usage of the new system: Statistics from the new solution will show how many users and documents are filed to the system quarterly and how many new boxes of inactive physical records are sent to the King County Records Center for storage.	Usage statistics will be compared with statistics from the current system.	The target for increased usage is 45%	1 & 2
Customer feedback: Feedback from a usability survey will rate user experience and inform how the system is being used and potential improvements.	Baseline for customer feedback is zero. This information is not currently collected. Baseline will be set one year after close of project by surveying customers who were	80% of customers responding to usability survey provide a favorable response	All

		migrated from Autonomy to HP Records Manager.		

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

~~Risk reduction is not the primary reason for this project. Most of the risks identified in the Business Case are reduced to zero if the project is approved. There is a risk in not knowing the actual costs for operations and maintenance, which will be outlined in a contract with the vendor, HP, if this project is approved. In the CBA, estimates entered begin with the same O&M cost as our current vendor for the legacy system, increased by 3% per year.~~

~~1. Migration~~
   ~~a. Vendor experience affects time and resources needed. Lack of experience in the size, systems or type of migration will increase the amount of time and resources needed for the migration.~~
   ~~b. Mitigation plan: selected a vendor that has experience in migrating at least 3 TB of records between records management systems, preferably the same records management systems affected by this project.~~
~~2. Customizations~~
   ~~a. More customizations can affect ongoing maintenance of the solution. If a solution needs many and/or major customizations, there could be a risk that system upgrades are more difficult to apply.~~
   ~~b. Mitigation plan: when possible, utilize out-of-the-box features and functionality~~
~~3. Training~~
   ~~a. Agencies may have different black-out dates of when they are unavailable to engage with training~~
   ~~b. Mitigation plan: conduct a roll-out for training, engaging with agencies early to plan to train during their off-peak timeframes~~
~~4. Legacy system maintenance during project~~
   ~~a. Maintaining ongoing operations with legacy system during prior to migration.~~
   ~~b. Mitigation plan: Coordinate with KCIT to ensure no changes are made to the county's IT environment that would render KC ERMS inoperable during the migration period. Operate parallel production systems until migration is complete and current users have received training on the new system. Sequence user transition based on established criteria.~~

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Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *$100,000 savings*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

2/8/2019 Update: This is an ongoing project. There were some vendor issues and the need for a third data migration in 2018 (which was out of scope), but the benefits are still intended to be achieved by the revised aforementioned timeline in Section 6, Category 2.

Metric Description	Metrics	Baseline	Target	Actual
Usage of new system	• # of people using system, • number of documents are filed to the system quarterly; • how many new boxes of inactive physical records are sent to the King County Records Center for storage	Pre-implementation numbers	Overall increase of 45% usage	

Requests	• Customer requests for circulating boxes of physical records; • # of electronic record searches and exports.	• Pre-implementation numbers for physical records numbers • No baseline for electronic records searches	• 0 for physical records • Increase of 10%/year for electronic records	•
Disposition	• # of *physical* records that reach the end of their retention period and are disposed of either by destruction or transfer to Archives. • # of *electronic* records that reach the end of their retention period and are disposed of either by destruction or transfer to Archives.	• Disposition statistics for physical records • Disposition statistics for electronic records is zero	75% of disposition eligible records dispose of annually	•
Customer Feedback	Feedback from a usability survey will rate user experience and inform how the system is being used and potential improvements.	Zero	20% of customers responding to usability survey	
Automation	# of document management, workflow, and business process automated using the system.	Zero	Five document management, workflow, or business processes are automated using the system tools.	

IT Project Benefits Achievement Plan (Version 2)

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

To complete this document fully, please read all of the colored sections and fill in the white cells. For assistance in completing this form, please contact your PSB analyst.

King County Department/Agency Name	DES/RALS/Recorder's Office
Project Title	Recording System Replacement
Project Number	1124175

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Norm Alberg, Records & Licensing Division Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Jon Scherer	Section Manager, RO	SME for Recorder's Office business, Project contact
Norm Alberg	Division Director, RALS	Business Owner
Thea Thach	Supervisor, RO	Subject Matter Expert
Kathleen Baker	Supervisor, RO	Subject Matter Expert
Sean Bouffiou	Finance Manager, RALS	Steering Cmty Member
Syd Phillips	IT Business Analyst, KCIT	Business Analyst (during budget submittal process)
Margaret Brownell	DES IT SDM, KCIT	Steering Cmty Member
Donna Frisk	KCIT/Project Manager	Project Manager

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	12/31/13	Jon Scherer	New, initial draft	60 min
Conceptual review	12/31/13	Molly Cherkin	Provided feedback on initial draft	30 min
Conceptual review	1/23/14	Molly Cherkin	Review with Margaret Brownell and updates	45 min
Conceptual review	2/7/14	Margaret Brownell	Final edits	30 min
Gate #2	6/30/14	Syd Phillips	Updates	60 min
	9/12/14	Sean Bouffiou	Address KCC staff comments/suggestions	3 hrs
Conceptual review	11/3/14	Sean Bouffiou	Address additional KCC staff comments and suggestions	90 min
Implementation	4-1-16	Sean Bouffiou	Update for current information	90 min
Implementation	6-3-16	Jon Scherer	Update for current informaton	1 Hr
Implementation	2-15-17	Sean Bouffiou	Updated for current information	.5 Hr
Project Completion	2/27/18	Sean Bouffiou/ Jon Scherer	Updated for current measures	2 hours
Spring 2019 BAP Report	2/8/2019	Sean Bouffiou/ Jon Scherer	Updated for 2018 Reporting cycle	1 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. Describe why you expect the proposed IT investment to produce the benefit(s).

The existing software solution (Anthem) has been deployed in the Recorder's Office since 2002 (15 years), though it was effectively an upgrade (not a platform change) from the system implemented in 1999 (ISOL). The existing vendor product was phased out by the vendor over six years ago, with the introduction of their next generation platform. While the Anthem system is still technically supported by the vendor for existing customers, support is limited to maintenance with the exception of changes mandated by state or federal law. With all of the vendor's investment and new development focused on their next generation platform, no new development on the retired platform has occurred in years. The functionality is limited, particularly online access for electronic recording and the processing of Real Estate Excise Tax (REET) affidavits and the associated taxes and fees. Recorded documents processed prior to August 1991 are maintained either in paper, microfilm, or digitally imaged. Digitally imaged documents, including most documents recorded August 1, 1991 or after, are available to the public online via the Recorder's Office web site. Certified copies are not available electronically via an online system, and the index used to search and find relevant documents has historically been weeks or months behind actual recording dates, making searches more difficult and incomplete.

Project Update: (June 6, 2016). This project is on schedule. The project selected Pioneer Software Solutions, Inc., to replace the legacy Anthem software. The contract has been executed with Pioneer, and Pioneer was onsite the week of May 31-June 3 for team introductions and initial project kickoff. The current project anticipated lauching the new system in Q1, 2017.

Project UpdateL (Feb. 15, 2017). This project was initially intended for implementation in February 2017. The project implementation date has been revised by mututal agreement in order to meet the vendor's schedule and project needs. This project is within budget. The contract was executed with Pioneer Software Solutions in 2016, and the project team is working on reviewing and approving various product design and configuration requirements via formalized "sprints." This is a work in progress. Data migration, performance and security testing, and acceptance testing are schedule for Q2-2017, with Go-live set for June, 2017. Slightly revised benefit "A" baseline and target to reflect growth in the desireable direction vs. decline in the less desirable direction.

Project update (2/27/18). The Anthem system was removed from production EOD 7/15/2017 and the new system (Landmark) was moved into producton beginning July 17, 2017. As a new system, the work group continues to refine processes and get to the know the system and associated capabilities. Over the past few months, reporting tools and integration have been a focus for improvement. Customer access to online document searches changed with the new system. More robust search tools take some time for customers to familiarize themselves with, which takes more time than some were accustomed to taking when using the legacy system. There were a few delays leading up to the transition to go-live, the overall project delivered a functional system. Bulk scanning equipment will be replaced with new equipment as this project ends. The next BAP update will be in February, 2019.

Project Update 2/8/2019. Now almost 18 months since go live with our Landmark recording system we continue to see benefits. Our monthly percentage of erecording submissions compared to paper documents has grown from 43% prior to Landmark to 71% in January 2019. This creates a more efficient work flow and opens the possibility to explore new developments in our Community Service Center program. Online customers have grown more confident in searching for their own documents and ordering copies via our website. We have grown our online business from less than 10 online copy orders per month to up to 100. The project goal for online copy requests is 25%. January 2019 saw a result of 17% online orders compared to only 4% in January of 2018. While there are still struggles to maintain an acceptable level of productivity in Indexing and Verification, we recognized the need to dedicate staff to these important elements of the system, hiring additional staff for the 2019-2020 budget cycle. Training has begun in earnest and the resources will be dedicated to the task in Q2 2019. We will track progress on these items on our Tier 2 board throughout the 2019-2020 budget cycle. The next update to the BAP will be in February 2020.

With a new system, the public will be able to:
A. Customer will be able to request documents electronically through a Web-based interface
B. Customer will be able to submit documents for recording electronically through a Web-based interface
C. Customer will be able to access multiple functions and services via self-service online
D. Customer will receive faster and more accurate service from the county, given improved indexing and timing.
E. Documents will be immediately searchable for the Public (vs. searchable after they are fully indexed, which takes additional time), and searches will be more accurate and more intuitive.
F. The County will be able to receive Excise Tax payments online

2. **How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)**
A. Percentage of document requests received online will increase (v. mail)
B. Percentage of hard-copy document submissions will decrease (v. electronic)

C. Number (count) of customer self-service functions available online

D. Backlog in indexing – days between recording and full indexing.

E. Quantity/percentage of self-service transactions conducted online vs. over the counter

F. System in place and operational to process Excise Tax payments online

3. ***What is the current baseline for this measure?***
   A. No document requests received via electronic web portal (currently all via mail)
   B. 56% hard-copy document submissions (vs. electronic)
   C. Only One (1) self-service function available online (records searches)
   D. Ten (10) days for documents to be fully searchable and available online
   E. Ten (10) day indexing backlog – No self service transactions available online.
   F. Zero (0) excise tax payments received electronically

   RALS is currently establishing baselines based on Lean event tracking. We will measure new state vs. historical data. The current system has poor reporting capability making actual baseline measures very difficult.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   A. 25% of document requests received via web portal
   B. 80% electronic documents submitted (v. hard-copy documents)
   C. 3 or more customer self-service functions available online 1
   D. 1 days for documents to be fully searchable and available online
   E. No indexing backlog – Documents fully available to the public via web portal
   F. Ability to process REET affidavits online.

5. ***When is the benefit likely to be achieved?***
   6 to12 months after go live (once staff becomes completely familiar with new systems and processes) and customers are aware of and using online tools.

Measure	Outcome	Status	Actual Date
A.	17%	In progress	Feb 01, 2019
B.	71%	In progress	Jan 31, 2019
C.	@ Go-live: 1) Records Searches 2)eRecording 3)eREET 4) Customer Reports - Self Service	Complete	July 17, 2018
D.	Fully searchable in 1 day for most documents.	In Progress	Feb 8, 2019
E.	Indexing backlog		
F.	@ Go-live	Complete	July 17, 2018

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   A new system will help increase operational efficiency and flexibility in the following ways:
   A. Documents will be immediately searchable by customers and this is important to operations because customers can find documents more easily for themselves without needing to visit the office or call and take up valuable staff time.(vs. searchable after they are indexed, which takes additional time),
   B. Searches will be more accurate and more intuitive. The current system only allows for minimal search criteria and does not accommodate multiple searches simultaneously or the direct comparison of documents. This makes it difficult for staff and customers to quickly determine which documents are needed. Modern search systems also allow for autofill of commonly searched items.
   C. Accountability with change tracking will be higher. Managers and supervisors will have better tools for oversight through more robust internal tracking (changes to indexes, receipts, images/rescans, etc.) system notifications, user privileges, reports, etc.
   D. The County will be able to minimize chances of future backlogs which is important because it minimizes overtime and means documents are available sooner for the public.
   E. The County will be able to receive Excise Tax payments electronically, allowing conveyance of property transactions to be performed at remote locations and by electronic submission which will speed up delivery and reduce the consumption of paper and postage.
   F. Automation will free up staff time to focus on higher value work such as quality control and the prompt delivery of recording services.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   A. Amount of time it takes for a document to be searchable and available online
   B. Expanded search capability including multiple search fields and simultaneous searching (= greater accuracy)
   C. Internal reports available for managers and supervisors
   D. Size of backlog - Days pending release/return of original document
   E. Ability to receive and process Excise Tax payments electronically, percentage of affidavits processed electronically vs. over the counter/mail.
   F. More time available for quality control work.

3. *What is the current baseline for this measure?*
   A. 10 day for documents to be fully searchable and available online
   B. Limited search functions and single searches at a time
   C. Limited reports available without KCIT technical assistance
   D. No indexing backlog
   E. No ability to process REET affidavits online.
   F. Currently, a total of 15 minutes per day for a single staff member is dedicated to quality control measures focused solely on ensuring that all images are accounted for. With a more

efficient system we expect to be able to dedicate 4 hours of staff time per day to quality control including ensuring that all documents are recorded and indexed accurately.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   A. 1 day for documents to be fully searchable and available online
   B. Multiple seach field functionality and simultaneous seach capability
   C. Standard and ad hoc reporting available to supervisors and managers without technical support.
   D. No indexing backlog
   E. Ability to process REET affidavits online.
   F. Targets will be identified as part of the implementation process for this project. Currently, the goal would be four (4) hours of staff time per day devoted to quality control measures.

5. ***When is the benefit likely to be achieved?***
   6 to12 months after go live (once staff becomes completely familiar with new systems and processes)

Measure	Outcome	Status	Actual Date
G.	Fully searchable in 1 day for most documents.	In Progress	2/8/2019
H.	Multiple search fiels and simultaneous seach capability	Complete	11/21/2017
I.	Available standard reports are increasing over time. Adhoc reporting is available but requires specific technical training to implement	In Progress	2/8/2019
J.	Indexing backlog of 39,141	In progress	2/8/2019
K.	@Go-live	Complete	7/17/2017
L.	Limited QC time available	In progress	2/8/2019

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   The current system (Anthem) was implemented by the County in 2002, as an upgrade to an existing version placed into production in 1999 (ISOL). The hardware to support the current system is between 5 and 7 years old (servers, storage disk arrays) and in need of replacement. Servers are on old 2003 servers, which are a risk and being tracked by the County's Information and Security Officer until replaced as well as several XP computers that are being used in Archives. Replacement has been delayed due to a desire to align new hardware with a new system in order to optimize both the hardware and software systems. The life cycle of software platforms likely varies, however 7 to 10 years is generally the duration of time before a replacement option,

platform migration, is available from the vendor. The life cycle of hardware varies as well, but the availability of manufactures' support and/or third party support is a reasonable indicator and/or driver for replacement of mission critical hardware. A life cycle of five (5) years and manufacturer warranty only (vs. third party after warranty support) is the County standard.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

The public record for King County is dependent upon an accurate and reliable recording system to maintain the prompt recording of documents and accurate retrieval of documents. These documents are critical to citizens for any number of legal transactions. RALS estimated that the Recorder's Office could function without an electronic recording system for approximately 4 hours without diminishing service or failing to meet legal mandates. With outdated hardware and aging code, the risk of not being able to recover quickly from a failure increases. Delays in recovering to production level could impact financial and other transactions that occur in the public and private sector, as they rely on recording or recording information.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20 percent of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

Project Update 2/8/2019. This is an ongoing project and is on-track to achieve its intended target.

IT Project Benefits Achievement Plan (Version 2)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

KC Department/ Agency Name	Department of Executive Services, Office of Risk Management Services
Project Title	Risk Management Information Software System Replacement
Project Number	1126546

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Tom Koney, DES Deputy Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Jennifer Hills	Director / Office of Risk Management Services	Project sponsor
Laurie Copsey	Business and Finance Manager / Office of Risk Management Services	
Sean Catanese	Enterprise Risk Management Program Manager / Office of Risk Management Services	

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

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Conceptual review	5/8/15	Chauntelle Hellner	New, initial draft	
2016 Annual Report	2/6/17	Chauntelle Hellner	Annual Update for PSB	
Update for the Spring 2019 BAP Report	2/13/19	Laurie Copsey	Final BAP	.5 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
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3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

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The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Updated 2/6/17
   The Office of Risk Management Services (ORMS) has moved to an Enterprise Risk Management model for managing county-wide risk. The 2012 Council Performance Audit of ORM provided recommendations on integrating Enterprise Risk Management in strategic and business planning processes. One area that is currently lacking for ORMS is the ability to provide real-time data and updated loss reports to help managers incorporate risk data into their business planning process. This is a key component of Enterprise Risk Management.

   Currently ORMS requires a KCIT Application Developer with coding expertise to write reports in the RiskMaster reporting tool. The system does not allow for general users to generate reports or retrieve data. Additionally, once the data is received from KCIT, the Enterprise Risk Management

Program Manager must spend a significant amount of time manipulating the data to make it a useful management tool for agencies.

The new software solutions on the market provide sophisticated dashboards and easy reporting of real time data for any user to access. Reports are customizable and can be automatically generated from the system and delivered to any county e-mail address. This will allow for production of quality, useful reports and will reduce the amount of time spent on retrieval and manipulation of data. This will enhance the maturity of the Enterprise Risk Management Program as it will allow the Program Manager to spend more time on high value data analysis and departments will benefit from the ability to make data driven decisions.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   A. The current previous system reporting capabilities are limited and take a high level of effort. The benefit will be measured by the ability to We now have dashboards with data at a glance, alerts with important indicators, and information for agencies more readily available. The measure will be better defined after implementation. The baseline is no current access to claims data without assistance from KCIT. 2/13/19 Update: As a result of final project implementation in 2018, we now have a schedule of automatically generated dashboards and reports on claims data delivered and tailored to each agency that expressed this interest. This revised reporting has been set up for over 80% of all agencies thus far and is easy to set up when requested by an additional agency.

   B. We will measure this by working with KCIT to get an estimate of current report requests to identify the difference after implementation and staff are trained on dashboards and reports. 2/13/19 Update: All staff in ORMS have the ability to generate reports and easily access data from the claims system. Managers are able to pull performance data without assistance from KCIT to help manage their staff; and Tort Claims Investigators are able to use real time data to manage their workloads.

   C. This will be measured by the difference between the time spent retrieving and manipulating data currently and post implementation. 2/13/19 Update: Enterprise Risk Management Program manager spends less time on data retrieval and formatting, and more time on high level data analysis to better advise agencies on loss exposures.

   D. Agencies feel they have adequate and timely data regarding claims and losses to incorporate in their decision making process. The target is 80% or more agencies report risk-related data is timely and valuable. Shortly after implementation, ORMS will meet with agencies individually to offer customizable reports based on agency needs. Six months later we will survey agency customers to determine if any adjustments are needed and if the data they receive from ORMS is timely and valuable. 2/13/19 Update: Agencies have access to timely, and in many cases automated, data reporting regarding claims and losses to incorporate into their decision making process. KCIT is no longer involved in the reporting process.

3. *What is the current baseline for this measure?*
   A. Currently we do not have the ability to automatically generate dashboards and reports for agencies.

B. Currently there is no ability for individual users to pull data from the system. All requests must go through KCIT and this delays the ability to use data to manage day to day operations.

C. The Enterprise Risk Management Program manager currently spends 15% of his time or 6 hours a week on the initial retrieval and formatting of data before he can start analyzing.

D. In 2012, ORM conducted a County wide survey of all agencies and the consistent response was a need for more claims and loss data.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
    A. The target is the ability to generate dashboards and reports for agencies. The improvement is that managers will have access to the data easily tailored to their operations to enhance decision making.

    B. The ability for all users to pull valuable real-time data as needed. This will greatly improve the ability to manage work and provide good customer service to County agencies, public records requestors, and claimants.

    C. The target is for the Enterprise Risk Management Program manager to reduce the number of hours spent per week on the initial retrieval and formatting of data from 6 hours on average down to 2, increasing his capacity for high level data analysis.

    D. Agencies will be surveyed 1 year after implementation regarding their satisfaction with data reported to them from ORMS.

5. *When is the benefit likely to be achieved?*
    All of these benefits will be achieved within 2 months of the system going live. The goal is to see these benefits by January 2018.

    Agencies will be surveyed in December of 2018 regarding their satisfaction of Risk Management lines of business including data reporting.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   The Office of Risk Management Services (ORMS) purchased CSC's RiskMaster in 1999. The product is 16 years old and the county has extended the support contract with CSC three times. This software

was recently upgraded to comply with Medicare reporting requirements. This upgrade has introduced a more cumbersome interface that has slowed claims processing by an estimated 20% which diminishes ORMS's ability to conduct its operations in a timely manner.

Additionally, since 1999 other risk management information systems have been introduced to the market. RiskMaster focuses primarily on claims management and has not kept pace with other risk management automation solutions for true risk assessment, prediction and mitigation of risk. It is difficult to retrieve data from RiskMaster to meet the enterprise risk management needs of our office, provide timely loss reporting to departments, and retrieve responsive records for public records requests.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20 percent of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

<u>Update 2/13/2019 Update</u>: This is the final BAP. All benefits were achieved in 2018. The project fully met or exceeded the target benefits.

Metric Description	Metrics	Baseline	Target	Actual
Increased access to claims data. This project will give ORMS staff access to data to better manage work	Access to view claims data.	No current user access. Requests go through KCIT.	Users have dashboard access with customized information to meet needs.	Results exceeded expectations. All users have personally customized dashboards. Users may build their own from a template or use one of several options customized for their roles. KCIT is not involved in access requests.
Agency Reporting – this project will give ORMS the ability to produce reports and loss information for ORMS and Agency Use	The number of report requests sent to KCIT	5-10 individual report requests per month	Users run their own reports – less than 1 per month requested to KCIT	Results exceeded expectations. KCIT is not involved in writing reports. Individual requests for information are more numerous as users become familiar with the system, but the time for ORMS staff to fulfill each request is reduced by approximately 80% from the previous system.
Enterprise Risk Management – This project will give the ERM program staff more time to analyze data and deliver services to agencies	Amount of time spent retrieving and manipulating data prior to analyzing.	35 hours per month spent pulling, manipulating and formatting data.	5 hours per month.	Results achieved: Manual data formatting and manipulation without analytic value or sustained quality improvement has been reduced to less than five hours per month.

IT Project Benefits Achievement Plan (Version 3 – 10/04/2016)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	DES / Human Resources Division
Project Title	Applicant Tracking System (old title NEOGOV Replacement)
Project Number	1124179

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Jay Osborne, Department of Human Resources Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Juliette Peze	IT Project Manager / KCIT	IT Project Manager. Monitor progress against plan and budget; suggests course correction. Facilitate communication between project team members. Assist in issue resolution
Julie Dunn	Employment Manager / HRD Subject Matter Expert	Manage and lead project as Business Lead and Subject Matter expert focusing on business process updates and changes
Gloria Allmon	Service Delivery Manager/ KCIT	Provides advice to the project team and steering committee on systems integration and KCIT best practices for environmental integration.
Jay Osborne	Director, Department of Human Resources / Project Sponsor	Set vision, define scope, and communicate priorities to the organization. Ultimate authority to changes in scope, schedule and budget.
Anita Whitfield Carmell Call Dan Bernard Gloria Allmon Ivette Martinez-Morales Jana Demas Janine Weihe Lorraine Patterson Matias Valenzuela Meg Safranek Nancy Loverin Richard Moore	Steering Committee	Allocate resources to the project. Monitor progress against plan and budget; suggests course corrections. Assist in issue resolution Allocate resources to the project.

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	6/9/14	Phillip Browning / Kendall LeVan Hodson	New, initial draft	2 hours
	9/10/14	Phillip Browning	Updates	2 hours
Budget process	3/1/16	Greg Felton	Updates	30 minutes
Budget process	06/29/16	Julie Dunn	Updated	2 hours
Budget process	10/11/16	James Fournier	Revised based on Council and PSB feedback	8 hours
Project Completion	8/23/2018	Jeff Scheeringa	Close out of project per DHR and KCIT Agreement	30 minutes
Project Completion	9/10/2018	Jay Osborne	Final Approval	15 minutes

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underline primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

1. Describe **why** you expect the proposed IT investment to produce the benefit(s).
2. How will you **measure** the benefit(s)? (How will you know if the benefit has been achieved?)
3. What is the current **baseline** for this measure?
4. What is the **target** for this measure? (How much improvement will this project achieve?)
5. **When** is the benefit likely to be achieved?

King County's Human Resources Division, is seeking to implement an Applicant Tracking System (ATS) SaaS solution that enhances recruiting ability, simplifies processes, is appealing to potential recruits, and offers analytics that will help support the County's goal of hiring the most qualified and diverse talent possible from internal and external sources. A new ATS would provide the following benefits:

Benefit A: Improve applicant/candidate experience

The current ATS reinforces a cumbersome and outdated processes that do not fit in with the County's culture of "Best Run Government." The difficulty of application process leads to candidates beginning the application and then abandoning the process before completing (drop off). Top applicants have multiple jobs to apply to and often do not complete our application do to systems issues or lengthy requirements.

A new ATS would improve the county's first impression with candidates and provide a technologically modern and user friendly experience for applicants. Candidates will experience the following improvements:

- Simplified application process and ability to quickly and easily apply for positions at the County
- Ability to search for positions based on key words and location
- Increased visibility into recruitment process (status of application, stage of recruitment, etc.)
- Consistent and frequent communication with candidates throughout the process with system automation
- Shorter time between job advertisement and job offer
- View a more appealing recruiting/career portal website
- Leverage social media in the recruitment process
- Enhanced mobile functionality features
- Apply for future job openings; not just current postings

Measure	Baseline	Target

Application Drop-off Rate: Number of applicants/candidates that start an application but do not complete the process	During 2016 Q1-Q3, there were 632,020 unique pageviews on the King County Careers Website (including King County employees) and we received a total of 52,611 applications. Using this data, our application drop-off rate can be implied as 92%.	Our goal is to reduce the application drop-off rate to 80% within three years of implementation.
Website Analytics: Number of unique pageviews of the King County Careers Website via mobile, tablet, and desktop traffic. Kelton research shows that 86% of active candidates use their smartphone to begin a job search. Mobile smartphone adoption cuts across demographics, ages, and also income levels and is critical to our Equity and Social justice (ESJ) strategic plan to "proactively seek candidates from diverse backgrounds and communities and encourage them to apply." Mobile technology could be our best diversity recruiting strategy.	Google Analytics data from 2016 Q1 through Q3 of non-King County employee unique pageviews of the King County Careers Website: 	Traffic Type	Potential Job Applicant	
	Unique Pageviews	% of Total
Mobile	178,409	39%
Tablet	26,912	6%
Desktop	250,393	55%
Total	455,714	100%		To increase the percentage of mobile and tablet traffic to a combined 55% within three years of implementation.
Candidate Experience: Survey of candidates about application experience, including ease of finding a particular job posting, site appeal, ease of use, time to apply, and other process specific questions	To be determined	HRD will start surveying candidates prior to implementation, then 6 months after implementation, then yearly. Collecting feedback on the current stats of our hiring process will help to improve future candidate experiences, which is key in recruiting for all applicants whether selected or not.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Benefit B: Attract more qualified diverse candidates
A new ATS that is more appealing and user-friendly, in addition to one that removes barriers from the application process, will yield an applicant pool that is more highly qualified and more diverse.

Measure	Baseline	Target
Diversity of Candidates: Diversity/EEO of applicant pools each step of the application process to mitigate unintended adverse impacts. A new applicant tracking system will have more robust capabilities to identify impacted steps in the process and allow us to eliminate barriers to employment.	During Q1 – Q3 of 2016 King County received a total of 52,611 applications, 47% were people of color and 43% were women. However, during this same time new hires for regular positions (non-temporary) were comprised of 37% people of color and 45% women.	To "screen-in" candidates such that the percentage of candidates who are people of color and/or women is reflective of our region's changing demographics at each step in the application process.

Qualifications of Candidates: Survey of HR Community about qualifications of applicants	2014 HRD customer service survey "the recruitment process yields a strong pool of qualified applicants" Agreement: 3.64, Importance: 4.51 (both out of 5)	Improvement in agreement within three years of implementation.
Qualifications of Candidates: Survey of HR Community about qualifications of hires	2014 HRD customer service survey "the recruitment process resulted in a quality hire for the position" Agreement: 4.10, Importance: 4.59 (both out of 5)	Improvement in agreement within three years of implementation.

Benefit C: Streamline internal user experience with recruiting and hiring process

HRD mapped out the current state process with County recruiters and hiring managers using Lean. Multiple opportunities for improvement and pain points were identified during the session including, but not limited to:

- Difficulty of building and formatting a job posting in NEOGOV
- Cumbersome workflow process that is not intuitive and lacks built in safety measures to prevent errors
- Manual process of posting jobs to multiple job sites
- Lack of integration between NEOGOV and social media sites
- Lack of integration between NEOGOV and PeopleSoft

A new ATS would provide the following benefits for County recruiters and hiring managers:

- Simplified job posting process and streamlined posting to hire process
- Establish a single recruiting system for the entire county (internal recruitments such as special duty)
- Have the ability to search for candidates in a database of qualified applicants (or laid off employees) that can be sourced for job openings
- Leverage stored candidate and talent information to recommend qualified applicants for other related positions that were not hired initially
- Have ability to advertise jobs to multiple job boards
- Have ability to advertise jobs directly to social media sites such as LinkedIn
- Increase efficiencies of current recruiting process allowing recruiters to focus less time on administrative processes and more time on value-adding activities such as sourcing job candidates

Measure	Baseline	Target
Average actual time-to-hire by job classification: # of calendar days from final department authorization/approval to recruit for a position to employee start date.	Not available as a report in NeoGov. HRD will work with agency recruiters to determine a baseline prior to implementation.	To be determined based on establishing a baseline and looking at industry standards for comparable local governments.
Survey of HR Community about completing hiring process to meet business needs	2014 HRD customer service survey "the time to complete the recruitment meets my business needs" Agreement: 3.19, Importance: 4.99 (both out of 5)	Improvement in agreement within three years of implementation. Receiving feedback on a regular basis allows us to see what worked, what didn't, and what internal improvements can be made for the next search.

Benefit D: Strengthen reporting and data for analytics to support strategic recruiting efforts

One of the best changes to make is in regard to improving hiring results is reviewing recruiting metrics. In NeoGov it is difficult to gather and maintain the right kind of data, such as where our candidates are coming from, how they apply for our jobs and skill sets an employee has. A best-in-class ATS not only tracks time-to-fill data and the volume of applications received with "single view" dashboards, it will also include metrics such as the efficiency of our interviewing process. We will be able to determine how long it takes candidates to move through interview stages, how that influences drop-out rates and where recruiters should spend the most time. This will allow us to allocate our HR resources more efficiently and plan our advertising spend to the places that yield the most hires and not just applicants. Wise use of recruiting metrics enables us to compare data from our recruiting process against county goals for the kind of insight we need to maintain and improve our recruiting practices. Through seamless integration with PeopleSoft, we will have accurate and timely metrics critical to making informed strategic decisions.

Examples of Talent Acquisition Reporting:
- Source-of-Hire
  - Tracking source-of-hire over time will help to modify our recruiters' work allocation based on the effectiveness and cost to ensure the best return-on investment of recruitment dollars. In addition, with a robust suite of integrated sourcing tools, we can build pipelines of pre-qualified talent ahead of actual demand, to fill our positions more quickly allowing us less interruption in delivering services to our residents.

- Every Open Requisition: Total Applied, Interviewed, Offers Extended, Offers Accepted
  - Track important ratios such as the number of candidates applied to interviewed, interviewed to offered, and offered to accepted. Strategic recruiting requires understanding the intricacies of each search and the ability to anticipate where the bottlenecks might be ahead of time. Identifying potential bottlenecks makes it easier to build a business case for positive changes in the application process.

- Time-to-Fill
  - Not only does knowing time-to-fill help HR professionals gain insight into a realistic time to hire new employees in the future, but it also helps managers redistribute work more effectively while the position is open. Once any high time-to-fill challenges are uncovered, recruiters can make recommendations to the hiring manager that demonstrate how simple changes can improve their time-to-fill.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit

analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Update of March 2019:

Measure	Baseline	Target	Results Summary
Application Drop-off Rate: Number of applicants/candidates that start an application but do not complete the process	During 2016 Q1-Q3, there were 632,020 unique pageviews on the King County Careers Website (including King County employees) and we received a total of 52,611 applications. Using this data, our application drop-off rate can be implied as 92%.	Our goal is to reduce the application drop-off rate to 80% within three years of implementation.	Benefit not achieved. Vendor was unable to deliver as agreed to in the contract.
Website Analytics: Number of unique pageviews of the King County Careers Website via mobile, tablet, and desktop traffic. Kelton research shows that 86% of active candidates use their smartphone to begin a job search. Mobile smartphone adoption cuts across demographics, ages, and also income levels and is critical to our Equity and Social justice (ESJ) strategic plan to "proactively seek candidates from diverse backgrounds and communities and encourage them to apply." Mobile technology could be our best diversity recruiting strategy.	Google Analytics data from 2016 Q1 through Q3 of non-King County employee unique pageviews of the King County Careers Website: **Potential Job Applicant** Traffic Type / Unique Pageviews / % of Total Mobile — 178,409 — 39% Tablet — 26,912 — 6% Desktop — 250,393 — 55% **Total** — 455,714 — 100%	To increase the percentage of mobile and tablet traffic to a combined 55% within three years of implementation.	Benefit not achieved. Vendor was unable to deliver as agreed to in the contract.
Candidate Experience:	To be determined	HRD will start surveying candidates prior to	Benefit not achieved. Vendor was unable

Survey of candidates about application experience, including ease of finding a particular job posting, site appeal, ease of use, time to apply, and other process specific questions		implementation, then 6 months after implementation, then yearly. Collecting feedback on the current stats of our hiring process will help to improve future candidate experiences, which is key in recruiting for all applicants whether selected or not.	to deliver as agreed to in the contract.
Diversity of Candidates: Diversity/EEO of applicant pools each step of the application process to mitigate unintended adverse impacts. A new applicant tracking system will have more robust capabilities to identify impacted steps in the process and allow us to eliminate barriers to employment.	During Q1 – Q3 of 2016 King County received a total of 52,611 applications, 47% were people of color and 43% were women. However, during this same time new hires for regular positions (non-temporary) were comprised of 37% people of color and 45% women.	To "screen-in" candidates such that the percentage of candidates who are people of color and/or women is reflective of our region's changing demographics at each step in the application process.	Benefit not achieved. Vendor was unable to deliver as agreed to in the contract.
Qualifications of Candidates: Survey of HR Community about qualifications of applicants	2014 HRD customer service survey "the recruitment process yields a strong pool of qualified applicants" Agreement: 3.64, Importance: 4.51 (both out of 5)	Improvement in agreement within three years of implementation.	Benefit not achieved. Vendor was unable to deliver as agreed to in the contract.
Qualifications of Candidates: Survey of HR Community about qualifications of hires	2014 HRD customer service survey "the recruitment process resulted in a quality hire for the position" Agreement: 4.10, Importance: 4.59 (both out of 5)	Improvement in agreement within three years of implementation.	Benefit not achieved. Vendor was unable to deliver as agreed to in the contract.
Average actual time-to-hire by job classification: # of calendar days from final department authorization/approval to recruit for a position to employee start date.	Not available as a report in NeoGov. HRD will work with agency recruiters to determine a baseline prior to implementation.	To be determined based on establishing a baseline and looking at industry standards for comparable local governments.	Benefit not achieved. Vendor was unable to deliver as agreed to in the contract.
Survey of HR Community about completing hiring process to meet business needs	2014 HRD customer service survey "the time to complete the recruitment meets my business needs" Agreement: 3.19, Importance: 4.99 (both out of 5)	Improvement in agreement within three years of implementation. Receiving feedback on a regular basis allows us to see what worked, what	Benefit not achieved. Vendor was unable to deliver as agreed to in the contract.

		didn't, and what internal improvements can be made for the next search.	

Project Close Out Summary Statement: This is a Final BAP. The project did not meet its target benefits.

In Q4 of 2017, it became apparent during testing of the iCMS system that the out of the box functionality that was documented by the vendor in their response to the KC open RFP was unable to meet several of the detailed requirements in the RFP and subsequent contract. The project team engaged the contractual escalation path and issued a notice to cure in partnership with the PAO and DES leadership. After the approved notice to cure time frame, and with guidance from the PAO, the County terminated the vendor contract.

King County still needs to achieve the goals and benefits described in this BAP for an applicant tracking system. DHR and KCIT re-engaged in discovery and reviewed product requirements against our current applicant system: NeoGov. We found that NeoGov has increased its functionality and the the system can now meet many, if not the majority, of King County's requirements. DHR and KCIT have agreed that the most prudent and efficient use of county resources is to complete our review of NeoGov functionality, develop a comprehensive end user and systems administrator training plan and train on NeoGov's full functionality. We will also use continuous improvement methods to develop standard recruiting and hiring workflows and processes as part of the full NeoGov rollout.

IT Project Benefits Achievement Plan

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	District Court
Project Title	District Court Unified Case Management System
Project Number	1124157

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Othniel Palomino – Chief Administrative Officer, King County District Court (KCDC)

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Othniel Palomino	Chief Administrative Officer – KCDC	Business Owner, Steering Committee Member/Leader
Judge Corinna Harn	Chief Presiding Judge – KCDC	Steering Committee Member, Project Leader
Enrique Kuttemplon	IT Director – KCDC	Steering Committee Member, IT Liaison/Lead
Jill Dorsey	Deputy Chief Administrative Officer – KCDC	Steering Committee Member
Bob Dowd	East Division Director – KCDC	Steering Committee Member
Patti Kohler	South Division Director - KCDC	Steering Committee Member
James Kim	West Division Director - KCDC	Steering Committee Member
Keri She	Business Analyst - KCDC	Responsible for analysis from IT perspective in capturing system requirements, coordinating/assisting system design, implementation, testing, and deployment.
Patrick Wells	Training Coordinator - KCDC	Steering Committee Member, Responsible for analysis from operations perspective in capturing system requirements, coordinating/assisting system design, implementation, testing, and deployment, Facilitator for Process Experts and Process Mapping.
Ann Dahlgren	Training Coordinator - KCDC	Steering Committee Member, Responsible for analysis from operations perspective in capturing system requirements, coordinating/assisting system

		design, implementation, testing, and deployment. Facilitator for Process Experts and Process Mapping.
Dee Hay	Training Coordinator - KCDC	Steering Committee Member, Responsible for analysis from operations perspective in capturing system requirements, coordinating/assisting system design, implementation, testing, and deployment, Facilitator for Process Experts and Process Mapping.
Heather Dean	Budget Director - KCDC	Steering Committee Member, Responsible for Overseeing Financial Requirements and Funding Information
Judge Anne Harper	West Division Presiding Judge – KCDC	Process Experts and Requirement Identifiers
Judge Charles DeLaurenti	South Division Presiding Judge – KCDC	Process Experts and Requirement Identifiers
Judge Peter Nault	East Division Presiding Judge - KCDC	Process Experts and Requirement Identifiers
Judge Johanna Bender	Mental Health Court Judge - KCDC	Process Experts and Requirement Identifiers
Judge Arthur Chapman	West Division Judge – KCDC	Steering Committee Member and Case Cleanup
Judge Mark Eide	South Division Judge – KCDC	Steering Committee Member and Case Cleanup
Judge Donna Tucker	~~Assistant~~ Chief Presiding Judge – KCDC	Steering Committee Member and Case Cleanup
Nina Davis	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Paul McDavid	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Kenneth Li	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Maggie Bradley	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Lisa Kissler	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Amy Turley	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Elizabeth Alexander	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Sommer Peck	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Lisa Bitz	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Sorin Say	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Betsy Bosch	Regional Mental Health Court Manager - KCDC	Process Experts and Requirement Identifiers
Judy Garcia	Probation Director - KCDC	Process Experts and Requirement Identifiers
Catherine Thompson	Probation Manager - KCDC	Process Experts and Requirement Identifiers
Kathy Orozco	Redmond Court Manager – KCDC	Process Experts and Requirement Identifiers
Josie Jimenez	Bellevue Court Manager – KCDC	Process Experts and Requirement Identifiers

Brandon Billak	MRJC Court Coordinator – KCDC	Process Experts and Requirement Identifiers
Tracey Smith	Auburn Court Manager – KCDC	Process Experts and Requirement Identifiers
Josh Sattler	Seattle Court Manager - KCDC	Process Experts and Requirement Identifiers
Denise Michels	Court Clerk - KCDC	Process Experts and Requirement Identifiers
LeeAnna Young	MRJC Court Manager – KCDC	Process Experts and Requirement Identifiers
Damita Beleford	Burien Court Manager - KCDC	Process Experts and Requirement Identifiers
Lillian Hawkins	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Sadora Anderson	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Kate Olson	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Katy Nelson	Shoreline Court Manager - KCDC	Process Experts and Requirement Identifiers
Rambaldo Cardoza	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Jennifer Miller	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Christina Melby	Bellevue Coordinator – KCDC	Process Experts and Requirement Identifiers
LeeAnn Rissler	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Somphien Manivanh	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Sarah Jaynes	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Theresa Reddekopp	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Elizabeth Biehn	Court Clerk - KCDC	Process Experts and Requirement Identifiers
Nicholas D'Angelo	Probation Officer - KCDC	Process Experts and Requirement Identifiers
David Sterner	Probation Officer - KCDC	Process Experts and Requirement Identifiers
Andrea Shao	Probation Clerk - KCDC	Process Experts and Requirement Identifiers
David Alber	Mental Health Specialist Probation Officer – KCDC	Process Experts and Requirement Identifiers
Christopher Allen	Probation Officer – KCDC	Process Experts and Requirement Identifiers
Nadine Wallace	Probation Officer	Process Experts and Requirement Identifiers
Enid McAdoo	Probation Officer	Process Experts and Requirement Identifiers
Jim Phoenix	Mental Health Specialist Probation Officer – KCDC	Process Experts and Requirement Identifiers
Elizabeth Owens	Probation Officer	Process Experts and Requirement Identifiers
Jerry Pettitz	Probation Officer	Process Experts and Requirement Identifiers
Susan Butler	Mental Health Specialist Probation Officer – KCDC	Process Experts and Requirement Identifiers
Jay Gorham	Probation Officer	Process Experts and Requirement Identifiers
Steven Wede	Mental Health Specialist Probation Officer – KCDC	Process Experts and Requirement Identifiers
Sue Bainton	Probation Clerk – KCDC	Process Experts and Requirement Identifiers
Jessica Brown	Training Coordinator	Process Experts and Requirement Identifiers
Annette Pooley	Probation Officer	Process Experts and Requirement Identifiers

Kari Goode	Probation Officer	Process Experts and Requirement Identifiers
Rachel Brooks-Bailey	Probation Officer	Process Experts and Requirement Identifiers
Annalisa Mai	Court Clerk – KCDC	Process Experts and Requirement Identifiers
Isabelle Isidro	Court Clerk – KCDC	Process Experts and Requirement Identifiers
Regina White	Court Clerk – KCDC	Process Experts and Requirement Identifiers
Gabriel Traber	Court Clerk – KCDC	Process Experts and Requirement Identifiers
Kanani Johnson	Program Manager	Project Management
Tami Cochran	Compliance Coordinator	Process Experts and Configuration Analyst
Susan Mahoney	Assistant Presding Judge	Steering Committee Member and Process Expert

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual Review	2/10/14-2/21/14	Steering Committee	New Initial Draft	240 hours
Conceptual Review	2/24/14-3/21/14	Steering Committee	Daily Revisions	360 hours

	Benefits Achievement Plan	2/28/14-4/21/14	Steering Committee	New Initial Draft	444 hours
	Benefits Achievement Plan	4/22/14-7/3/14	Steering Committee	Daily Revisions	1040 hours
	Costs Benefits Analysis Workbook	5/26/14-6/13/14	Heather Dean and Enrique Kuttemplon	Draft and Revisions	78 hours
	Process Mapping	2/18/14-4/15/14 (and intermittent days to present)	Subject Matter Experts, Functional Analysts, Business Analysts	Process Mapped all KCDC processes to identify the scope of the requirements and assess the Financial Needs of a new System	1568 hours
	2014 BAP Annual Report	3/1/15	Steering Committee	Review Only of BAP for PSB Report Out	2 hours
	2014 BAP Annual Report	7/27/15 – 8/12/15	Steering Committee	Review and Revision of BAP and Conceptual Review for PSB Report Out	3 hours
	Costs Benefits Analysis Workbook	6/4/15 – 9/2/15	Heather Dean, Patricia Kohler, and Kathy Moon	Draft and Revisions	120 hours
	2015 BAP Annual Report	3/1/16	Steering Committee	Review Only of BAP for PSB Report Out	1 hour
	2016 BAP Annual Report (Ongoing Project)	1/1/17-2/3/17	Steering Committee	Annual Review and Updates	3 hours
	2018 BAP Annual Report (Ongoing Project)	1/8/19 – 2/7/19	Steering Committee	Annual Review and Updates	5 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)
Choosing only one category as the Primary Project Benefit was extremely difficult as all four choices are primary benefits of this project and limiting it to one benefit grossly underestimates the full benefits that will be realized from a new case management system.

	☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public
	☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services
	☐ Category #3: Maintaining service levels by replacing or upgrading older technology
	☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

External Service Benefits Executive Summary:

King County District Court (KCDC) is using the outdated statewide JIS system with limited integration to internal standalone court systems and virtually no integration with systems of other law and justice agencies statewide (including our partner contract cities). While not selected as the primary benefit of a new case management system for the purpose of this proposal, the implementation of a new case management system will vastly improve both the quality and the quantity of services that King County District Court is able to offer the public and our criminal justice partners. Through new enhanced electronic access to court records, the court will be able to offer the following new or expanded benefits to the public:

    A. With the implementation of the new case management system, people will be able to file their court documents any day, any time and from anywhere.

    B. Parties will be able to opt in to receive text or email based hearing notices in addition to the paper notices required by statute.

    C. Fewer people will be sent to collections.

    D. Information from Courtroom will be accessible to the public same day.

1) Describe why you expect the proposed IT investment to produce the benefit(s).

    A. With the implementation of the new case management system, people will be able to file their court documents any day, any time and from anywhere.
       eFiling will be a central requirement for a new Case Management System. eFiling will allow for access to District Court outside of regular business hours. With the implementation of eFiling, documents can be filed twenty-four hours a day, seven days a week from any computer with internet access. This transforms the current filing system from limiting the public and our

criminal justice partners to eight filing locations, to a system where essentially any computer terminal becomes a portal to King County District Court.

B. Parties will be able to opt in to receive text or email based hearing notices in addition to the paper notices required by statute.

A new case management system will not only allow parties to access services electronically from anywhere but it will also allow the court to reach defendants through modern means. Currently, notices for upcoming court hearings are delivered standard postal mail. While this meets the legal requirements it is an inadequate means of notification in the current technological environment. Given an atmosphere of frequently outdated addresses, defendants with unstable housing situations, and a culture highly reliant on smartphone technology, mailing paper notices is not dependable and often ineffective. The new case management system will have the technology for hearing notices to be delivered via text and/or email for those who opt-in. Individuals will get notices of future court hearings immediately, and the system can be programmed to send out multiple reminders to keep defendants up to date on the status of their hearing. While text and email will not replace standard mail as a means for notification at this time, they will help the Court reach individuals for whom postal mail was previously an unreliable noticing method thereby providing a supplemental service to the public.

==UPDATE 2/2019 – KCDC will not be implementing both text and email as supplemental noticing. As part of configuration, KCDC has included SMS supplemental noticing and reminder notices technology. However, after reviewing research presented at the National Center for State Court's (NCSC) eCourt 2018 Conference, King County District Court determined email noticing does not provide additional benefits. Multiple studies presented at NCSC's eCourt conference from courts across the county that have implemented either SMS, email, or a hybrid showed that, while SMS did have a measurable decrease in failure to appears (and for criminal cases, resulting bench warrants), the additional of a secondary electronic noticing method (email) did not have a measurable additional impact. King County District Court will monitor the success of the SMS noticing and readjust this decision if necessary.==

C. Fewer people will be sent to collections.

Currently King County District Court contracts with NCO Financial in order to collect on unpaid court fines and traffic infractions. The new case management system would allow King County District Court to take over the payment plan portion of the NCO contract, maintaining their services only for collections. With King County District Court in control of payment plans, the court could allow for time payments or different pay dates tailored to the defendant's economic situation; smaller monthly payments in response to the defendant's financial standing; or hold the debt if special circumstances arise if the defendant misses a payment. Reminder notifications can be generated by the system with minimal clerical labor to prevent lapses in payment. These notices can be configured to go out by mail and/or as text/email alerts if the defendant desires. If a debt obligation goes unpaid for a certain period of time, the Court may still contract with a third party to handle collection procedures which often require extensive staffing. Having a system in

place to foster cooperation with the defendant will enable the court to offer the public payment plan arrangements to match their financial situations.[1]

UPDATE 2/2019 – In-house time payment will not be included in Phase 1 of Full Go-Live. King County District Court continues to consider the benefits and impact of a future move to in-house time payment as part of the CMS and will revisit it if needed. The product District Court selected and is implementing is capable of doing so. However, due to changes in legislation and resulting impact on judicial policy, District Court is currently in the process of reevaluting all collection procedures as well as decisions on our long-term collections vendor. This reevaluation process is not expected to be completed prior to Go-Live. Once these policy decisions are finalized, District Court will revisit timepay and determine what actions are needed.

D. **Information from Courtroom will be accessible to the public same day.**
   Documents created in open court will be created within the system by the judge and clerk, signed by the parties electronically in open court, and uploaded in the system without the need for any clerical re-entry of data. The only paper copies will be those that are printed from the system as reference documents for the defendant. This will be a huge improvement from the current system where all documents are created as paper copies that need to be transcribed into the system and the originals then scanned and indexed, often resulting in a delay of four to five business days or more until the information is viewable in the system by the public will be eliminated. (Please see *King County District Court BAP Supplemental Details* Section VII for more detailed information).

2) *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   A. **With the implementation of the new case management system, people will be able to file their court documents any day, any time and from anywhere**. - We will measure the system's availability for after-hours access by parties remotely (with the exception of planned system downtime for planned maintenance).
   B. **Parties will be able to opt in to receive text or email based hearing notices in addition to the paper notices required by statute.** - We will measure the number of texts /email notices sent out and will know the benefit has been achieved through the number of parties opting in to electronic messaging.
   C. **Fewer people will be sent to collections.** - To determine if fewer people have been sent to collections we will measure: The number of people being assigned to full collect.
   D. **Same Day Access to Court Information** – We will measure the amount of time from court hearing until documents and records are available for public viewing.

3) *What is the current baseline for this measure*
   A. **With the implementation of the new case management system, people will be able to file their court documents any day, anytime, and from anywhere.** - We currently do not have this functionality and thus the baseline is zero.

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[1] "Maximizing Recovery Rates in Consumer Debt." Timetric (2012): n. pag. Timetric, Apr. 2012. Web. 23 May 2014.

B. **Parties will be able to opt in to receive text or email based hearing notices in addition to the paper notices required by statute** - The current baseline for this is zero as we do not have this functionality on our current system.

C. **Fewer people will be sent to collections.** The current baseline for this measure is approximately 166,484, which is the number of cases assigned to collections in 2013.

D. **Same Day Access to Court Information** – The baseline is the current average of 4 to 5 days from hearing in open court to the time when the documents are available for public viewing.

4) *What is the target for this measure? (How much improvement will this project achieve?)*

A. **With the implementation of the new case management system, people will be able to file their court documents any day, any-time, and from anywhere.** - The target is 99% uptime of the system with the exception of planned maintenance.

B. **Parties will be able to opt in to receive text or email based hearing notices in addition to the paper notices required by statute.** – There is no explicit target as we currently do not have this functionality or metrics to measure it. By the end of the first year we will develop a set of metrics and targets for further years to assess the improvement from this functionality.

C. **Fewer people will be sent to collections**. The target for collections is a 15% reduction in cases assigned to collections.

D. **Same Day Access to Court Information** - The target for this measure is that orders, documents, and all case and hearing information would be accessible to the public within 24 hours of a hearing.

5) *When is the benefit likely to be achieved?*

A. **With the implementation of the new case management system, people will be able to file their court documents any day, anytime, and from anywhere.** While the benefit itself will be achieved upon implementation, awareness of the benefit is likely to be achieved over the course of three years after implementation [Update of June 2017] from 2019 to 2021, with expectations of incremental growths beyond.

B. **Parties will be able to opt in to receive text or email based hearing notices in addition to the paper notices required by statute.** - As we currently do not have this functionality or metrics to measure it. By the end of the first year we will develop a set of metrics and targets for further years.

C. **Fewer people will be sent to collections** - We expect the benefit to be achieved by end of [Update of June 2017] the first year 2019 in which it is implemented.
Update 2/2019 – Please see discussion in section 1.C above. We do expect a reduction in the number of people sent to collections. But due to statewide legislation changes and resulting judicial policy that has yet to be finalized, we are uncertain as to the amount and when this can be realized. This is not an issue with the chosen case management system, but instead impact from the law and policy changes. Because of new statutes and resulting policy changes either currently set to be implemented or in process with the legislature, less people WILL be sent to collections. Due to efficiencies gained by the case management system, King County District Court may lower that number even further.

D. **Same Day Access to Court Information** - We expect this benefit to be fully realized by the end of [Update of June 2017] 2019, the first year in which it is implemented. Much of the information will be available immediately upon implementation but we recognize there may be a delay in full realization due to learning curve of new technology by staff.

Executive Summary:

As discussed in our previously submitted Conceptual Review, due to our current system's major insufficiencies, King County District Court faces daily challenges operating on multiple stand-alone systems requiring repetitive and duplicate data entry points. The following issues and challenges in King County District Court's current case management system create disjointed and challenging internal operations that require clerks to rework the same tasks. The result is increased errors and processing time which in turn increases the cost of the work and drastically reduces its reliability.

A new case management system will allow us to completely redesign our current work processes that are hampered by the old technology and limited ability to integrate with other County or City criminal justice agencies. We will be able to move to a streamlined and fully integrated workflow process that ensures:

    A. Better Utilization of Court Staff
    B. Complete Law and Justice Information Immediately Available to Judge and Clerk
    C. Accurately Determine Value of Court Programs
    D. Maximize System Uptime

Outlined below is an analysis of how a new case management system will address each of these needs:

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

    A. **Better Utilization of Court Staff** – A new case management system will allow King County District Court to better utilize court clerk FTE time in several ways:
        o **Reduce Volume of Documents Clerks Manually Scan into System –** As mentioned in category one, eFiling will be a central requirement for a new case management system. Attorneys will be mandated to eFile as they currently are in King County Superior Court. They will submit their documents electronically, eliminating the manual document upload process entirely, leaving the clerk to simply confirm that the attorney's inputs (such as case number and document type) are correct. Though pro se filers and defendants will have the option to file electronically or through traditional paper, the vast majority of the

average 3,024,000 pages a year that are scanned into the system will be eliminated and the court's staff will be able to confirm that the documents were filed correctly thereby improving the overall accuracy of the filings. This will allow for both a reduction of some FTE's through attrition, repurposing of some FTE's for supporting the new system, as well as a reallocation of some resources to increase quality control and customer service that KCDC does not currently have the resources for.

o **Reduction of Court Clerk Training Time –** Movement to a new case management system with only one program to train on and the elimination of hundreds of commands that must be learned to navigate JIS will drastically reduce onboarding time as well as reduce errors that necessitate continuous training of existing staff. This will allow new employees to become productive contributors more quickly, reducing the amount of time a court-location is down any employees. In turn this will allow the Training Coordinators more time to complete other trainings, develop and implement more training materials and continue to document KCDC's procedures as the system and statutes change.
Much of in-court clerk training is focused on taking forms and orders generated in the courtroom and entering them into JIS via freehand docketing and command codes. Full integration of forms and orders that populate the data into the system will eliminate all of this training, allowing clerks to be trained on quality control of the data instead.

o **Timely Completion of Work –** Much of the time clerks spend processing case work is due to lack of automation and the redundant data entry in numerous standalone systems. Virtually all relevant case documents must be filed in paper form or converted to paper form and then manually scanned and indexed into District Court's outdated document management system. Due to the lack of an eFiling and case management system, King County District Court has required staff to manually input and manually manage cases. Each stand-alone subsystem exists independently and requires separate clerical data entry. The simple entry of a new case can require a clerk to enter the same data into as many as seven systems. With the implementation of a single integrated case management system with eFiling functionality, the time it takes to process a case will be reduced resulting in case work being completed in a consistently accurate and timely manner. This again, allows for both a reduction of some FTE's through attrition, repurposing of some FTE's for supporting the new system, as well as a reallocation of some resources to increase quality control and customer service that KCDC does not currently have the resources for.

o **Fewer Clerical Errors –** As mentioned above, clerks are required to manually manage cases. Data entry errors are caused by manually entering data (and often re-entering the same data multiple times). There are few safeguards to ensure data is accurate or necessary steps in the management of the case have been completed. Integration of all system components, eliminating redundant data entry requirements, as well as enhanced monitoring capabilities of the new case management system will be instrumental in helping reduce dismissals due to jurisdiction and speedy trial violations. Warning and milestone markers built into the system that are triggered throughout the life of a case are essential for case monitoring and alerting clerks and judges when action is needed.

B. **More Complete Law and Justice Information Immediately Available to Judge and Clerk -** One of the major limitations within the current system is the lack of integration with the agencies with which District Court shares data, such as the Department of Licensing and King County law enforcement (including the Washington State Patrol, King County Sheriff, Municipal law enforcement and the jails within and outside King County who house defendants with cases in King County District Court). As a central part of this development process, King County District Court is working with the other criminal justice agencies within King County to create a data sharing model. When the new case management system is implemented, it will conform to a data model that will allow for data transfer between all King County Criminal Justice Agencies such as Superior Court, Department of Public Defense, Sheriff's Office, Prosecutor's Office and DAJD. When a judge or a clerk is in the courtroom, the information from agencies across the county (such as King County Correctional Facility data to include other court holds, prior booking information, Court Information Services Interview data, and Personal Reference Information) will be immediately available through these data interfaces ensuring that the judge can make judicial rulings with a more complete picture of all factors, ensuring fairness and public safety.

UPDATE 8/2015: As part of an agreement between King County District Court and the Administrative Office of the Courts, with support from the King County Council and the Washington State Legislature, the Court is working with AOC as the pilot court for the development and implementation of the Information Network Hub and Electronic Data Repository (INH/EDR) as described in Phase 2 Interfaces in the RFP. The INH/EDR interface allows courts to efficiently and bi-directionally exchange statewide criminal justice data.

UPDATE 1/2017: The Expedited Data Exchange Steering Committee has decided to reanalyze and review the plan for the Information Network Hub and Electronic Data Repository Project which we believe will lead to its delay. The Court, however, is planning to proceed ahead without the interface. The Court is still working closely with the AOC and will be ready to implement the interface with the EDR when it becomes available.

UPDATE 1/2019: - The status is regarding the Expedited Data Exchange is unchanged from the above 2017 update. This impacts our expectation of information from other agencies. We have been in talks with the Department of Licensing since 2014 to directly interface. Based on their implementation of their new DRIVES system in 2018, however, they changed their approach and only want to interface with us via the EDR. Because of that, and the risk associated with the EDR, there is some risk in our ability to retrieve data from DOL. We are working closely with AOC and our vendor on sending data through the EDR to DOL but this change has created an additional risk in this area.

Additionally, we are currently working with the project team from DAJD to make sure that, when their system nears completion, both KCDC and DAJD have the necessary business requirements for an interface. We look forward to interfacing with their system and having that additional data available to our court.

C. **Accurately Determine Value of Court Programs -** One of the most valuable additions that the new case management system will bring to King County District Court is much improved metrics and reporting system for data tracking. King County District Court can use the data to make incremental decisions regarding those programs to better serve the public. Currently, JIS is

limited in the reports that it can produce due to both the age of the database query system, non-standardized data entry and the fact that it simply was not designed for a court of our magnitude. To compound that fact, the data is queried from fields in JIS that often do not require standard entries. This means that for those reports we are able to run, the data it returns cannot be fully relied upon and thus cannot be used to accurately determine the value of court programs.

D. **Maximize System Uptime** – King County District Court faces intermittent outages of the systems causing interruptions in service and interfering with the Court's ability to carry out daily operations. Notification for system failures is often delayed, especially on systems that are not maintained by District Court such as JIS, and while repairs are being made the judicial process is halted. Additionally, the failings in our current outdated electronic document program often are only detected after the problem has occurred and requires substantial staff time to repair. A new case management system will be maintained in house, with onsite IT staff.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   A. **Better Utilization of Court Staff** – Better utilization of court staff through reduction of clerical time spent scanning documents, reduction of clerical training time, integration that will reduce time spent entering data or scanning in documents as well as increased accuracy and thus reduction of time fixing errors will allow King County District Court to return a total of 16 FTE positions to the County by means of attrition (see this information in Category 4 as well).

   B. **More Complete Law and Justice Information Immediately Available to Judge and Clerk** – This benefit will be achieved upon implementation of a standard data model. Benefit realization will be achieved when judicial officers have access to information from other King County criminal justice agencies.
   ==UPDATE 8/2015 – This benefit will also be achieved upon implementation of the INH/EDR.==

   <mark>Update 1/2019 – This benefit will continue to increase as more systems are able to interface with us including DAJD and DOL.</mark>

   C. **Accurately Determine Value of Court Programs** – This benefit will have been achieved when we have the ability to input data elements, run reports, and gather statistical data about the use and performance of the programs. For example, the ability to query and measure who comes into a program, the time span from entry to completion or recidivism, and the completion rate of participants**.**

   D. **Maximize System Uptime** – Currently we have no mechanism to track system downtime other than anecdotally. With JIS, the state-run court database, we often find out about system errors and interface outages months later. Our new case management system will have system monitoring software that will allow for rapid notification of any error. This will allow us to measure whether our target has been achieved.

3. *What is the current baseline for this measure?*
   A. **Better Utilization of Court Staff** – The current baseline is 162 number of staff.

   B. **More Complete Law and Justice Information Immediately Available to Judge and Clerk** – At this time we have limited to no integration with any of the King County Law and Justice Agencies and

while a committee has been formed to develop a data model, at this time there is no shared data model across the agencies. Our current baseline is that the judge has access data and information from JIS only. Any other information has to be manually researched by clerical staff such as through telephone calls, faxes, or access to other agencies systems in an often untimely process.

C. **Accurately Determine Value of Court Programs** – There is no current baseline for this measure. We lack metrics or reports to measure and evaluate program performance due to current system inflexibly and the limited and unreliable data.

D. **Maximize System Uptime –** We have no ability to measure a baseline for this measure as we currently cannot measure or monitor this for our systems and often find out about outages months after they have occurred and affected thousands of cases. The ability to monitor for these outages may be the most necessary benefits of a new case management system.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   A. **Better Utilization of Court Staff –** The target for this measure is a 10% reduction in staffing (a total of 16 positions) through attrition over a three year period of time. (See table below for details).
   B. **More Complete Law and Justice Information Immediately Available to Judge and Clerk –** The target for this measure is development and adherence to a county-wide data model for all King County Law and Justice Agencies and the ability upon implementation of that data model to interface with those agencies that have that capability at that time. This will provide judicial access to more complete information.
   ==UPDATE 8/2015 – The target also includes the ability to send and receive statewide criminal justice information via the INH/EDR.==
   C. **Accurately Determine Value of Court Programs –** The target for this measure is implementation of metrics and reports to evaluate the success of various court programs
   D. **Maximize System Uptime –** The target for this measure is 99% uptime.

5. *When is the benefit likely to be achieved?*
   A. Better Utilization of Court Staff – The breakdown of the timeline of the benefit is detailed in the table below:

"Better Utilization of Court Staff" Measures	2019	2020	2021	3 Year TOTAL
Total # of FTE's eliminated by attrition through **ALL** efficiencies	8	5	5	18
Total # of FTE's Returned to County through attrition	6	5	5	16
Total Salary and Benefit Savings Returned to the County	$467,184	$856,504	$1,245,824	$2,569,512
KCIT workstation savings Returned to the County	$9,600	$15,600	$21,600	$46,800
Overhead Savings Returned to the County	$3,764	$6,899	$10,034	$20,697
Total Staffing Savings Returned to the County	**$480,548**	**$879,003**	**$1,277,458**	**$2,637,009**

*Totals are year on year cumulative

UPDATE 1/2019 - In December 2017, King County District Court found alternate positions within the County for 4 employees. Through this initative, in 2018 we saved $229, 816 through the resulting salary and benefits reduction and the savings will be ongoing.

In 2019, King County District Court is eliminating 1 FTE. This reduction was allowed as a result of this project's move away from paper and towards the electronic filing. As a result, we no longer need this position to process the paper. This will allow King County District Court to save $183,388 this fiscal year starting in 2019 and the savings will be ongoing.

King County District Court also has taken a CMS project related contra of $185,622 for FY19/20.

B. **More Complete Law and Justice Information Immediately Available to Judge and Clerk –** Target for this measure is not known at this time as a King County Criminal Justice Committee spanning numerous county criminal justice agencies is currently driving this process. King County District Court is committed to adhering to the timeline developed and decided upon by this committee. **UPDATE 1/2017: This committee is on hold at present. We are, however, currently working with the Prosecutor's Office, Superior Court and DJA, as well as King County Data to develop data sharing outside of this committee as part of our implementation.**

C. **Accurately Determine Value of Court Programs –** Upon implementation of this system we will have the reporting capabilities. As soon as the new system launches, reliable data will start to be collected for measurement. A year after launch of the new case management system [Update of June 2017] in 2020, analysis will be done with trusted information accumulated over the previous year. With the data, measurements can be made and goals for subsequent years drafted along with evaluation of success and effectiveness of court programs.

D. **Maximize System Uptime -–** This benefit is likely to be achieved within 1 year of phase 2 implementation [Update of June 2017] in 202019 as the unstable systems will be replaced in full and new integration with built in validation of data transfers and system monitoring software will be elements of the new system.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

Please see section XIII (Upgrade of Technology to Maintain and Increase Service to the Public) of King County District Court BAP Supplemental Details for information on this Category
JIS fails to help King County District Court meet the mission of providing a forum that is fair, efficient and accessible. Instead the current case management system produces errors, inefficiencies, and service outages that stalls the judicial process. The new case management system will replace the Court's

reliance on JIS and upgrade the secondary programs to be better integrated with the system as a whole and will provide both improved reporting and monitoring capabilities. An improved reporting and data collection system will enable King County District Court to provide quality control and meet its fiduciary responsibility to the public. The new case management system will have the capability to calculate speedy-trial and reconfigure the timeline whenever waivers are filed or warrants are issued. These automated calculations will provide an essential safeguard to ensure a timely resolution of all cases.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

Executive Summary:
District Court expects that eFiling and system-generated forms will reduce paper documents filed to, and produced by, the Court by 35% of the baseline total. From this reduction the Court will realize a savings of 4 FTE positions through attrition. The Court will reassign one staff position into a professional position. The professional position will be used to analyze and maintain data integrity and return 3 of those positions to the county (keeping the salary of and benefits necessary to fund the professional position).

District Court expects that the reduction in paper documents filed to, and produced by, the Court to be 50% from the baseline total, two years after launch. From this reduction, the Court will realize a time savings of an additional 2 FTE positions through attrition.

In the third year after launch, the expectation is that paper documents filed to, and produced by, the Court will be reduced 75% from the baseline total. From this additional reduction, the Court will realize a time savings of 3 more FTE positions through attrition.

The current system also requires a substantial amount of clerical time to be expended towards the manual processing of paper documents filed with the Court. Time must be spent preparing the documents for the scanning program as well as converting the documents into a readable electronic format. The launch of eFiling and system generated forms will vastly reduce clerical time spent uploading documents into the electronic court record.

The lack of integration between the District Court system (JIS) and the probation system (PCMS) has led to a substantial amount of clerical time being spent transferring data between the two systems. The new case management system will have a probation module included which will have full integration with the District Court component. This will greatly reduce the amount of clerical time spent manually entering redundant data. The Court expects that the efficiency savings will allow for the investment of a management position and return to King County 3 FTE positions through attrition. Within the first three years of implementation, King County District Court will return a total of 10% of its FTE clerical positions to the county through attrition. (See table in Question 5 for full breakdown of positions).

It is clear that a new case management system will allow us to completely redesign the way we do business and allow us to significantly reduce costs through a streamlined and fully integrated workflow process that will result in the following:
A. 7.5 Year Payback of Project Costs
B. 10% Efficiency in Staffing through Attrition
C. Savings through Elimination of High Volume Scanners

1. *Describe why you expect the proposed IT investment to reduce costs?*

   A. **7.5 Year Payback of Project Costs** - The benefits realized after the first seven years (2025) of implementation will almost fully recover the project costs. By the end of the eighth year (2026), benefits will have fully recovered the project costs.
   B. **10% Efficiency in Staffing through Attrition** - King County District Court estimates that the efficiencies provided by launching a new case management system will allow the Court to return a total of 16 FTE positions to the County by means of attrition. Currently we experience a net attrition rate of approximately 15 FTE's on an annual basis and will return FTEs to the county per the chart below. Furthermore, the Court is committed to investing in one additional professional staff position to meet the complex challenges such as data analysis to ensure quality control and data integrity, and one additional management staff to facilitate the process. The Court will not seek additional funding for these positions, instead funding them through additional clerical savings done through attrition.
   C. **Savings through Elimination of High Volume Scanners** - The court will also realize a cost saving transitioning from expensive high volume scanners to smaller desktop models with an expected decrease of $44,000 annually in licensing fees alone. After taking into account maintenance contracts and other costs, the total savings of these high volume scanners will total $110,000 annually.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   A. **7.5 Year Payback of Project Costs** – We will know that this benefit has been achieved through the reduction in payroll through efficiencies, the reduction of certain costs due to the higher

productivities of the system, cost avoidance, and realization of new revenue sources. (Please see Cost Benefit Analysis Workbook for detailed figures)

B. **10% of Efficiency through Attrition** - This will be measured through the decreasing staffing number through attrition over time (see question 5, section B for schedule of reduction).

C. **Savings through Elimination of High Volume Scanners** – This benefit will have been achieved when we are able to eliminate the high volume scanners and terminate any associated maintenance contracts resulting in full eradication of costs.

3. *What is the current baseline?*

A. **7.5 Year Payback of Project Costs** – The baseline is repayment of $0 costs. By end of year eight (2026), full repayment of costs will have occurred.

B. **10% of Efficiency through Attrition** - The current baseline is 162 number of staff.

C. **Savings through Elimination of High Volume Scanners** – The current baseline is the approximately $110,000 in annual expenditures on the high volume scanners.

4. *What is the target for this measure? (How much savings will this project achieve)*

A. **7.5 Year Payback of Project Costs** – Target for this measure is full payback of project cost. District Court is expecting to [Update of June 2017] begin go live with the new Case Management System in 2017. In February 2025, 7.5 years after full go live, District Court will have paid back the project cost.

B. **10% of Efficiency through Attrition** - The target for this measure is a 10% reduction in staffing (a total of 16 positions) through attrition over a three year period of time. (See table below for details).

C. **Savings through Elimination of High Volume Scanners** – The target for this measure is elimination of all high volume scanners resulting in a $0 annual expenditure.

5. *When is the cost reduction likely to be achieved?*

A. **7.5 Year Payback of Project Costs** – The payback of costs will occur 7.5 years from [Update of June 2017] full implementation, approximately February 2025. Please see the Cost Benefit Analysis for detailed repayment information.

B. **10% of Efficiency through Attrition** - The breakdown of the timeline of the benefit is detailed in the table below:

"Efficiency Through Attrition" Measures	2019	2020	2021	3 Year TOTAL
Total # of FTE's eliminated by attrition through **ALL** efficiencies	8	5	5	18
Total # of FTE's Returned to County through attrition	6	5	5	16
Total Salary and Benefit Savings Returned to the County	$467,184	$856,504	$1,245,824	$ 2,569,512
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Total Staffing Savings Returned to the County	**$480,548**	**$879,003**	**$1,277,458**	**$2,637,009**

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In 2019, King County District Court is eliminating 1 FTE. This reduction was allowed as a result of this project's move away from paper and towards the electronic filing. As a result, we no longer need this position to process the paper. This will allow King County District Court to save $183,388 this fiscal year starting in 2019 and the savings will be ongoing.

King County District Court also has taken a CMS project related contra of $185,622 for FY19/20.

C. **Savings through Elimination of High Volume Scanners –** Cost reduction should be achieved by the end of ~~year one~~2019. High Volume scanners will be eliminated upon implementation of the new case management system and all associated agreements and costs associated with the existing systems will be terminated.

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

UPDATE March 2019 – This is an ongoing project. In 2018, 16,411 civil cases were initiated via the eFiling portal and 581,079 pages of scanning were eliminated. All other case types on track to go live in 2019 and to achieve expected benefits as detailed in the BAP updates.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Judicial Administration (DJA)
Project Title	System Replacement Project (SRP)
Project Number	[Update 1/27/16] 1123900

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Teresa Bailey, DJA Deputy Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Teresa Bailey	Deputy Director/DJA	Project Director
~~Katy Shaw~~ Danielle Anderson [Update 1/27/16]	CaseFlow and Court Clerk Division/DJA	Manager
~~Joe McAllister~~ Jane Swanson [Update 1/13/17]	Finance and Customer Service/DJA	Financial processes oversight
Sarina Aiello	Kent RJC Division Manager/DJA	Business process oversight; ensuring that stakeholder business needs are met

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Benefits Achievement Plan	August 24, 2015	Teresa Bailey	Request to combine Core ECR Replacement and CMS (SCOMIS Replacement) Projects	2 hours
2015 Annual Update	January 27, 2016	Latasha Battle	Updated project#, name of CaseFlow Manager and the status of ECR stabilization work	.5 hour
2016 annual report – BAP update for an ongoing project	January 13, 2017	Latasha Battle	Updated name of Finance and Customer Service manager	.25 hour
Update for the Spring 2019 BAP Report	January 18, 2019	Teresa Bailey	Updated go-live date and added the benefit measurement timeframe.	.5 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
Benefit A, BUSINESS CONTINUITY:
Although the external benefits listed below are critical and position DJA for multiple service improvements, DJA's System Replacement Project (SRP) is first and foremost a business continuity project made essential by: 1) The outdated Core ECR technology platform; and 2) AOC's planned decommission of the SCOMIS system within the next 3-4 years. In addition to the service enhancements listed below, a moderns CMS solution replaces the functionality provided by SCOMIS. Should DJA lose business continuity in the areas of case, financial or document management operations, the manual work requirements could prevent both the court and the public from processing cases and accessing critical information in a time frame required for reasonable court operations.

Benefit B, EQUITY AND SOCIAL JUSTICE – TIMELY PUBLIC ACCESS TO DATA:
A significant service limitation of AOC's SCOMIS system is the 24-hour turn around between defendants/offenders making payments with the Clerk (known as a Legal Financial Obligation or LFO), and that same payment being uploaded to the AOC finance and accounting module(s) in Olympia. *The data associated with the payment is not available for reporting until upload is complete.* Customers therefore cannot verify receipt or required distribution of LFOs in real time, causing a great deal of frustration and requiring DJA customers to make multiple inquiries to secure verification of funds received, paid or distributed. Although there are many reasons that customers are inconvenienced, two particularly common scenarios include:
1) After paying on an LFO for many years, payers make the final payment and want immediate verification that their obligation is fulfilled; and
2) LFO payers must often provide proof of a fulfilled obligation when purchasing vehicles or real estate.

This second example is particularly important because third-party transactions cannot close if the payer does not have the required documentation. A modern Case Management System will upload

LFO data in real time, thus allowing DJA staff to access the requested detail and provide financial information timely to customers. Additionally, in many circumstances juvenile offenders are eligible to have their records sealed upon completion of certain criteria by a specific date. When juvenile offenders make their final payment just before the date when the Judge considers sealing their case, not having up to date financial data is problematic.

Assisting the general public and case parties timely is particularly responsive to King County's Equity and Social Justice agenda, since a certain portion of Superior Court clients come from disadvantaged populations that have difficulty physically accessing the Clerk's Office on even a single occasion. When a customer comes in and makes a final payment on their LFO, they expect to leave with an accounting printout showing the balance is paid in full. Due to the delay in posting payments, an accounting history cannot be provided until the following business day. Turning these individuals away and/or asking them to call or return on the following business day for updated information may not be realistic from the point of view of ensuring equal public access to DJA services. Considering that a portion of DJA customers are jail and prison inmates, DJA's inability to provide real time data is particularly disparate. These individuals also call DJA to inquire about LFO payments and distributions, and there can be significant ramifications for their court cases. Nevertheless, DJA still cannot provide accurate data until the following business day; or if an inquiry is made on a Friday, the requestor must wait until the following Monday.

DJA's industry research shows that a COTS solution will deliver real time reporting capability. This translates to questions associated with case status or LFO payments being answered in real time with the most accurate information. (Although a new CMS also brings with it the potential for accessing critical data online, DJA still must answer in-person and telephone questions from case parties timely, since some disadvantaged individuals do not have access to a computer. Any public facing web data access points would also show real time data, however.)

Benefit C, OPPORTUNITY FOR PUBLIC CONVENIENCE:
DJA has recently completed industry research and observed analogous case management systems installed in other Superior Court Clerk Offices around the country. It is clear that COTS CMS solutions can facilitate an intuitive public web interface and convenient access to court documents and data for the general public, the judiciary and the legal community. The potential to filter data by various fields such as date, party name or case positions DJA to assist both the public and the legal community in accessing critical case management data timely.

Industry research also shows the potential to expand the way DJA receives payments (i.e. credit cards) and offer multiple options for providing receipts (e.g., printed or emailed).

The legacy SCOMIS system that is owned and operated by the Administrative Office of the Courts (AOC) in Olympia, WA is also built on a decades-old platform. The public interface is counter-intuitive and quite backward against the public's expectation for current technology: For example, users must tab between fields and cannot use a mouse; 2) the entire user interface is code dependent and, without in-depth knowledge of system commands and consistent practice, public users, as well as the legal community and the judiciary find SCOMIS nearly impossible to navigate. Consequently, SCOMIS remains a highly inefficient tool for case research. With the data owned and managed by the AOC in Olympia, DJA has been unable to affect service levels associated with public access to data. A modern Case Management System designed to accommodate County business needs will position DJA to design public-facing web interfaces and present case information in a straightforward and helpful manner.

Benefit D, EFFICIENCY FOR LFO RECIPIENTS IN CHECK PROCESSING:
LFO recipients often receive multiple payments from multiple payers on a given day. However, the current AOC financials associated to SCOMIS only permit a single check for each individual LFO payer, meaning that DJA often issues multiple checks to a single LFO recipient on a given day. For example, the State Department of Social and Health Services (DSHS) can receive anywhere between 100 and 150 checks from DJA on a given day; banks and insurance companies can receive as many as 20 checks on a specific day. A modern finance and accounting module (typically designed into COTS Case Management Systems) will benefit Legal Financial Obligation (LFO) recipients directly by allowing DJA to cut a single check covering payments from multiple LFO payers. This will simplify banking operations for LFO recipients.

BENEFIT E, EFFICIENCY IN GOVERNMENT THROUGH DATA SHARING:
As background, DJA is chairing the Criminal Justice IT Efficiencies Work Group, which is comprised of technology leaders from KCIT and King County CJ agencies. This work group is facilitating opportunities for data sharing and efficiency through applied technology. The SRP solution will integrate with a King County Law, Safety & Justice Integration Solution Center (which will function as a central data exchange for the PAO, DAJD, KCSO and DPD). This will support single instance data entry in all agencies, and allow each agency to access critical data in real time in order to maximize operational effectiveness.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
Benefit A, BUSINESS CONTINUITY:
A successful project results in DJA operations continuing without interruption once SCOMIS is decommissioned. Additional business continuity results include continued access of court documents over the internet and via electronic viewing systems in courtrooms and in DJA customer service centers.

Benefit B, EQUITY AND SOCIAL JUSTICE - TIMELY PUBLIC ACCESS TO DATA:
DJA can measure the number of customer requests for financial data that cannot be immediately answered in a given time period. A successful project will result in this number being either zero or a *de minimis* amount. Because our customer base is disproportionate based on who is using the court system, increasing customer service will benefit this population.

Benefit C, OPPORTUNITY FOR PUBLIC CONVENIENCE:
The public benefit for DJA's new Case Management System can also be measured through the commentary of the public and the judiciary. A successful project will create a comment record indicating that customers can conduct case and document research through straightforward web-based interfaces. Such commentary can be secured through surveys and focus groups.

Benefit D, EFFICIENCY FOR LFO RECIPIENTS IN CHECK PROCESSING:
DJA can monitor the number of checks issued to individual LFO recipients on any given day. A successful project will show a daily average of 1 check per LFO recipient.

BENEFIT E, EFFICIENCY IN GOVERNMENT THROUGH DATA SHARING:
Once the KC LSJ central data exchange is established, it will be straightforward to count the number of data elements secured by and transferred from each participating agency. It will also be possible to measure reductions in case processing time for each agency, given their access to real time data.

3. ***What is the current baseline for this measure?***
Benefit A, BUSINESS CONTINUITY:
The SCOMIS system is currently 99.95% available and fully utilized by DJA for case processing and financial management.

Benefit B, EQUITY AND SOCIAL JUSTICE - TIMELY PUBLIC ACCESS TO DATA:
Currently, customers cannot secure verifying data associated with court-ordered financial payments on the same day that a payment is processed by the Clerk. Once a payment is processed, DJA cannot provide *verification* of payment made and/or distributed until the next business day. This is particularly troubling if the request is made on a Friday.

As with item A above, DJA cannot provide verification of payments made and distributed until the next business day. With respect to Equity and Social Justice, this service deficit forces disadvantaged populations to either access a computer or make a return trip to DJA offices on the following business day, neither of which may be realistic. For incarcerated customers, family members often call or visit DJA offices in order to secure the information once it is subsequently available.

Benefit C, OPPORTUNITY FOR PUBLIC CONVENIENCE:
The state SCOMIS system is difficult to use and, from a case research point of view, nearly prohibitive. Considerable time is reportedly wasted by customers trying to navigate the displayed data. Because DJA does not own or manage AOC's case data, the CMS case data that DJA does offer online is fairly limited. It is currently impossible to filter case data online by document type, case type, attorney name or hearing date.

Benefit D, EFFICIENCY FOR LFO RECIPIENTS IN CHECK PROCESSING:
As noted above, the State Department of Social and Health Services (DSHS) can receive anywhere between 100 and 150 checks from DJA on a given day. Banks and insurance companies can receive as many as 20 on a specific day.

BENEFIT E, EFFICIENCY IN GOVERNMENT THROUGH DATA SHARING:
Currently, there is no method for King County LSJ agencies to share data in real time.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
Benefit A, BUSINESS CONTINUITY:
The target for this measure is no disruption and/or reduction to DJA service levels once SCOMIS is decommissioned.

Benefit B, EQUITY AND SOCIAL JUSTICE - TIMELY PUBLIC ACCESS TO DATA:
The target for this measure is zero lag time between data entry and data availability. Any finance questions that cannot be answered in real time will be de minimized and highly specialized circumstances.

Benefit C, OPPORTUNITY FOR PUBLIC CONVENIENCE:
The targets for this benefit include: 1) reductions over time in the number of customers who visit DJA offices for services for information that can be secured online; 2) feedback from customer surveys and/or focus groups designed to assess the satisfaction of the public and the judiciary with the new CMS system - the target would be an average rating of either "satisfied" or "very satisfied"; and 3) offering robust online case management research capability serving both the public and the judiciary.

Benefit D, EFFICIENCY FOR LFO RECIPIENTS IN CHECK PROCESSING:
The target for this benefit will be an average of one (1) check issued to each LFO recipient on a given day.

BENEFIT E, EFFICIENCY IN GOVERNMENT THROUGH DATA SHARING:
The targets for this benefit will vary depending on agency. However, a high level target applying to all participating agencies is establishment of a dependable data stream allowing each agency to facilitate multiple LEAN process improvements.

5. *When is the benefit likely to be achieved?*
   Upon SRP go-live.

   ==Updated 1/18/2019 - SRP go-live date was 11/13/2018, benefits will be reported in third quarter 2019.==

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Multiple COTS products exist that offer DJA the opportunity to innovate through efficiency and customer service delivery. For example, many systems on the market allow data included in court minutes created within the system to automatically populate throughout the system. This means that a future court date included in the clerk's minutes can automatically add a calendar entry in the case management system and would include the docket entry for the clerk minutes. Additionally, the SCOMIS system has multiple screens that contain certain data fields and it is necessary to go to various screens to enter data. Data entry should be easier and more intuitive in a modern system. Finally, many case and document solutions facilitate varying degrees of automated data intake from scan stations, which would allow DJA to index court documents to the court file sooner, making those documents available to the court and the public sooner as well.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Benefits can be measured by reviewing data elements in the new system and determining whether any require double data entry. That information can be compared to the data entry currently required. Ease of data entry can also be determined by comparing the steps currently necessary to

input data to the steps required by a new system. DJA will also be able to measure the average time between document intake and availability for viewing in the court file.

3. *What is the current baseline for this measure?*
   DJA currently has performance measures in place to track time required for data entry as well as the average time between document intake and availability for viewing in the court file. Time required for data entry depends on the type of case, type of document, and type of processing required by staff for a particular document. The baseline measure is available for the various types of documents filed.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   The target for this measure is data entry that is 2-4% more efficient than the current system supports. In addition to more efficient data entry there should also be increased accuracy and less time spent due to the elimination for the need to duplicate data. Overall, DJA staff should have more time to spend on other value added work, such as enhanced customer service.

5. *When is the benefit likely to be achieved?*
   The quicker data entry and document processing will likely be achieved within 6 months of go-live. Staff are currently very fast and accurate and there will be a learning curve while they all transition to a new system that operates quite differently than the SCOMIS system.

   Updated 1/18/2019: Benefit measurement planned for 3rd quarter 2019.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

   SRP Phase I, Case and Financial Management: RCW 2.32.050 designates County Clerks as the official record keeper for the Superior Court's case records. The Department of Judicial Administration (DJA), which is the King County Clerk's Office, requires an electronic system to fulfill this role: specifically, to track and index court records and facilitate public and government access to those records. For more than 30 years, DJA has fulfilled its record-keeping responsibilities with the Superior Court Management Information System (SCOMIS), a statewide mainframe system operated and maintained by the Washington State Administrative Office of the Courts (AOC) in Olympia. SCOMIS serves as a Superior Court case management index for the entire state. It is used by the court, the public, the Bar, and Law, Safety and Justice (LSJ) agencies seeking information pertaining to specific Superior Court cases. DJA staff enter data directly into SCOMIS that is used as the official index and docket, and also for limited case management purposes. As further background, SCOMIS

does not maintain actual case documents; those remain stored within individual County Clerk Offices. Rather, SCOMIS stores *critical data associated to each case*.

County Clerks in the state of Washington enter and maintain data in SCOMIS and also in various systems within each Clerk's Office. SCOMIS and multiple DJA systems' data are kept in synch via highly outdated screen scrape methodology. SCOMIS is engineered from extremely old and inflexible mainframe technology, the functional limitations of which have forced the establishment of multiple IT systems in order facilitate performance of DJA's record-keeping and case management responsibilities (DJA systems for case scheduling and exhibit management are two examples). As the largest Clerk's Office in the state of Washington, DJA has long been limited by the AOC SCOMIS system, which was designed and constructed in the late 1970's.

As further background, AOC is currently managing the State Superior Court Case Management System (SC-CMS) Project, which seeks to replace SCOMIS within the next 3-4 years. King County has recently made the decision to *not* participate in the statewide project due to multiple characteristics of the Project and AOC's chosen solution that are incongruent with mission-critical business practices and/or strategic goals of DJA and Superior Court. DJA places high value on its ability to respond quickly to changing operating requirements typically stemming from local rules, urgent changes to practice, or increasing customer demands. AOC's chosen solution will be designed as a functional common denominator among Clerks Offices in Washington; and to some extent, with functionality that is even less desirable than the legacy SCOMIS solution. DJA has long needed an updated Case Management System (CMS) to: 1) capitalize on modern computing functionality that allows for data exchange and more efficient business practices; 2) improve the customer service delivered to the public and the court; and 3) update and consolidate DJA's technology platform and position the department for service excellence well into the future.

King County's decision to separate from AOC's SC-CMS Project was made extremely carefully and with close coordination with the Executive's Office, Budget Office, Superior Court Administration, Superior Court leadership, and the County Council. Nevertheless, DJA intends to provide data to facilitate a statewide view of official case records.

In addition to constructing its own case management system, DJA must also develop a unique system for data exchange between a County-specific system and the AOC solution in order to feed King County's case data to the statewide repository.

Finally, as part of its project to replace SCOMIS, AOC will also retire financial management systems that are used by all County Clerks in the state. (These financial systems are comprised of the Judicial Receipting System (JRS) and the Judicial Accounting Sub System (JASS).) Accordingly, DJA must replace the functionality provided by JRS and JASS. DJA will require a finance management system that is suitable for a large, high-volume Clerk's Office before SCOMIS and JRS/JASS are decommissioned. Without procurement of a financial module, DJA will be left without the capacity to fulfill its financial obligations to the court and public.

SRP Phase 2, Document Management: DJA maintains, manages and distributes Superior Court records through a central application known as Core ECR or "Core." Core ECR provides work flow, routing, retention and viewing of these electronic documents.

The existing Core ECR system was originally developed in 1999 and is at end-of-life. Although the life expectancy of IT systems can vary depending upon system-specific characteristics, a 10 year

production lifespan without major redevelopment/replacement is typically the maximum (1). Core ECR has far exceeded this rule of thumb and now poses a significant risk to Clerk and Superior Court operations because its outdated technology platform is extremely difficult to maintain. DJA has nearly completed a maintenance effort to stabilize the main repository. Once this is complete, a significant risk of catastrophic failure will be eliminated. However, the associated workflow layer is still extremely outdated and inefficient.

Update – 1/27/16:
The maintenance effort to stabilize the main ECR repository was completed in September 2015.

2. If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.

SRP Phase I, Case and Financial Management: Without a new CMS system and an accompanying Finance and Accounting module to replace the functionality that will be lost when AOC decommissions SCOMIS, it is assured that DJA will be unable to perform the vast majority of its mission critical business processes. Such a scenario has a profoundly negative effect on both DJA and Superior Court operations.

SRP Phase 2, Document Management: Core ECR has previously failed catastrophically on two separate occasions (once in 2005 and again in 2008), leaving DJA to operate manually for long periods of time. DJA consequently made multiple changes to its technology environment in order to bring Core back on line and to increase its stability. These failures brought tremendous stress and inconvenience to the Clerk's Office, the court, and a broad customer base. Avoiding a much more catastrophic scenario in the future is exactly why DJA is currently working to stabilize Core ECR by replacing the document repository layer. However, the outdated and inefficient workflow layer still highly outdated.

Update – 1/27/16:
The maintenance effort to stabilize Core ECR by replacing the document repository layer was completed in September 2015.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual

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[1] Ten (10) years is an industry-accepted rule of thumb for the lifespan of technology systems: Commercial vendors tend to issue software updates/upgrades every couple of years and typically engineer software with backward compatibility with underlying platforms for 2 or 3 versions. This is true of IT systems in general as well as systems specific to clerk operations.

purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing time annual savings, and % of purchases receiving prompt payment discounts*	*• 10 days processing time* *• 10 percent of purchases are receiving discount* *• Savings of $100,000*	*• 1 day processing time* *• 30 percent of purchases are receiving prompt payment discounts* *• $400,000 savings*	*• 2 day processing time* *• 20 percent of purchases are receiving prompt payment discounts* *• $200,000 savings*

2019 BAP Report: This is an ongoing project. Go-live occurred 11/13/2018, most go-live support will complete 2/28/2019 and benefits will be measured third quarter 2019.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.

For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Local Services, Permitting Division
Project Title	Permit Integration
Project Number	1028784

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Warren Cheney, DLS~~PER~~ Permitting, Chief Financial Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Warren Cheney	DLS~~PER~~ Permitting, Chief Financial Officer	Operational oversight and management

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2013 annual report	2/06/2014	John Backman	New, initial draft	2 hours
2013 annual report	2/10/2014	John Backman	Review and comment by the PI Management Committee	0.5 hour
2013 annual report	2/11/2014	John Backman		3 hours
2013 annual report	3/10/2014	John Backman	Response to comments	1 hour
2013 annual report	3/24/2014	John Backman	Response to comments	1 hour
2014 annual report	3/23/2015	John Backman	Update	2 hour
2014 annual report	6/11/2015	John Backman	Revisions	0.5 hour
2014 annual report	7/06/2015	Warren Cheney	Revisions	2.0 hours
2014 annual report	7/09/2015	Warren Cheney	Revisions	0.5 hour
2014 annual report	7/24/2015	Warren Cheney	Revisions	1.0 hour
2015 annual report	2/24/2016	Warren Cheney	No Change/no update	5 minutes
2015 annual report	3/28/2016	Warren Cheney	Revisions	1.0 hour
2015 annual report	6/20/2016	Warren Cheney	Revisions	0.5 hour
2016 annual report	12/30/2016	Warren Cheney	Update	0.5 hour
2017 annual report	02/05/2018	Warren Cheney	Update	0.5 hour
2019 BAP report	02/06/2019	Warren Cheney	Update	0.5 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   The Permit Integration (PI) Project is now closed. It involved the replacement of several legacy permitting systems with a vendor-hosted, web-enabled system. In addition to replacing the core permitting functions, the new system has provided new functionality and capabilities, including, but not limited:
   - Expanded services for licensing, Right-of-Way and special use permits;
   - Direct integration with the County GIS data;
   - Wireless field reporting for inspections;
   - Public online access to permit status;
   - Online and IVR inspection scheduling; and
   - Online application, payment and issuance of residential, HVAC retrofit installation permits.

   Building on the new system, DPER has undertaken a broad array of process changes to improve customer services. Finally the new permit platform makes it possible for DPER to expand online services through MyBuildingPermit.com and integrate with the County's new electronic payment provider.

   The IT Project Review Board has previously approved the PI Project. More detailed description of the Project, its expected benefits, and likely achievement timeframe may be found in the proviso report referenced by Motion 2015-0242.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The usefulness of the on-line service channel to customers will be measured by *customer satisfaction survey* as the services are implemented. Progress to date implementing on-line services will be measured by:
   1) % of all applications submitted on-line;
   2) % of all permit fee revenue paid on-line; and
   3) % of all permit inspections scheduled on-line.

3. *What is the current baseline for this measure?*
   As of July 27, 2015, the baseline measures are as follows:
   1) Applications submitted on-line = 0%
   2) Permit fee revenue paid on-line = 0%
   3) Permit inspections scheduled on-line = 32%
   4) Customers satisfied with aforementioned services: The most recent customer satisfaction survey conducted by DPER in 2011 did not address demand for or satisfaction with on-line services which DPER had not yet made available at that time. No directly relevant baseline data exist regarding customer demand or satisfaction for on-line permitting services by King County.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   Targets are to achieve utilization rates and satisfaction levels comparable to those obtained by other jurisdictions using MyBuildingPermit.com, which as of 2015-Q1 and aggregated for all jurisdictions using MBP were as follows:
   1) Eligible applications submitted on-line via MBP: 61%
   2) Permit fee revenue paid on-line via MBP: 15%
   3) Permit inspections scheduled on-line via MBP: 57%

5. *When is the benefit likely to be achieved?*
   Updated Feb 2018: ~~After one year of preparation beginning January 2017,~~ DPER began vending basic home permits via MBP in December 2017. In 2018, ten more permit types were made available on-line via MBP. By 12/31/~~2018~~2020, all permit types should be available on-line. ~~within one year of joining MBP in January 2017, the following benefits are expected:~~
   1) ~~Eligible applications submitted on-line via MBP: 61%~~
   2) ~~Permit fee revenue paid on-line via MBP: 15%~~
   3) ~~Permit inspections scheduled on-line via MBP: 5~~7~~%~~7%

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications

such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   A single, vendor cloud solution replaced at least five legacy systems (Permits Plus, PRMS, TRS, Informix-based finance/billing system, and BINS) some of which had reached the end of life, e.g. Permits Plus, which is no longer vendor-supported, and the DDES-built, Informix-based finance/billing system. The life-cycle for the new web-enabled solution is expected to be 2020 or longer.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update for the 2019 Report: While the Permitting Integration project is completed, the external benefits accruing to permitting customers have not yet been fully obtained. As described in Section 6, the principal customer benefit of on-line permit application via MyBuildingPermit.com should be realized for most permit types by 20182020.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DOT/Roads
Project Title	Roads Obsolete IT System Replacement
Project Number	1134094
Project Timeframe	2019-2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Rick Brater, Roads Division Director (updated 1/14/19)

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Mike Crippen	Sr Business Analyst/Roads	Subject Matter Expert
Ruth Harvey	SBOS Section Manager/Roads	Stakeholder
Mark Foote	Finance Manager/Roads	Budget and Oversight

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Budget Project Submittal	5/24/18	Mike Crippen	New, initial draft	3 hours
2019-20 Budget Project Submittal	6/29/18	Mike Crippen	Edits for submittal	1 hour
2019-20 Budget Project Submittal	7/23/18	Ruth Harvey/Mike Crippen	PSB and KCIT request for changes	2 hours (1 hour each)
2019-20 Budget Project Submittal	7/24/18	Ruth Harvey/Mike Crippen	PSB and KCIT request for changes	3 hours (1.5 hours each)
2019-20 Budget Project Submittal	7/25/18	Mike Crippen	PSB and KCIT request for changes	2 hours
2019 BAP Report	1/14/19	Mike Crippen	Reflect new Roads Division Director Rick Brater	5 minutes

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition

to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The primary project benefit is reducing risk of system failure/business disruption by replacing obsolete technology. Additional secondary benefits of modernizing these applications include the following:
   A. Improved services due to enhanced functionality and usability for planning, budgeting, performance monitoring, engineering, and maintenance activities (CIP database);
   B. Streamlined and integrated systems that deliver operational efficiencies by reducing redundant processing and labor intensive work and rework and allowing users to perform other, more critical work (CIP database, Bizdocs, Scales database);
   C. Greater compatibility with other Roads and county software and systems (all proposed systems);
   D. Increased efficiency in complying with regulatory mandates (Scales database, Cultural Resources database);
   E. Improved ability to leverage systems and data for more informed analysis, reporting and decision making (CIP database, Cultural Resources database, Scales database).

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Surveys, qualitative analysis. (see table below)

3. *What is the current baseline for this measure?*
   See table below

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   See table below

5. *When is the benefit likely to be achieved?*
   See table below

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved

Improve customer satisfaction with systems	Average internal customer satisfaction with each system rated on a scale from 1 to 5	2.5	4 or above	12/31/2020
Minimize redundant processes and labor intensive work	Qualitative assessment of extraneous work performed	High	Low	12/31/2020
Systems are compatible with other Roads and county systems as defined in the alternatives analysis	Percent compatibility with systems identified in the alternatives analysis	50-75%	100%	12/31/2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

   The primary benefit of this project is reducing risk of system failure/business disruption and enhancing service levels by replacing obsolete technology. Roads has five obsolete systems currently in need of replacement. These systems, their ages, and critical business functions are described below.

   CIP database (over 20 years old) – Serves as the central data repository for managing the Roads 6-year capital program, including tracking of scope, schedule, budget, and other project information. Major functions of the CIP Database system are: 1) provides a tool for development of capital project budget proposals, 2) serves as system of record and tool for project managers to track capital projects, and 3) produces capital program reports to facilitate transparency of work/spending progress and support data driven decision making. The system supports the development of the biennial budget submission and quarterly performance reports. Also supports annual required reporting at the state level to the County Road Administration Board. The CIP Database's data and functions intersect/interact with other systems including PSB's PIC Database, the EBT/Oracle financial database, and other Roads applications.

   Cultural Resources database (over 15 years old) - This research tool supports meeting of state and federal regulatory requirements for protection of archaeological and historic sites. It is used by county staff at Roads and other agencies to screen ground-disturbing projects against protected cultural resources. The database is used by or on behalf of a variety of King County agencies in addition to Roads, including the Parks and Recreation Division, Water and Land Resource Division, and Metro Transit. King County spent hundreds of thousands of dollars in federal grant money to develop the database content and companion GIS. The database allows for quick access to what was previously decentralized and difficult to access historical information and helps to prevent inadvertent impacts to archaeological/historic sites, including native graves.

Map Vault/Biz docs (Over 15 years old) – This system allows Roads to provide legally mandated access to thousands of maps and records via a web portal used by property owners, developers, utility companies, other county agencies, and Roads staff. These online resources have replaced the majority of the need for customers to travel to look at physical materials, providing both convenience to internal and external customers, and reducing vehicle trips that contribute to greenhouse gas emissions.

Scales database (Over 15 years old) – The system serves as a means to record transactions from three stormwater decant facilities that collect materials generated from the cleaning of stormwater drainage systems. The system is open to King County agencies, other public agencies, and private companies. The system is needed to track surface water runoff to a point source in order to comply with regulation with the Clean Water Act (CWA) and National Pollutant Discharge Elimination System (NPDES) Permit program. Usage transactions are collected through the system, packaged, and uploaded to Oracle EBS monthly for revenue billing.

All these systems are well past end of lifecycle and built on old technology no longer supported by KCIT, making them difficult and expensive to support and increasing business risk. Further, they are not able to be integrated with other Roads or county systems, cannot leverage geospatial capabilities, and lack updated functionality needed by the business. The state of these applications results in decreased productivity and efficiency, requires manual processes, and causes staff to spend time detecting and correcting errors. There is also an ongoing risk of system failure and loss of business continuity.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

These five legacy systems were identified as highest priority and most urgent for replacement. They support critical business functions as described above, but are at, or well beyond, end of lifecycle. They are based on outdated platforms no longer support by KCIT (such as Access and Cold Fusion). In many cases, they were not developed by IT professionals, rather were built by former agency staff decades ago in an ad hoc manner and added to over time without adequate documentation. They have become increasingly difficult to use, require constant manual workarounds and corrections, are hard for KCIT to maintain (institutional knowledge to support is fading as legacy technology ages), and are at continual risk of temporary or permanent failure. Without timely replacement, they will ultimately become unusable for the purpose they were designed for, which from a business perspective constitutes failure just as much as a system crash or other acute event.

Several of the systems are already at, or past, the brink of failure, having lost the ability to reliably perform some of their original key functions. Failure can come from many sources, including:

- Key system functions become unusable, impeding the ability of the system to perform the job it was designed for.
- Hardware that fails – causing recovery from a backup and potential need to re-create the same hardware and build (very difficult and expensive to do, generally unsupported by hardware vendors);
- Key software (e.g., operating system, database software) becoming unsupported and thus locked off from network access due to security issues;
- Updates to other systems that break integration points , isolating these systems;
- Inability to support the technology due to a lack of available skills. .

The CIP Database is one -- approximately one-third of the original functionality of the system is no longer usable or reliable due to changes in other county systems and lack of institutional knowledge necessary to repair or sustain the system. For example, functionality such as the full suite of original internal management reports are no longer available.

The Map Vault and Biz docs are also at the brink of failing. Roads has experienced frequent episodes of system inoperability in addition to the inability to support the technology. The system was developed in-house by an engineer who is no longer with Roads. When the employee left, the system knowledge went with him. Due to the lack of skill availability within KCIT to support Java NetBeans technology which the system is built on causing Roads to reach out to the former employee for technical support on multiple occasions. These updates were necessary due to changes in operating systems and updates to Microsoft Office. The gap in support has resulted in the system being down for months at a time and attendant work being backlogged.

The Cultural Resource Database and Scales Database are not yet failing, but it is unclear how much longer KCIT will be able to keep these systems operable and fully functional since they are built on older technologies (Microsoft Access) that KCIT no longer supports.

3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Compliance with current KCIT technical standards provides reliable and sustainable systems (all proposed systems)	% of standards complied with	Poor/no compliance	100% compliant	By 12/31/2020
Systems deliver full intended business capability (all proposed systems)	# of work arounds and manual processes needed to mitigate system deficiencies	Dozens	0	By 12/31/2020
Minimize system downtime during business hours (Bizdocs)	% of time system is up	77%	95%	By 12/31/2020

CATEGORY #4: **Reduced cost to produce service (external or internal) or cost avoidance**
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: *Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.*

Example: *Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

2019 BAP Report: This is a new project in the 2019-2020 budget. There are no changes to the benefits.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

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4. To ensure that benefits are achieved

King County Department/ Agency Name	DNRP Parks and Recreation Division
Project Title	Parks Asset Management System
Project Number	1124055
Project Timeframe	2017 to 2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Kevin Brown, Parks Division Director, is the Business Owner for this project.

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Lindsey Miller	Parks Capital Projects	Business Project Manager (Primary)
Jason Rich	Parks Capital Projects	Business Project Manager (Secondary)
Frank Overton	Parks Capital Projects	Business Supervising Manager
Bing Subelbia	Parks Operations	Business Project Program Manager Operations
Kathy Waymire	Parks Operations	Business Administrator Operations
Patrice Frank	Information Technology	IT Service Delivery Manager
Nirmala Kumar	Information Technology	IT Project Manager
Jim Frohoff	Information Technology	IT Systems Architect
Doug Henderson	Information Technology	IT Services Manager
Yuko Caras	Information Technology	GIS Specialist
Greg Stought	Information Technology	GIS Data Development Supervisor
Matt Miner	Lucity Software	Lucity Lead Implementer/Project Manager

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
***Example:** 2017-18 3rd Omnibus budget process*	*07/01/13*	*Jack Smith*	*New, initial draft*	*2 hours*
***Example:** 2019-20 Budget Process*	*11/01/13*	*Jack Smith*	*Changed the metrics we will measure*	*2 hours*
2019-20 Budget Process	9/10/18	Lindsey Miller	New, initial draft to comply with document requirements	
2019 First Omnibus	2/1/19	Lindsey Miller	Updated dates for Phase 1.	30 mins

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Implementing this project will allow Parks to accurately identify and update the location and condition of each asset it owns, and will make that information available to all Parks staff, especially Operational staff that manage the repairs and assess the replacement needs of these assets. It will also enable Parks to associate assets with Work Orders so that, down the road, life cycle costs for maintaining an asset will be available. In addition, this investment will allow Parks to track inspection data for assets. Understanding current asset conditions and replacement values is required to make meaningful financial projections for maintaining a consistent level of service throughout the system. Currently generating a list of parks assets is a manual process with asset data spread amongst multiple groups, systems, and files. In addition, actual life cycle costs for most assets can only be estimated, and this is a time consuming and manual exercise.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   a. After Phase 1 data collection and through the end of Phase 3, Parks will measure how many assets are recorded in Lucity. After Phase 1, the goal is to have all current Park sites in the system as a parent asset with the existing known Parks child assets attached to these parks. After Phase 3, the goal is to have new and updated child asset data collected and in Lucity for all Parks sites. Parks does not know many total assets this will amount to yet, but will consider the benefit

achieved if all Park sites have asset data. This data will be available to all Parks staff and will make it easier and faster to locate and quantify Parks assets.

b. After Phase 1, Parks will begin measuring the number of maintenance and repair related Work Orders in Lucity tied to specific assets. By the end of Phase 2, the goal will be to have all maintenance and repair related Work Orders tied to an asset. This will streamline record keeping because of the tools that come with the asset management module. Note that administrative Work Orders will still not be tied to assets.

c. After Phase 3, Parks will begin measuring the number of mobile devices being used to access Work Order and asset information from the field. Access to Work Order and asset information in the field allows for more efficient and informed decisions.

d. Within 1 year of Phase 3 completion, Parks will measure the % of Work Orders addressed within 14 days. With increased access to asset and Work Order information in the field, it is expected that a higher percentage of Work Orders can be addressed within 14 days. Faster completion of work orders will result in higher quality assets – such as playgrounds or facilities – for the public to enjoy.

3. ***What is the current baseline for this measure?***
    a. Prior to project start, 242 Park sites (parent assets) and approximately 5,000 child assets were available in the King County GIS Library. No other asset data was in a format where it could be easily accessed or tallied by all Parks staff.
    b. Work Orders are currently tied to site locations, but zero Work Orders are tied to assets.
    c. Parks Operations currently have zero access to work order or asset data in the field. This data is only available in the main office at the start or end of their days.
    d. In 2018, to-date, approximately 41% of Work Orders are addressed within 14 days.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
    a. By the end of Phase 1 (~~2018~~Q2 2019) the target will be to have all 242 Parks sites in Lucity as parent assets with the child asset data from the existing GIS system (approximately 5,000 records) available in Lucity. By the end of Phase 3 (2020) the target will be to have new and updated child asset data for all 242 Park sites.

    b. By the end of Phase 2 (2019), all maintenance and repair related Work Orders will have an attached parent or child asset record in Lucity (i.e., Work Orders associated with administrative tasks will not be counted).

    c. By the end of Phase 3 (2020), each Parks Maintenance District (currently 12 districts) will have at least one mobile device at its home shop that is being used to access Lucity work order and asset data in the field.

    d. Within a year of Phase 3 completion (2021), the goal is for 50% of Work Orders to be addressed within 14 days.

5. ***When is the benefit likely to be achieved?***
    The full benefit would be achieved by the end of 2021

6. Summary Table for Benefit Category #2:

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	*# sites inspected per day per inspector*	*6 sites/day per inspector*	*10 sites/day per inspector*	*By 12/31/2018*
Increased access to data to make decision making more efficient for all Parks staff	# of Parks sites and child assets available in Lucity	0 Parks sites and child assets	Phase 1: 242 Park sites and 5,000 child assets Phase 3: New and updated child assets for all 242 Park sites	~~By 12/31/2018~~ By 5/1/2019 By 12/31/2020
Increased information about asset maintenance history and life cycle costs	# Non-administrative Work Orders with an attached asset record	0 Work Orders in Lucity	All non-administrative Work Orders	By 12/31/2019
Access to asset and work order data by field staff increasing efficiency	# of Parks Districts with mobile devices that can access Lucity in the field	0 Parks Districts	12 Parks Districts	By 12/31/2020
Access to asset and work order data by field staff increasing efficiency and resulting in better maintained assets for the public to enjoy	% of Work Orders addressed within 14 days	41%	50%	By 12/31/2021

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

3. Summary Table for Benefit Category #3:

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update for the Spring 2019 Report: The completion date for Phase 1 of this project has been pushed to May 2019. Therefore, the benefit associated with Phase 1 (increased access to data to make decision making more efficient for all Parks staff) was not achieved in 2018. However, other than the schedule delay, the project is still expected to produce the expected benefits and will be able to report on that in 2019.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	DNRP, Parks and Recreation Division
Project Title	Parks Facility Scheduling System Replacement
Project Number	1124159

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Katy Terry, Assistant Director of the Parks and Recreation Division

Section 3. Who is involved in developing the Benefit Achievement Plan?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Leslie Arai	KCIT	Project Manager
Gary Hocking	IT SD Manager	Project Advisor
Doug Hodson	Finance Manager	Project Advisor
Jennifer Lehman	Business Finance Officer	Project Team Member
Macile Assink	Business Finance Officer	Project Team Member
Helen Wolski	Recreation Coordinator	Project Team Member
Charlie McAvoy	Contract Specialist	Project Representative

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2015-16 Budget Process	11/4/14	Jennifer Lehman	New, initial draft	
2015 BAP Report	2/23/16	Jennifer Lehman	No changes	
2016 BAP Report	2/15/17	Jennifer Lehman	No changes	
2017 BAP Report	2/27/18	Doug Hodson	2017 Annual Report - BAP update for a completed project.	
Spring 2019 BAP Report	3/1/19	Charles McAvoy	BAP update for a completed project.	

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits:** Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)
☐ **Category #1:** External service benefits: Improving the quality or quantity of services provided to the public
☐ **Category #2:** Internal service benefits: Improving internal operations, including the quality or quantity of internal services
☒ **Category #3:** Maintaining service levels by replacing or upgrading older technology
☐ **Category #4:** Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   By creating a web portal for customers to reserve facilities, register for classes, and pay online, the proposed IT system is anticipated to improve customer experience by providing more options for customers to access parks services.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The division will measure the public satisfaction with the web portal by inserting a short survey at the end of the online reservation process about the customer's experience with booking and paying online. Furthermore, the division will measure the proportion of bookings and payments via the web portal versus traditional methods (in person and over the phone).

3. *What is the current baseline for this measure?*
   Currently, the only way for customers to book and pay for reservations/registrations are over the phone, in person, and mail. Several customers have requested the ability to book and pay online.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   The division strives for a positive reception of the web portal. The target is survey results indicating 75% of users are satisfied with the new system, including ease of navigation and useful information. Furthermore, the division anticipates a material amount of bookings and payments will shift towards the web portal. According to an **American Customer Satisfaction Survey** from January 2014, roughly one-third of all users of federal services interface with agencies most frequently via websites.

5. *When is the benefit likely to be achieved?*
   There is likely to be a transition and education period for Parks' customers to get acquainted with the web portal. The division anticipates to shift the amount of transactions occurring to the web portal by Q3 2018, and to yield survey results indicating 75% of users in favor of the new system by Q1 2019.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   By allowing customers to enter their information directly into the booking and payment system, for example camp sites and picnic shelters, the proposed IT project is expected to free up Parks employees' time for other higher-level duties. In doing so, Parks employees' time can be dedicated to other activities such as timely follow-up to customer questions, coordinating booking of larger events including timely review of required paperwork for the larger events (e.g. insurance documentation), and more frequent bank reconciliation.

   Parks does not anticipate any staff reductions due to this project because some reservations, such as ballfields, weddings, and birthday parties, will continue to be booked via traditional methods.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Parks will roughly measure the resources currently spent on reservations, and describe how that freed-up staff time is used.
   Parks will also measure whether timeliness for other higher-level duties improves. For example:
   - improve the frequency of changing lock combinations at camping facilities from monthly to weekly; and
   - reduce the median follow-up time to customer questions to within the work day.

3. *What is the current baseline for this measure?*
   Currently, Parks has four FTEs spending a significant amount of time dedicated to reservations and bookings (>75%), and another eight FTEs who spend a portion of their time (<50%) on reservations, particularly during the busy, summer season.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   This project is anticipated to shift the number of FTEs currently spending a significant amount of time to reservations and bookings to only a portion of their time (<50%) on reservations.

5. *When is the benefit likely to be achieved?*
   By 2020, Parks anticipates the number of staff spending a significant amount of time dedicated to reservations and bookings to shift to spending only a portion of their time (<50%) on reservations. As the business process surrounding online reservations and bookings is developed, a more thorough timeline will be identified.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   Parks and Recreation Division is currently using an information system from CLASS Software Solutions (now called The Active Network) as its registration and scheduling system, as well as tracking accounts receivable on user fees and entrepreneurial efforts. This application is vital to division operations.

   King County's 200 parks provide venues to meet the increasing recreation demands of our growing population. King County Parks today operates 82 athletic fields available for a variety of team sports and other activities, 29 play areas, 26 picnic shelters, 2 equestrian arenas, regional and back-country trails, a campground and a world-class aquatic center. King County Parks processes over 26,000 bookings, 3,000 user groups, and manages close to $4 million in revenue annually through its current system, CLASS.

   CLASS has been in operation since March 2000. Since that time, the Division underwent a business transition plan, adopted by the King County Council that emphasizes community and corporate partnerships and greatly reduced the division's dependence on King County's general fund. Since 2003, the Division has successfully taken many strategic actions that have generated revenue or created efficiencies, including implementing or increasing user fees and establishing corporate and community partnerships that enhance park amenities and maximize the investment of taxpayers' dollars.

   However, The Active Network is phasing out CLASS Software Solutions. The company has announced that it will no longer support the software system beyond 2017. As a result, the Division seeks a replacement solution to reliably support three business offices (Marymoor Park, King County Aquatic Center, and the Regional Scheduling Office) to do their jobs more effectively and help the public continue to have seamless process to book facilities and classes through King County Parks.

   The Division is seeking a SaaS solution for this system. This type of solution is continually updated by the system vendor. A very long life cycle is anticipated, but cannot really be quantified at this time due to the relatively short period of time the current SaaS vendor model has been in place.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
   The CLASS software system may fail if a replacement system is not fully implemented before 2017, resulting in permanent data loss and significant, manual- and paper-intensive process workarounds.

   Prior to 2017, it is likely the system will experience delays or errors as Active Network begins phasing out support for the system, but still remain functional. To mitigate this risk, the Division is investing in virtual server storage and SQL standard server to ensure CLASS continues to be operational until a

replacement is implemented.

After 2017, it is guaranteed the system will fail without regular support from Active Network.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
   The main benefit of having customers submit reservation requests online has helped free up staff to focus on other bookings that are handled via telephone and email. Admittedly, there are some glitches with the software that Parks staff sometimes experience. PerfectMind is in constant contact with Parks scheduling staff regarding reported support cases in order to alleviate errors and problems as they occur. The investment in this scheduling software has remained a sustained benefit since last year's report.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   Depending on the complexity of the event or booking task being performed, some Parks staff report a reduction in the creation and management of those bookings, while others report an increase in time spent fixing erroneous calculations and system errors.

   The usage of online questionnaires for County customers has helped lighten the burden that would otherwise require customers to hand-write specifics in their booking requests. Measurements for the amount of time spent on certain types of bookings within PerfectMind will help Parks assess and suggest process improvements that can be brought directly to the vendor.

3. *What is the current baseline?*
   Parks has ten FTEs at separate locations that use PerfectMind more than 50% of their time for reservations and bookings. The Regional Scheduling unit continues to bring on one TLT for part of the year to assist with the busier part of the scheduling season. Marymoor schedulers bring on two TLTs for the busier season. The Marymoor Park business unit has experienced a significant increase in the amount of administrative hours spent ensuring accurate booking during the busier months as well as lengthier processes. Users report that some processes have become more time-intensive compared to the previous software for bookings. This increase in task time is generally attributed to

accounting bugs encountered in the last year. Staff has adjusted their internal processes and dedicated certain individuals to certain tasks to account for these added responsibilities.

4. *What is the target for this measure? (How much savings will this project achieve)*
   A combination of balancing usage of PerfectMind and other staff responsibilities will ensure that each booking and reservation gets the attention required for quality service to County customers. It is still hopeful that the time required to perform bookings and reservations is reduced by 50%.

5. *When is the cost reduction likely to be achieved?*
   At this time, Parks is working closely with PerfectMind to correct the accounting issues and bugs in their software. PerfectMind is committed to providing continuous support to help KC Parks; and is in constant contact via email and phone with our local administrators. It is likely that these problems can be fixed and the program's benefit can be achieved by the end of 2020, but it is possible these benefits may not be fully achieved.

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: *This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.*

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing time, annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Spring 2019 BAP Report: Perfect Mind, the replacement facility scheduling program, went live January 2017. Online registration and booking was incrementally rolled out during 2017. More time is still needed to assess the benefit achievement progress. Progress reporting will continue in next year's report.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	DNRP/Solid Waste
Project Title	DNRP Solid Waste Division Transfer Transaction system upgrade (DNRP – SWD – Paradigm Upgrade)
Project Number	1124571

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Eben Sutton, SWD/Finance and Administration Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Ann Berrysmith~~ Retired	SWD/Finance and Administration Manager	Financial Decisions
Alejandra Calderon	SWD/Special Projects Administrator	Agency Contact
Ken Wong	SWD/Accounts Receivable Supervisor	End User
~~Tom Nguyen~~ Left Project in 2015	KCIT/IT System Specialist	Technical Support
~~Gary Hocking~~ Retired	IT SDM / KCIT	BAP edits
Eben Sutton	SWD/Finance and Administration Manager	Project Sponsor
~~Lloyd Jordan~~ Retired	IT PM III	Project Manager
Patrice Frank	IT SDM / KCIT	BAP Data

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	6/4/14	Alejandra Calderon	New, initial draft	2 hours
Project Implementation	2016	Alejandra Calderon	Review only.	.5 hours
2016 Annual Report	2/15/17	Lloyd Jordan	Review only.	1.0 hours
2017 Annual Report	5/23/18	Eben Sutton	Annual report; update benefits achieved in Section 7. Not a final BAP.	8 hours
Spring 2019 BAP Report	1/25/19	Eben Sutton	Final BAP. Updated benefits grid in §6 to new template format; §7 benefits achieved.	2 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underline primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☒
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒

Category #3: Maintaining service levels by replacing or upgrading older technology	☒ ☐
Category #4: Reduced cost or cost avoidance to produce services	☐ ☐

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Completion of this project would improve the overall reliability of the system. Less down time will reduce delays at the scale houses. Although we currently cannot measure wait times both the customers and staff will benefit from system reliability and less unplanned maintenance. This will also help us reduce staff over time for unscheduled maintenance.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   We will measure the support staff call out / call back support hours.

3. *What is the current baseline for this measure?*
   Our call out / call back hours for unscheduled support of the system are highly variable. We are currently averaging 6 hours per week of call out / call back time.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   Our target is to reduce call out / call back support hours to an average of 2 hours per week.

5. *When is the benefit likely to be achieved?*
   We will be able to measure the benefits about six months after implementation is final (Dec 2016).

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Completion of this project will automate the preparation of the transaction file uploaded to the Oracle EBS financial system. This is currently a manual process that results in staff overtime.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   We will track any staff overtime related to preparation of the EBS upload.

3. *What is the current baseline for this measure?*

Preparation of the EBS upload file currently results in 4 hours of overtime per week.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   Our target is to completely eliminate this overtime.

5. ***When is the benefit likely to be achieved?***
   Full changeover of all the transfer stations to the new system will take approximately one year. So, we will be able to begin measuring results in mid-2017.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   This project will upgrade the hardware, server operating system, and Paradigm software that make up the Solid Waste Division weigh scale / transaction system. This upgrade is necessary because:
   - The age of the existing server hardware is 7 years old. The average lifecycle of this technology is about 4 years.
   - The age of the current server operating system is 10 years. Microsoft is dropping support for this operating system (Microsoft Windows Server 2003) in July 2015.
   - We are also using an older version of the Paradigm transaction system. Our vendor will be supporting the version we are using until 2018.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   The Windows Server 2003 operating system that is currently used in this system is being retired by Microsoft in July 2015. After that date Microsoft will no longer support this software. The current server hardware is old, and does not support the Microsoft Windows Server 2012 operating system. A system failure is becoming more likely; currently there are isolated failures approximately every 3 months.

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

Final BAP. This project fully achieved all benefits, although a change in staffing within KCIT from an overtime-eligible to a salaried/FLSA exempt staff member supporting the product made measuring one benefit difficult.

Benefit Category 1: Support Call Outs
SWD established a goal of reducing call-out hours from six hours a week (baseline) to two or less hours a week.
2017 Results: KCIT responded to 121 call-outs related to the Paradigm system in 2017, or an average of one every three weeks. These call-outs were of an average duration of 5 minutes per call-out using the new remote support capabilities of the new Paradigm software. There was no week in 2017 where the total support call out hours exceeded the 2 hour a week target.
2018 Results: KCIT reports 94.75 hours spent supporting the application in 2018, for an average of 1.8 hours a week. This benefit has been achieved.

Benefit Category 2: Reduce overtime preparing EBS export files
SWD established a goal to eliminate the overtime cost associated with the preparation of EBS export files from four hours a week to zero. These files are generated daily and keep the Paradigm system synchronized with the county's Oracle eBusiness Suite accounting system.
2017 Results: The task of generating these files was transferred from an employee paid hourly, to an employee paid by salary. Accordingly, while the overtime hours dropped to zero that does not necessarily reflect the new level of effort to prepare the files. However, in general the level of effort to produce these files has diminished.
2018 Results: No change.

Benefit Category 3 (Primary): Modernize the software and hardware platform to improve reliability
SWD was experiencing hardware failures approximately every three months, which degraded our ability to serve our customers. Through proactive hardware replacement, the division sought to reduce hardware failures to zero.
2017 Results: The division's Skykomish drop box facility experienced a server failure in 2017, but this was

the only server failure experienced. Total customer service degradation time was five hours.
2018 Results: KCIT reported no hardware failures in 2018, achieving the targeted measure.

Metric	Baseline	Target	2017 Actual	2018 Actual
Category 1: Hours per week required to support SWD outside of business hours	• **6 hours a week**	• **2 hours a week**	• *0.25 hours a week.* ✔️	• *1.8 hours a week* ✔️
Category 2: Hours per week of overtime spent preparing EBS files	• **4 hours a week**	• **Zero**	• *unable to measure; see comments* ❓	*No overtime incurred (due, in part, to a change in KCIT staff providing the service)*
Category 3 (Primary): Number of server failures	• **4 per year**	• **Zero**	• *1* ❌	• *0* ✔️

IT Project Benefits Achievement Plan (Version 2)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DNRP\Water and Land Resources Division
Project Title	Surface Water Management Billing System Replacement
Project Number	1129702

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Nitin Chadha, Finance & Admin Manager, WLR

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Diane Schneider	BFO IV/WLR	Client Project Manager
Nitin Chadha	Finance & Admin Mgr/WLR	Project Sponsor (updated 3/2018)
Marivic Kokorowski	Senior Business Analyst/KCIT	Business Analyst

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.

3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Example: Conceptual review	7/1/13	Jack Smith	New, initial draft	2 hours
Example: Funding release	11/1/13	Jack Smith	Changed the metrics we will measure	2 hours
Conceptual review	9/21/16	Diane Schneider	Updated description of project benefits	2 hours
2016 annual report – no change BAP for new project started in 2017	2/9/17	Diane Schneider	Review only	30 min
2017 annual report	3/6/18	Diane Schneider	Updated section 7	1 hour
Spring 2019 BAP report	2/6/19	Diane Schneider	Updated section 7, ==active project==	1 hour

Section 6. Description of Project Benefits

Identify the category(-ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait

time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The current process for preparing and calculating SWM fees for all King County unincorporated parcels and parcels of 16 cities (soon to be 17 starting 2017) involves the use of several resources. These are 1) the existing SWM application to calculate most SWM fees, 2) a separate database for identifying discounts that a parcel is eligible for, 3) spreadsheets to calculate fees for some parcel types or cities that the SWM application cannot calculate, 4) KCIT personnel to create complex reports, and 5) Treasury personnel time over-riding SWM fees by uploading spreadsheet calculations because they are more correct than what the SWM application sent to them.

   The new application will eliminate the need for a separate discount database and spreadsheets by building in the functionality needed to accommodate various rate structures, discounts and other variable changes in the future. The new application will also eliminate the need for a separate fee forecasting model. The current billing system cannot accommodate the many discounts available. It is only capable of a one-rate class discount. Discounts are now granted from 10-90%. A separate side discount system calculates the rates, then they are manually entered on a spreadsheet. After the SWM rates from the billing system are transferred to Treasury, the discount spreadsheets need to be uploaded after the rates run, to override the billing system rates. This is done over several days in Treasury and must be balanced to ensure they all were uploaded. As cities change their rate structures, the new billing system must be flexible to incorporate their changes. For instance, when the City of Des Moines changed their billing structure three years ago the billing system could not accommodate it, so it is all calculated using spreadsheets and entered manually. These spreadsheets are sent to Treasury to upload after the fees run, and before the property tax statements are printed because the fees the billing system calculates are incorrect.

   All of these increase the number of tools, resources and time needed to provide accurate SWM fees to Treasury for the annual property tax billing and a heavy dependence on manual processes from three agencies: the SWM program, KCIT and Treasury. The new system will not be dependent on side systems, spreadsheets, or manual entry to accurately bill SWM fees.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   We will no longer have to maintain side systems and spreadsheets, specifically eliminating the following:
   - Database for discounts – the discount information will be contained within the billing system, providing current, accurate fees. Customers will be given accurate information the first time they speak with a customer service person, rather than having to wait for a return call after looking up information in multiple systems.

- Spreadsheets for manually calculating cities – eliminating manual calculations ensures more accurate billings
- Spreadsheet report that combines SWM application and discount data
- SWM forecasting model – forecasting and modeling future SWM rates can be done using real time data, rather than requiring KCIT staff to run iterative scenarios

3. **What is the current baseline for this measure?**
   We currently maintain multiple side systems that require multiple handoffs of information:
   - A discount system where engineers manually enter various discounts.
   - A field in the SWM billing system must be checked to indicate that the parcel has a discount. This is in addition to the discount side system, to alert us to look in the side system for the discount information. It is a duplication of indicating that a discount exists.
   - Spreadsheets are used to override fees that are incorrectly calculated in the SWM billing system. These manual calculations take extra time and create risk of inaccuracy, and create more work in Treasury to upload and balance. Every year, some accounts don't upload and they must start the process the following day
   - Spreadsheets are sent to Treasury with calculations from the discount system to override the SWM billing system. The discount spreadsheets take at least a day to review.
   - A spreadsheet is created to calculate and transmit SWM fees for one contract city with a different billing structure- this process takes several days to complete, including sending the spreadsheet to the City to approve prior to uploading to Treasury.
   - A SWM rate modeling side system to model and forecast SWM fees – this system requires KCIT analyst time to update, check data, and run multiple iterations, which can take weeks of time.

4. **What is the target for this measure? (How much improvement will this project achieve?)**
   To eliminate the need for side systems, spreadsheets and multiple handoffs of information. The new SWM billing system reports will be accurate and will provide correct SWM fee calculations to Treasury with minimal need for overrides in the Treasury system during their critical time validating taxes. Since the major improvement we expect is a significant reduction in risk exposure due to manual calculations and multiple handoffs, it is hard to measure and quantify the improvements.

5. **When is the benefit likely to be achieved?**
   The first billing cycle after project completion. January 2018. The initial benefit of SWM billing and discounts included in the system was completed in time for the 2018 billing in January. The system was ready to go November 2017. The modeling benefit is expected to be achieved sometime in spring of 2020 (updated 2/6/19).

CATEGORY #3: **Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.**

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS)

Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
3. ***What is the current baseline?***
4. ***What is the target for this measure? (How much savings will this project achieve)***
5. ***When is the cost reduction likely to be achieved?***

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional five years. This project is currently functioning at 99.999% up-time and will report annually for the next five years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than

anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

<u>Update for Spring 2019 Report</u>: This is an ongoing project, the initial benefit of having SWM billing discounts included in the system has been achieved, modeling benefits are anticipated in Q2 2020.

Metric/benefit	Indicator	Baseline	Target	Actual result
Eliminate the need for side systems to calculate discounts and SWM fees and eliminate the need for Treasury to override fees charged by current system	Testing the new billing system – attending meetings to validate progress	Spreadsheets to calculate fees and discount side system to calculate discounts	All SWM fees and discounts calculated in the new billing system with no side systems and no need for treasury to override fees	No side systems used to calculate bills. KC Treasury processed 12 overrides for last minute changes rather than over 9,000 over past years.
SWM rate modeling- forecasting SWM rates using real time data		Rate modeling side system- requires KCIT Analyst time to update, check data, run multiple iterations	Rate model within SWM system to run real-time data	1st priority was the billing calculation and successful 2018 billing. Analysts are now looking at the rate model.
2/6/19 This is an ongoing project	Integrated forecast model as part of the billing system		Forecast scenarios with high level of accuracy	This is an active project, there is ongoing work with IT on the rate model.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DNRP Water and Land Resources Division (Stormwater Services Section)
Project Title	Cityworks AMS for WLRD Stormwater Services
Project Number	1131430

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Michael Murphy, Water and Land Resources Deputy Division Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Mark Preszler	Functional Analyst IV/ WLRD SWSS	Data & Analytics Manager
Nick Hetrick	Functional Analyst III/ WLRD SWSS	Data Coordinator/ SWSS Project Lead
Patrice Frank	DNRP IT SDM	Service Delivery Manager

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners

that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	5/27/16	Nick Hetrick	Initial draft	2 hours
Conceptual review	6/10/16	Nick Hetrick	Update to initial draft	1 hour
Finalize Draft documents	6/30/16	Nick Hetrick	Update drafts with comments from IT and SWSS staff	3 hours
Revise Final Draft Feedback	10/10/16	Nick Hetrick	Revise based on feedback	2 hours
No changes BAP for a new project that starts in 2017	2/17/2017	Nick Hetrick	Review Only	10 minutes
Spring 2019 BAP Report (implementation)	2/8/2019	Mark Preszler/ Nick Hetrick	Target / actual update	15 minutes

Section 6. Description of Project Benefits

Identify the category(-ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary </u>type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

X Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications

1. ***Describe why you expect the proposed IT investment to produce the benefit(s)***.

   Our current solutions to manage stormwater facilities, NPDES permit compliance, various field inspections are stored in different types of applications such as excel, access and custom applications built in house. These silos impact the ability of staff to inform management quickly because data usually needs to be compiled in spreadsheets by multiple staff and then sent to management. The existing applications are also quite dated and program managers have identified several shortfalls that do not allow them to complete tasks efficiently due to technical limitations of the current solutions. This will also improve onboarding of new staff as well because training time will be greatly reduced because staff will not need to learn how to use multiple applications. Overall this will improve the quality and quantity of work that is currently being done once solution is implemented and we have full active user adoption.

   Asset Management Unit
   - Leverages existing Enterprise GIS inventory eliminating redundant asset registries.
   - Ability to conduct facility inspections in the field via mobile device.
   - Combines inspections and maintenance workflows to track condition of assets
   - Ability to track associated costs to the individual asset level
   - Inspectors will no longer need to manually sketch asset locations
   - Support mowing program administration.
   - Applies existing inspection templates from MIS into the Cityworks environment.

   Business Audit / Local Source Control Program
   - Ability to track inspection sites and audits spatially
   - Ability to conduct mobile inspections
   - Less staff time required to plan annual inspection and audits
   - More efficient workflow to help with completing permit required inspections
   - Provides single system of record for enforcement

   Drainage Complaints
   - More efficient assigning of complaints to response staff
   - Improving response time to citizens
   - Will be integrated with work orders to allow complete tracking in one system
   - Will be accessible in the field via mobile device.
   - Document reimbursable labor and costs during an emergency more efficiently than current systems.

   Regulatory Compliance
   - Ability to track compliance targets in real time.
   - Reduction in staff time needed related to compliance reporting for annual reporting and audit response

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***

Goal 1: Migrate drainage complaint intake/tracking to Cityworks and retire access database application

Baseline: Migrate specified historical drainage tracker data to Cityworks environment and retire access database applications.

Target: Successful migration of historical data and all active users in SWSS using the Cityworks environment for drainage complaint intake and tracking within 7 months. Improving response time to drainage complaints by 15% by applying the benefits below.

Benefit: Program managers can assign and track work related to drainage complaints in one system. This will lower IT costs by not having to maintain a custom application along with database management costs. Staff will be able to access this data remotely using mobile devices which is not currently possible. Automation of task assignments will improve response times for both internal and external requests by routing work directly to staff. Better data quality of complaint/request history allows for better planning based on data that is not currently available in the current systems.

Goal 2: Migrate Source Control programs to Cityworks and retire supporting access database

Baseline: Migrate identified historical source control data to Cityworks environment and build inspections templates to replace paper forms and access database application.

Target: Complete migration of identified historical data and streamlined inspection forms that will replace paper forms and the access database within 7 months. Once the data is migrated we expect to see a 20% decrease in time needed to meet annual inspection goals set by the NPDES permit. The benefits listed below describe how we will meet the target.

Benefit: This will make the tracking of inspections much more efficient and provides a map interface based on GIS data that will display inspection locations. The assignment of inspections can all be done within the Cityworks environment and will streamline the current process greatly which uses multiple databases and spreadsheets. The ability to automate assignment of inspections on a time table and tracking for enforcement can all be done in this application providing much better management of this information. Inspectors will also have access to historical information in the field as well as having the ability to complete tasks such as inspections using a mobile device in the field. The efficiency gained will also be used to collect more detailed data that is not possible in the current system.

Goal 3: Migrate Asset Management Unit Inspections, condition ratings, and legacy data into Cityworks Environment and retire Maintenance Information System (MIS) and Asset Management Database (AMD) access database application.

Baseline: Migrate identified data from Maintenance Information System (MIS) to Cityworks system and tie inspection and condition data to the GIS database containing updated stormwater inventory. Rebuild MIS reports and other data to Cityworks environment. Build out inspection templates in Cityworks and configure condition rating based on inspection data within cityworks and configure condition weights based on existing formulas in the Asset Management Database (AMD) application.

Target: Complete migration of identified data from MIS and AMD into the Cityworks environment

and configure Cityworks to support Asset Management Unit operations such as inspections, work orders, and condition assessment rating and have all Asset Management Unit staff using the Cityworks environment and retire legacy applications within 2 years from the project start. Decreasing facility inspection time by 10%. This will be achieved by applying the benefits listed below.

Benefit: The Asset Management Unit migration to Cityworks will streamline workflows in one system and provide a stable platform for the future. Inspectors will no longer need to hand draw the inventory in Visio and enter information in the MIS database as this will be handled by the integration with GIS. This will also eliminate the redundant non-spatial inventory for stormwater assets in MIS because Cityworks will leverage the GIS database as the asset registry and provide staff with a map display of where they have assigned inspections. Staff also will now have a mobile platform that can be used in field to complete inspections. Inspections will now support condition rating of facilities and individual assets in one systems currently the AMD application relies on a manual export to the access database Cityworks has the capability to assign weighted ratings as soon as an inspection is completed which will provide real time condition rating that can be used to see condition of facilities in real time in both tabular and map displays. Cityworks does not require multiple databases like the current solution which improves data quality. The quality of the data will also be improved due to real time validation that requires staff to enter data in the same way and also will require entry of specific data before being able to close an inspection which will reduce multiple visits. Cityworks also provides support for CCTV inspection which will improve data quality and allow these more detailed inspections of stormwater assets to be viewed and the corresponding data can be used for analysis.

3. *What is the current baseline for this measure?*
   See specific goals above. The overall baseline is migrate existing data identified by SWSS program managers so staff can transition to the Cityworks environment and then configuration of Cityworks to support each units tasks for inspections, work orders, requests, reporting and SWSS Asset Management plan.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   See specific targets above. The overarching target for this project is to get all existing programs on a modernized platform to support all current operations for existing business processes. Additionally targets for efficiency in inspection tasks and for improved data quality.

5. *When is the benefit likely to be achieved?*
   Benefits will be achieved from this project once legacy systems have been shut down and all identified programs have moved their workflows to Cityworks environment. It will be a phased approach and all programs will be completed within 2 years from the project start.
   It is believed that the 2-year time frame is still realistic for phasing out the legacy workflows and systems within the scope of this project.

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will

not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

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1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
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Example: <u>Reduced cost to produce service</u>. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: <u>Cost Avoidance.</u> Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

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Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional five years. This project is currently functioning at 99.999% up-time and will report annually for the next five years on up-time levels.

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Metric Description	Metrics	Baseline	Target	Actual
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Update for the Spring 2019 Report: This is an ongoing project. The targets for retiring old databases were missed and new timelines are provided.

Metric Description	Metrics	Baseline	Target	Actual
Migrate drainage complaint intake/tracking to Cityworks and retire access database application		Migrate specified historical drainage tracker data to Cityworks environment and retire access database applications.	Successful migration of historical data and all active users in SWSS using the Cityworks environment for drainage complaint intake and tracking within 7 months. Improving response time to drainage complaints by 15% by applying the benefits below.	7-month target missed due to KCIT capacity. New target set to end of Feb 2019. Will be able to evaluate actual after deployment.
Migrate Source Control programs to Cityworks and retire supporting access database		Migrate identified historical source control data to Cityworks environment and build inspections templates to replace paper forms and access database application.	Complete migration of identified historical data and streamlined inspection forms that will replace paper forms and the access database within 7 months. Once the data is migrated we expect to see a 20% decrease in time needed to meet annual inspection	7-month target missed due to KCIT capacity. New target set to end of Feb 2019. Will be able to evaluate actual after deployment.

			goals set by the NPDES permit. The benefits listed below describe how we will meet the target.	
Migrate Asset Management Unit Inspections, condition ratings, and legacy data into Cityworks Environment and retire Maintenance Information System (MIS) and Asset Management Database (AMD) access database application.		Migrate identified data from Maintenance Information System (MIS) to Cityworks system and tie inspection and condition data to the GIS database containing updated stormwater inventory. Rebuild MIS reports and other data to Cityworks environment. Build out inspection templates in Cityworks and configure condition rating based on inspection data within Cityworks and configure condition weights based on existing formulas in the Asset Management Database (AMD) application.	Complete migration of identified data from MIS and AMD into the Cityworks environment and configure Cityworks to support Asset Management Unit operations such as inspections, work orders, and condition assessment rating and have all Asset Management Unit staff using the Cityworks environment and retire legacy applications within 2 years from the project start. Decreasing facility inspection time by 10%.	6 months behind schedule due to KCIT capacity. Attempting to reach same 2-year target from project start.

IT Project Benefits Achievement Plan (Version 4) (updated 2.4.2019)

To complete this document fully, please read all of the colored sections and fill in the white cells.
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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Name	DNRP/WLRD/Environmental Laboratory
Project Title	Laboratory Information Management System (LIMS) ~~Replacement~~ Modernization (updated 2.4.2019)
Project Number	~~1129697~~ 1134076 (updated 2.4.2019)
Project Timeframe	2018 –2023

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner is Diane McElhany, Lab Manager. Project Sponsor is Josh Baldi, WLRD Division Director. (updated 2.4.2019)

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Diane McElhany	Section Manager, Environmental Lab	Business Owner (as of 10.10.2016)
Kate Leone	Manager, Environmental Lab	Business Owner (retired 10.7.2016)
Nagesha Kannadaguli	IT Services Supervisor, KCIT	~~Project Lead~~ Supervisor of KCIT SMEs
Barb DeLauter	IT Business Analyst, KCIT	Business Analyst (left County 2018)
Gary Hocking	IT Service Delivery Manager, KCIT	Project Sponsor (retired 4.28.2018)
Terry Siebens	Environmental Laboratory Scientist III	LIMS Committee, Scientist User, Business Analyst (updated 2.4.2019)
Juliette Peze	IT Project Manager III, KCIT	KCIT LIMS Project Manager
Susannah Rowles	Laboratory Project Manager	LIMS Committee, Scientist User
Debbie Osada	Environmental Laboratory Scientist III	LIMS Committee, Scientist User
Stephen Heard	IT Enterprise Manager III, Engineering	Determines project technology
Brent Anderson	IT Master Developer, KCIT	Programmer (updated 2.4.2019)
Kirthi Kumar	IT Master Developer, KCIT	Project Lead and programmer (updated 2.4.2019)

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.

4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
17-18 Budget Process	6/30/16	Kate Leone Gary Hocking Barb DeLauter	Initial draft	5 hours
17-18 Budget Process	8/31/16	Kate Leone Gary Hocking Barb DeLauter	Revision in response to raters' comments	3 hours
17-18 Budget Process	10/11/16	Diane Mcelhany Barb DeLauter	Revision in response to BAP Council Conceptual Review Evaluation	11 hours
19-20 Budget Process	6/15/18	Diane McElhany	Revision based upon 2017 Business Analysis efforts by KCEL, Astrix Consulting Report, and further consultation with KCIT	5 hours
Spring 2019 BAP Report	2/4/19	Diane McElhany	Active Project. Updated Sections: 1, 2, and 3 with administrative details, Section 6 (categories 2, 3, 4).	2 hours
Updates based on Jillian Scheibeck's comments.	3.8.19	Diane McElhany	Active Project. Updated Sections: 1, 2, and 3 with administrative details, Section 6 (categories 2, 3, 4).	15 minutes

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category 1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category 2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services (secondary)

☒ Category 3: Maintaining service levels by replacing or upgrading older technology (primary)

☒ Category 4: Reduced cost or cost avoidance to produce services (secondary) (updated 3.8.19)

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

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Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. **Describe why you expect the proposed IT investment to produce the benefit(s).**
   Modernizing the existing LIMS system will provide these benefits:

a. Will eliminate the risks associated with maintaining depreciated technology (Oracle Forms) making the system more secure and easier for KCIT to maintain.
b. Will eliminate the licensing costs associated with Oracle Forms and Databases.
c. Will eliminate the costs, licenses, installation and maintenance of client based software to run the application. KCIT staff have recently indicated (fall 2018) that Microsoft platform fees have increased and may not be far from Oracle fees. It is currently unknown whether there will be net cost reduction benefit at the end of this project until Microsoft Azure platform costs are better understood by KCIT staff. (updated 2.4.2019)
d. Will allow for LEAN efficiencies to be captured:
   - Barcoding of sample bottles and labels. This functionality will allow for faster and more accurate sample login, batching, data entry, and sample disposal functionality.
   - Electronic bench sheets. This functionality will reduce the need to create and store log books, improve the accuracy and legibility of sample preparation data, and better integrate this metadata with analytical results.
   - Automated data transfer directly between some instrumentation and LIMS making data entry faster, less prone to human error, and secure. This would reduce the time required for data review and improve the overall quality of stored data.
e. Will utilize KCIT standard software languages and platforms for LIMS and its ancillary supporting programs, allowing a broader pool of developers to help support just one technology stack.
f. Provide Lab Management with Super-User tools shifting key business functions from KCIT staff to designated Lab staff, thereby reducing future KCIT resources.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   We will measure the benefits associated with Q1 (A) above by
   - Reporting the savings of eliminating licensing costs associated with Oracle technology minus cost of the new KCIT supported ~~technology stack~~ Azure platform. (updated 2.4.2019)
   - The front end of the LIMS system will eliminate 78 Oracle forms which will be replaced by a web-based interface. (updated 2.4.2019)
   - ~~Measuring the increase in number of parameters reported per sample.~~ This project will not directly influence the lab's sample workload. (updated 2.4.2019)
   - Plan to reduce KCIT embedded staff from 5 to 3 FTEs based upon the Super-User Tools which will shift the non-IT application functions to Lab staff.
   - Barcoding and electronic bench sheets will reduce the amount of paper logbooks associated with quality assurance tasks such as sample preparation, calibration checks, and sample disposal. Will measure how many paper log books are eliminated by their conversion to electronic logs. (updated 2.4.2019)

3. ***What is the current baseline for this measure?*** See in table below in Q(4).

4. ***What is the target for this measure? (How much improvement will this project achieve?)***

Measure	Baseline	Target
Barcoding: The amount of staff resources devoted to login and sample tracking and disposal duties throughout the sample lifecycle. Benefit to be measured Q2 2021. (updated 2.4.2019)	Currently 1.5 FTEs are devoted to login and sample tracking and disposal duties.	We anticipate saving approximately 8 to 10 hours a month of staff time if barcoding is implemented throughout the full sample lifecycle. This time would be redirected toward other lab duties.

Electronic Bench sheets: Reduce staff and space resources to create and store physical log books. Improve quality, access, and storage of sample preparation documentation. Benefit to be measured Q2 2021. (updated 2.4.2019)	Currently most sample preparation steps are documented by handwritten notes. Log books are printed and stored for a decade or more.	• Electronic bench sheets will eliminate the need for physical log book creation, manual data entry and physical log book storage. • Electronic bench sheets will eliminate the need to interpret difficult handwriting. • Electronic bench sheets will reduce/eliminate spelling errors. • Electronic bench sheets will allow sample preparation meta-data to be more easily shared with customers and electronically stored. • Staff time saved would be redirected toward other lab activities. We are targeting a 50% reduction in paper bench sheets. (updated 2.4.2019)
Automated data uploading to LIMS: The goal is to reduce the time to upload and peer review data as well as decrease the error rate of data entry. Benefit to be measured Q2 2021. (updated 2.4.2019)	Depending upon the analyses, these steps can take between a few minutes and as much as several hours per sample batch.	We anticipate saving up ~ 10% of sample prep time by automating the data transfer between the prep instrumentation and LIMS. Staff time saved would be redirected toward other lab activities.
Industry Standard software and platform: This would allow for a greater pool of KCIT staff to support the LIMS application and reduce licensing fees. Benefit to be measured Q2 2023. (updated 2.4.2019)	Typically there have been 5 or more KCIT embedded at the Lab over the ~25 year life span of the LIMS system.	Shifting from deprecated technology and an Oracle Database platform to KCIT supported technology is the main driver behind this project. As KCIT shifts away from Oracle platforms, there are fewer resources to maintain this system. The Oracle licensing is also approximately $12K per year. It is anticipated that we will save 75% of that cost by switching platforms. We expect to reduce the number of KCIT embedded staff from 5 to 3 FTEs post project completion. Because we do not know the Azure platform costs, it is impossible to know how much if any net savings will be produced in eliminating the Oracle Forms and platform. (updated 2.4.2019)

5. *When is the benefit likely to be achieved?*
   This project has been broken out into 3 distinct phases spanning from the first quarter of 2019 through the fourth quarter or 2023. Cost benefits associated with the elimination of the Oracle forms and client based software savings will be realized in the ~~third~~ fourth quarter of 2020. All other benefits will be realized by the end of the project (~~fourth quarter~~ Q2 of 2023), when all phases of the project are completed. (updated 2.4.2019)

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

   The mission of the Environmental Lab is: To provide quality field, laboratory, information technology services, and advisory services in support of King County and other publicly-sponsored programs that protect and enhance water quality. Modernizing the LIMS system is in alignment with the Environmental Lab's mission because it supports the need to efficiently and accurately provide information to King County and other publicly-sponsored programs so that they can protect and enhance water quality.

   The Environmental Lab uses LabVantage Solutions Inc. LIMS, is a business critical application that manages sample collection, workload throughput, analytical calculations, quality control functions, data results, and reporting of data to customers. LIMS is also the repository of several million bits of associated discrete regional data collected over the past 52 years. This system is used to generate and provide high quality data in support of regulatory compliance and long term environmental monitoring projects that give support to King County and other publicly-sponsored programs.

   This system is ~25 years old. The original vendor of the LIMS, LabVantage Solutions, went through a number of acquisitions and consolidation with other LIMS vendors over the years, and dropped support for this LIMS system in favor of other product lines well over a decade ago. At that point King County purchased the system code in order fully maintain and support this application.

   This system has undergone a number of upgrades over its lifespan and is well integrated with a number of ancillary software programs that support the Lab. The consultant confirmed that the upkeep of this system is probably the best he has seen in his 20 years of working in this industry. The database is stable and the application sound. The only real risk at this time is the use of the deprecated Oracle Forms and KCIT's desire to move away from Oracle Platforms whenever possible.

   Upgrading the system rather than replacing the system is advantageous for several reasons:
   - It is less costly to upgrade than replace the system.
   - It will allow KCIT to choose the platforms of their choice for maintenance and support.
   - Customers will continue to have uninterrupted access to over 52 years of LIMS data. This includes all final, QC, meta, and narrative data.
   - KCEL will maintain essential features, reports, and electronic data deliverables critical to efficient workflows and King County regulatory compliance.
   - This will allow KCEL to manage additions of future features and tools required by future regulatory compliance mandates from EPA and WDOE.
   - There are no external licensing or service fees associated with this project as KC owns all of the source code for LIMS.

   This upgraded system should support King County for several more decades if it is properly maintained and supported. It is anticipated that the modernized LIMS will provide KCIT with a system that will conform to KCIT approved technologies and will therefore be more easily maintained at a greatly reduced cost. This benefit should be realized immediately upon implementation which is currently scheduled for the fourth quarter of 2023.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

The risk that the current front-end Oracle Forms technology will soon no longer be supported by Oracle is a certainty (100% risk). It is therefore mandatory that, at a minimum, these Forms be replaced by modern technology. A Proof of Concept was conducted and it was deemed possible to replace these with modern technology.

The Oracle database is stable and is not a risk technologically. However KCIT would like to migrate Oracle databases to other technology whenever possible to avoid Oracle Licensing fees associated with ~~web~~ client based applications. (updated 2.4.2019)

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
   There are four drivers that will contribute to the cost reductions of the proposed IT investment;
   a. ~~Moving away from Oracle Forms and database licensing fees will reduce the costs of the system.~~ Because we do not know the Azure platform costs, it is impossible to know how much if any savings will be produced from eliminating the Oracle Forms and platform. (updated 2.4.2019)
   b. It is anticipated that by building Super-User Tools, many KCIT tasks can be moved directly to the business owner and designated lab staff, reducing KCIT support costs (from 5 to 3 embedded KCIT resources). (updated 2.4.2019)
   c. There will be LEAN workflow efficiencies incorporated as the Oracle Forms are eliminated, thereby giving analysts more time to perform higher level functions and reducing the amount of paper used and archived through RALS.
   d. Because the County already owns the source code, no additional licensing fees or vendor support contracts will be incurred.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   We will measure and compare the cost savings gained by eliminating the need for Oracle licensing fees and reduced KCIT support to pre-modernization costs.

3. *What is the current baseline?*
   The Environmental Lab currently spends ~ $970K annually to support the current LIMS system and its ancillary applications. This cost includes the hardware, licenses, and software maintenance and support.

4. ***What is the target for this measure? (How much savings will this project achieve)***
KCIT has not yet given a comprehensive estimate of the savings. However, there are ~ $12K licensing fees associate with Oracle which will be eliminated. Reducing the number of KCIT embedded staff from 5 FTEs to 3 FTEs is expected to save approximately ~~$200K~~ $400K (updated 2.4.2019) or more. This savings would be redirected to pay for other lab operating costs and the increasing costs of existing KCIT services.

5. ***When is the cost reduction likely to be achieved?***
This project has been broken out into 3 distinct phases spanning from the first quarter of 2019 through the fourth quarter or 2023. Cost benefits associated with the elimination of the Oracle forms and client based software will be realized in the ~~third~~ fourth quarter of 2020. All other benefits will be realized by the end of the project (~~fourth~~ second quarter of 2023), when all phases of the project are completed. (updated 2.4.2019)

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *$100,000 savings*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

<u>Update for Spring 2019 Report:</u>
This is an ongoing project. There were administrative details changed and additional clarification was added in the project benefits and timing. The secondary benefit in category #4 was updated to reflect the uncertainty of expected cost savings in the project.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DNRP / Wastewater Treatment Division (WTD)
Project Title	Capacity Charge Escrow and Customer Add Automation
Project Number	P: 1123391 T: 1.01

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

~~Tim Aratani:~~ Heidi Popochock, WTD Finance Manager and Devin Barnes: WTD BFO IV

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Devin Barnes	BFO IV/WTD	Lead
Hiedi Popochock	Finance Manager/WTD	Sponsor
Patrice Frank	KCIT	IT Service Delivery Manager
Francesca Ho	PPM2/WTD	Process Owner: Consultation and testing
Dan Dicks	PPM4/WTD	Process Owner: Consultation and testing
TBD	IT PM2/KCIT	KCIT Project Manager
TBD	IT Business Analyst	KCIT Business Analyst

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

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Conceptual review	6/03/16	Devin Barnes	New, initial draft	3 hours
Conceptual review	7/07/16	Devin Barnes	Review of draft	1 hours
Conceptual review	9/21/16	Devin Barnes	Update for council staff questions	1/2 hours
2016 Annual Report – BAP update for a new project that starts in 2017	2/13/17	Devin Barnes	Added KCIT team members after initial meetings and mapping process	1/6 hours
2016 Annual Report – BAP update for a new project that starts in 2017	2/14/17	Devin Barnes	Added metrics in section 7	1/4 hours
Update for the Spring 2019 BAP Report	2/07/19	Devin Barnes	Added project update to section 7	10 Minutes
Update for the Spring 2019 BAP Report	3/05/19	Devin Barnes	Added project update to section 7 and section 3	5 Minutes

Section 6. Description of Project Benefits

Identify the category(-ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1 (primary): External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☒ Category #4 (secondary): Reduced cost or cost avoidance to produce services (Secondary)

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   a. One of our project goals is for escrow agents to have access to the most current information on capacity charge accounts through an automated system, thus creating faster response times. By making our data more readily available we will be assisting in a faster escrow process for the public.
   b. Another one of our project goals is to establish new customer accounts in a timely manner, relative to their sewer connection date.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   a. The time between the receipt of a request and a response can be measured to determine how many responses are handled by the system and how many have to be deferred to staff.
   b. We will look at the average time between sewer connection date and customer creation date to determine the timeliness of account setup.

3. *What is the current baseline for this measure?*
   a. We are currently required to respond to customer escrow requests within three days, 72 hours.
   b. There is no baseline on when customer accounts are setup as they are reported to us through a third party.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   a. Our goal is an automated, instantaneous, response for the majority of escrow requests and maintaining the current standards we have for requests requiring research.
   b. Our goal is to have accounts established for new customers within one month of their connection to the sewer system.

5. *When is the benefit likely to be achieved?*

We anticipate that benefits can be successfully measured in 3Q 2018.

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

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1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
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3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to

1. *Describe why you expect the proposed IT investment to reduce costs?*

   Currently the Capacity Charge Program is administered largely through manual efforts. As our customer base continues to grow, with population densification, more staffing resources are required to handle the additional load, given current processes. If this automation project goes forward Wastewater will see both current cost savings and future cost avoidance. By reducing the number of rote processes we will be able to reduce our current overtime requirements for the program and put sufficient infrastructure in place to manage escrow requests with reduced staffing levels in the future and a reduction in overtime.

   This project once fully implemented and in use by escrow agencies, is anticipated to reduce the TLT staff effort necessary for processing escrow requests. WTD will assess whether this available staff capacity should be reallocated to additional collection efforts and capacity charge account maintenance due to the growing number of new sewer connections.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*

   Our success will be measured by the number/percent of requests and accounts managed through programmatic means and our error rate; this can be extrapolated into cost avoidance. For near term savings we will measure Overtime as it relates to these processes. We will also measure the number of TLT positions we are able to reduce

3. *What is the current baseline?*

   The current annual budgeted overtime is $170,000. Currently there are 6 TLT positions of which 5 are allocated to escrow requests.

4. *What is the target for this measure? (How much savings will this project achieve)*

   For escrow requests and customer adds identified as "standard and routine in nature" we are looking to have at least 90% handled programmatically with near 0% error rate. Overtime on these processes should approach 0 as staff vets the new work flow. The target is to reduce to one the number of TLTS dedicated to escrow process when compared to the 2017-2018 budget

5. *When is the cost reduction likely to be achieved?*

   Efficiencies and benefits should be measurable by June 2018 for inclusion in the 2019-2020 Biennial Budget which will include reduced overtime for escrow and customer add tasks. We see these efficiencies going forward perpetually as there will be an infrastructure in place to better manage escrow requests with fewer resources. The TLT reduction for the escrow process is expected happen as part of the 2019-2020 budget if not sooner.

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any

monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update 07-FEB-2019: This project started in 01-JAN-2017 but was put on hold in AUG-2017; with intermittent work occurring between WTD and KCIT. Project was delayed due to cost concerns with BRC and cost estimates from KCIT. Project developing specific Milestones with ROIs (Return On Investment) for internal funding releases to control costs between departments and provide management with specific interim goals. Completion of Milestones/ROIs Q1 2019. Metrics not updated until Milestones are established. This project has completed a functional requirements document for KCIT and BRC.

Metric Description	Metrics	Baseline	Target	Actual
Average time between escrow request and response to customer	Escrow request response time	72 hours	• Instantaneous for most requests • Maintain 72 hour limit	
Average time between sewer connection date and customer creation date	Customer setup delay	None	• Less than one month between connection, or start of service, and setup	
# of customers that can be added programmatically rather than manually	Customer adds automated	None	• 90% of Single family residents added with 0% error rate	
Staff overtime on escrow requests	Staff overtime on escrow requests	$170,000	• $0	

Update as of 02/22/2017: The project is new. No updates have been made to Section 6.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DNRP/WTD
Project Title	CMMS – Maximo
Project Number	1134070
Project Timeframe	2019 - 2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Dave Jurgens, Assistant Manager, WTD Operations

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Robert Waddle	Manager, WTD Operations	Project Sponsor
Courtney Schaumberg	Capital Project Manager, WTD PMU	Project Manager
Dave Jurgens	Asst Manager, WTD Operations	Business Owner
Doug Neal	Systems Engineering Lead	Project Lead
Celeste Bryant	Project Control Engineer, WTD PMU	Project Control Engineer

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.

When a material scope change is identified and reported.

5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual Review	6/29/2018	Doug Neal	New	10 Hours
2019-20 Budget Process	7/23/2018	Doug Neal	KCIT is not funding this project. It's being funded by WTD. Not sure what else is needed here.	5 minutes
Spring 2019 BAP Report	01/07/2019	Dave Jurgens	Upon PRB request, WTD has funded a gap analysis of alternative CMMS systems owned by KC using a consultant (Jacobs). We are expecting a final report from them to submit to PRB by the end of Feb-2019.	10 minutes
Spring 2019 BAP Report	03/05/2019	Devin Barnes	Updated Section 7 For gap analysis	5 minutes

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	% of customer satisfaction (to be determined through a survey)	45%	95%	By 12/31/2018
Example: Reduced time for customers to obtain a license	# days it takes to issue licenses	5 business days	1 business day	By 09/30/2018

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Through the implementation of Maximo, WTD will recognize several benefits, including: reliable data transfers between the CMMS and Oracle EBS, accurate financial information associated with WTD assets, and the ability to meet a King County Council Administrative Order. The following bullets provide further detail regarding these benefits and discuss others as well.

   - The current interfaces between Mainsaver and Oracle EBS are dependent on flat-file (aka CSV file) transfers and have been proven unreliable, error prone, incomplete and too slow. Replacing Mainsaver with Maximo and shifting our interfaces to utilize either IBM Maximo Enterprise Adaptors or web services will significantly improve the accuracy of financial data associated with assets in the CMMS. We currently estimate that the accuracy of financial data in Mainsaver is off by as much as 50%. Improving this accuracy will allow asset management to make well informed budgeting and asset life-cycle decisions, which should yield an overall cost savings to WTD.

   - Replacement of Mainsaver with Maximo will allow WTD to comply with the independent audit recommendations (AECOM) commissioned by the King County Council Administrative Order following the West Point Treatment Plant Failure on Feb 09, 2017. One way it will accomplish this is through the implementation of a Life Safety Management (LSM) system. Mainsaver does not include the functionality required to incorporate the Council mandated LSM system necessary to document decisions, enforce stricter levels of maintenance, and improve vertical and horizontal communications on plant risks. Maximo's Health, Safety and Environment Manager, coupled with the ability to compile detailed workflows, accurately perform system and component analysis, integrate management of change, and build reports will allow LSM to be successfully implemented. Maximo will also allow Lockout-Tagout and Training to be incorporated into the CMMS to further enhance safety of plant personnel and equipment while enhancing governance and auditing of these systems.

- Mainsaver is not capable of providing many features in a functional and/or user friendly manner. For example, Mainsaver does not provide the following:
    - Functional and or user friendly access on mobile devices
    - The ability to utilize industrial control system (ICS) points necessary to enable usage based preventive maintenance work orders
    - The ability to track maintenance history based on equipment location

Maximo will provide users with remote access on mobile devices in a fully functional and user friendly manner. Each plant in WTD covers a large geographic area and includes off-site facilities. There's often a need for operations and maintenance staff to access drawings, work orders, asset information, and safety related information in the field. Currently, users are forced to login to a terminal server and use the Mainsaver desktop application on their mobile devices. This is frustrating for the user and often results in the user giving up and making a trip back to the office for access to information. Current estimates, based on 150+ WTD employees who use Mainsaver and work in the plant or at remote sites, show that up to 7,800 hours per year are spent traveling back to the office for access to the CMMS. Providing users with user friendly, remote access to the data will not only provide them with the information they need when they need it, it will improve operational efficiency.

To enable interfaces with other applications, Maximo has worked with an array of vendors to develop plug-ins. One such plug-in provides the ability for Maximo to interface with OSIsoft PI. Leveraging this interface, Maximo can use Industrial Control System (ICS) point data to enable usage and calendar based preventative maintenance (PM) work orders. Preventative maintenance on assets is analogous to getting the oil changed in your car. You change your oil to extend the life of your engine and prevent lubrication related breakdowns. In general, you change your oil every 3000 miles or 12 months, whichever comes first. In this example, 3000 miles is a measure of usage and 12 months is a measure of time based on the calendar. This same concept applies to asset maintenance. Effective use of usage based PM work orders should increase asset reliability and reduce the number of corrective work orders written against assets; thus, reducing the cost of maintaining those assets over time.

Maximo will also provide the ability to track maintenance history based on slot (aka location). A slot is the location where an asset is installed. For example, a pump is installed in a certain location in the plant. If you swap two pumps, the location of each pump changes. In Mainsaver, maintenance history is tied to the asset. In our pump example, the maintenance history would follow the pumps, regardless of location. Maximo will allow engineers to track maintenance history on both individual assets (the pumps in this example) and on location. In other words, maintenance history will be tied to not only the assets, but to the locations where those assets reside in the plant. This will allow engineers to view all maintenance history associated with locations regardless of the assets that have been installed in those locations, while still allowing them to view all maintenance history associated with individual assets. This will provide engineers with the tools required to reduce risk at the system level, analyze asset failure rates based on location and help identify the cause of asset failures.

- Implemented in 1996, WTD's current CMMS (Mainsaver) has approached its end-of-life. Although it has been highly customized, it can no longer meet the needs of WTD's maturing asset management program. In addition, with Mainsaver's shrinking market share (<2%), the

viability of Mainsaver as a competitive entity in the current market place is suspect. With revenue likely following market share and our experience with the company, we have no choice but to assume Mainsaver will either be sold or possibly go out of business in the coming years. Implementing IBM Maximo will allow WTD to take advantage of a world class product and the stability associated with that product. In addition to stability and Maximo's proven track record in the market place, it will allow our asset management program to continue maturing, through the use of interface options, tools and features not otherwise available in Mainsaver.

- Due to the unreliable interfaces between Oracle EBS and Mainsaver; a lack of line-level information with respect to p-card transactions; errors or missing information related to requisition and PO data; and a lack of functionality within Mainsaver, accurately planning and scheduling work orders is not always possible. Implementing Maximo and changing the way we interface with Oracle EBS and PeopleSoft will provide the functionality necessary to accurately track procurement and inventory transactions at the work order and asset level. The ability to successfully track the status of all parts related to a work order, regardless of how the parts are obtained, will provide planner/schedulers with the information necessary to improve planning and scheduling accuracy. This will ultimately lead to an increase in productivity.

- The current interfaces between Mainsaver and Oracle EBS don't allow for the management of inventory within the CMMS and provide only limited procurement functionality within the CMMS. These limitations reduce the productivity of WTD's purchasing specialists by requiring them to track procurement and inventory wholly or partly in separate systems. The requirement to manage inventory in Oracle EBS also limits WTD's ability to implement efficiencies such as the use of QR codes for disbursing inventory and performing cycle counts. Implementing Maximo and restructuring the interfaces with Oracle EBS will allow inventory and procurement to be fully managed within the CMMS and allow WTD to incorporate lean techniques into its procurement and inventory management processes.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   - Significant improvement in the accuracy of financial data associated with assets in the CMMS:
   Success will be measured by comparing financial data in the CMMS to the data in Oracle EBS using various methods.

   - Functional and user friendly access to the CMMS on mobile devices resulting in a reduction in the number of hours employees spend traveling back to the office for access to the CMMS:
   Success will be measured by verifying functionality through testing, monitoring the use of remote access, and compiling survey results from end users.

   - The ability to track maintenance history and finances based on slot (aka location):
   Success will be measured by implementing a location based hierarchy in the CMMS and verifying, through reporting tools, that the associated financial data is being tracked according to asset location.

   - The ability to use ICS point data to trigger usage based preventive maintenance work orders, resulting in increased asset reliability and a reduction in corrective work orders written against the assets:

Success will be measured by comparing the number of corrective work orders written against associated assets before and after the successful implementation of usage based preventative maintenance work orders in Maximo.

3. *What is the current baseline for this measure?*
   - <u>Significant improvement in the accuracy of financial data associated with assets in the CMMS:</u>
     The baseline this benefit will be measured against is the accuracy of financial data in Mainsaver. It's currently estimated that the financial data in Mainsaver is about 50% accurate.

   - <u>Functional and user friendly access to the CMMS on mobile devices resulting in a reduction in the number of hours employees spend traveling back to the office for access to the CMMS:</u>
     The baseline this benefit will be measured against is the time spent per year by WTD employees traveling back to the office for access to the CMMS. It's currently estimated that employees spend up to 7,800 hours per year traveling back to the office for access to the CMMS.

   - <u>The ability to track maintenance history and finances based on slot (aka location):</u>
     The baseline this benefit will be measured against is Mainsaver's inability to track maintenance history and finances based on slots (aka locations).

   - <u>The ability to use ICS point data to trigger usage based preventive maintenance work orders, resulting in increased asset reliability and a reduction in corrective work orders written against the assets:</u>
     The baseline this benefit will be measured against is the number of corrective work orders written against associated assets from 1/1/2019 to 12/31/2021.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   - <u>Significant improvement in the accuracy of financial data associated with assets in the CMMS:</u>
     The target for this measure is increasing the accuracy of financial data in the CMMS to 98%. The successful implementation of IBM Maximo Enterprise Adaptors and/or web service interfaces between Maximo, Oracle EBS, and PeopleSoft will improve the financial accuracy of data in the CMMS. Accurate financial data in the CMMS will allow engineering to make more informed decisions when planning projects, projecting budgets, and projecting asset replacements. Overall, this should reduce asset life-cycle costs and prevent waste by prematurely replacing assets or continuing to perform maintenance on assets when it's more cost effective to replace them.

   - <u>Functional and user friendly access to the CMMS on mobile devices resulting in a reduction in the number of hours employees spend traveling back to the office for access to the CMMS:</u>
     The target for this measure is the successful implementation of a fully functional and user friendly interface with Maximo on mobile devices and a 90% reduction in the hours spent per year by employees traveling back to the office for access to the CMMS.

   - <u>The ability to track maintenance history and finances based on slot (aka location):</u>
     The target for this measure is the successful implementation of a location based hierarchy and the ability to track maintenance and financial history based on location. With no ability to track asset maintenance history based on location in Mainsaver, engineers often find themselves trying to make partially informed decisions. Maximo will allow engineers to view all maintenance history associated with locations, independent of the assets that have been in those locations,

while still allowing them to view maintenance history associated with individual assets. This will provide the engineers with the tools required to reduce risk at the system level, analyze asset failure rates based on location and help identify the cause of asset failures based on external system components.

- The ability to use ICS point data to trigger usage based preventive maintenance work orders, resulting in increased asset reliability and a reduction in corrective work orders written against the assets:
The target for this measure is the successful implementation of an interface between OSIsoft PI and Maximo to facilitate usage based preventative maintenance work orders, leading to a reduction in asset maintenance costs through increased asset reliability and a reduction in corrective work orders.

5. *When is the benefit likely to be achieved?*
Some benefits will be achieved immediately after migrating to Maximo, others will take time to implement once the migration is complete.

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Significant improvement in the accuracy of financial data associated with assets in the CMMS	Comparing the accuracy of financial data in the CMMS against Oracle EBS	50% financial accuracy in Mainsaver	98% financial accuracy in Maximo	12/31/2022
Reduction in the # of hours spent per year traveling to the office for access to the CMMS	12 min/user/day * 150 users / 60 minutes * 260 work days = 7,800 hours/year	7,800 hours per year spent traveling back to the office for access to the CMMS	Fully functional remote access and a 90% reduction in the time spent traveling back to the office for CMMS access	12/31/2022
The ability to track maintenance history and finances based on slot (aka location)	Reports	This functionality does not currently exist in Mainsaver	Fully functional location based maintenance and financial history	12/31/2022
A reduction in maintenance costs for associated assets via increased asset reliability and a reduction in corrective work orders	# of corrective work orders written against associated assets	# of corrective work orders written against associated assets from 1/1/2019 to 12/31/2021	A reduction in the # of corrective work orders written against associated assets from 1/1/2022 to 12/31/2024	12/31/2024

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

1. **Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.**
2. **If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur**.
3. **Summary Table for Benefit Category #3:**

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	# of system outages per month	5 outages	No outages	By 06/30/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. **Describe why you expect the proposed IT investment to reduce costs?**
2. **How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)**
3. **What is the current baseline?**
4. **What is the target for this measure? (How much savings will this project achieve)**
5. **When is the cost reduction likely to be achieved?**
6. **Summary Table for Benefit Category #4:**

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

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Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

DB: 03/05/2019 - This project has conducted a gap analysis to assist in determining the most appropriate CMMS for WTD. This project has not started yet and has not generated any benefits yet. No update to benefits schedule.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

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2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/ Agency Name	DNRP / WTD
Project Title	Central Drawing Management and Control Software Procurement and Implementation (within the Electrical/I&C project roll up)
Project Number	1038335
Project Timeframe	2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Bruce Kessler – Assistant Director of WTD

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Bruce Kessler	Assistant Director/WTD	Project Sponsor
Alden Wyma	PM / WTD	PM
Celeste Bryant	PCE / WTD	Project Control Engineer
Mika Petaia	BFO / WTD	LCCA Lead
Tom Bell-Games	PM / HDR	Business analyst, Needs analysis, Alternatives analysis, Industry Best Practice SME
Shilpi Mittal	KCIT	Business Analyst
Dominic Palo	KCIT	Contract Specialist
Katie Gibbons	Plant ENG / WTD	SME
Steve Huang	Plant ENG / WTD	SME
Jeff Fugier	Plant ENG / WTD	SME
Bo Vestergaard-Hansen	Project ENG / WTD	SME
Joel Paulson	Project ENG / WTD	SME
Don Jewett	Project/PM III WTD	SME

Section 4.   When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5.   How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	4/19/18	Alden Wyma & Celeste Bryant	New, initial draft	8 hours
Budget process	5/23/18	Alden Wyma & Celeste Bryant	Revising BAP and Full Proposal	10 hours
Budget Process	7/13/18	Alden Wyma & Celeste Bryant	Revising BAP, Full Proposal, and Cost Template.	5 hours
Spring 2019 Report	1/24/19	Alden Wyma	Project end date	10 minutes
Budget Process	2/5/19	Alden Wyma	Updated section 7	10 minutes

Section 6.   Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☒
Category #4: Reduced cost or cost avoidance to produce services	☐	☒

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?

Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	% of customer satisfaction (to be determined through a survey)	45%	95%	By 12/31/2018
Example: Reduced time for customers to obtain a license	# days it takes to issue licenses	5 business days	1 business day	By 09/30/2018

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   On average, WTD spends 40 hours per project to rework or find drawings that were not correctly completed or saved in the current drawing management systems. The new program will eliminate this time inefficiency.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Employee survey conducted in the first and fourth quarter of the year. Surveyed group would include the same group of end users, engineers/CAD designers, from each treatment plant and the downtown King Street Center.

3. *What is the current baseline for this measure?*
   Approximately 40 hours total lost per project

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   1 hour expended per project. It is expected that some time will be taken to use the program and find the drawings, which is why the target is a little more than 0.

5. *When is the benefit likely to be achieved?*
   12/15/2019

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Most recent drawing with all revisions immediately accessible in the DMS	According to survey results of end users hours per project to locate drawings.	40 hours	1 hours	By 12/15/2019

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   - WTD requires a secure, comprehensive and standardized document management solution and management protocol to address the growing need to efficiently account for all aspects of CAD documents and control across the Division.
   - Incorporate version control of all documents, thereby improving operational efficiencies, safety and reliability of information required for operations, maintenance, and response to emergencies. This will also reduce the cost of re-work due to inadvertent use of outdated information, thereby improving both speed and accuracy of service within the Division and to rate payers.
   - **Replace WIT** (West Point Information Toolkit) Internally developed standalone Access database used by west section O&M. WIT was developed in 1995 with active updates until 2012. Once data is transferred to DMS, WIT will be retired in place and backed up into ERMS.
   - **Replace Adobe RoboHelp 10** an online off the shelf software purchased and used by east section O&M since 2013. This software had a 2017 update release which WTD did not purchase due to the pending DMS project request. Once data is transferred to DMS, the program's use will be discontinued.
   - **Become the record source** for project drawings created by the project engineers. According to our records manager, Don Jewett, the new DMS will meet all security and record retention requirements of King County, but will not replace ERMS for other document retention purposes.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
   Independent drawing management introduces unacceptable risk to several aspects of our work control practices including Lockout-Tagout and costly rework during the design phase of capital projects when accurate drawings cannot be located.

3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Employee Efficiency	According to survey results of end users, percentage of instances multiple versions of drawings found for a single location.	80% of drawings have multiple versions	10%	By 12/15/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
   Prevent reproducing record drawings at the start of capital projects

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   Monitor capital expenditure by project teams to produce drawings at the beginning of projects

3. *What is the current baseline?*
   $7,000 - $50,000 of project costs lost to searching or reproducing drawings. The large range is due to the varying capital size and complexity of WTD projects.

4. *What is the target for this measure? (How much savings will this project achieve)*
   We expect to have $85 due to people still having to use time to search in the program for the drawing. This measure does not include the cost of creating drawings for a completely new project.

5. *When is the cost reduction likely to be achieved?*
    12/15/2019

6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Capital savings	Cost of producing drawings at the beginning of projects	Depends on project; can range from $7000 to $50,000 per project	$85 per project search	By 12/15/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update for the Spring 2019 Report:
1. No major concerns to date other than schedule and a more realistic budget.
2. No major milestones were achieved in 17-18 other than selecting Blue Cielo as the vender of choice.
3. The project is on track to achieve benefits.

4. Most recent drawing with all revisions immediately accessible in the DMS – Work not yet started. Benefit not achieved.
5. On average, WTD spends 40 hours per project to rework or find drawings that were not correctly completed or saved in the current drawing management systems. The new program will eliminate this time inefficiency – Work not yet started. Benefit not achieved.
6. Prevent reproducing record drawings at the start of capital projects – Work not yet started. Benefit not achieved.

IT Project Benefits Achievement Plan (Version 5)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Names	DNRP – WTD, DOT and FBOD (update 6/16/15)
Project Title	IBIS and Business Objects Retirement
EBS Project Number	745408050 Phase 3 = operating project (50% cost shared with DOT) Phase 1-2: WTD project #1047326 and DOT project #1112497

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: Tim Aratani, Finance Manager, WTD

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Molly Cherkin	Business Analyst, KCIT	Business Analyst
Max Foster	Business Finance Officer, DNRP	WTD SPOC
Margaret Brownell	Service Delivery Manager, KCIT	Project Lead/Director
Lyza Gatmaytan	Web Developer, KCIT	Project Manager

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.

5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process	9/3/13	Molly Cherkin	New, Initial draft	4 hours
Budget Process	9/5/13	Max Foster and team	Research, collaboration for choosing metrics	4 hours
Budget Process	10/16/13	Molly Cherkin	Re-doing BAP in new form	30 minutes
2014 Annual report/ project implementation – Phase 3	3/17/15	Lyza Gatmaytan	Review, project status update.	1 hour
2014 Annual report – Phase 3	6/16/15	Lyza Gatmaytan	Annual review, incorporating changes requested by Beth Mountsier/KC Council.	1 hour
2014 Annual report – Phase 3	7/8/15	Lyza Gatmaytan	Incorporate Phase 3 description - change requested by Beth Mountsier/KC Council.	30 mins.
2015 Report on Phase 1 and 2 Implementation	6/21/16	Max Foster and team	Prepare statistics and prepare draft summary	6 hours
2015 Annual Report – Phase 2 has been completed, Phase 3 currently in Contract Negotiation	6/21/16	Max Foster	Updates on benefits realized for Phase 2 and project status for Phase 3 as requested by Jennifer Giambattista/KC Council.	6 hours

2016 Annual Report - Phase 3 is in the middle of implementation and is on time and on budget.	2/13/2017	Max foster	Phase 3 as requested by PSB (Gauhar S.) Ongoing project. No changes to anticipated benefits.	10 mins.
Spring 2019 BAP Report	2/05/2019	Devin Barnes	Reviewed. Update Sec. 7: No additional benefits anticipated.	5 mins
Spring 2019 BAP Report	3/05/2019	Devin Barnes	Reviewed. Update Sec. 7: No additional benefits anticipated.	5 mins

Section 6. Description of Project Benefits

Identify the category (ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

X (primary for Phases 1-2) Category #1: External service benefits: Improving the quality or quantity of services provided to the public

(secondary for Phases 1-2) Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services.

X (primary for Phase 3) Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance.

(secondary for Phases 1-3) Category #4: Reduced cost or cost avoidance to produce services.

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather

than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

Update as of 02/22/2017: The project is ongoing ==(currently, in Phase 3). The Category 1 benefits and measures were related to Phases 1-2 of the project. Phase 3 benefits fall under Category 3==.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   - Reduce cycle times - If this project is approved, WTD staff will be able to more quickly and efficiently access relevant data so they can provide **accurate and timely responses to customer inquiries** and keep up with ongoing operational duties. Specifically, the following cycle times will be decreased as a result of the solution's implementation:
       o Response to escrow request
       o Early pay-off (unapplied receipts)
       o Early pay-off (escrow request)
       o Lien request preparation
       o Returned item processing
       o Overpayment research
   - Reduce deficit - If this project is approved, WTD staff will have more time and resources to focus on **decreasing the backlog of work** (including decreasing a $1.9 million deficit in "at-risk" delinquent accounts) resulting in part from the current inefficient data retrieval process.
       o *Note: The $1.9 M deficit only refers to "at-risk" accounts, accounts on which a lien can be filed and thus WTD staff is more likely to be able to collect payment ("at risk" accounts are those within 30 days of being 3 years delinquent and older that do not have a lien against the property).*

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   - Decreased cycle times
   - Decreased balance of delinquent payments

3. ***What is the current baseline for this measure?***
   - Cycle times
       o Response to escrow request – 2 days
           ▪ Average of 250 escrows received daily. Average response time is 2 days. If no research is needed to complete the request, it takes between 5 - 20 minutes to respond. However in most cases additional research is needed and/or WTD staff must contact local agency for confirmation which may take up to a week to complete the original escrow request. This project's focus is to reduce this research delay.
       o Early pay-off (unapplied receipts) – 1 day
           ▪ On average, this process takes about 1 day. Of the 14,000 invoices that are mailed out each month, WTD gets approximately 7 to 15 pay-offs daily in the unapplied receipts. It takes anywhere from 60 - 90 minutes to process, depending on how fast the invoices are printed. This cycle time is also affected by a glitch in the Oracle Concurrent Manager, which may increase the processing time to overnight. From the pay-off, WTD also has to complete the process by closing future invoices and closed/inactive accounts. If this leads to refunds, which often happens, the process can take 1 hour to days to find the correct data. This project's focus is to reduce the delay's from the system and missing data in the EBS customer records.

- o Early pay-off (escrow request) – 15 minutes
  - For payoffs due to an escrow request, it takes 5 to 15 minutes to process the early payoff.
- o Lien request preparation – 2 hours
  - Preparation for lien requests takes approximately 2 hours.
- o Returned item processing – 1 hour per item
  - There are currently approximately 7,022 items of outstanding returned mail. Cycle time varies depending upon how much research and account maintenance is needed for each piece. Estimated cycle time per piece is 10 minutes to 1 hour.
- Delinquent deficit – $1.9 million as of 8/31/2013
  - o WTD pulls this report annually and as of 8/31/2013, the deficit for the "at-risk" accounts was $1.9 million.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
- Cycle times
  - o Response to escrow request – 5 to 60 minutes depending on the amount of research needed
  - o Early pay-off (unapplied receipts) – 15 to 75 minutes
  - o Early pay-off (escrow request) - 5 minutes
  - o Lien request preparation – 45 to 60 minutes.
    - 15 minutes for drafting Intent to File Lien (then 3 weeks to deliver via post office processing) and 30 to 45 minutes processing time (with up to one day for signature approval) to file lien.
  - o Returned item processing– 10 to 30 minutes to process each item (and the elimination of the backlog)
- Delinquent deficit –
  - o The total deficit will be less than one million by 8/31/2014

5. ***When is the benefit likely to be achieved?***
- Cycle times - likely decrease within 2 months of implementation
- Delinquent deficit – 1 year
  - o The deficit would reduce over 5-10 years as each property with a lien changes hands. The amount at risk would become $0 within 12 to 24 months. Any amounts delinquent over 3 years will have lien filed so the actual amount will not have an "at risk" status.

NOTE: The Capacity Charge Section will undertake a Lean Business Process Improvement Project starting with a Lean Event in October 2013.

Updated 6/21/16:
Phase 3 (underway, target completion of 9/30/2017): IBIS and Business Objects Retirement Project
- The IBIS data will be migrated to a stable inexpensive environment to support demand for continued use of data. Data will be migrated in a format that can be queried to produce business critical reports.
- The IBIS Financial and Business Objects Reporting systems are outdated and unstable, program software incompatibility problems have prevented users from accessing needed data. Special workstations with very old configurations have been put in place to resolve the issue.
- Phase 3 has processed through vendor selection and contract development and can proceed once the final contract details have been finalized. KCIT has conducted an OPS ART analysis and has approved the project after obtaining security architectural improvement commandments from the

vendor. DOT/Transit, DNRP/Wastewater and FBOD/FMS have reviewed the project and a project financing plan has been developed.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

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The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   - HP ends all support for the HP-UX operating system used by IBIS and Business Objects on December 31, 2015.
   - BRC does not have the resources or knowledge to provide support moving forward.
   - IBIS and Business Objects software programs are very old and have not been upgraded. It is very fragile.

- Program software incompatibility. KC employee/standard workstations can no longer access IBIS and Business Objects. Extra "IBIS only" workstations with very old configurations have been put in place to resolve the issue.

Update of 08/07/2017: As part of Phase 3, the IBIS and Business Objects servers will be shut down and replaced with a cloud based OLTP reporting tool called Performance Center. The primary benefit of this phase will be retaining the ability to respond to public information requests and potential grant audit related inquiries. Federal DOT grants require access to the information through the late 2020's and WTS loans require access for a similar period.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
   A market research was conducted Q4 2014 to identify possible solutions to replace IBIS and Business Objects. One of the proposed solutions is a Cloud-based ITL with BI. Cost is projected at $20,000 for Data Migration and Implementation, and $45,000 for Annual Subscription.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   Implementation success measures incorporated into the project – UAT acceptance, implementation for 3-6 months with no problems/errors, cost reduction.

3. *What is the current baseline?*
   Yearly cost for maintaining IBIS and Business Objects in 2014 is $141,289.92.

4. *What is the target for this measure? (How much savings will this project achieve)*
   Approximately an annual savings of $90,000.

5. *When is the cost reduction likely to be achieved?*
   Q1 2016 (updated 6/16/2015) Now Q2 2017.

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *$100,000 savings*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

==Update of 08/07/2017==: Phases 1-2 (bringing capacity charge data into EBS and eliminating reliance on two systems to do routine daily work) have been completed (EBS project #1122195 closed out). The target outcomes set for Phases 1-2 and related to timeliness and accuracy have been accomplished. Also, increased collection activities for liens and intents to lien has largely eliminated the AR delinquency issue. See below for more detail.

Currently, the project is in Phase 3. Phase 3 is an operating project. The target completion date for this phase is 09/30/2017.

Phase 2: CCP Data Migration from IBIS to EBS (updated 6/16/15)
- CCP data migration from IBIS to EBS eliminated accessing two AR systems as part of the daily workflow
- Migrating the IBIS data to EBS was a precursor to a LEAN process improvement process for CCP
- The IBIS data migration project was conducted as a model for future EBS system improvement projects by the BRC Review Board and management.

Project update 6/21/16:
- Project was implemented in Dec-2014 with IBIS access removed CCP users in early 2015.

- All IBIS data that was needed to perform transactions in EBS was successfully migrated from IBIS to EBS eliminating the need to look at two systems to perform routine business activities.
- The cycle times for transactions totally within Oracle EBS AR have dropped because of the elimination of the need to consult two systems.
- Escrow requests however have not reduced in cycle times due to the need to review assessor data and other public records. The cycle time would have been significantly higher if IBIS 2 data wasn't implemented.
- Volumes have increased for escrow requests and change of ownerships due to continued increases in new construction and mortgage refinances. CCP is able to accommodate the increased workload due to the ease in accessing data on one system.
- Additional staff resources and the ease in accessing data in one system have helped to eliminate backlogs in returned mail, change of ownership and intents to lien.
- Moving IBIS data into EBS has enabled the Phase 3 project to move forward.

Measure	Baseline	Target	Results (updated 6/21/2016)
Decreased cycle times	2 days	5 to 60 minutes	3 days (heavier volume, limited staff)
Decreased balance of delinquent payments	$1.9 million (as of 8/31/2013)	<$1 million by 8/31/2014	<$3.6 million
Early pay-off (unapplied receipts)	1 day	15 to 75 minutes	No change due to scanner issue.
Early pay-off (escrow request)	15 minutes	5 minutes	1 minute 17 seconds
Lien request preparation	2 hours	45 to 60 minutes	30-45 minutes
Returned item processing	1 hour/item	10-30 minutes/item	10-20 minutes/item
Cost savings	Annual cost of $141K to maintain IBIS and Business Objects	Cost savings of $90K/year beginning Q2.2017 Q1.2016 due to migration to a Cloud-based solution and shutting down the three IBIS servers	Delay in achieving this target from the original Q1.2016 to Q2.2017

Update of 08/07/2017: Lien request cycle times were worse due to huge growth in the requests. This has been reduced to 1.5 days total cycle time and the system time has been reduced to under 5 minutes. WTD is developing an automated system that will fulfill most escrow requests on demand with no need for WTD personnel to work on the requests.

No improvement in early pay-off requests was due to a scanner issues in FBOD-Treasury. This issue has been resolved. Additional work has been done so that unapplied receipts will be automatically applied to all accounts with a higher level of internal control. A test project has been on-going with Soos Creek since August demonstrating this functionality. A full scale roll out will be done for all districts later in 2017. Currently the work is being done in under the 15 to 75 minutes per day goal. But with these improvements this time with be reduced to a very small amount.

Update of 6/18/2018:
- The turnaround time for escrows is still at **1.5 days**.

- The $1.9 million debt (explained as within 30 days of being 3 years delinquent or more) has decreased to **$104,583.00**.

Update of 02/05/2019:
- Phase 3 is complete (Vendor solution mo'mix) - the County has maintained their level of service by retaining access to historical, IBIS, financial data.
- Project finished and closed. No additional benefits anticipated.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DNRP/WTD
Project Title	DNRP/WTD Pretreatment Information Management System (PIMS) Replacement
Project Number	1134301
Project Timeframe	2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Mark Isaacson, Division Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Chris Townsend	Environmental & Community Services Manager/WTD	Sponsor
Mark Henley	Environmental Program Managing Supervisor / WTD	Sponsor/Lead
Arnaud Girard	Industrial Waste Compliance Investigator III / WTD	Lead
Devin Barnes	Finance / WTD	Finance Consultant
Juliette Peze	KCIT Program Manager	PIMS KCIT Program Manager
Patrice Frank	DNRP IT Service Delivery Manager	IT Customer Service Manager
Caitlyn Hall/ Judy Pickar	Business & Financial Officer III/DNRP	WTD Capital Cost Estimator/ WTD Project Management

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.

5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Budget Process	6/11/18	Devin Barnes	New, initial draft	2 Hours
2019-20 Budget Process	6/14/18	Mark Henley	New, revised draft	3 hours
Update for the Spring 2019 BAP Report	2/7/19	Devin Barnes	Reviewed document. Benefits moved from 2020 to 2021 due to slightly delayed 2019 project start. We want to measure benefits over the course of a year.	20 Minutes
Update for the Spring 2019 BAP Report	3/5/2019	Devin Barnes	Update for section 7	5 Minutes

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary.

While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☒
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☒

<u>CATEGORY #1</u>: **External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.**

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   If this project is approved, Industrial Waste (IW) customers, general public, and external partners (local sewer agencies) will be able to use a web-based, "self-service portal" to perform tasks on-line such as: completing industrial surveys, filling out applications for permits or discharge authorizations, entering and submitting self-monitoring report (SMR) data, accessing data including GIS, accessing billing information, and potentially paying bills via ePayments.

   IW's current PIMS system lacks all of the above functionalities. Specifically, the current PIMS lacks the ability to utilize web technologies and does not allow for integration with other systems.

   This project will replace the current outdated PIMS with a modern one providing additional services to external customers, such as:
   - Submitting SMR discharge data via a web-portal. This will reduce waste and conserve customers' resources by eliminating manual writing on SMR paper forms, scanning and emailing or physical mailings (time, postage). It will also save time and increase compliance because it is envisioned that the new system won't allow customers to submit SMRs if they are missing data or if the reports are incomplete. Fields will be flagged and will require being

addressed in order to submit. This will reduce re-submittals to KCIW. The new system will allow customers to easily revise data.

- o Submission of e-reporting of discharge data will also meet the federal requirements 40 CFR Part 3 thereby being in compliance with EPA/Ecology (external regulatory agencies). EPA/Ecology won't have to take enforcement action against KCIW, thus their staff time will not be expended on enforcement actions against KCIW. Deadline for compliance with federal law is December 31, 2020.
- o The ability to use mobile devices to submit data and information to KCIW creates convenience.
- o Integration with GIS so customers can see which, if any, local sewer agency their discharge will be going to and if their permit request is within the WTD service area. This saves time and effort for customers outside of our service area by helping them to know when they don't need to submit an application.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   The benefits will be achieved when customers can submit their discharge data on-line through a web portal, and KCIW is in compliance with federal regulations. Post-implementation: a survey of Industrial Users (IUs) can be conducted to measure satisfaction with the on-line SMR discharge data tool. Specific, quantifiable benefits for Industrial Users will be achieved when:
   - % of Significant Industrial Users (SIUs) are able to submit SMRs online
   - EPA/Ecology gives CROMERR approval to KCIW
   - From survey, % SIU satisfaction with the on-line SMR tool.

3. ***What is the current baseline for this measure?***
   Currently, external stakeholders are not able to perform any of the above functions. Specifically,
   - 0% of SIUs submit SMRs via on-line/web portal
   - KCIW has not received approval to accept electronic reports via 40 CFR 3.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   This improvement will save IW customers time, effort and resources.
   - > 90% of Significant Industrial Users (SIUs) are able to submit SMRs online
   - EPA/Ecology gives CROMERR full approval to KCIW
   - > 70% SIU survey satisfaction with the on-line SMR tool.

5. ***When is the benefit likely to be achieved?***
   By 12/31/2020 (Federal mandate)

6. ***Summary table for Category #1:***

Outcome/ Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Customers able to submit SMRs via web portal	% of customers able to submit SMRs online	Not currently able to do (0% of customers are able to submit via web)	90% of customers submit via web	12/31/2021
KCIW compliant with federal regulations	Gain full approval from EPA/ECY. (Note: EPA/Ecology does not give a numerical rating or a % approval)	No approval currently	Full approval	12/31/2021

SIUs are satisfied with on-line tool to submit SMRs	% SIU satisfaction with the on-line SMR tool	0% satisfaction (web-based tool not currently available)	70% satisfactory rating with SMR reporting tool	12/31/2021

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   WTD expects to reap several internal benefits from this project, both operationally and by enhanced information. By implementing a modern pretreatment COTS system, that is web-based, IW can:
   - Receive self-monitoring discharge data from industrial customers electronically which will automatically populate fields/templates regarding compliance and enforcement actions. This will eliminate manual data entry and save valuable staff time. Currently staff manually type in customer data into PIMS ~ 300 hours/year.
   - Automatically submit information to King County's financial system, for billing. Reducing staff data analysis and entry. Fees like surcharge, will be automatically calculated. Currently staff manually perform this task ~ 250 hours/year.
   - New functions for creating and tracking control documents will reduce manual efforts and staff can focus more time on inspections.
   - The new PIMS will allow inspectors in the field to upload pictures, videos, and voice recordings real-time. This will allow staff to be more efficient and save time while on site at a customer's location. It will also produce faster, more defensible enforcement actions by providing documentation as violations are occurring.
   - By integrating this new system with GIS, IW and WTD will get several benefits:
     - Staff will have real time information about the WTD conveyance system and customer discharge points. This information is important for issuing control documents.
     - GIS information can be used to help trace samples back to their source for "unusual occurrences" and to source trace an unpermitted discharge. It will also allow IW staff to relay information to off-site or treatment plant staff whether their facilities will be affected by a "slug" load of toxic material. Thereby, providing an alert and potential call for proactive action to protect infrastructure and worker safety.

This new system will also facilitate the distribution of IW data in a way that was not possible before and allow users to make data driven decisions via integration to other WTD systems (Finance, GIS and KCEL).

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The benefits will be achieved when IW staff no longer have to manually enter customer discharge data, when they no longer have to manually calculate bills, when they have more time to conduct inspections, when they use modern tools to capture critical information regarding compliance. Specific quantifiable benefits will be measured in the following ways:
   - # of hours manually entering SMR data by KCIW staff
   - # of hours used to manually calculate bills

3. *What is the current baseline for this measure?*
   Current baseline is manually enter of customers' discharge data and hundreds of hours spent on producing the billing manually by KCIW staff.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   Eliminate data entry of self-monitoring data. Reduce manual entry for billing purposes.

5. *When is the benefit likely to be achieved?*
   By 12/31/2021

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Eliminate data entry	Hours spent entering Self-Monitoring Data per year	~300 Hrs/Year	~0 Hrs/Year	By 12/31/2021
Reduce data entry	Hours spent producing IW billing	~250 Hrs/Year	~10 Hrs/Year	By 12/31/2021

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   This project will replace the existing PIMS system with a Saas COTS solution. This replacement project is necessary because support could end at any time and that creates a large risk to KCIW in

performing its legally required duties. Besides reducing risk, the new PIMS will meet federal requirements for electronic reporting (40 CFR Part 3 – Cross media electronic reporting rule).

Existing PIMS, which is roughly 20 years old, is limited by a legacy database and an archaic desktop-based user interface that is not web-based. Data that is self-reported by industrial users (IW's customers) is manually processed. PIMS does not integrate with GIS and with the finance system to automate billing or invoicing. In addition, the current PIMS system does not support LEAN IW's efforts nor does it meet federally-required e-reporting efforts. The PIMS system currently faces the following two significant risks: (1) lack of support infrastructure and (2) inflexibility to adapt to emerging business requirements, which are a product of PIMS age and original code/language (GUPTA). The WTD IW unit is, operationally, heavily reliant on PIMS (everyday use by a staff of 15).

PIMS is at extreme operational risk, as there is only one person/developer who has the ability to perform changes to the original source code (consultant in L.A.) and one KCIT staff member who can work with GUPTA as a DBA. If either of these two people were to retire or decide to seek other employment, PIMS would be unsupported. Although PIMS has been a fairly stable system, KCIW has experienced some serious system issues in the last few years – there is a "bug" that randomly opens and closes IW customers' accounts. If KCIW fails to conduct legally-required inspections or sampling events; it risks being in violation of its delegated pretreatment responsibilities with EPA/ WA Dept. of Ecology. EPA/Ecology could find KCIW in violation and "overfile" (take away the IW program from KC). The current PIMS system has gone beyond its life cycle, especially with respect to e-reporting and automated workflows. As time goes on, support and development for PIMS will cease. The new PIMS is expected to last at least 20 years, as a COTS system, and will keep up with modernization and evolving technologies.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur***.
   Support for PIMS is based upon a sole source waiver with an individual, whom worked on the original PIMS project. The GUPTA language is not part of KCIT standard set of supported technologies. It is highly likely that PIMS will lose total support via personnel decisions or retirements within the next 1 to 3 years. It's imperative that PIMS move to implementation as soon as possible.

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Reduce account maintenance issues due to system failures	# of system events were accounts open/close by themselves, against business logic, per year.	1 to 2 times per year	No events	By 12/31/2021
Achieve Regulatory Compliance, with CROMERR	Gain regulatory acceptance from EPA/Ecology for e-reporting	Current system does not allow for e-reporting. No EPA/Ecology approval at this time	Gain CROMEER approval. IW customers are able to submit self-monitoring data to KCIW.	By 12/31/2021

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
   IW staff won't be manually entering IW discharge data or manually performing billing tasks such as calculations. This will move to automated workflows.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   - Amount of time manually processing customers' data
   - Amount of time manually calculating bills

3. *What is the current baseline?*
   Self-monitoring data entry ~ 300 hours/year x $150/hour (overburden) = $45,000/year
   Billing entry ~ 250 hours/year x $200/hour = $50,000/year

4. *What is the target for this measure? (How much savings will this project achieve)*
   Reduced cost Approximately $93,000/ year (for the life of COTS system)

5. **When is the cost reduction likely to be achieved?**
   After implementation is complete, a cost savings will be realized beginning with the first year of the system's use.

6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Annual savings	Staff time spent on manual discharge data entry	$45,000	$0	12/31/2021
Annual savings	Staff time spent on manual billing entry	$50,000	$2000	12/31/2021

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both

quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: *This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.*

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

DB: 03/05/2019 – This project is currently going through vendor selection. No benefits have been realized for this project yet. This project has been slightly delayed in vendor selection, but we are still on track to recognize benefit schedule (2021).

IT Project Benefits Achievement Plan (Version 2)

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

To complete this document fully, please read all of the colored sections and fill in the white cells. For assistance in completing this form, please contact your PSB analyst.

King County Department/Agency Name	DNRP/WTD
Project Title	West Section Control System Replacement
EBS Project Number	1038125, 1114374 & 1114376

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: Christie True, DNRP Department Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the benefit achievement plan below:

Name	Title / Agency	Project Role
Lisa Taylor	Section Manager/WTD	Sponsor
Robert Waddle	Section Manager/WTD	Sponsor/Customer
David Jurgens	Assistant Plant Mgr/WTD	Sponsor
Randy Smith	Supervisor/WTD	Customer
Steve Zamperin	Supervisor/WTD	Customer

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring

to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Revised per Council Request	10/14/13	Ann Grothe	Revised, changed to new format	2 hours
Revised per Council Request	2/24/16	Ann Grothe	Customer updates	30 minutes
Revised per Council Request	2/7/17	Ann Grothe	Review only	15 minutes
Revised per Council Request	2/27/18	Ann Grothe	Review only	15 minutes
Spring 2019 BAP Report	1/9/2019	Ann Grothe	Review & minor updates (final BAP)	30 minutes

Section 6. Description of Project Benefits

Identify the category (ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improved the quality or quantity of services provided to the public
2) Internal service benefits: Improved internal operations, including the quality or quantity of internal services
3) Maintained service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

· Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: N/A

Category #2: Internal service benefits: N/A

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   This project completely replaced the current West Section control system. The expected life span of a SCADA or DCS (distributed control system) is 10-20 years. The current control system technology, installed in the 90's, is failing. The hardware is no longer manufactured and the software is no longer supported by the manufacturer. As this system is critical to plan operations, timely replacement is necessary to avoid Ecology permit violations.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   Existing hardware and software is already failing. The probability of complete system failure is 100% within a year. The replacement was phased to prioritize the replacement of critical and failing hardware first.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance – N/A

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. *For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.*

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	*• 10 days processing time* *• 10 percent of purchases are receiving discount* *• Savings of $100,000*	*• 1 day processing time* *• 30 percent of purchases are receiving prompt payment discounts* *• $400,000 savings*	*• 2 day processing time* *• 20 percent of purchases are receiving prompt payment discounts $200,000 savings*

Update for Spring 2019 Report:
This is the final BAP. The project has been closed. The control system was successfully replaced and there have been no failures. No additional benefits have been identified or realized and the project is complete.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Public Defense
Project Title	DPD Case Management System
Project Number	1133724
Project Timeframe	September 2018 – March 2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Gordon Hill, Interim Criminal Policy & Practice Director, DPD

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Anita Khandelwal	Director / DPD	Business Sponsor
Ericka Turley	Functional Analyst / DPD	Project Lead/Steering Committee Member
Laura Federighi	Chief Financial Officer/ DPD	Financial
~~Gwen Clemens~~ (left department)	~~Director of Administrative Services and Operations / DPD~~	~~Project Sponsor/Steering Committee Member~~
~~Jeanette Brinster~~ (left department)	~~Quality and Resource Counsel / DPD~~	~~Steering Committee Member~~
Tanya Hanna	CIO	IT Sponsor
Jim Keller	Service Delivery Manager / KCIT	Steering Committee Member/ KCIT
Alex Jacobson	Business Analyst / KCIT	Business Analyst
Jenn Butler	Project Manager / KCIT	Project Management
Gordon Hill	Interim Director Criminal Policy & Practice	Project Sponsor
Molly Cherkin	Business Analyst / KCIT	Business Analyst Supervisor

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	2/1/18	Ericka Turley	New, initial draft	2 hours
2017-18 3rd Omnibus Budget process	3/23/18	Ericka Turley	Added metrics, updated content	13 hours
2017-18 3rd Omnibus Budget process	4/4/18 4/18/18 5/25/18	Gwen Clemens	Reviewed content	3 hours
2017-18 3rd Omnibus Budget process	4/18/18 5/24/18 5/25/18	Ericka Turley	Finalized content	11 hours
Spring 2019 BAP Report	1/29/19	Ericka Turley & Gordon Hill	Updated Section 6 with new benefits. Added a summary update to Section 7.	

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services

3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☒	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Governments are constitutionally mandated to provide all people accused of crimes or at threat of losing their children with effective assistance of counsel. The Chief Defender must assure the time and resources allocated are carefully monitored so that all people to whom she is appointed to represent receive constitutionally sufficient representation. This includes removing barriers to ensure that clients are notified and prepared in advance of every court hearing. The proposed CMS will address this by using automated notifications to remind and prepare clients and their attorneys in advance of each of their court hearings. DPD cannot do this cost effectively presently. We also plan to reinvest time and resources recovered to increase client contact. Other jurisdictions have shown that automatic notifications result in a statistically significant reduction in failure to appear rates. We expect similar results with automatic notifications and increased client contact.

We are currently in the process of exploring a system with a company called Uptrust that may allow us to send text reminders to clients regarding court dates. A new case management system will internalize this process, eliminating the loss of control of our data and client information to a third party.

A new CMS will allow us to realize additional external benefits:
1. It will be easier/quicker to produce case files for clients who request them;
2. Clients will be more satisfied with complaint responsiveness because supervisors will have more ready access to case documents and notes.
3. Clients will be more likely to receive representation consistent with DPD policies for quality representation because DPD will be able to track compliance with time and work requirements.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Our new CMS will include the ability to count client contacts and failure-to appear notices for any given period. With this data, we can then compare our projections to actuals and determine if we are on track. We plan to include these metrics on our tier board.

1. We will measure the time required to produce complete client files
2. Supervisors will track client complaints and their steps to redress the complaints as part of annual attorney evaluations.
3. DPD will measure compliance with key representation metrics and distribute measurements to attorney supervisors to ensure

4. *What is the current baseline for this measure?*
   Because our current system does not allow us to track failure-to-appear or client contact data, we conducted a manual study. We took a representative sample of 2017 District Court cases that had a bench warrant for failing to appear and reviewed each case individually. In this sample, we found that 90% of clients failed to appear and that less than 20% of those clients were contacted in the week prior to their hearing. Once the new system is implemented, we will update the baseline with improved data.

As revealed by our recent 2018 audit, we lack accurate data about all aspects of our current business because of the inadequacy of our current CMS; for example, the 90% failure to appear figure mentioned above is likely inaccurate. Our current baseline in all the above areas is not currently knowable, the benefit of a new system will be the ability to measure the identified benefits.

5. *What is the target for this measure? (How much improvement will this project achieve?)*
   We performed an initial literature review and found that the failure-to-appear rate varied widely depending on the type of case and release categories. However, when looking at less serious offenses, the range settled between 15 and 20 percent. We will target 20% for the first year and readjust in subsequent years as we collect our own data. We expect to contact 75% of all District Court clients at least a week prior to their hearing.

As to each of the added external benefits, the ability to track/measure the benefits is, itself, the target.

6. *When is the benefit likely to be achieved?*
   We expect to achieve the benefit at least 12 months after implementation.

7. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Reduced collateral consequences resulting from clients failing to appear at a hearing stemming from a lack of communication prior to their hearing	Rate of failure to appear	90% **Update 3/19:** Current actual percent unknown due to faulty data	20%	Dec 2020
	% of District Court clients who were contacted at least a week prior to their hearing	20%	75%	Dec 2020
Update 3/2019: It will be easier/quicker to produce case files for clients who request them;	Measurement of length of time between client's request for file and production of complete file	0%	80%	Dec 2020
Update 3/2019: Clients will be more satisfied with complaint responsiveness because supervisors will have more ready access to case documents and notes.	Measurement of number of complaints received, time between complaint and supervisor resolution	0%	80%	Dec 2020
Update 3/2019: Clients will be more likely to receive representation consistent with DPD policies for quality representation because DPD will be able to track compliance with time and work requirements.	Production of accurate, consistent data regarding time attorneys and other case workers spend on identified tasks	0% (Data is currently produced by accuracy and consistency is insufficiently reliable)	80%	Dec 2020

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. Describe why you expect the proposed IT investment to produce the benefit(s).

DPD's needs have surpassed the capabilities of its current systems. A new CMS will allow us to make process improvements that will affect approximately 20,000 cases per year. RFI vendor responses demonstrated modern and efficient features that would improve our ability to perform core business functions. For example, a new system would:

A. **Decrease the time it takes to create and open new cases.** We process approximately 20,000 cases each year. Every new case must be entered at least twice, once in the case assignment database at the Director's Office and once again in the assigned division's database. The case may be entered yet again if it is reassigned. We are seeking a solution with enhanced workflow capabilities that will allow cases to be assigned and accepted with a few keystrokes or clicks of the mouse. Having this capability will allow us to shift tasks to more meaningful and value-added work.

B. **Decease the time spent reviewing and processing electronic evidence.** In 2017, staff uploaded 1,045,874 files totaling 22,516 GB. Disappointingly, our existing CMS lacks the full set of functionality such as full-text search and basic file organization, which is needed to manage and navigate this vast number of files. For example, docket staff must zip, unzip, and rezip files so that they can be saved together because our CMS does not have the basic technology of grouping files together into a folder. Staff also have no ability to flag a file to indicate that it contains material that needs to be seen. This causes a considerable amount of wasted time sifting through files that are immaterial. Additionally, although video files are saved in the system, they must be downloaded to a computer before they can be viewed. To view, staff must download the entire zipped file containing many other files inside, unzip the file and then locate the specific few minutes or section of the one file they want to view. Because more than one person typically views these files, this download process happens more than once. While the issue of large file sizes won't go away, a new system with improved document management and video streaming capabilities will allow staff to review and attend to the contents of the legal case rather than spend time hunting for files.

Update 2/2019:

C. **Decreased time spent by Attorneys, Investigators, and Mitigation Specialists entering data**. By streamlining and more intelligently limiting the information we're tracking and thus requiring our staff to enter, we will increase staff efficiency in the performance of other functions.

D. **Allow Division and Department management to generate reports that measure the staff workloads and rates to create more reasonable staffing projections, models, and assignment decisions.** Because DPD cannot currently accurately track and measure in an efficient and reliable manner: attorney time, credits/assignment, credits/filing, hours/credit, investigator and mitigation hours per credit/case, etc., we both over- and underutilize staff and other recourses. The ability to track this data will allow us to answer questions raised by our 2018 audit.

2. How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)

We will measure the benefits as follows:

A. **Satisfaction Survey:** Staff will be surveyed for how satisfied they are with the new CMS and if they feel that their time is better utilized.

B. **Proportion of Time Spent on Value Added Work:** Division staff will be asked to report on the proportion of time they spend manually entering new cases compared to more value added work.

C. **Data entry Tracking:** Staff will be surveyed regarding the amount of time they spend entering data into the new system.

D. **Data Tracking:** we will run reports and aggregate data allowing to accurately answer questions raised by our 2018 audit.

3. ***What is the current baseline for this measure?***
   Our baseline was determined using two methods:
   A. **Satisfaction Survey**: 30 percent of staff rated their satisfaction with the existing system as average to above average on a staff survey completed in 2017.
   B. **Proportion of Time Spent on Value Added Work:** A baseline will be established using an employee survey prior to implementation.
   C. **Unknown**: Our 2018 audit and our ability to adjust the data in our staffing model reveals that we are currently not able to accurately track data regarding data entry, attorney work, case practice/outcomes, or credit assignment.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   We would consider the project a success if the following conditions are met:
   A. **Satisfaction Survey**: 75 percent of staff give an above average rating on a staff satisfaction survey.
   B. **Proportion of Time Spent on Value Added Work:** zero percent of Division staff time will be spent manually entering new cases assigned.
   C. **Accurate Measurement:** We will generate reports regarding the foregoing information that are corroborated by observation and other data sources (such as the Courts and Prosecuting Attorney's Office).

5. ***When is the benefit likely to be achieved?***
   We expect to achieve these benefits by December 2020.
   Because of delays caused by a change in management of DPD and renewed areas of focus raised by our 2018 Audit, we expect these benefits to be delayed until late 2021.

6. ***Summary Table for Benefit Category #2:***

Outcome/ Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Improved staff satisfaction	% of employees who give above average ratings of the CMS	30%	75%	Dec 2020
Shift to more value added work	Proportion of time spent on duplicate data entry compared to more value added work	To be determined prior to Dec 2018 Update 02/2019 The 2018 audit revealed an inability to track this metric. We will continue to attempt to quantify this while working to acquire a new system and will revisit this question in a subsequent BAP	0%	Dec 2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example:		5 outages	No outages	By 06/30/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Spring 2019 BAP Report: This is a new and ongoing project. Over the course of 2017-2018, we have obtained funding for the project; we have engaged with KCIT and have begun their process of developing an RFP based on the creation of functional teams; and we have completed the initial survey of these teams to establish base line qualitative measures of their current experiences and vision for a future CMS. We have entered into a new Project Charter with KCIT.

Summary Table not yet created as no benefits have been achieved as of this date.

IT Project Benefits Achievement Plan

To complete this document fully, please read all of the colored sections and fill in the white cells.

For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	King County Elections
Project Title	Tabulation System Replacement
Project Number	1129465

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Nate Valderas, Operations Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Sonja Rowland	IT Project Manager III, KCE	Project Manager
Jerelyn Hampton	Elections Supervisor, KCE	Subject Matter Expert
Kortney Kinzer	Elections Supervisor, KCE	Subject Matter Expert
Kelly Moselage	Elections Lead-BP, KCE	Subject Matter Expert
Chris Raver	IT Systems Specialist Sr., KCE	Subject Matter Expert
Leland Buchanan	Elections Lead – BP, KCE	Stakeholder
~~Shannon Cortez~~	~~Deputy Director, KCE~~	~~Steering Committee Chair~~ (updated 3/1/19)
Julie Wise	Director, KCE	Sponsor
Nate Valderas	Operations Manager, KCE	Steering Committee Member
Kendall LeVan-Hodson	Chief of Staff, KCE	Steering Committee Member
Bill Adams	Business Finance Officer, KCE	Business Finance Officer

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process	5/19/16	Sonja Rowland	New, initial draft	4 hours
Update Post Early Feedback	6/20/16	Sonja Rowland	Section 1, Section 7	30 minutes
Update Post Council Staff Feedback	10/13/16	Sonja Rowland	Sections 2, 3, and 6	45 minutes
Spring 2017 BAP Report	2/2/2017	Sonja Rowland	Review Only	5 minutes
Spring 2019 BAP Report (final BAP)	1/29/2019	Nate Valderas	Section 6: updated primary Project Benefit Section 7: added new metric and updated actuals for existing metrics	20 minutes

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underline primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1 (**Secondary**): External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2 (**Secondary**): Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒Category #3 (**Secondary, updated 1/29/2019**): Maintaining service levels by replacing or upgrading older technology

☒Category #4: **(Primary, updated 1/29/2019)** Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   ~~Decrease number of days post-election to complete 95% of scanning.~~ updated 1/29/2019

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   To be determined.

3. *What is the current baseline for this measure?*
   To be determined

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   To be determined.

5. *When is the benefit likely to be achieved?*
   To be determined.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The new scanners on the market are faster, more reliable and are able to read a wider variety of marking devices as well as ballots in various conditions (torn, dirty, etc.), thus greatly increasing the speed in which ballots are scanned.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Measuring the difference between the baseline ballots per hour per machine scan speed for an 18" double side ballot.

3. *What is the current baseline for this measure?*
   For an 18" double side ballot the baseline is 1,200 ballots per hour per machine.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   The target for this measure is 2,500 - 18" double side ballots per hour per machine.

5. *When is the benefit likely to be achieved?*
   Within one year following implementation of the new tabulation system.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   The legacy system was deployed in 2009. It is now owned by a company that did not build it and is not totally familiar with it so cannot adequately support it. While the average lifecycle for this

technology is 10 years, this particular product was built on a Windows XP platform and cannot be modified for the current, supported Windows Operating System without having to undergo rigorous Federal and State certification testing.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   This benefit will be achieved as soon as the legacy system has been removed and the new system is installed and operational at levels meet or exceed current tabulation and adjudication levels.

3. ***What is the current baseline for this measure?***
   Current baseline is a system certified to operate on a Windows XP platform (which is no longer supported by Microsoft) and cannot expand to meet growing voting population.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   A system that is certified to operate on a Windows 2008 or newer version of software and has the ability to expand to meet King County's growing voting population.

5. ***When is the benefit likely to be achieved?***
   Immediately upon implementation.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance. This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
   The new hardware allows for faster scanning and increased functionality in the software results in less manual intervention upstream. *(updated 1/29/2019)*

2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
   We will measure cost reduction in the number of temporary worker hours worked per 1000 ballots processed *(updated 1/29/2019)*

3. ***What is the current baseline?***
   In 2016 (the last general election before implementing the new system) the process took 34.11 hours per 1000 ballots processed *(updated 1/29/2019)*

4. ***What is the target for this measure? (How much savings will this project achieve)***
   A 25% decrease in hours worked per 1000 ballots processed. *(updated 1/29/2019)*

5. ***When is the cost reduction likely to be achieved?***
   Within one year following implementation of the new tabulation system. *(updated 1/29/2019)*

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	Processing Time annual savings, and percentage of purchases receiving prompt payment discounts	• 10 days processing time • 10% of purchases are receiving discount • Savings of $100,000	• 1 day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2 day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

This is a final BAP. The project has exceeded its primary benefit target. The costs savings were incorporated into the 2019-2020 Biennial Budget. *(updated 3/1/19)*

Metric Description	Metrics	Baseline	Target	Actual
Increased speed in which ballots are scanned	Difference between the baseline ballots per hour per machine scan speed for an 18" double side ballot.	For an 18" double side ballot the baseline is 1,200 ballots per hour per machine.	2,500 – 18" double side ballots per hour per machine.	5,600- 12,000 ballots per hour *(updated 1/29/2019)*
Eliminated risk of operating the tabulation system on an unsupported platform.	No longer running on Windows XP.	Windows XP	Windows 2008 or newer	Windows 2008 *(updated 1/29/2019)*
Reduce cost to deliver service *(updated, new metric added 1/29/2019)*	Difference between baseline temporary election worker hours dedicated to preparing scanning and reviewing ballots. *(added 1/29/2019)*	34.11 temporary election worker hours per 1000 ballots processed *(added 1/29/2019)*	Reduction of 25% in hours per 1000 ballots *(added 1/29/2019)*	64% reduction in hours per 1000 ballots processed (12.21 hours) *(added 1/29/2019)*

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	DNRP/DNRP Administration
Project Title	Project Information Center – Green Building/Sustainability Module
Project Number	1127457

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Bob Burns, Deputy Director, Department of Natural Resources and Parks

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Nori Catabay	Green Building Team Program Manager/King County	Requirements Advisory – Green Building Ordinance
Hans Erickson	Project Controls ~~Managers~~ Supervisor/WTD/DNRP	DNRP Capital Data Integration Coordinator - Budgeting and Quarterly Reporting
~~Sid Bender~~ Tricia Davis	~~Capital Manager~~ Budget Supervisor/PSB	PSB Contact

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process	9/21/15	See Section 3	Revision required for new BAP format	1 hour draft/1 hour including participant review
2016 Annual Report (project approved in 2015-16 Supplemental; currently reviewing business requirements)	02/28/2017	Nori Catabay	Updated Section 6 to reflect a greater number of projects reporting on Green Building than when project was originally proposed	1 hour
2016 Annual Report	06/25/2017	Nori Catabay Gaukhar Serikbayeva	Updated Section 2 and 6 in response to Council staff feedback	1 hour
2019 BAP Review Process	2/7/2019	Jim Walsh	Updated status of BAP since Project was cancelled	15 minutes

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underlined primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

Note: Since Category #1 is a relatively lower value project benefit category as compared to the other benefit categories, see the responses to below to categories 2, 3, and 4.
1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Benefit #1: Better reporting and more effective performance management because the accuracy and accessibility of the data will be improved. Better reporting will provide more transparency and better information for all users.

   Benefit #2: Improve Green Building/Sustainability program compliance by integrating with the County CIP budget and reporting system (i.e. Project Information Center/PIC). This will put staff time to better use toward project implementation, management, green building execution ~~training~~ and technical assistance.

   Benefit #3: A centralized system will provide agency users with consistent data entry, workflows, control measures, reviews and management of green building ordinance requirements

   In addition, this request will serve as an effort to respond to the King County Auditor's Green Building Ordinance Performance Audit. The Audit recommended implementation of a system for collecting, verifying, analyzing and communicating data reported under the Green Building Ordinance.

   The investment in system architecture will improve the overall quality of green building reporting data*.*

   PSB, the Green Building Team and Program Manager have limited resources available to devote to capital project oversight. Efficient data base structure and reporting value are essential given the hundreds of ~~high cost~~ projects requiring oversight.

   The investment in development of a ~~the architecture of the~~ Green Building/Sustainability Tab in the Project Information Center will free up ~~approximately hundreds of~~ significant hours in staff time that could be better used toward project implementation, management, green building execution ~~training~~ and technical assistance.

   Once system is available, the following will be implemented:
   a) Provide 2 training sessions per year. The training will instruct agency capital project managers on how to utilize the PIC system to enter green building reporting requirements.
   b) Provide more oversight on green projects: This time will be spent reviewing information on existing projects being reported, projects being proposed, following up on project issues and green building opportunities, working with the county divisions to address problems, assisting agencies with requests for help with problems, and training other division staff to do these same activities.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   ~~Once the architecture changes have been completed, two measures will be utilized:~~

   Benefit #1: Better reporting and more effective performance management because the accuracy and accessibility of the data will be improved. Better reporting will provide more transparency and better information for all users.

a) Percentage of Green Building Ordinance applicable projects ~~entering~~ reporting green building information

b) ~~Number of projects providing data for all reporting criteria~~ Percentage of users sorting and reviewing data by agency and project type to support performance management.

Benefit #2: Update of 06/2017: Freeing up staff time to allow more time for data quality control, project implementation, management, green building training and technical assistance to agencies.
a) Ratio of time ~~Number of hours reduced~~ spent by staff on improving, analyzing, and utilizing data (e.g., to provide training and assisting agencies to address problems, following up on project issues and green building opportunities) to time spent on aggregating data and creating reports (survey).

Update of 07/2017:
Benefit #3: ~~Survey of~~ Better experience for users because of consistent data entry, workflows, control measures, reviews and management of green building ordinance requirements
a) Percent of users satisfied with green building data and reports (survey)

3. **What is the current baseline for this measure?**
Benefit #1:
a) Percentage of Green Building Ordinance applicable projects ~~entering~~ reporting green building information: ~~0~~92%
b) ~~Number of projects providing data for all reporting criteria: 0~~ N/A. To be set by end of 2018.

Benefit #2:
a) Update of 06/2017: ~~Number of hours by staff: Approximately 3~~,560~~5,200 hours~~ Ratio of time spent by staff on improving, analyzing, and utilizing data vs. time spent on aggregating data and creating reports: N/A. The baseline will be set in Q4 2018. Currently, PSB, the Green Building Team and Program Manager have limited resources available to devote to green building and sustainability oversight.

Benefit #3:
a) Update of 06/2017: Percent of users satisfied with green building data and reports: ~~0%~~N/A. To be set by end of 2018.

4. **What is the target for this measure? (How much improvement will this project achieve?)**
Benefit #1: Update of 06/2017
a) % of Green Building Ordinance applicable projects reporting green building information: ~~1st year – 75%.~~ By Year 3 - 100%.
b) ~~1st year – 5~~300 ~~projects. all projects.~~ 75% satisfaction of users that utilize/analyze Green Building data for performance management (Q4, 2021)

Benefit #2
a) Ratio of time spent by staff on improving, analyzing, and utilizing data vs. time spent on aggregating data and creating reports: target is to be set in Q1 2019. ~~Reduce time on reporting by 1700 hours~~

Benefit #3:
a) % of users satisfied with green building data and reports: 75%.

Summary table of measures

Benefit	Measure	Baseline	Target
Benefit 1: Better reporting because the accuracy of the data will be improved. Better reporting will provide more transparency and better information for all users.	a) % of Green Building Ordinance applicable projects ~~entering reporting~~ green building information	~~9~~2%~~0~~	~~Year 1 – 75%.~~ Year 3 (Q4, 2021) - 100%.
	b) % of users sorting and reviewing data by agency and project type to support performance management	N/A. To be set by end of 2018	75% ~~satisfaction~~ of users utilize/analyze the Green Building data for performance management (Q4, 2021)
Benefit 2: Freeing up staff time (from aggregating data and creating reports) toward data quality control, project implementation, management, green building training and technical assistance.	a) Ratio of time spent by staff on improving, analyzing, and utilizing data vs. time spent on aggregating data and creating reports	TBD during survey development Q4 2018	TBD during survey development ~~Q1~~ Q2 2019
Benefit 3: Better experience for users because of consistent data entry, workflows, control measures, reviews and management of green building ordinance requirements	% of users satisfied with the green building data and reports (survey)	N/A. To be set by end of 2018.	75% satisfaction (Q4, 2021)

5. ***When is the benefit likely to be achieved?***
   When project is completed, starting in 201~~9~~7 for the 201~~8~~6 reporting cycle. The benefits to be achieved and measured by end of 2021. (Update of 02~~6~~7/2017)

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

   Green building reporting is currently paper-based, with eight different divisions sending hundreds of reporting forms and hundreds of green building checklists to the Green Building Team Program Manager. Documents are currently saved separately in the Solid Waste Division with the Green Building Team Program Manager. This IT request will change by providing an electronic paperless centralized database, accessible to all divisions responsible for reporting. The Green Building Team Manager will have access to the PIC and be allowed to extract reported information necessary for annual performance measures, and Strategic Climate Action Plan Progress Report annual reports to Council. Information will be more accurate and consistent.

   The age of existing technology system is 12 years old.

   The average life cycle for SQL databases is dependent on the ability to keep pace with developments in SQL programming database products provided by Microsoft. Provided that the database is supported by KCIT and updated to current versions of SQL, which is part of the annual maintenance done by KCIT, the life cycle of the replacement database is not impacted by the programming platform.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

   Primary reason is not risk reduction.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
3. ***What is the current baseline?***
4. ***What is the target for this measure? (How much savings will this project achieve)***
5. ***When is the cost reduction likely to be achieved?***

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing time, annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Spring 2019 BAP Report: This is the final BAP for this project. This project was cancelled in early 2018 and was not done in PIC. The project sponsor and PRB determined that the DNRP Prism capital system will be used for Green Building Module data collection and reporting requirements.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Office of Performance, Strategy and Budget
Project Title	Budget System Project Information Center 2014 Modifications
EBS Project Number	1121753

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

_____ Dwight Dively (updated 3/21/2019), Director, Office of Performance, Strategy and Budget

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Sid Bender	Capital Manager /PSB	Coordinator
Mike Morrison	Capital Program Administrator/PSB	Advisory
Hans Erickson	Project Controls Manager/WTD/DNRP	DNRP Capital Data Integration Coordinator - Budgeting and Quarterly Reporting
Shon Hong	Project Controls Manager/FMD	FMD Capital Data Integration Coordinator – Budgeting and Quarterly Reporting
Jim Walsh	Technology Group Manager/PSB	PIC Administrator PSB Technology System Coordination
Leslie Arai; Tracie Jacinto	Project Manager KCIT; Business Analyst KCIT	Oversee project planning and completion
Jim Record	PSB Analyst	Database Admin

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.

3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process	10/25/13	See Section 3	Revision required for new BAP format	4 hours draft/ 16 hours including participant review
2014 Annual Report (ongoing project)	3/20/15	Sid Bender	In addition to increased training for CIP agency staff, this version of the BAP expands the training beneficiaries to include PSB analysts. Updated the list of operations and management staff involved in work described in this benefit achievement plan update.	2 hours
2015 Annual Report (ongoing project)	2/22/16	James Walsh	Changed project role of James Walsh to PIC Administrator. Added notation that additional staff will save time because of system improvements.	
2016 Annual Report (completed project, BAP not final)	3/15/17	Jim Record	Updated Section 6, category 2 to add survey results and cleaned up language in category 3 to clarify that project 1121286 is closed.	2 hours
Update for the Spring 2019 BAP Report	3/21/19	Jim Record	Updated Section 2, Section 3, Section 5, and Section 7 for a completed project, FINAL BAP.	2 hours

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary </u>type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

X Category #2 **(Primary)**: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

X Category #3 **(Secondary):** Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***

   The investment in system architecture will improve the overall quality of oversight by PSB. PSB has limited resources available to devote to capital project oversight, while it is responsible for proposing and monitoring about 500 projects worth $200 to $300 million per year.

   The investment in the architecture of the Project Information Center (PIC) will free up approximately 25% of an FTE at PSB that can be utilized to do capital project oversight and training for agencies and PSB analysts (updated 2/2016).

   Who will be able to reinvest their time? Primarily, the PSB capital program administrator, who has over 25 years of experience managing and administering capital projects and systems, will be able to make a significant shift in the use of time In addition, all PSB staff that oversee capital funds, as well as staff countywide who use the system, will save ~~a significant amount of~~ time because information will be easier to access, and the PIC system will be more comprehensive: it will include all capital budget requests, spending from EBS for those projects, and performance monitoring information for projects as required by code (updated 2/2017).

   What will they be able to reinvest their time in?
   - ~~Provide 4 training sessions per y~~ear. This will need to be downgraded to two formal trainings each biennium right at start of agency budget season and 4 or more individual trainings as employees are on-boarded during the biennium. During the agency budget phase PSB also provides working labs of 3 hours for agency users to perform their CIP work and be mentored. (updated March 21, 2019)   The training will instruct agency finance representatives on how to create capital appropriation proposals using the PIC system, and how to create quarterly reports for baselined projects or for Mandatory Phased Appropriation Projects.

   - Provide more oversight and optimizing reporting processes: This time will be spent reviewing information on existing projects being reported, projects being proposed, following up on project issues or inconsistencies, working with the county auditor to address problems, assisting agencies with requests for help with problems, and training other PSB staff to do these same activities.

- This project will also improve user satisfaction because more user friendly interface, better permissions, and a better interface with EBS data.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   Once the architecture changes have been completed, two measures will be utilized:
   - Number of training sessions completed per year. PSB mostly achieved this goal; 4 training was the target and we achieved 2 trainings in the biennium with 5 individual trainings as employee on boarded. Training for all PIC users occurs at the start of the Agency Proposed phase for the planning biennium, PSB also includes 6 labs for individuals to utilize. (updated 3/21/2019)
   - To measure user satisfaction and time saved with the new system, we will sample users using the zzgroup e-mail list. In addition, we will survey Council and Auditor staff using the PIC system. (Time saved can be reported as activities/work completed that would not have otherwise been completed.) (Updated 02/2017). Mostly achieved this goal, 90% was target, achieved 79%, see survey results in Section 7. (updated 3/21/2019)

3. ***What is the current baseline for this measure?***
   - Number of training sessions completed per year: 0
   - Percent of users satisfied with system: The baseline will be established with a survey of all users before the system changes have been completed.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   - Number of training sessions completed per year: 4
   - Percent of users satisfied with system: At project completion the users will be surveyed to determine whether at least 75% of the users are satisfied and are able to redirect time to other high value capital oversight activities. One year after project completion, our target will be 90% of users satisfied and able to redirect time to other capital oversight activities. (Updated 02/2017). 79% of users satisfied with system according to November 2018 survey results as shown in Section 7 (updated 3/21/2019).

5. ***When is the benefit likely to be achieved?***
   - When project is completed, starting in 2016.

Measure	Baseline	Target	Actual as of 03/2017
# of training sessions per year	0	4	1 session Q1.2017 1 session Q4. 2016
% of users satisfied with system	15% ~~TBD with a survey of all users before the system changes have been completed~~	• at least 75% at project completion; • 90% one year after project completion	65% could easily enter CIP data into PIC during the 2017-18 budget cycle
SEE SECTION 7 FOR UPDATES (3/21/2019)		•	

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

   The Project Information Center (PIC) is a SQL server based application providing the county's primary oversight tool for collecting and storing capital project budget data. PIC is coupled with SQL Server Reporting Services (SSRS) for report distribution. PIC is utilized by all nine county agencies that implement capital projects.

   Implementation of this project will significantly improve the county's ability to maintain high quality project oversight by maintaining data in a stable, secure and supported software environment.

   Currently, these essential functions are managed in the PIC system and SQL Reporting Services:
   1. Create and maintain for future viewing and analysis 500 Capital Appropriation Proposals (CAPs) per biennial budget cycle
   2. Omnibus supplemental budget requests
   2. Supply data to GIS based public website located at kingcounty.gov/cip for projects >$1M.
   3. Supply data to quarterly council report for projects over $1M and Mandatory Phased Appropriation (MPA) reports.

   Project 1121286, ~~currently in~~ progress closed, includes development of reports in the SSRS environment (updated 03/2017):
   1. Migrate the Mandatory Phased Appropriation Report (MPA) quarterly status report from Access to SSRS (for all designated MPA projects in the implementation phase)
   2. Migrate the CAP report from Excel to SSRS (for all budget requests – provided to council for capital project budget requests)
   3. Migrate the Category 1 status report (for all baselined projects over $1M) from Excel to SSRS
   4. Migrate the Budget status report (Level 1 and Level 3) from Access to SSRS
   5. Red Yellow Green CIP project monitoring report
   6. Database administrator built TBD query that provides a data download into Excel for multiple users to pivot and report out information to their management team,
   7. Technology Report, identifies which Capital projects are technology based
   8. Excel query for Attachment A that is easily manipulated to extract needed data.
   9. CIP Decision Making report, to provide guidance to users when a decision for an Omnibus has been made.
   10. 1% Arts report to identify those projects that have 1% Arts applicable to the project. (Updated 3/21/2019)

   The~~ise~~ ~~new~~ request functions provide ~~will add these functions~~ to the PIC system (updated 03/2017):
   1. Automate actual cost and budget data transfer from the EBS financial system to the PIC database for CAP reports and quarterly reports.
   2. ~~Provide a~~A methodology for efficient data import from Agency project management databases, where they exist.

Additionally, implementation of this project ~~will~~ moved all of the components included in the system to a platform that the county can continue to support. In addition, it ~~will~~ improved data reliability, user experience, and ability of the county to share and administer project permissions to all county stakeholders without compromising data security. The ~~current~~ previous architecture of the SQL programming was not compatible with county architecture or security standards and was not able to ~~cannot~~ be improved or modified in any significant way without a KCIT-led re-architecture. The initial PIC database was developed in 2009. (updated 03/2017)

The average life cycle for SQL databases is dependent on the ability to keep pace with developments in SQL programming database products provided by Microsoft. Provided that the database is supported by KCIT and updated to current versions of SQL, which is part of the annual maintenance done by KCIT, the life cycle of the replacement database is not impacted by the programming platform.

In addition, a number of existing tools that are required for capital budgeting, reporting and data management are not supported by the county in a way that is acceptable in the long term. This problem is primarily related to the tool's use of Access databases in combination with Excel reports. Neither PSB nor KCIT have resources dedicated to this type of data management or reporting methodology. Therefore, this project ~~pursues the~~ ~~eliminat~~ion ~~of a~~lled such tools and moves~~d~~ them to the KCIT supported SQL database and SQL Server Reporting Services model.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   The likelihood of risk to the data lies with poor quality data entry from the inadequate user interface that ~~currently~~ previously ~~e~~xist~~s~~existed. The ~~current~~ previous application ~~is~~ was not user-friendly and lack~~s~~ed basic features that ~~will~~ would have improved data quality and reliability. The new PIC system provides better data integration with EBS; and PSB has implemented new business processes for inputting CIP information into EBS which improves data reliability in both systems. (updated 03/2017)

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

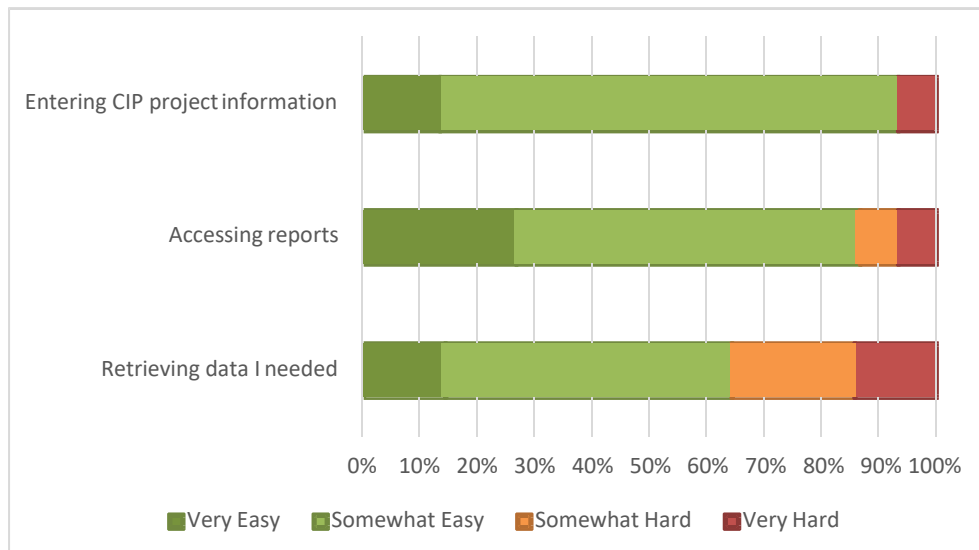**The above examples are summaries. Please respond to each question listed below rather than provide a summary.**

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
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4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Updated March 21, 2019:

Metric Description	Metrics	Baseline	Target	Actual
# OF Training sessions per year	*# of formal and informal trainings occurring during biennium*	• *0*	• *4 training sessions per year* • *May need to adjust this downward to 2 formal trainings and 5 onboarding trainings by individual (depends on when FTE is hired)*	• *1 Session Q1.2018 plus 1 council training Q3.2018. Plus individual onboarding trainings when nor formal training available.*
# of Users Satisfied with system by responding to survey questions which includes: *Entering CIP project Information, Accessing Reports, and Retrieving data I needed*	*Use of PSB Budget Process Survey, see below for results from 11/27/2018 email 2:54 pm.*	• *15%*	• *90% one year after project completion*	• *92% Entering CIP project info* • *87% Accessing PIC Reports* • *57% Retrieving data I needed;* • *79% Satisfaction (average from 3 items above)*

IT Project Benefits Achievement Plan (Version 2)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
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4. To ensure that benefits are achieved

King County Department/Agency Name	Executive/Performance Strategy and Budget (PSB)
Project Title	Hyperion Upgrade
Project Number	1129910

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Dwight Dively, ~~Jonathan S~~wift, ~~Deputy~~ Director, PSB

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
James Walsh	Technology Manager/PSB	Project Manager
Kate Davis	Business Analyst	Business Analyst
Kerri Char	System Administrator	Technical Analyst
Jim Record	System Administrator	Technical Analyst
Andy Bauck	Budget Analyst	Functional Analyst

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
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Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

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Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More

complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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Conceptual review	7/1/16	James Walsh	New, initial draft	1 hour
Budget process	8/22/16	Kate Davis	Revisions	2 hours
Budget process	9/2/16	Kate Davis	Revisions	1.5 hour
Budget process	9/14/16	Kate Davis	Revisions	1 hour
Budget process	10/16	PSB/Council	Revisions	1 hour
2016 Annual Report – Project implementation	3/17	Kate Davis	No changes; BAP for a new project that starts in 2017	1 hour
2016 Annual Report – Project implementation	7/10/17	Kate Davis	Revisions	1 hour
2019 BAP Report	2/27/19	Kate Davis	Updated Section 7	1 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national

and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

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1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   Hyperion 11.2.1.4 offers new features including: better performance of large data forms, increased ability to audit data changes, simplified user interface, improved tablet accessibility and improved system administrator tools. As part of the project, these features will be assessed and users will be engaged to determine how to best take advantage of the new tools. More benefits will be identified during the project and the BAP will be updated. The first benefit identified below provides a description of how the project would take advantage of increased performance of data forms. The second benefit describes how the project could build a foundation for increased analysis.

   Benefit #1 Reduction in Time to Enter Data: Users enter changes to the budget using web based data entry forms. Our current data entry forms limits the user's view of the data to only the incremental change that they are making to the budget. Users must estimate their calculations and validate their entry using separate screens and reports. The current process is cumbersome and error prone.

   CURRENT STATE DATA FORM

	Decision Package #1
Supplies	7,000
Total	7,000

With Hyperion 11.2.1.4 and the addition of actuals into the system, we will be able to develop more comprehensive data forms. These forms will provide users with more contextual information to support data entry. With enhanced form performance, we would be able to design forms that could show the baseline budget, historical actuals and all incremental changes in the data form. Users would be able to enter, calculate, and validate their data entry in a single screen which reduces the amount of time and potential data entry errors.

FUTURE STATE DATA FORM*

	Baseline Budget	Actual	Decision Package #1	Decision Package #2	Total
Labor	150,000	150,000			150,000
Supplies	20,000	25,000	7,000		27,000
Capital	100,000	100,000			100,000
Central Rates	10,000	10,000		2,000	12,000
Total	280,000	285,000	7,000	2,000	289,000

*Form design would be dependent on system performance and user review / specification.

Benefit #2: Increased Monitoring of County Funds: Having actuals in the budget system creates an input that could be used to automate the creation of Financial Plans for Operating Budgets. The creation of Financial Plans is a manual process that requires compiling data from multiple sources: actuals from EBS, budget from Hyperion, and year end forecasts from side systems. Each financial plan takes about 2 hours to compile and analyze.

Financial Plans are the primary tool used in PSB's Financial Monitoring process. Each quarter, PSB analysts evaluate the fiscal health of County funds. Financial Monitoring has tremendous business value to the County. Analysts are able to identify risks and opportunities throughout the biennium and work with agencies to develop mitigating actions. Financial Monitoring is time consuming and currently PSB only monitors funds that are identified as high risk. As more automation is introduced, analysts will have the capacity to evaluate a larger number of funds per quarter. Early identification of issues reduces the risk that funds will develop negative fund balances or excessive fund balances.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***

   Benefit #1 Reduction in Time to Enter Data
   - Number of steps to revise and validate a budget change
   - User satisfaction rating with data entry

   Benefit #2: Increased Monitoring of County Funds
   - Percentage of funds monitored each year

3. ***What is the current baseline for this measure?***
   See below

4. *What is the target for this measure? (How much improvement will this project achieve?)*

Measure	Baseline	Target
1a. Number of steps	<mark>18</mark> (2/27/19)	25% reduction
1b. User satisfaction with data entry	70% of users satisfied with OPEX data entry	90% users satisfied with OPEX data entry
2a. Percentage of operating funds monitored per year	33% of operating funds monitored each year	60% of operating funds monitored each year

5. *When is the benefit likely to be achieved?*
   Benefits for Data Entry would be achieved <u>within six months</u> of the start of the budget process. Measurement, however, would occur in August / September 2018.

   <u>Update 2/27/19</u>
   Benefits for Financial Monitoring would be achieved <u>within a <mark>2</mark> years</u> of the project Go Live – approximately Q1 ~~2019~~ <mark>2</mark>021. Benefits are dependent on several business process factors including developing a robust process for capturing year end forecasts in Hyperion and evaluating medium to lower risk funds. <mark>The Financial Monitoring project was delayed based on an early project decision to move Hyperion to a Cloud Based solution. The Cloud project was more complex than a simple upgrade and was prioritized in order to ready the system for the 2019-2020 budget process. As of February 2019, the Financial Monitoring work is substantively complete, but PSB is still developing the business process and rollout strategy for these new tools.</mark>

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   The primary benefit of this project is to reduce the risk of disruptions to the budget development process. Disruptions can occur when there are compatibility issues between Hyperion and other software used by our 100+ Hyperion users. Hyperion is dependent upon the operating system (OS), Office and Internet Explorer (IE) versions for the desktop computer client. As these 3 technologies are updated at King County the current version of Hyperion is exposed to more risk that it will not perform properly on a given desktop computer with the more advanced OS, Office and IE versions. Upgrading Hyperion reduces the risk of these disruptions as Oracle tests and certifies new Hyperion releases against the latest versions of Microsoft products.

   Disruptions can also occur when there are failures in hardware or middleware. In 2013, Hyperion experienced critical hardware failures in two out of three environments that resulted in three

months of system downtime. Currently the County insures against these disruptions by employing a combination of County IT support and consultant report to monitor and troubleshoot issues. However, County resources provide a "best efforts" level of service which means that issue resolution may be delayed by competing projects or deficits in skill sets to address the issue.

This project will migrate the Hyperion budget system from version 11.1.2.1 to the Hyperion Planning and Budgeting Cloud Service (PBCS). The current version went live during the ABT project in 2012 and dates from 2011 when the software and hardware were purchased. For the current version 11.1.2.1, the Oracle Premier Support level will expire in April of 2018 – right in the middle of the development of the 2019-2020 budget. After that date Extended Support is available for a fee until April 2021.

When products are covered by Premier Support, Oracle Support proactively develops patches and bug fixes to keep Hyperion compatible with the most recent versions of Internet Explorer, Microsoft Excel, and Java. The County can install these patches prior to the start of the budget season to ensure that the process is not interrupted by new issues that arise from ancillary software upgrades. In Extended Support, Oracle Support is more reactive in nature. Any issues that arise would need to be resolved on the fly potentially in the middle of budget development.

Even with Premier Support, Oracle has stopped creating patches for Hyperion 11.1.2.1. The most recent patch which the County has installed is certified for IE 9. Currently, most of the County's Hyperion users are using IE 10 and IE 11.

With the PBCS solution, the County's Hyperion solution will be updated monthly with incremental patches. The system will always be up to date and will be less likely to experience conflicts with new versions of Microsoft Office and Internet Explorer. Additionally, the responsibility for managing hardware and middleware will shift to the Cloud which should provide more stability and less risk of failure.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
   The probability of significant system issues and the chronic user issues is high. Browser updates are rolled out by KCIT every year – often for security purposes – and minor compatibility issues with Hyperion arise with each update. It is difficult to predict the exact likelihood of a significant issue occurring.

   In the worst case scenario, agency and PSB users could lose access to Hyperion Planning and Smart View as IE and Excel upgrades are rolled out by KCIT. County staff would need to work with Oracle Support to resolve the issue. This could delay the creation of the budget.

   Other smaller issues could arise that interfere with the user's ability to view and pull data. For example, in our current version, changing the zoom level on the Internet browser interferes with the users' ability to navigate the menus on the screen and open reports. Our current workaround is to request that users do not use the zoom feature on the browser. This creates an accessibility issue for users with impaired eyesight.

   The risk of compatibility issues will be mitigated upon the project completion in December 2017.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit

analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: _Reduced cost to produce service._ *If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.*

Example: _Cost Avoidance._ *Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
   The County anticipates that the PBCS project avoids the cost of approximately $750,000 in future upgrade costs. With our current on-premise solution, we must perform an upgrade or cloud migration every 5 years. These upgrades are large scale changes that require assistance from outside vendors and hardware purchases. With the PBCS solution, large upgrades and hardware purchases are not necessary as the product is updated through monthly patches that can be tested by PSB technical staff.

   Additionally, PSB has analyzed the ongoing costs and assumes:
   a. no significant change in maintenance costs paid to outside vendors for maintaining the licenses and monitoring system performance
   b. a reduction in KCIT rates currently paid by BRC for maintaining servers; and
   c. a reduction in BRC DBA hours spent on maintaining the system

   None of these maintenance factors result in budget reductions in the KCIT or BRC budgets. However, it is expected that resources can be deployed more efficiently in KCIT and BRC with the movement of this system to the Cloud.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   PSB will monitor all future upgrade costs. PSB will also reassess the ongoing costs at the end of the project.

3. *What is the current baseline?*
   The current estimate for an on-premise upgrade is $750,000. By moving to PBCS rather than an on-premise upgrade, the County will avoid the costs of software upgrades in the future.

4. *What is the target for this measure? (How much savings will this project achieve)*
   The target is for future upgrade / migration costs is $0 by Q4 2022.

5. *When is the cost reduction likely to be achieved?*
   In Q4 2022.

Section 7. Benefit Achievement Summary

For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	Processing time, annual savings, and % of purchases receiving prompt payment discounts	• 10 days processing time • 10% of purchases are receiving discount • $100,000 savings	• 1 day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2 day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update 2/27/19
This is not the final BAP. The Financial Monitoring module will be complete by the end of 2019.

Metric Description	Metrics	Baseline	Target	Actual
Reduce time to enter data.	1a. Number of steps 1b. User assessment of ease of use	• 18 steps (2/27/19) • 70% User satisfaction with OPEX data entry	• 25% reduction • 90% User satisfaction with OPEX data entry	• 72% reduction (18 steps to 5 steps) • 94% User satisfaction with OPEX data entry
Increased monitoring of County funds	2a. Percentage of operating funds monitored per year	• 33% of operating funds monitored each year	• 60% of operating funds monitored each year	First measure in Q1 2021
Cost avoidance for future upgrades	3. Cost of upgrade	• $750,000	• $0	Measure in 2022

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Transportation/Transit
Project Title	Next Generation Wireless (NGW) (Replacement of 4.9 Network and Mobile Access Routers)
Project Number	1124429
Project Timeframe	Q4 2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Elizabeth Love – Transit Systems Development & Operations Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Dan Overgaard	Supervisor, Transit Systems Development and Operations	Former Project Sponsor
Jill Krecklow	Finance Manager, Transit	Finance Manager
Pamela Wrenn	Project Manager II, Transit Systems Development and Operations	Former Project Manager
Scott Niskanen	IT Project Manager II, Transit	Project Manager
Patrick Dean	KCIT Network Architect	Network Architect
Elizabeth Love	Transit Systems Development & Operations Manager	Project Sponsor

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.

5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-2020 Budget Process	7/25/18	Scott Niskanen	Moved content to new version of BAP template	1 Hour
Spring 2019 BAP Report	2/6/19	Scott Niskanen	Review only	10 min

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☒
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: *If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.*

Example: *If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The Next Generation Wireless (NGW) is an infrastructure project involving the creation of a new wireless network between coaches and King County servers. Mobile Access Routers (MAR)s on coaches will connect via cellular signal during travel and via Wi-Fi when on bases. This allows King County access to critical data, such as location and fare payments, while a coach is on route and access to Audio Video data while a coach is on base.

   Legacy hardware was supported through an agreement between King County and Cisco. The agreement between ends December 31, 2018 and the King County only has inventory on hand with no option for replacement equipment. The decision to end support was made by Cisco.

   This IT investment will expand capacity for data driven systems deployed on coaches while moving away from end-of-life legacy equipment.

   Examples of data driven systems include:
   Fare payment. The next generation ORCA project has identified potential enhancements for the next generation, such as the use of open payments (e.g., account-based payments using various credit- and debit-card technologies)

   Speed and reliability: Transit Signal Priority (TSP) uses location information from coaches to request signal changes from local jurisdictions. The next generation of TSP will benefit from improved accuracy and availability of location information.

   Improved information: Real Time Information Signs (RTIS) provide scheduling information to the public at stops throughout King County. Improved location information will allow Transit to improve accuracy of data provided to signage at stops.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Benefits to the deployment of NGW can be assessed through two metrics.
   1) Compare performance of NGW to legacy network (capacity and speed)
   2) Decommissioning of legacy equipment

3. *What is the current baseline for this measure?*
1) Performance of 4.9GHz legacy equipment is limited to 5Mbps (Megabits per second) across the network
2) Legacy equipment is deployed and in use throughout the fleet

4. *What is the target for this measure? (How much improvement will this project achieve?)*
1) Performance for NGW involves measuring how much data can be transmitted at one time and per month. These measurements vary greatly between coaches on base and on route.
   a. For coaches on route, the minimum targets for transmitting data (bandwidth) is 10Mbps and 15GB per month. This represents a minimum 100% improvement over legacy equipment.
   b. For coaches on bases, the minimum bandwidth targets are 600Mbps and unlimited data per month. This represents a minimum 12,000% improvement over legacy equipment.

2) The target for legacy equipment decommission is 100% removal of all legacy equipment.

5. *When is the benefit likely to be achieved?*
End of 2020

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Increased bandwidth for data communications	Bandwidth	5Mbps	600 Mbps on route and 1.3 Gbps on base	12/31/2020
Fully supported modern equipment	# of coaches with legacy equipment	100% of coaches have legacy equipment	0% of coached have legacy equipment	12/31/2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
The Cisco 4.9 GHz solution currently deployment is no longer manufactured and support will end 12/31/2018.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both

quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Spring 2019 BAP Report: Project ongoing. The project is in Final Design Phase and a year behind the initial schedule. No change in expected benefits.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	DOT/Transit
Project Title	Capital Management and Reporting System
EBS Project Number	1028812 , Appropriation A00580

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

~~Kevin Desmond, Transit General Manager~~ Rob Gannon, Transit General Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Liviu Prisecaru	IT Project Manager II, DOT Transit Division	Project Manager
Jill Krecklow	Finance Manager, DOT Transit Division	Stakeholder
~~Randy Witt~~	~~Design & Construction Manager DOT Transit Division~~	~~Stakeholder~~
Diane Carlson	Capital Division Director	Sponsor

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5.   How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual Review	06/20/14	Liviu Prisecaru	New, initial draft	1 hour
Conceptual Review	08/14/14	Kathleen McMurray	Revision	3 hours
2014 Annual Report	02/19/15	Liviu Prisecaru	Review only	.25 hours
2015 Annual Report	02/06/16	Liviu Prisecaru	Review only	.25 hours
2015 Annual Report	04/01/16	Kathleen McMurray	1. Updated Business Owner 2. Updated Section 3 to only include current staff 2. Updated Section 6, Cat 2	1 hour
2016 Annual Report	02/17/17	Liviu Prisecaru	Review only. This project is currently underway.	.25 hours
2016 Annual Report	06/23/2017	Jill Krecklow	Include dates for benefit achievement per council staff direction.	.25 hours
Spring 2019 BAP Report	02/06/2019	Liviu Prisecaru	Updated benefits	.25 hours

Section 6.   Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

■ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff..

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   Metro Transit Division manages a 6 year Capital Improvement Program (CIP) worth over $1.4 billion. The program encompasses facility, IT and bus procurement project activities that are performed by several different Transit sections using their own systems, processes and methods. Project data in Transit is maintained in dispersed and non-integrated, mostly manual systems. Creating consolidated Transit CIP reporting from the existing data is problematic, lacks timeliness and is limited to what is available for manual compilation. Compiling the data is very time consuming and by the time the final reports are created, some of the data may be already outdated, making it impossible to use for the identification of problems or issues with a project. Further, the need for improved CIP reporting and revised practices has been part of several audit recommendations. Transit's response to these audit recommendations identified a management and reporting system as a necessary item to fully implement improvements. Audits have included:

   - **1999:** Transit Management Audit of the King County Department of Transportation (performed by Doolittle and Company) several recommendations regarding capital program management and reporting
   - **2005:** Performance Audit of Transit Capital Planning and Management – Executive response to the audit identifies the need for a capital management and reporting system with the goal at that time of evaluating Oracle Projects as part of the ABT process.
   - **2009:** Performance Audit of Transit – recommendations for the capital program reporting and the overall recommendation of making more data driven decisions require us to be able to gather and report information on the capital program in a consistent manner.
   - The Washington State Auditor, also completed an audit of King County's capital programs which has resulted in the development of several standards and reporting requirements which currently are difficult to implement without a system.

   If this project is approved, the new Capital Management and Reporting System (CMRS) would support improvements in the CIP that include project management standardization, process efficiencies, increased reporting accuracy and improved capital project delivery rates:

   1. Project management standards. All capital projects in Transit will be managed within the CMRS utilizing standards established during the course of this project. These standards will be scalable to project size and complexity and are expected to result in improved visibility to project delivery performance throughout the organization.

   2. Process efficiencies. The project is expected to result in efficiencies due to the elimination of the need to extract and consolidate data from dissimilar sources. Transit and King County project reporting and budget processes are expected to be streamlined as a result of using a single data source.

3. Accurate and timely reporting. The project is expected to result in more accurate reporting because the data and processes used to create the data will have less variability across the organization. Consolidated CIP reporting will not require the manual manipulation to form the information into a single data structure – thus saving time and reducing the likelihood of errors.

4. Capital project performance. Better project planning and the ability to identify issues early through timely reporting is intended to improve project performance, including capital project delivery rates. For example, the new system will have historical information, including project schedules, that can be used to help identify trends and improve overall project management.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   1. Project management standards. This benefit will be measured by using the number and percentage of Transit capital projects that are maintaining all data required by the Capital Management and Reporting System (CMRS). Data requirements will include information to support reporting as well as standard project management practices.

   2. Process efficiencies. This benefit will be achieved when the need to extract and consolidate capital project data from dissimilar or manual systems is eliminated.

   3. Accurate and timely reporting. This benefit will be measured by the speed with which consolidated CIP reports are prepared (less 'stale' data) and CIP report recipients' satisfaction with output.

   4. Capital project performance. As part of this project, Transit will identify performance metrics to demonstrate performance in meeting major milestones, and budget metrics. Examples could include:
   - Percent of projects setting a baseline as compared to planned**.**
   - Roll up portfolio wide- construction/implementation contract dollars awarded year to date compared to plan
   - Final project results – scope, schedule and budget compared to baseline
   - Roll up portfolio of final project results - % delivered scope on time and on budget

3. *What is the current baseline for this measure?*
   1. Project management standards. Currently, Transit capital projects are not managed within a central system. Therefore, the baseline for this measure is zero. The percent of projects following standard practices is not known.

   2. Process efficiencies. Currently, Transit staff must extract and consolidate project data from dissimilar systems. As an example, Transit capital program data must be manually entered into the King County budget system.

   3. Accurate and timely reporting. Currently, it takes Transit staff hours to prepare limited consolidated CIP reports and this allows for very limited analysis of the information. CIP report recipients' will be surveyed to determine their current satisfaction level with the accuracy of reports.

   4. Capital project performance. As part of this project, Transit will identify specific performance and budget metrics. If no baseline data exist, then the first year of data can be used as a

baseline. ~~Transit's overall annual program "accomplishment rate" is currently 90%.~~ Transit's overall capital program annual accomplishment rate, as measured by expense, has been ranging between 60% and 90% in the recent years.

5. *What is the target for this measure? (How much improvement will this project achieve?)*
1. Project management standards. The target is to have 100% of Transit capital projects managed within the central system and to have 100% of capital projects entering all required data.

2. Process efficiencies. The target is to eliminate the need for Transit staff to extract and consolidate project data from dissimilar and manual systems.

3. Accurate and timely, reporting. Project status updated are performed within 5 days of month closing. Reports on financial elements of project performance are available within 5 days of EBS closing. Targets for other reporting measures will be developed as the project progresses. The target is for Transit staff to spend more time analyzing and interpreting capital program data than developing it. CIP report recipients' will be surveyed to determine their satisfaction level with the accuracy and timeliness of reports using the new Capital Management and Reporting System. It is expected that the target level of satisfaction will be 80% or more as stakeholders become familiar with the sytem and reports.

4. Capital project performance. Transit will identify specific performance and budget metrics and identify targets as part of this project. ~~The target for Capital Project Delivery information to be readily available and program under-expenditure to be reduced to 5%. The target accomplishment rate would therefore be 95%.~~ The target for Capital Project Delivery information to be readily available and program under expenditure will be reduced, improving overall accomplishment rate and helping achieve a goal of 90%.

6. *When is the benefit likely to be achieved?*
1. Project management standards. The benefit will happen in phases with the first phase establishing a threshold level of required data for all capital projects. The level of data will likely be expanded in subsequent phases of the project. Likely to have 100% of projects entering all required data at each phase. [Update 6/23/2017: Assuming project implementation 4Q/2018, data will be populated by that time]. [Updated 2/06/2019 Assuming project implementation 3Q/2019, data will be populated by that time]

2. Process efficiencies. The benefit will likely be achieved within 1 year following implementation. [Update 6/23/2017: Based on project implementation of 4Q/2018, this benefit will be achieved by 4Q/2019] [Update 2/06/2017: Based on project implementation of 4Q/2019, this benefit will be achieved by 4Q/2020]

3. Accurate and timely reporting. The benefit will likely be achieved within 2 years following implementation. [Update 6/23/2017: Based on project implementation of 4Q/2018, this benefit will be achieved by 4Q/2020] . [Update 2/06/2019: Based on project implementation of 3Q/2019, this benefit will be achieved by 3Q/2021]

4. Capital project delivery rates. The benefit will likely be achieved within 3 years following implementation. [Update 6/23/2017: Based on project implementation of 4Q/2018, this benefit will

be achieved by 4Q/2021] [Update 2/06/2019: Based on project implementation of 3Q/2019, this benefit will be achieved by 3Q/2022]

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please

include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

Spring 2019 BAP Report: Ongoing project, expected benefit achievement date has been delayed by about one year. The project encountered delays due to lack of staff resources but is now a high priority of the Capital Division.

IT Project Benefits Achievement Plan

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Transportation (DOT)/Transit Division
Project Title	Transit Customer Information Systems Refresh
EBS Project Number	1111785

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: Rob Gannon, ~~Interim~~ General Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Damon Berbert	IT Project Manager II, DOT Transit Division	Project Manager
Terry White	Sales and Customer Services Supervisor, Customer Information Technology, DOT Transit Division	Project Sponsor (in lieu of retiring Section Manager)
Matt Hansen	Customer Communications & Services Manager	Project Sponsor (official replacement for retired Section Manager)

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Example: Conceptual review	7/1/13	Jack Smith	New, initial draft	2 hours
Example: Funding release	11/1/13	Jack Smith	Changed the metrics we will measure	2 hours
Annual Report	11/27/13	Damon Berbert	Converted plan from Benefit Realization Plan into Benefit Achievement Plan format	2 hours
Annual Report	03/20/14	Damon Berbert	Revised per feedback	1 hour
Annual Report	03/13/15	Damon Berbert	Review only; updated Project Sponsor	.25 hours
Annual Report	02/11/16	Damon Berbert	Updated Category 3	1 hour
Annual Report – update	06/15/16	Damon Berbert	Added Category 1; Updated Category 3	3 hours
2017/2018 Budget Request	07/20/16	Kathleen McMurray	Review only; updated Business Owner	.25 hours
2017/2018 Budget Request	10/6/16	Damon Berbert	Revised throughout in response to Council staff feedback	1 hour
2017/2018 Budget	10/31/16	Jill Krecklow	Clarified programmatic benefits	30 minutes
2016 Annual Report	02/17/2017	Damon Berbert	Review only; Updated dates in Category 3/Section 1	.5 hours
Spring 2019 BAP Report	02/06/19	Damon Berbert	Updated wifi standard in Cat 1; Updated dates in Cat 3/Section 1	1.5 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

X Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The primary purpose of the Transit Customer Information Systems Refresh program is to replace outdated customer information systems that are at/near/or past effective use, which is Category 3. Applications are listed under Category #3

   BENEFIT (secondary): By implementing or improving the customer facing tools, customer satisfaction with Metro in general and obtaining information should not decline from the current levels. In addition, usage of the tools should increase.

   To ensure that these two goals are achieved, annual trend reporting of customer satisfaction and usage will be maintained and provided as part of the reporting for this program. For individual program elements (e.g., Tracker, Trip Planner) user satisfaction associated with the specific refresh activities will also be evaluated.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   - Overall customer satisfaction with obtaining information will be evaluated annually as part of the rider/non-rider survey process.

- Satisfaction with individual applications will be evaluated with an online survey of the application users.
- Usage information will be monitored and reported at least annually through counting user contacts/sessions.

For the CRM project, we will informally ask our internal staff using the system to assess whether the improvements allow for improved customer service

For the Wi-Fi access project, we will assess whether the access is meeting performance standard of 802.11, a common industry standard

3. **What is the current baseline for this measure?**
   - Current customer satisfaction with obtaining information is 63% Very Satisfied. This measure from 2015 will serve as the baseline.
   - The baseline for the satisfaction with individual application refresh activities is zero at the beginning of the refresh cycle.
   - The baseline for application usage will be established prior to each refresh cycle. A trend will be provided that shows usage over time, but the baseline for each application will be the pre-refresh level.

4. **What is the target for this measure? (How much improvement will this project achieve?)**
   - Customer Satisfaction with obtaining information will not decline.
   - Customer satisfaction with individual application refresh activities will be at least 75% as measured by online survey.
   - Application usage will increase by at least 10% by the end of the refresh cycle than what it was at the start of a refresh cycle.

For the CRM project, we expect our internal staff using the system to report they are satisfied that improvements allow for improved customer service

For the Wi-Fi access project, we expect wi-fi service to meet performance standard of 802.11, a common industry standard

5. **When is the benefit likely to be achieved?**
   - Customer Satisfaction with Customer Information is gathered and reported annually.
   - Customer satisfaction with individual application refreshes will be done during the closeout phase of each refresh cycle.
     Tracker Q4 2018 2019-20 – refresh to implement in 2019
     Trip Planner Q4 2018 2019-20 – refresh to implement in 2019
     SMS Q4 2018 initial SMS implementation was 2018; SMS refresh cycle was removed from scope of this project
   - Application usage will be reported annually, with increased usage expected to happen within 6 months of the refreshed application rolling out.

For the CRM project, we expect our internal staff using the system to report they are satisfied that improvements allow for improved customer service by December 2017 so that feedback can be incorporated into the next refresh cycle starting in 2018 2019. X date

For the Wi-Fi access project, we expect wi-fi service to meet performance standard of 802.11, a common industry standard starting at implementation.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
Outdated technology platforms limit the ability of Transit to effectively deliver customer service information to the public. Information accessed by customers can be inaccurate, incomplete, delayed or difficult to obtain. Technology and procedural issues prevent effective data sharing between customer information systems resulting in inconsistent outputs.

This project will implement software products that will include improved data sharing and integration between systems. To ensure these new software products continue to be relevant, this program includes a 3-year refresh of each new product. In other words, after each system is initially

replaced or upgraded, it will then be reevaluated after 3 years. This evaluation will include a review of the method of data sharing and current technologies. It will inform the final refresh plan for each system or tool.

The following status shows the customer information systems that require replacing or upgrading in order to improve the sharing of data and message content:

Initial Replacement / Implementations
1. Online Trip Planner – originally implemented in 2001
   o Replaced desktop Online Trip Planner in 2013
   o Added mobile web Online Trip Planner in 2014
   o Added iOS/Android Online Trip Planner apps in 2015
2. Tracker – originally implemented in 2005
   o Replaced Tracker in 2013
3. Customer Relations Management system (including Lost and Found) called MCS – originally implemented in 2005
   o Replacement ~~expected~~ to be completed in ~~Q1 of~~ ~~2016~~2017
4. IVR (BusTime) – originally implemented in 1991
   o Replaced IVR in 2014
5. SMS Departure Information (text messaging)
   o ~~New tool targeted for~~ ~~2016~~Q3 of 2017. ~~Unforseen~~Unforeseen procurement and contract details have resulted in this schedule change.
   o Added in 2018
6. Downtown Seattle Transit Tunnel Wifi Access Points
   o Added in 2016

Next Refresh of Implemented Systems for the ~~2017/2018~~ 2019/2020 timeframe
7. Online Trip Planner
   o Refresh ~~planned 2017-2018~~ to be in 2019
8. Tracker
   o Refresh ~~planned 2017-2018~~ to be in 2019
9. Customer Relations Management system (including Lost and Found)
   o Refresh planned ~~2018-~~2019
10. ~~SMS Departure Information~~ Due to initial implementation of SMS Departure Information in 2018, a 3 year refresh cycle for that tool was removed from scope of this project.
   o ~~Refresh planned 2018-2019~~

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
   n/a

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional five years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and improved the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing time, annual savings, and % of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *$100,000 savings*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

<u>Spring 2019 BAP Report</u>: The project is underway. Continued system refreshes in 2019. See next page for a summary of the project metrics.

Summary – **Customer Information Systems IT Project**

Benefit	Metrics	Baseline	Target	Actual
Category 1 (secondary): Deliver accurate, complete, and timely customer service information to the public	Overall Customer Satisfaction with Obtaining Information (to be evaluated annually as part of the rider/non-rider survey process)	2015 Rider/Non-rider results = 63% Very Satisfied	No reduction	Reported annually
Category 3 (primary): Maintain current customer facing tools	Customer Satisfaction with individual tools (online survey of the application users)	At beginning of each refresh cycle, baseline is zero	At least 75% very satisfied and/or somewhat satisfied	During close-out of each refresh cycle.
	Increased usage of tools (annual counting user contacts/sessions)	Baseline to be determined at the beginning of each refresh cycle.	10% increase over the baseline	Trend to be reported annually, with increased usage expected to happen within 6 months of the refreshed application rolling out

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Transportation (DOT)/Transit Division
Project Title	HASTUS Employee Performance Module (EPM)
EBS Project Number	1116893

Section 2. Business Owner

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

~~Kevin Desmond, Transit General Manager~~ Rob Gannon, ~~Acting~~ Transit General Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Ted Harris ~~Jim O'Rourke~~	Transit Operations Manager, DOT Transit Division	Sponsor
~~Ralph Keyport~~ Amanda Nightingale	**Acting** Planning/Technical Support Services Supervisor, DOT Transit Division	Advisor

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2013 Annual Report	01/21/2014	Ray Burgess	Converted plan from Benefit Realization Plan into Benefit Achievement Plan format	4 hours
2014 Annual Update	02/11/2015	Kathleen McMurray	Review only	.25 hours
2015 Annual Update	01/22/2016	Kathleen McMurray	Review only	.25 hours
2015 Annual Update	04/04/2016	Kathleen McMurray	Added clarifying language	.25 hours
2016 Annual Update	6/06/2017	Jill Krecklow	Review only; project start dependent upon completion of other HASTUS related efforts.	.25 hours
Spring 2019 BAP Report	2/7/2019	Alex Rampley	Project has been dis-allocated, final BAP update, no monies spent, no benefit realized.	.25

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits:** Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

X Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   ~~Transit Operations is currently required to manually pull data from multiple systems and paper documents to track operator work performance, unavailability's, accidents and completed training. This data is used to determine potential disciplinary actions, plan training activities and schedule replacement operators on daily driving assignments as needed.~~

   ~~The addition of the HASTUS Employee Performance Module (EPM) will enable Transit Operations to pull all relevant operator data into a single database where it can be tracked and viewed as required. The EPM module has user-defined and modifiable rules for identification of trends and specific issues with an individual operator or a group of operators. User tools will allow Chiefs to create custom queries when trying to manage very specific operator problems or very general workforce problems. The level of tools and access available to the average Chief will increase significantly over the current system version.~~

   Expected benefits:
   a. ~~Reduces the entry by base administrative staff from paper operator records into Laserfiche.~~
   b. ~~Reduces time spent by Transit Operations chiefs and supervisors gathering and analyzing consolidating personnel records from multiple sources for each operator.~~
   c. ~~Improved accuracy of employment actions (disciplinary, etc). Current practice is prone to errors due to incomplete or inaccurate information.~~

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   a. ~~**Reduces the entry by base administrative staff from paper operator records into Laserfiche** — Success will be measured by a reduction number of paper records to be entered into Laserfiche by the base administrative staff.~~
   b. ~~**Reduces time spent by Transit Operations chiefs and supervisors gathering and analyzing consolidating paper personnel records from multiple sources for each operator** — Success will be seen in chiefs and supervisors spending less time gathering and analyzing personnel records as the information would available via EPM.~~
   c. ~~**Improved accuracy of employment actions (disciplinary, etc.). Current practice is prone to errors due to incomplete or inaccurate information** — Success will be the elimination of any error in employment actions for operators.~~

3. *What is the current baseline for this measure?*
   a. ~~**Reduces the entry by base administrative staff from paper operator records into Laserfiche** — Baseline for this measure is an estimate of 500 hours per month for each base from a survey done by Base Operations.~~
   b. ~~**Reduces time spent by Transit Operations chiefs and supervisors gathering and analyzing consolidating paper personnel records from multiple sources for each operator** — Baseline for this measure is not recorded as it involves a desk audit and the cost of doing a desk audit is not justified by the estimated time savings.~~
   c. ~~**Improved accuracy of employment actions (disciplinary, etc.). Current practice is prone to errors due to incomplete or inaccurate information** — Baseline for this measure is not producible as Base Operations does not keep statistics on inaccurate employment actions as~~

they are corrected as soon as discovered. Any error records are buried within the thousands of quality employment actions done annually by Base Operations.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   a. **Reduces the entry by base administrative staff from paper operator records into Laserfiche** – Should see at least a reduction of 1 hour per day per base the time spent by base administrative staff doing entry from paper operator records into Laserfiche. This equates to a total of approximately 140 hours per month for all seven bus bases.
   b. **Reduces time spent by Transit Operations chiefs and supervisors gathering and analyzing consolidating paper personnel records from multiple sources for each operator** – the EPM module will be used 100% for employment actions with no reliance upon personnel files.
   c. **Improved accuracy of employment actions (disciplinary, etc.). Current practice is prone to errors due to incomplete or inaccurate information** – No errors in employment actions.

Summary Table:

Benefit	Measure	Baseline	Target
Reduced entry by base administrative staff from paper operator records into Laserfiche.	Time spent by the base administrative staff to enter data from paper operator records into Laserfiche.	500 hours per month for each base (from a survey done by Base Operations)	A reduction of 1 hour per day per base the time spent by base administrative staff doing entry from paper operator records into Laserfiche. This equates to a total of approximately 140 hours per month for all seven bus bases.
Reduced time spent by Transit Operations chiefs and supervisors gathering and consolidating personnel records from multiple sources for each operator.	Time spent by chiefs and supervisors gathering and analyzing personnel records	N/A. Baseline for this measure is not recorded as it involves a desk audit and the cost of doing a desk audit is not justified by the estimated time savings.	EPM module is used 100% for employment actions with no reliance upon personnel files
Improved accuracy of employment actions (disciplinary, etc).	# of errors in employment actions for operators	Current practice is prone to errors due to incomplete or inaccurate information. Baseline for this measure is not producible as Base Operations does not keep statistics on inaccurate employment actions as they are corrected as soon as discovered. Any error records are buried within the thousands of quality employment actions done annually by Base Operations.	Zero errors

5. *When is the benefit likely to be achieved?*
   [New 6/6/2017: This project is currently awaiting the completion of other HASTUS related system implementations and is not expected to begin in 2017. Project initiation will be evaluated as the other efforts are completed. The benefits identified are still valid and are expected to be achieved

~~when the project is implemented. System functionality will be evaluated as part of project planning as new functionality may be available from the core system.] The benefits of the EPM module will [New 1/22/16: begin to] be seen immediately upon implementation but will not be fully realized for at least 6 months. This slow realization of benefits will be due to the changing of procedures and behaviors by the affected base personnel.~~

New 2/7/2019 This project has been deallocated due to prioritization of other projects requiring competing resources

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*

3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Spring 2019 BAP Report (2/7/2019): This project has been cancelled due to prioritization of other projects requiring competing resources. Benefits were not achieved. This is the final BAP.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Transportation/Transit
Project Title	HASTUS Planning Module
Project Number	[New 7/20/16] 1124415
Project Timeframe	

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

~~Kevin Desmond, General Manager~~ Rob Gannon, ~~Interim~~ General Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Marty Minkoff~~	Supervisor, Service Planning	Project Sponsor
Jill Krecklow	Finance Manager, Transit	Stakeholder
Katie Chalmers	Supervisor, Service Planning	Project Sponsor
~~Diane Sutherland~~	~~IT Project Manager, Transit SDO~~	~~IT Project Manager~~
Cecilia Florescu	IT Project Manager, CDP	IT Project Manager

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	6/5/14	Yan Zhang	New, initial draft	.5 hours
Budget process	10/2/14	Kathleen McMurray	Updates based upon Council staff feedback.	3 hours
Annual Update	2/11/15	Kathleen McMurray	Review only	.25 hours
Annual Update	1/22/16	Kathleen McMurray	Review only	.25 hours
2017/2018 Budget	7/20/16	Kathleen McMurray	Updated Business Owner, Added Project Number	.25 hours
2019/2020 Budget	5/8/18	Diane Sutherland	Updated Business Owner and Project Sponsor	.25 hours
2019/2020 Budget	7/26/18	Diane Sutherland	Updated BAP form to version 3 at PSB request	1.5 hours
Spring 2019 BAP Report	2/06/19	Cecilia Florescu	Review	.25 hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

<u>CATEGORY #1</u>: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

<u>CATEGORY #2</u>: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   a. **Streamlined processes.** The Transit Service Planning workgroup currently uses a labor-intensive, Excel-based process to produce draft timetables, which are used to estimate costs and otherwise evaluate transit service design concepts. Service Planning also uses a variety of GIS-based tools to generate spatial views of network design concepts and produce street-by-street instructions for publication in paper-based service change packages. If this project to implement the HASTUS Planning Module is approved, Metro would acquire a new module for HASTUS, the software suite currently used by the Scheduling group to produce vehicle and operator/crew schedules. The new module would be used primarily by the Service Planning group to develop and evaluate route and transit network concepts, including the associated costs.

   The HASTUS Planning Module is integrated with other HASTUS modules currently used by Transit for Scheduling and Operations. Incorporating this module would enable planners to easily access current ridership, run-time and trip arrival/departure data and more efficiently incorporate these data in the development of route and network design concepts. This would streamline the service planning task of developing service alternatives and identifying more realistic/accurate cost estimates. It would also reduce steps (and effort) in the handoff of planner guidance to schedulers who could then take that imported planner estimate and develop full vehicle and crew schedules from the same data source inside the same software/platform. This effort may also streamline/simplify the process of creating maps that could then be used for public presentation, both in the planning process or later on for public consumption of live or future transit information.

   b. **Elimination of duplicate data entry.** Service Planning uses different tools than other workgroups involved in the production of service change data. As a result, Service Planning's Excel-based timetables and paper-based maps and routing instructions must be manually re-created in HASTUS by other workgroups in Transit. If this project to implement the HASTUS Planning Module is approved, the need for other Transit workgroups to re-create this information in order to proceed with the production of transit service change data can be eliminated. .

   When combined, both a and b are expected to result in savings in labor hours that will be reinvested in higher value activities. The project will determine the exact nature of these savings as well as any new costs associated with this module as part of the business process review.

c. **Improved service efficiencies.** If this project to implement the HASTUS Planning Module is approved, process improvements that will be enabled by the addition of the module to Transit's HASTUS application are expected to result in more efficient service. This will increase the amount of service hours available for serving our customers, which will in turn impact ridership, productivity and the overall value Metro provides to King County.

2. **How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)**
    a. **Streamlined processes.** We will know that this benefit has been achieved when we realize the aforementioned process efficiencies in developing and evaluating route and transit network concepts, including the associated costs.

    b. **Elimination of duplicate data entry.** We will know that this benefit has been achieved when Service Planning's Excel-based timetables and paper-based maps and routing instructions do not need to be manually re-created in HASTUS.

    For both a and b, Transit will identify the specific bodies of work to be done by freed up hours from these efficiencies.

    c. **Improved service efficiencies.** We will know that this benefit has been achieved with increases in service trips (Service Trip per Plat/Vehicle Hour) and/or productivity (Riders per Plat/Vehicle Hour).

3. **What is the current baseline for this measure?**
    a. **Streamlined processes.** The baseline for this measure will be determined at the early stages of the project when all of the steps that can be eliminated have been identified.

    b. **Elimination of duplicate data entry.** The baseline for this measure is that it takes hundreds of labor hours each service change to re-create Service Planning's Excel-based timetables and paper-based maps and routing instructions in HASTUS.

    For both a and b Transit will identify the work to be done by freed up hours and note the current level of that work.

    c. **Improved service efficiencies.** The baseline for Service Trip per Plat/Vehicle Hour and/or Riders per Plat/Vehicle Hour is currently zero as we are not able to easily calculate these measures of service efficiency. (Note that these measures are different than the overall system efficiency measures as they enable a comparison of productivity between individual service hours (e.g. how much of a route is in revenue service versus deadhead or layover.) The baseline will be determined during the first year of operation.

4. **What is the target for this measure? (How much improvement will this project achieve?)**
    a. **Streamlined processes.** The target for this measure is elimination of unnecessary steps from the process to produce draft timetables, which are used to estimate costs and otherwise evaluate transit service design concepts.

b. **Elimination of duplicate data entry.** The target for this measure is the elimination of the need to re-create Service Planning's Excel-based timetables and paper-based maps and routing instructions in HASTUS.

For both a and b Transit will identify the work to be done by freed up hours and note the target level of that work.

c. **Improved service efficiencies.** The target is a 2% improvement in these measures.

5. **When is the benefit likely to be achieved?**
   a. **Streamlined processes.** This benefit is likely to be achieved within a year of implementation.

   b. **Elimination of duplicate data entry.** This benefit is likely to be achieved within a year of implementation.

   For both a and b, staff should have freed up staff time available for higher value work within one year of implementation.

   c. **Improved service efficiencies.** As this benefit can only be measured at a service change event and Transit is moving to two service changes a year by the time this project is implemented, we would anticipate achieving this benefit in 3 years (or 4 service changes after the baseline data is developed).

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Streamline service planning process	# of staff hours freed by improvements	TBD by project	TBD by project	Within 1 year of implementation, current estimated benefit achievement date of Q1 2021
Elimination of duplicate data entry	# of staff hours freed by improvements	TBD by project	TBD by project	Within 1 year of implementation, current estimated benefit achievement date of Q1 2021
Improved service efficiencies	Increased service trips (Service Trip per Plat/Vehicle Hour) and/or productivity (Riders per Plat/Vehicle Hour)	TBD by project	2% improvement	Within 3 years (or 4 service changes after baseline data development in year 1). Current estimated benefit achievement date of Q1 2024.

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

> *Example:* This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. **Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.**
2. **If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.**
3. **Summary Table for Benefit Category #3:**

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

> *Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.*
>
> *Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. **Describe why you expect the proposed IT investment to reduce costs?**
2. **How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)**
3. **What is the current baseline?**
4. **What is the target for this measure? (How much savings will this project achieve)**
5. **When is the cost reduction likely to be achieved?**
6. **Summary Table for Benefit Category #4:**

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Spring 2019 BAP Report: Project ongoing, no change to expected benefits or timing. The project was initiated in summer 2018. It had been on hold waiting for completion of the HASTUS Upgrade project.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Transportation/Transit
Project Title	HASTUS Upgrade
EBS Project Number	1111783

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

~~Kevin Desmond~~ Rob Gannon, General Manager Transit

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Jim O'Rourke, Ted Harris~~ Timothy Flanagan	Acting Deputy Director of Bus ~~Transit Operations~~/ Transit	Sponsor [Updated ~~6/23/2017~~ 2/28/2018]
~~Victor Obeso~~ Bill Bryant	Manager Service Development/ Transit	Sponsor [updated 6/23/2017]
Ralph Keyport	Supervisor of Planning Technical Support Services/ Transit	Subject Matter Expert
Jon Bez	Supervisor of Scheduling ~~Route Planning~~/ Transit	Subject Matter Expert [Updated 6/23/2017]
Jill Krecklow	Finance Manager, Transit	Stakeholder

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.

4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Funding Release	11/08/2013	Ray Burgess	New, initial draft	8 hours
2013 Annual Report	1/31/2014	Kathleen McMurray	Review only	.25 hours
2013 Annual Report	2/14/2014	Jill Krecklow	Modified benefits discussion	.75 hours
2014 Annual Report	2/12/2015	Cathy Snow	Review only	.25 hours
2015 Annual Report	1/29/2016	Diane Sutherland	Review only	.25 hours
2016 Annual Report	2/17/2017	Diane Sutherland	Review and modified business owner. This project is underway.	.25 hours
2016 Annual Report	6/23/2017	Jill Krecklow	Revise per council staff direction: added quarter/year dates for milestone achievement.	.25 hours
2017 Annual Report	2/28/2018	Diane Sutherland	Final BAP Update for a completed project. Reviewed and modified business owner and Sections 6&7	.5 hours
Spring 2019 BAP Report	2/7/2019	Alex Rampley	Review only (final BAP)	.25 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated

benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary </u>type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   The HASTUS application system is crucial to the scheduling of transit routes and the management of bus and train operators on a daily basis. This system must be available to the multiple customers within Transit for them to perform their jobs.

The current HASTUS software is version 2006 and has only 2 more years of guaranteed maintenance. The version of Crystal Reports that comes with HASTUS 2006 is currently unsupported. The new software, HASTUS 2014, will provide 10 years of guaranteed maintenance. In addition it comes with a fully supported version of Crystal Reports.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

The HASTUS system is an essential component of day to day Transit operations. This project addresses the fact that the risk of system failure would increase if Transit were to operate on a version that was no longer supported by the vendor. The reporting component of the system is already not supported. Changes such as upgrading operating systems and servers by King County increase the risk that older, unsupported software will experience a failure.

[Update 6/23/2017] – Project upgrade occurred 3Q/2016; project will be closed out 2Q/2017.
[Update 2/28/2018]- Project is closed.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance. This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
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Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Spring 2019 BAP Report: This is the final BAP. Project closed in late 2017; upgrade completed.

Metric Description	Metrics	Baseline	Target	Actual
Upgrade HASTUS version 2006 to HASTUS 2014 completed.	HASTUS 2014 is operational	Outdated HASTUS 2006 in use by Transit	Upgrade to HASTUS 2014 in operation. Business continuity supported by vendor product and maintenance agreement	Upgrade to HASTUS 2014 in operation. Business continuity supported by vendor product and maintenance agreement

IT Project Benefits Achievement Plan (Version 2)

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King County Department/Agency Name	DOT/Transit
Project Title	Mobile Ticketing Pilot Project
EBS Project Number	#1116944 , A00650

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: ~~Kevin Desmond~~Rob Gannon, Transit General Manager

Section 3. Who is involved in developing the Benefit Achievement Plan?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Liviu Prisecaru	IT Project Manager II, DOT Transit Division	Project Manager
Dan Overgaard	Supervisor, DOT Transit Division	Stakeholder
Kathleen McMurray	Supervisor, DOT Transit Division	Stakeholder
Jill Krecklow	Finance Manager, DOT Transit Division	Finance Manager

Section 4. When should the BAP be started, updated and completed?

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5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

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Conceptual review	06/20/14	Liviu Prisecaru	New, initial draft	2 hours
Conceptual review	7/8/2014	Kathleen McMurray	Updated for Conceptual Review	5 hours
2014 Annual Report	2/19/15	Liviu Prisecaru	Review only	.25 hours
2015 Annual Report	2/06/16	Liviu Prisecaru	Review only	.25 hours
2016 Annual Report	2/17/17	Liviu Prisecaru	Minor updates. This project is currently underway.	.25 hours
2016 Annual Report	6/26/2017	Jill Krecklow	Revised to reflect council staff feedback: removed Category 2 benefits and assigned date for benefit achievement.	.5 hour
2018 Annual Report – Final BAP – Project Closed	2/05/2019	Liviu Prisecaru	Updated for Project Closed status	.5 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

XCategory #1: External service benefits: Improving the quality or quantity of services provided to the public [Update 6/26/2017: change benefit category based on conversation with L. Krekel-Zoppi to reflect fact that this is the pilot effort of a new product.] Achieved!

☐Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   If this project to perform an evaluation of mobile ticketing fare payment technologies is approved, customers will have the opportunity to test a new method for paying their transit fare. Currently, customers can pay for their bus fare using either an ORCA card or cash. This project will evaluate the feasibility of adding mobile ticketing to the list of fare payment methods.

   The 2012 Metro Rider Non-rider Survey found that sixty percent of respondents used a smartphone. Of those smartphone users, twenty-three percent paid their bus fare with cash. This represents fourteen percent of all riders. It is expected that this group of riders will experience the greatest benefit from mobile ticketing. These benefits include:
   a. **Convenience.** By paying their transit fare from their smartphone, customers can avoid "fishing" around for cash and worrying about having exact change.
   b. **Faster boarding.** Riders who pay with a mobile ticket instead of cash will not need to wait in line as their change is accepted and processed by the farebox.

   Other transit agencies who have implemented mobile ticketing have experienced significant user acceptance of the technology. According to an April 11, 2014 **article** in Mass Transit, over 80,000

TriMet (Portland, OR) riders downloaded their mobile ticketing application, and purchased over 1 million tickets in the first seven months of operation. MBTA (Boston, MA) reported that in the first 9 months after implementing their mobile ticketing system, over 1 million tickets were purchased (representing $10 million in sales). Metro customers are expected to similarly find mobile ticketing to be a convenient way to pay their bus fare.

Reduced dwell times due to increased use of non-cash forms of payment will benefit riders during peak boarding times on trips through downtown Seattle. This is consistent with one of the lessons learned in the Data and Lessons Learned from Elimination of the Ride Free Area and Start-up of RapidRide C and D Lines Report: *Continue to pursue strategies to speed boarding in downtown Seattle through off-board fare payment.*

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
The Mobile Ticketing Pilot Project will assess adoption patterns, complexity of the technology and its acceptance by the test participants. All test participants will be surveyed to obtain reactions to various aspects of the test, such as specific fare products, boarding times, the ease of using the particular application and the convenience of mobile ticketing in general. Survey findings will be included in the Mobile Ticketing Pilot Assessment Report. This report will address both the internal and external benefits of this project.

3. ***What is the current baseline for this measure?***
No assessment exists of customer acceptance of mobile ticketing for King County Metro.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
It is expected that at least 75% of the test participants will find mobile ticketing to be a convenient way to pay their bus fare. It is expected that at least 75% of the test participants will find boarding faster with mobile ticketing, as compared to cash.

5. ***When is the benefit likely to be achieved?***
Two months following the completion of the pilot test, the Mobile Ticketing Pilot Assessment Report will be delivered. This report will contain the test participants' survey results.

[Update 6/26/2017: Report to be delivered to council in 4Q/2017] Update 2/6/2019 Report delivered as scheduled.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff..

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications

such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

[Update 6/26/2017: removed category 2 benefits based on direction from L. Krekel-Zoppi. Focus on external benefits of the new product being introduced by this pilot.]

1. ~~***Describe why you expect the proposed IT investment to produce the benefit(s).***~~

~~If this project to perform an evaluation of mobile ticketing fare payment technologies is approved, Metro will have the opportunity to assess whether or not it makes sense for the County to implement mobile ticketing. The pilot program model allows for proof of concept and study of consumer response, technology effectiveness, and other operational considerations prior to a full-scale investment.~~

~~**Background**~~
~~King County Metro currently collects cash fare payment on the bus. This process requires a farebox into which customers insert their fare. Maintaining the farebox system and cash handling costs the agency more than $5 million a year. In addition, cash collection on the bus has been shown to increase the amount of time that a bus sits in a zone boarding passengers. Less cash collected on the bus would both reduce the costs of cash handling and reduce dwell times. As a result, King County Metro is looking at the possibility of migrating the transit system to cashless on-board payment at a point in the future. In order to reach a cashless on-board environment a number of functional and policy changes will need to be implemented. This Mobile Ticketing Pilot is one step towards removing cash collection, but it is not the only change that would be required, nor is it the sole reason for piloting new ways for customers to purchase fare media.~~

~~Taking cash collection off the bus would not mean that customer cannot use cash to purchase fare media, just that it would need to happen off the bus. Cash would still be collected off-board through ticket vending machines (TVMs), Metro customer service offices, or third party retail outlets. The goal would be to maximize electronic fare payment methods, including the existing ORCA card and emerging new technologies. By applying various strategies intended to move the penetration of electronic media close to 100%, Metro would then be in a place to consider eliminating the onboard cash fareboxes and avoid the cost to replace the equipment. The cost to replace this equipment is estimated at over $20 million (not including the on-going operations and maintenance costs for this equipment). Currently fareboxes are the leading source of trouble-calls requiring staff to make repairs while a bus is in service. The cost savings from eliminating cash collection on the bus cannot be fully realized until all cash is removed from the bus.~~

~~Whether or not cash is no longer collected on the bus, increasing the use of electronic fare payment media is expected to benefit transit travel times through downtown Seattle. Although the exact date has not been determined, the implementation of North Link will eventually require Metro to bring its bus routes out of the downtown Seattle transit tunnel. The added volumes through downtown Seattle surface streets will benefit from faster boarding (see the Data and Lessons Learned from Elimination of the Ride Free Area and Start-up of RapidRide C and D Lines~~ ~~Report)~~.

~~One of the emerging electronic fare payment technologies is mobile ticketing, which provides customers the ability to pay their transit fares using their smartphones. This technology is currently~~

implemented in numerous transit systems worldwide. Example agencies and vendors provided below:

Transit System	Vendor
Capital Metro (Austin, TX)	Bytemark (NYC)
Dallas Area Rapid Transit (DART)	Unwire (Denmark)
Fort Worth Transportation Authority	
Denton County Transportation Authority	
Massachusetts Bay Transportation Authority (MTBA)	Masabi (UK)
NJ Transit	Masabi (UK)
NY Waterway	Bytemark (NYC)
San Diego Metropolitan Transit System (MTS)	Masabi (UK)
South Shore Line, Northern Indiana and Chicago	Bytemark (NYC)
Telefonica O2 (Europe)	Masabi (UK)
TriMet (Portland, OR)	GlobeSherpa (Portland)
Virgin Trains (UK)	Masabi (UK)

Mobile Ticketing Pilot Program
This pilot project will procure a system for test purposes and solicit test participants from the public to evaluate the value of mobile ticketing for King County Metro and its customers. Customer adoption patterns will be assessed to determine if current cash paying customers are likely to embrace this new technology and thereby increase the use of electronic fare payment media.

In talking with consultants and other agencies, Transit has learned that the cost for mobile ticketing systems range from 8% to 12% of the fare transaction (in other words, up to 12 cents per dollar collected). Since mobile ticketing systems are generally hosted services, these costs include management of the back-end system, revenue processing and management of the application. The pilot project will analyze the cost to operate, maintain and upgrade a mobile ticketing system to help determine if mobile ticketing is a cost effective fare payment option for the County.

If proven beneficial, a project to fully implement mobile ticketing technology for Metro could follow.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
The Mobile Ticketing Pilot Project will provide the opportunity to measure potential benefits of implementing mobile ticketing technology. Test participants will be surveyed to assess the likelihood of current transit customers switching from cash to mobile ticketing for fare payment. Additionally, the cost to operate, maintain and upgrade a mobile ticketing system will be gathered from vendor data. These findings will be included in the Mobile Ticketing Pilot Assessment Report.

3. *What is the current baseline for this measure?*
   a. **Customers switching from cash.** No assessment exists of customers' likelihood of switching from cash to mobile ticketing at Metro.
   b. **Cost to maintain system.** Metro will use cash collection costs as the baseline for this measure:
   Collection cost per cash boarding (approximate): $0.14
   Collection cost as a % of cash collections (2013 estimate): 15%
   (Note: these are not measures that are routinely reported and the information provided here are estimates and do not include the longer term decision about replacing fareboxes.)

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   a. **Customers switching from cash.** Test participants who currently pay with cash report they would switch to mobile ticketing: 25%

   b. **Cost to maintain system.** For the pilot, we will be evaluating the collection cost per transaction and evaluating if it is less than our current cost for cash collections. This analysis may be skewed based on the pricing that is proposed for the pilot; however moving forward the procurement process will help to ensure that transaction costs are as low as possible. It is also unlikely that the pilot will have a significant impact on overall system costs, however transaction level costs can be evaluated. Full recognition of savings won't be possible until and unless all cash collection costs are eliminated. The pilot will provide data upon which a goal can be developed and considered as part of the decision making to move forward with a full roll-out of mobile ticketing.

5. ***When is the benefit likely to be achieved?***
   Two months following the completion of the pilot test, the Mobile Ticketing Pilot Assessment Report will be delivered. This report will contain the cost analysis and the results of the tester survey responses.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual

purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: *Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*

3. *What is the current baseline?*

4. *What is the target for this measure? (How much savings will this project achieve)*

5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: *This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.*

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of	*Processing time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

prompt payment discounts.				

This is a Final BAP. Per the report transmitted to the Council in 2018 (2018-B0044_SR_MobileTicketing):

- Ticket sales through Transit GO Ticket increased throughout the pilot project, starting at over 3,000 tickets sold in the first month and growing to over 24,000 tickets sold in July 2017. However, Transit GO Tickets represented only a tenth of a percent of Metro's overall fare payment.
- Approximately 2,000 Transit GO Ticket users responded to the pilot project survey and indicated 77 percent overall satisfaction with the product, and 86 percent of respondents were satisfied with the ease of purchasing tickets and setting up an account. Twenty-six percent of respondents reported having issues using the application, such as drivers not recognizing the tickets or the tickets not loading or activating.
- According to a Metro survey of transit operators, operator satisfaction with the ease of recognition of Transit GO Tickets was 57 percent, with 42 percent somewhat or very dissatisfied.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DOT/Transit
Project Title	On-Board Camera Management System
Project Number	1129798 [Updated 2/5/19]

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Rob Gannon, Transit General Manager & Grantley Martelly, Transit Safety and Security Manager [Updated 2/5/19]

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Kathleen McMurray	Supervisor/Transit	Subject Matter Expert
David Hull	Special Projects Manager/Transit	Subject Matter Expert
Jill Krecklow	Finance Manager	Chair, Transit Technology Oversight
Paula Adams	Technology PM	Project Manager

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document

to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	6/22/16	Kathleen McMurray	New, initial draft	3 hours
2017/2018 Budget	10/6/16	Kathleen McMurray	Updated in response to Council staff feedback	3 hours
2017/2018 Budget	10/10/16	Jill Krecklow	Revised BAP to align with council staff feedback and project purpose	1 hour
2017/2018 Budget	10/16/16	Jill Krecklow	Revised BAP to align with council staff feedback	1 hour
2016 Annual Update	2/17/17	Kathleen McMurray	Minor updates only. This project was just funded and has not yet started.	.25 hours
2016 Annual Update	6/23/16	Jill Krecklow	Revised BAP based on council staff feedback specifically to include dates in (QQ/YY format). As this project is still in planning, the implementation date is estimated for this purpose.	.25 hours
Spring 2019 BAP Report	2/5/19	Paula Adams	No change to intent, but rewritten for better clarity, given that a new PM has been assigned (Adams).	1 hour

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☒ Category #4: Reduced cost or cost avoidance to produce services

<u>Category #1</u>: **External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.**

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

<u>Category #2</u>: **Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.**

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

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1) *Describe why you expect the proposed IT investment to produce the benefit(s).*
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3) *What is the current baseline for this measure?*
4) *What is the target for this measure? (How much improvement will this project achieve?)*
5) *When is the benefit likely to be achieved?*

Category #3: **Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.**

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: **Reduced cost to produce service (external or internal) or cost avoidance**
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs*
   ~~This project is one that is intended to reduce costs as it provides an automated solution to what is otherwise a manual process of retrieving and managing video images and manually ensuring that the systems are operating. The benefits that come from increased customer and bus operator security~~

Despite having an active OBCS program, Metro still lacks automation for securing, distributing and managing requested video segments/events, and relies on completely manual processes for this work. Today, Metro's Operations Security Liaison (OSL) or his designee physically travels to a coach, located at one of seven bases. The OSL then swaps out the removable hard drive on the digital video recorder (DVR). Once back at the office, the OSL connects the extracted hard drive to a computer, where video event/segment creation, labeling and distribution occurs. Chain of custody also is managed manually. Not only is this processes highly dependent upon the availability of skilled staff, it is also unsustainable, given the ever-increasing size of Metro's fleet and service area.

While the approach depicted in Figure A is problematic on its face, there is additional downstream inefficiency: Given the number of video files requested each day, and given the amount of time it takes to physically retrieve each file, Metro personnel do not have time to review the captured video in a way that creates the smallest video segment possible. In other words, *an overly long video file is created and distributed, thereby pushing the more surgical analysis downstream to requestors; many of whom are (more highly paid) County staff who then have to spend an hour or more searching through the file[1].*

A final grave deficiency in the current system is a lack of automated health monitoring for camera and video infrastructure. OBCS malfunctions are typically identified during monthly inspections performed by Metro's Vehicle Maintenance (VM) group, but this is a delayed and reactive approach. The very worst case scenario also occurs when the OSL discovers *during the process of retrieving requested video* that a DVR has not been functioning for some time - this constitutes serious risk exposure for Metro.

The Video Management System (VMS) Project procures, installs and operationalizes an automated, cloud-based solution for identifying, labeling and distributing requested video segments/events. The solution will integrate with the existing OBCS infrastructure. Future updating and/or replacement of OBCS should integrate with the automated, cloud-based VMS solution to the greatest extent possible.

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[1] Creation of overly large video files inadvertently creates union issues as well. While searching through especially long segments, it sometimes happens that the video captures the transit operator doing something wrong. This triggers responsive protocols with the operator in question, and creates the appearance (and union complaints) that Transit supervisors are "fishing" for operator error on a regular basis. This entire scenario becomes less likely with the creation of smaller video segments.

At minimum, the VMS shall deliver the following business requirements:

A. **Wireless Video Segment Retrieval, Management and Distribution:** This feature will allow staff to remotely identify, access, download and distribute stored video files.

B. **Live Streaming Video:** The solution shall allow live streaming video, the download of which is triggered under emergency circumstances only.

C. **File Management and Storage:** This feature will provide automated system labeling, reporting and tracking of downloaded video segments/events. This will eliminate dependency upon manual documentation and will improve response times when video segments/events are requested.

D. **Health Status Monitoring:** The new system will monitor all OBCS equipped coaches in the fleet on a daily basis and provide automated OBCS health status reporting in order to eliminate the need for manual OBCS inspections. The health monitoring function will notify Vehicle Maintenance (VM) automatically when a problem occurs, improving the timeliness of repairs and reducing OBCS downtime.

E. **County Technology Standards:** The solution will satisfy KCIT Architectural guidelines and the Strategic Technology Roadmap for Transit (STRT).

A successful project will reduce costs by replacing manual, staff-intensive processes for accessing and managing requested video images with highly automated processes. The solution will also feature remote health monitoring, so that system components which have failed - or are about to fail - are quickly identified and replaced. Remote health monitoring ensures consistent functionality and minimizes the need for manual processes to address unique or unusual circumstances.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   ~~The cost effectiveness of the system will be measured in terms of staffing resources required to retrieve and manage video images and to maintain system reliability.~~

The cost effectiveness of the solution will be measured by:

A. The reduction in staffing resources required to retrieve and manage video images;

B. The amount of time it takes to produce and distribute a video segment, once it has been requested.

3. *What is the current baseline?*
   ~~Decision package DS_034 Vehicle Camera Expansion requests 7 TLTs and $1,274,278 in the biennium in order to support activities of retrieving and managing video images and ensuring reliability.~~

A. Transit allocates one full time Security Liaison and two support Operators for the purpose of manual video segment retrieval. This amounts to approximately $300,000 annually in fully-loaded staff costs.

B. Accounting for travel time, each video segment can take 2-4 hours to retrieve, process and distribute.

4. *What is the target for this measure? (How much savings will this project achieve)*
   ~~The target for this measure is that once the video management system is in place, there will be no additional resources required and the TLT positions requested in the 2017/2018 budget will be reduced without a degradation in response rates or system reliability.~~

The target for this measure is that manual video retrieval will become extremely rare, occurring only in very unusual circumstances. Video will be requested, secured and distributed from a single desktop, making physical travel to a base completely unnecessary.

5. ***When is the cost reduction likely to be achieved?***
~~2019 or when the system is fully operational~~
~~[Update 6/23/2017: Benefits will not fully accrue until a significant portion of the fleet receives new equipment. Based on system selection in 2017 and implementation starting in 2018, full benefits are assumed to occur by 4Q/2019]~~

Q4 2020, or when the system is fully operational.

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	Processing Time annual savings, and percentage of purchases receiving prompt payment discounts	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Spring 2019 BAP Report: The project is underway. See next page for a metrics summary.

Summary – **Onboard Camera Management System IT Project**

Benefit	Metrics	Baseline	Target	Actual
Category 4: Ability to cost effectively access and manage the camera images and maintain system reliability.	Staffing resources required to retrieve and manage video images and to maintain system reliability	Decision package DS_034 Vehicle Camera Expansion requests 7 TLTs and $1,274,278 in the biennium in order to support activities of retrieving and managing video images and ensuring reliability.	No additional resources required and the TLT positions requested in the 2017/2018 budget will be reduced without a degradation in response rates or system reliability	By Q4.2019 or when the system is fully operational

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	DOT/Transit
Project Title	ORCA Replacement Planning
EBS Project Number	1124456

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: ~~Victor Obeso~~John Resha, Deputy General Manager, Transit

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Jill Krecklow	Finance Manager, DOT Transit Division	Finance Manager
Randy Boshart	IT Project Manager II, DOT Transit Division	King County Project Manager
John Resha	Assistant General Manager, Metro Transit Department	Project Sponsor

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County.

More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	09/04/2014	Kathleen McMurray	New, initial draft	6 hours
Annual Report	02/18/2015	Catherine Boon	Review only	.25 hours
Funding Release	08/27/2015	Catherine Boon	Update	.5 hours
Annual Report	01/22/2016	Kathleen McMurray	Corrected the end of the current vendor operating contract from 2020 to 2021	.25 hours
2016 Supplemental Budget	03/28/2016	Kathleen McMurray	Review only	.25 hours
2017/2018 Budget	07/22/2016	Randy Boshart	Updates to reflect that project includes detailed design and implementation.	2 hours
2017/2018 Budget	10/6/2016	Randy Boshart	Updates in response to council review evaluation	1 hour
2017/2018 Budget	10/16/2016	Jill Krecklow	Updates in response to council staff feedback	2 hours
Funding Release	1/18/2017	Randy Boshart	Update	.25 hours
2019/2020 Budget	5/8/2018	Randy Boshart	Update	.25 hours
Spring 2019 BAP Report	2/6/2019	Randy Boshart	Update business owner	.25 hours
Spring 2019 BAP Report	4/11/2019	Shelley De Wys	Clarification of benefit achievement date	.25 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underline primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☒
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The primary benefit of this project is replacing the existing system to maintain existing functionality (Category 3), with the measurable result of no loss of ORCA market share or apportioned fare revenue. The current state of electronic fare collection will likely provide some improvements to the customer experience with ORCA and those are the benefits explored in this section.

   This project is to fund King County's participation in the detailed planning and scoping to replace the existing regional ORCA smart card fare collection system. The ORCA agencies have agreed to a number of strategic objectives for the ORCA replacement project of which the following are designed to improve the quality of services provided to the public. These benefits include impacts from the updated system as well as functional enhancements and/or policy changes that could be supported by the new system.

   BENEFIT 1 (secondary): Improve customer experience by:
   - Making it easier for customers without banking relationships to get the benefits provided by an ORCA card (for example, intersystem transfers);
   - Providing an infrastructure that allows customers almost instantaneous availability of loaded value; eliminating the waiting period that exists with the current system.
   - Allowing payment from a variety of devices (smartphone, ORCA card, etc.);
   - Providing more options for off-board fare payment, allowing customers to pay without waiting in line to board the bus

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

Customer satisfaction with ORCA and features above are implemented

3. ***What is the current baseline for this measure?***
   King County Metro Customer Satisfaction with fare payment is currently 77%

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   The target for customer satisfaction is more than 90% of customers are very or somewhat satisfied with ORCA.

5. ***When is the benefit likely to be achieved?***
   One or two years following project completion, estimated to be in the 2021-2022 timeframe.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff..

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   As stated above, the primary benefit of this project is replacing the existing system to maintain existing functionality (Category 3).

   BENEFIT 2 (secondary): System efficiencies will result in lower costs for agencies.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   System operating costs will be lower.

3. ***What is the current baseline for this measure?***
   Current system operating costs are $7.6 million with half of the expense coming from the vendor for the operations and maintenance of the system and the other half being agency costs for services provided to the region to support the system (e.g. fiscal agent services from Sound Transit; Mail center charges from King County Metro)

   While all the efficiencies will be identified during system design, a small one that can be baselined at this time is the cost of uncollectable fares resulting from bad credit card transactions in the autoload process. Currently system design of the autoload process results in value added to ORCA cards before

the credit card transaction is processed. For 2017, the impact to the region is ~$320,000 including 2 FTE.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
The target for the system operating costs is that they are lower than the baseline when that is developed. The target for autoload transactions being uncollectable will be $0.

5. ***When is the benefit likely to be achieved?***
Some benefits, such as the uncollectible autoload costs will immediately be realized, others will likely take one to two years following project completion to be fully realized.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
The current ORCA fare collection system was implemented in 2009 on technology platforms that were prevalent in 2003 when the system was designed. A 10-year operating and maintenance agreement was signed with the vendor. The current ORCA system is proprietary and individual components have already reached the end of their useful life and, while the vendor is making repairs, new devices are not available without starting a new development effort.

Examples of system functionality that are at end of life or based on antiquated technology platforms include:
- Analog communications with third party retailers. In order to support the system, a third party retailer must provide a phone and fax line over which data is sent. With the onset of digital technology, hardware and software that communicate over analog networks are getting harder and harder to find and support.
- Back office computers are operating on software that is no longer supported. This includes some software that, due to security concerns, KCIT will not allow to be resident on devices that interact directly with the King County network.
- Devices no longer available for purchase. Examples include devices such as onboard fare transaction processors and driver display units have reached the end of life and while the vendor is making repairs, we are not able to purchase new devices so are limited to the inventory on hand which could limit our ability to expand service.
- No device inventory available. Stand Alone Fare Processors are no longer available as the original inventory has been deployed. Expansion of Rapid Ride or Link service rely on the ability to collect fares off the vehicle and stand-alone fare processors are required.
- Limited ability to modify system functionality. With the proprietary system, the vendor is required when any system modification is needed. This creates the inability to provide

updated functionality for customers and limits the business process improvement that agencies can implement. In some cases, side systems are being developed in order to respond to changing circumstances.
-   Increased security risk and cost increases. The Customer Service Terminals are essentially personal computers that connect to the system. In 2014, the devices were upgraded to eliminate a security risk at a cost of $1.1 million. Additionally the back office computers recently had to be upgraded because they were operating on software that, due to security concerns, KCIT would not allow to be resident on devices that interact directly with the King County network. This could become an issue again in the future if the devices are not able to be updated.

At the end of the contract, the vendor will no longer be supporting the system and components.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
Implementing a new system will remove the risk that is inherent with the current 10-year vendor contract. The proprietary system components make us dependent upon the vendor to provide, not only system services such as revenue apportionment, but also equipment such as stand-alone fare processors which have reached the end of their useful life and are no longer available without a substantial new, proprietary development effort. There is a risk that the new system will not be available before the vendor contract for the current system expires. Regionally, this risk is being addressed through development of transition plans and other risk mitigation activities.

BENEFIT 3 (primary): Maintain regional fare collection functionality. Customers have come to rely upon the ability to seamlessly transfer if they pay their fare with an ORCA card.

BENEFIT 4 (primary): Customers continue to be satisfied with fare collection.

3. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
BENEFIT 3: ORCA market share is currently calculated annually. The measure will be measured through no loss of ORCA market share. This will indicate that customers are continuing to use ORCA to pay for public transit.

BENEFIT 4: Customer satisfaction is measured annually in the survey of riders.

4. ***What is the current baseline for this measure?***
BENEFIT 3: Baseline for the ORCA King County Metro market share is ~65%. Baseline will be examined during design and implementation to determine that if travel patterns and other changes may have changes to market share.

BENEFIT 4: Customer satisfaction in 2015 was 77% very satisfied. Customer satisfaction will be reviewed during the design and implementation phases to determine if the baseline needs to be revised.

5. ***What is the target for this measure? (How much improvement will this project achieve?)***
Target is no loss of market share and no loss of customer satisfaction. .

6. ***When is the benefit likely to be achieved?***

Benefits will be achieved one year following <u>full installation of all</u>
system <u>components</u> ~~implementation~~, <u>current estimated benefit achievement date of Q3 2023.</u>
<u>(Revised 4/11/2019)</u>.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: <u>Reduced cost to produce service</u>. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: <u>Cost Avoidance.</u> Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional five years. This project is currently functioning at 99.999% up-time and will report annually for the next five years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing time, annual savings, and % of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving payment discounts* • *$100,000 savings*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*
Spring 2019 BAP Report: Project ongoing. No change in expected benefits or significant change in timing. See next page for the metrics summary.				

Summary – **ORCA IT Project**

Benefit	Measure	Baseline	Target	Actual
PRIMARY (Category 3): **Maintain use of ORCA for fare collection**	Increased ORCA market share	Baseline ORCA King County market share is ~65% at King County Metro.	No loss in market share	1 year following implementation
PRIMARY (Category 3) **Continued satisfaction with Fare collection**	Customer Satisfaction with Fare Collection	Baseline is currently 77% very satisfied	No loss of satisfaction	1 year following implementation
SECONDARY (Category 1): **Improved customer experience**	King County Metro Customer Satisfaction	77%	>90% of customers being very or somewhat satisfied with ORCA	1-2 years following project completion
SECONDARY (Category 2): **Lower costs for agencies due to system efficiencies.**	Lower system operating costs (e.g., cost of uncollectable fares resulting from bad credit card transactions in the autoload process)	Currently system design of the autoload process results in value added to ORCA cards before the credit card transaction is processed. For 2017, the impact to the region is ~$320,000 including 2 FTE.	Target for autoload transactions being uncollectable is $0. Others are to be determined.	1-2 years following project completion

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Transportation/Transit
Project Title	Real-Time Improvements
Project Number	1124413
Project Timeframe	Sept. 2017 – Oct. 2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Rob Gannon, Director, Metro Transit

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Alex Rampley	IT Project Manager II, Transit	Project Manager
Damon Berbert	IT Project Manager II, Transit	Replaced Alex as Project Manager
Chrissy Russillo	Transit Cust. Comm & Svcs Mgr, Metro Transit Department	Project Sponsor

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.

5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Budget	7/25/18	Alex Rampley	Update version, revise text	1 hour
Spring 2019 BAP Report	2/6/19	Damon Berbert	Review Only	.5 hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category		Primary	Secondary

	(select only one)	(select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☒	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

<u>**CATEGORY #1**</u>**: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.**

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   Metro Transit customers use a variety of information systems to check bus schedule and status information, including schedule pages in Metro Online, the Automated Trip Planner, Tracker, the Interactive Voice Response system, Real Time Information Signs, the regional One Bus Away systems, and myriad third party applications. Many customers also receive automated Transit Alerts via email subscription, or follow Metro on Twitter and Facebook.

   As customers use and rely on electronic information in many other areas of their lives, they increasingly expect transit to provide a similar level of customized service and immediate responsiveness. Today, these systems do not provide consistent information about significant temporary changes that may affect the customers' trips, such as reroutes, stop closures and service cancellations. In these situations customers have to do additional work to research what is happening, and even then may not find the information they need in time to adjust their trip plans. For many events, Metro Transit systems are simply not able to produce consistent electronic updates, across all of its customer information outlets, because the information has to be entered manually into each system, and resources are not available to keep up with the pace of the event, customize the output appropriately for each system, or ensure consistency on all the changes that potentially should be announced. Some systems such as One Bus Away third party apps cannot be updated manually, and Metro Transit does not have the capability to distribute these updates electronically. So customers are often not provided with accurate or timely information about changes affecting their service.

The proposed IT investment will implement a new centralized messaging system and modify business processes and existing tools to create, manage and automatically distribute updates about reroutes, stop closures and service cancellations consistently across all relevant platforms. Customer-facing systems will be modified to accept and display this new information.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   At present, Metro Transit's Automated Trip Planner and Tracker are manually updated with text messages for a subset of events, and One Bus Away and our public facing data feed does not display any information at all about reroutes, stop closures and service cancellations. Reroutes in particular interrupt data flow, leading to a message of "Scheduled" for all stops and trips on the coach's schedule downstream of the re-route. Other systems simply refer customers to the "Alerts and Updates" page in Metro Online, which can be cumbersome to use and at a minimum requires the rider to use a separate tool.

   After the project is implemented, these systems will all receive updates and revised stop time data and display them automatically. The quantity of messages provided for reroutes, stop closures, and service cancellations to customers will provide a measure of intended project benefits. Post implementation Metro Transit will measure the percentage of all reroutes, service cancellations and stop closures that are provided in an automated manner through One Bus Away, the Automated Trip Planner and Tracker. Since the project was initiated, a new vendor product offering has simplified the complex task of creating stop data for service re-routes, the project will implement this new tool as it fills the large number of gaps in data that occur when coaches leave their planned route.

   The project has conducted research using surveys and focus groups to identify customer information needs and has identified a need for an informational campaign when new features are added. Metro Transit customer communications staff will be engaged to provide electronic and printed material across several channels to alert riders as new data and features become available. Post implementation the Metro Rider Information Survey will be used to access satisfaction with the improved data streams. Customer research may also come from the work of partners agencies such as Sound Transit.

3. *What is the current baseline for this measure?*
   The current baseline for disruption messaging is zero percent of disruptions provided in data or as messages across all platforms. Customer satisfaction with information was measured at 76% in the 2016 rider information survey (published in 2017), the most recent available.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   The target for data and messaging service disruptions is 80% of disruptions. Some disruptions occur in real time and resolve or change more rapidly than staff can monitor and message around them. The target for customer satisfaction for real time information is an increase of 10% from 2016 levels.

5. *When is the benefit likely to be achieved?*
   Percentage of messages created vs. disruptions will be measured for the year following overall implementation (2020). Customer satisfaction will be measured during the rider information survey period that follows implementation (Target Fall 2019).

6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*
Riders are kept informed of situations that affect their travel on Metro Transit	Deviation events messaged to riders on all channels	0%	80%	By 12/31/2020
Customer satisfaction with information about travel options	% of respondents satisfied in Rider Survey	76%	86%	By 4/30/2021

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The Real Time Improvements project will improve internal operations through the introduction of new and/or improved technology and data integration. Currently communication about service disruptions requires a variety of phone and email communications, in addition to manually entering the same data across a variety of technology platforms. This project will streamline these processes by improving each primary system to capture information and move it via integration to any downstream systems that need that information. While full automation in this area is impractical, particularly for unplanned events like traffic outages, the project will achieve reductions in data entry and off-line communications, and will realize some degree of automation that will allow public facing real time information messaging based on decisions made by transit control center technicians and entered directly into the INIT transit control system.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   We will measure the number of data messages that originate in one system and transfer to downstream systems without additional manual data entry.

3. *What is the current baseline for this measure?*

Currently no data integration exists for service disruption information.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   When complete, 70% of service disruptions should move through the system without duplicate data entry.

5. *When is the benefit likely to be achieved?*
   Within six months of project completion.

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	*# sites inspected per day per inspector*	*6 sites/day per inspector*	*10 sites/day per inspector*	*By 12/31/2018*
Improved data integration for service disruptions	# of disruptions that are automatically messaged based on TCC coordinator original entry.	None	70% of service disruptions messaged without manual intervention.	7/1/2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did

not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

<u>Spring 2019 BAP Report:</u> Project ongoing. This project was funded in the 2017-18 budget and is "Preliminary Design" phase. No change in expected benefits or timing.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Transportation (DOT)/Transit Division
Project Title	Regional Fare Coordination System (ORCA System) Enhancements
EBS Project Number	Various – Master Project with Sub-projects

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

~~Kevin Desmond, Transit General Manager~~ Rob Gannon, ~~Acting~~ Transit General Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Tom Friedman~~	~~IT Project Manager II/DOT Transit Division~~	~~Project Manager~~
Phil Branham	Supervisor of Fare Media Sales/DOT Transit Division	Fare Media Sales Information
Chuck Sawyer	Supervisor/DOT Transit Division	Market Research Information
Tom Randall	Chief/DOT Transit Division	Customer Services Information
Dave Dunneback	Planner/DOT Transit Division	King County Employee ORCA Usage
Randy Boshart [Update 6/23/2017]	IT Project Manager II /DOT Transit Division	Project Manager

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2013 Annual Report	1/6/14	Tom Friedman	Converted plan from Benefit Realization Plan into BAP format	3 hours
2013 Annual Report	03/20/14	Kathleen McMurray	Revised per feedback	1 hour
2014 Annual Report	02/06/15	Kathleen McMurray	Review only	.25 hours
2015 Annual Report	2/11/16	Kathleen McMurray	Numerous updates throughout document	2 hours
2015 Annual Report	4/4/16	Kathleen McMurray	1. Updated Business Owner 2. Updated Section 3 to only include current Transit staff 3. Updated # of elements	.25 hours
2016 Annual Report	2/17/17	Randy Boshart	Updated Business Owner title and benefits achieved	1 hour
2016 Annual Report	6/27/2017	Jill Krecklow	Revised to reflect council staff feedback related to project benefits. Included dates for benefit achievement, added benefits specifically related to ORCA LIFT and added some description of nature of this project.	.5 hour
Spring 2019 BAP Report	2/6/2019	Randy Boshart	Review only	.25 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

X   Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐   Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐   Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐   Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

[Update 6/27/2017: The RFCS Enhancement project is a master project with several sub-projects. The sub-projects are all designed to advance use of the ORCA system by more customers, either by revising functionality, offering more/different products or providing streamlined operations which make it easier to use.]

Background: There are ~~7~~ 6 Elements (or sub-projects) within the RFCS Enhancements Project. ~~Four~~ Three of the ~~seven~~ six elements are in this Benefit Category. The expected benefits for each of these will be described separately.

1.   *Describe why you expect the proposed IT investment to produce the benefit(s).*

a. **Streetcar Element.** The goal of this element is to install ORCA readers on the two streetcar lines: South Lake Union and First Hill. It is an extension of the current regional ORCA system to the streetcar mode. This will allow the public to use ORCA cards for fare payment on streetcars thereby providing better access to services for the public.

b. ~~**Operations Enhancement Element.** The ORCA system went 'live' on April 20, 2009. This element is intended to address operational issues that have come to light since the implementation of the system. The primary benefits are expected to be customer and employee satisfaction related to the collection of fares on board buses.~~

c. **University of Washington Element.** The goal of this element was to convert the U Pass program to ORCA. This allows UW students, staff and faculty to use ORCA cards for fare payment thereby providing better access to services for the public.

d. **Regional Enhancements Element.** The specific enhancements included in this element are determined by the ORCA Regional Joint Board (made up of the General Managers of the 7 participating agencies). Overall, the goals are to improve customer satisfaction and increase operational efficiencies.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   a. **Streetcar Element.** The benefit of this element will be measured by the number of passengers using ORCA for fare payment. The ORCA system automatically keeps track of the number of ORCA "taps" or "boardings". ORCA Boardings reports can be generated easilty for any time period.
   b. ~~**Operations Enhancement Element.** The enhancements planned for this element are relatively small and the impact will be difficult to measure without an expensive survey effort. It is proposed that a surrogate metric is the number of customer complaints recorded by the Metro Comment System (MCS).~~
   c. **University of Washington Element.** Conversion to ORCA was not expected to change transit use at UW but the number of times the cards are used is an indicator of the usability of the extension of the regional ORCA system.
   d. **Regional Enhancements Element.** The usage of ORCA since Full System Acceptance is the most relevance metric, specifically regional average weekday ORCA boardings as a percent of total average weekday boards.

3. ***What is the current baseline for this measure?***
   a. **Streetcar Element.** ORCA use on streetcars will be measured by looking at ORCA Boardings on Streetcar service as a percentage of total Streetcar boardings: Baseline is 0%
   b. ~~**Operations Enhancement Element.** Customer satisfaction will be measured by looking at ORCA complaints per calendar quarter as entered in MCS: Baseline is 73 (3ʳᵈ Quarter 2012)~~
   c. **University of Washington Element.** UW ORCA boarding will be measured by looking at Total ORCA Boardings by UW cardholders in October of each year: Baseline is 0
   d. **Regional Enhancements Element.** ORCA Market Share will be measured by looking at Regional Average Weekday ORCA Boardings/Total Average Weekday Boardings: Baseline is 51% (End of 1ˢᵗ Quarter 2011)

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   a. **Streetcar Element.** ORCA use on streetcars will be measured by looking at ORCA Boardings on Streetcar service as a percentage of total Streetcar boardings: Target is 50%
   b. ~~**Operations Enhancement Element.** Customer satisfaction will be measured by looking at ORCA complaints per calendar quarter as entered in MCS: Target is decrease by 30%~~

c. **University of Washington Element.** UW ORCA boarding will be measured by looking at Total ORCA Boardings by UW cardholders in October of each year: Target is 1,422,677

d. **Regional Enhancements Element.** ORCA Market Share will be measured by looking at Regional Average Weekday ORCA Boardings/Total Average Weekday Boardings: Target is 65%

5. *When is the benefit likely to be achieved?*

a. **Streetcar Element.** 2/17/17: Benefit has been achieved. As of December 2016 usage of ORCA on Streetcars is 66%. Two years following implementation of ORCA fare payment on streetcars.

b. ~~**Operations Enhancement Element.** Two years following implementation of the Operations Enhancement.~~

c. **University of Washington Element.** Benefit has been achieved. All UW transit trips were converted to ORCA with implementation of the UW Element. Total ORCA Boardings by UW cardholders in October 2012 was 1,422,677.

d. **Regional Enhancements Element.** Two years following implementation.

[Update 6/27/2017: The regional enhancement elements of this project are all designed to increase ORCA market share. Incremental enhancements to the system coupled with outreach and promotional activities have increased ORCA boardings from an initial 51% of boardings (2011) to 67% in 2016. One particular enhancement that was done as part of this project is related to ORCA LIFT. ORCA LIFT would not have been possible without the funds available to develop a system for the service providers to use to enter and share information. The original estimate for ORCA LIFT 'customers' was 45k – 60k. As of May, 2017 ORCA LIFT has 47,019 customers.]

[New 1/22/16: Operations Enhancement Element was removed from the scope of the RFC Enhancements project.]

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

Background: There are ~~7~~ 6 Elements (or sub-projects) within the RFCS Enhancements Project. Two of the ~~seven~~ six elements are in this Benefit Category. The expected benefits for each of these will be described separately.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

a. **King County Employee Card Element.** This element implemented ORCA cards for King County employees. The cards provide building access and functionality in addition to ORCA functionality.

b. **Data Access Element.** The primary benefit of this element is to preserve the detailed ORCA transaction data that is currently stored as csv files on the ORCA Back Office Computer (BOC). This project element will make the transaction data available to a limited number of users but it will position Metro for future use of the data for operational analysis as part of a yet to be determined project. The ORCA vendor will be purging these data soon and it is important that they be saved elsewhere.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   a. **King County Employee Card Element.** The benefit of this element can be measured by monitoring the usage of ORCA boardings generated by King County cards.
   b. **Data Access Element.** Success will be measured by having a repository of detailed ORCA transaction data rather than having the data unavailable for future study.

3. *What is the current baseline for this measure?*
   a. **King County Employee Card Element.** King County employee ORCA usage will be measured by looking at Total ORCA Boardings by King County employees for June to October of each Year: Baseline is 0
   b. **Data Access Element.** Baseline for this element is having no database for BOC transaction data.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   a. **King County Employee Card Element.** King County employee ORCA usage will be measured by looking at Total ORCA Boardings by King County employees for June to October of each Year: Target is 691,673
   b. **Data Access Element.** Target for this element is having a database for BOC transaction data.

5. *When is the benefit likely to be achieved?*
   a. **King County Employee Card Element.** Benefit has been achieved. All King County employee transit trips were converted to ORCA with implementation of the King County Employee Card Element. Total ORCA Boardings by King County employees for June to October 2012 was 691,673.
   b. **Data Access Element.** Benefit has been achieved. Work on this element is complete with the implementation of a repository of detailed ORCA transaction data.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

Background: There are 7 6 Elements (or sub-projects) within the RFCS Enhancements Project. One of the seven six elements are is in this Benefit Category. The expected benefits for each of these will be described separately.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   Sales & Customer Services Element. 2/17/17: Benefit has been achieved. Legacy point of sale (POS) system has been retired. The ORCA system was implemented as a regional system that did not address all of the needs of the individual agencies. This project element's purpose is was to extend the ORCA system in several ways with the goal of completing the replacement of Metro's legacy point of sale (POS) system. The legacy POS system is was currently only used for a small number of sales transactions at the agency. With the completion of the project element, all sales transactions will be are now performed using the ORCA system and the legacy POS system will be has been retired.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
   N/A

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

[Update 6/27/2017: The RFCS Enhancement project is a master project with several sub-projects. The sub-projects are all designed to advance use of the ORCA system by more customers, either by revising functionality, offering more/different products or providing streamlined operations which make it easier to use.]

Background: There are 7 6 Elements (or sub-projects) within the RFCS Enhancements Project. Three of the seven six elements are in this Benefit Category. The expected benefits for each of these will be described separately.

1. *Describe why you expect the proposed IT investment to reduce costs?*
   a. **University of Washington Element.** Surveys that are currently done every 2 years to determine UW transit usage will no longer be needed.

b. ~~Operations Enhancement~~ **Sales & Customer Services Element.** Legacy POS system will no longer be needed.

c. **King County Employee Card Element.** Avoids support of multiple building access and ORCA cards for KC employees.

2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***

a. **University of Washington Element.** Surveys will no longer be needed. Cost savings.

b. ~~Operations Enhancement~~ **Sales & Customer Services Element.** Legacy POS system will no longer be needed. Cost savings.

c. **King County Employee Card Element.** Separate building access card will not be needed.

3. ***What is the current baseline?***

a. **University of Washington Element.** $42,000 every 2 years

b. ~~Operations Enhancement~~ **Sales & Customer Services Element.** $18,000 per year

c. **King County Employee Card Element.** $386,000 over 5 year life cycle.

4. ***What is the target for this measure? (How much savings will this project achieve)***

a. **University of Washington Element.** $42,000 every 2 years

b. ~~Operations Enhancement~~ **Sales & Customer Services Element.** $18,000 per year

c. **King County Employee Card Element.** $386,000 over 5 year period

5. ***When is the cost reduction likely to be achieved?***

a. **University of Washington Element.** ~~June 2015.~~ [New 1/22/16: Benefit has been achieved. King County no longer pays for or manages a survey to determine UW transit usage.]

b. ~~Operations Enhancement~~ **Sales & Customer Services Element.** 2/17/17: Benefit has been achieved. Legacy POS system was retired in 2016 ~~Estimated to be June 2016~~ (two years after implementation).

c. **King County Employee Card Element.** April 2017. 2/17/17: Benefit has been achieved. All King County staff have ORCA cards which also allow for building access.

[New 1/22/16: Corrected the name of the Sales & Customer Services Element (it was misnamed "Operations Enhancement Element").]

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing time annual savings, and percentage of purchases receiving prompt payment discounts*	*10 days processing time* *10% of purchases are receiving discount* *Savings of $100,000*	*1 day processing time* *30% of purchases are receiving prompt payment discounts* *$400,000 savings*	*2 day processing time* *20% of purchases are receiving prompt payment discounts* *$200,000 savings*

There are ~~7~~6 Elements (or sub-projects) within the RFCS Enhancements Project. Benefits for each of these Elements will be realized at different times. The below list identifies those benefits realized to date. Additional benefits will be added over time.

Metric Description	Metrics	Baseline	Target	Actual
Category 1: External Services				
ORCA usage on streetcar	ORCA usage on streetcar compared to all boarding	0	50% of riders using ORCA on streetcar for fare payment	As of December 2016 ORCA usage on streetcar is 66%
University of Washington (UW) ORCA Boardings	Total ORCA Boardings by UW Employees in October of each Year.	0	1,422,677	1,422,677 (all UW transit trips converted to ORCA with the University of Washington Card Element)
ORCA LIFT Customers [updated 6/27/2017]	Total # ORCA LIFT cards issued.		45k to 60k	Customers as of 5/31/2017 total 47,019. Outreach and expanding contracts with social service agencies continue to expand use of the product. The technology investment enables this work to be done in a cost effective manner, but does not in and of itself result in the program acceptance.

Category 2: Efficient Operations				
King County (KC) Employee ORCA Use	Total ORCA Boardings by KC Employees for June to October of each Year.	0	691,673	691,673 (all KC transit trips converted to ORCA with the King County Employee Card Element)
Installation of a repository of detailed ORCA transaction data rather than having the data unavailable for future study.	Installation of a repository of detailed ORCA transaction data.	No data repository exists.	Data repository is created and collecting data.	Data repository is created and collecting data
Category 3				
Legacy Point of Sale (POS) System retired	Transactions on POS system	$18,000 per year to support legacy POS system	Cost savings of $18,000 per year	Point of Sale System has been retired.
Category 4				
Survey data no longer used to determine UW transit usage.	Surveys will no longer be needed.	$42,000 expended every 2 years	Cost savings of $42,000 every 2 years	Cost savings of $42,000 every 2 years (King County uses ORCA data to determine UW transit usage and no longer pays for or manages a survey this purpose)
~~Legacy Point of Sale (POS) System retired~~	~~Transactions on POS system~~	~~$18,000 per year to support legacy POS system~~	~~Cost savings of $18,000 per year~~	~~Point of Sale System has been retired.~~
King County Employee card usage for both building access and fare payment	KC employee card distribution	$386,000 over 5 year period	Cost saving of $386,000 over 5 year period	All King County staff have dual use ORCA cards which allow for building access. Saving realized.

[New 1/22/16: Updated Metrics table to include benefit "Survey data no longer used to determine UW transit usage".]

New 2/17/~~2~~17: Updated Metrics table to include:
1. ORCA usage on streetcar
2. Legacy Point of Sale (POS) System retired
3. King County Employee card usage for both building access and fare payment

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Transportation (DOT)/Transit Division
Project Title	Rider Information Systems (RIS) – TABS
EBS Project Number	1028651

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Rob Gannon, ~~General Manager~~ Director, Metro Transit Department

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Jill Krecklow	Finance Manager-Enterprise ~~Operations, DOT~~ Metro Transit Department~~Division~~	Finance Manager – Overall Capital Program Development
~~Bob Virkelyst~~ Matt Hansen	~~Customer Communications & Services, Service Information, DOT Transit Division~~ Strategic Planning Manager, Metro Transit Department	Sponsor
~~Liviu Prisecaru~~ Diane Sutherland	~~Systems Development & Operations, DOT Transit Division~~ IT Project Manager II, Metro Transit Department	Project Manager

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document

to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Examples: conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Annual Report	02/14/2014	Jill Krecklow	Initial Report	1 hour
Annual Report	03/20/2014	Kathleen McMurray	Revised per feedback	1 hour
Annual Report	02/19/2015	Liviu Prisecaru	Review only	.25 hours
Annual Report	02/06/2016	Liviu Prisecaru	Review only	.25 hours
2017/2018 Budget	07/20/2016	Kathleen McMurray	Updated Business Owner & Project Sponsor; Added Project Number	.25 hours
2017/2018 Budget	10/10/2016	Kathleen McMurray	Updated based upon Council staff feedback	1 hour
2017/2018 Budget	10/16/2016	Jill Krecklow	Revised to reflect council staff feedback	.5 hours
2016 Annual Report	2/17/2017	Liviu Prisecaru	Review only. The project was on hold will awaiting additional funds. Funding has been approved and new project manager assigned.	0.25 hours
Spring 2019 BAP Report	2/5/5019	Diane Sutherland	Updated Section 3 to reflect Transit Department change. Updated project completion date and removed dependency on completed Stop Based Scheduling.	.5 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

X Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications

such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   The legacy Timetables and Bus Schedule Information System (TABS) was custom designed and implemented in 1992 for the production of paper timetable pamphlets and paper bus stop schedules that are posted at bus stops. TABS is used to collect and reorganize data for use by PageMaker publishing software and to provide schedule information for use in Metro Online. TABS currently has two components (Automated Time Tables and Bus Stop Information) each of which is facing significant end-of-life issues. While TABS is working today, the continued complexity of data and changing business requirements will continue to require resources to modify and update the highly customized and non-vendor supported system.

   This project will replace both components of TABS (Automated Time Tables and Bus Stop Information) with a modern technological solution that will be maintainable, adaptive and designed to minimize cycle time of production processes.

   This project is expected to be completed in Q4 ~~2018~~2019.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   Business continuity is the primary reason for this project. There is a 100% probability that the tools available to support the generation of schedule information at bus stops will fail, it is just a question of when they will fail. The hardware used to develop the schedule information at bus zones/shelters has already been cobbled together from spare parts once already. The TABS system is highly customized and non-vendor supported. As technology and business requirements change, the risk of being able to produce timetables and bus schedules in a consistent and timely manner will be at risk.

Non-standard and outdated hardware and software includes:

· Ingres as a KCIT not supported database
· Openroad client application (custom developed)
· PageMaker – no longer supported by Adobe (current software supported is InDesign)
· Old MAC computers running on old unsupported operating system that is compatible with Openroad and PageMaker]

~~This project is dependent upon completion of the Data Infrastructure Replacement Project – Stop Based Scheduling effort. The business process change to Stop Based Scheduling will change how the schedule times are determined. Stop Based Scheduling will implement a new module by Giro (the vendor of Transit's HASTUS application) and will likely change the data available for Timetables and may provide options for replacement that are integrated with other applications. Delays in Stop Based Scheduling have occurred due to the unavailability of KCIT resources to support the project. Daily, these delays introduce risk to the current TABS environment.~~

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to < 1 day allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Spring 2019 BAP Report: Ongoing project, expected to be completed by year-end 2019.

IT Project Benefits Achievement Plan (Version 2)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
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King County Department/ Agency Name	DOT/Transit
Project Title	Safety and Security System
Project Number	1129800 [Updated 2/5/19]

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: Grantley Martelly, Transit Safety and Security Mgr. [Updated 2/5/19]

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Kathleen McMurray	Supervisor/Transit	Subject Matter Expert
Marc Anderson	Transit Risk Program Manager/Transit	Subject Matter Expert
Grantley Martelly	Chief Safety Officer	Project Sponsor
Jill Krecklow	Finance Manager – Enterprise Operations	Chair – Transit Technology Oversight
Paula Adams	Technology PM	Project Manager

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	6/22/16	Kathleen McMurray	New, initial draft	3 hours
2017/2018 Budget	10/6/16	Kathleen McMurray	Updates from Council staff feedback	2 hours
2017/2018 Budget	10/10/16	Jill Krecklow	Update to reflect information from the Comprehensive Safety System Review	1 hour
2017/2018 Budget	10/16/16	Jill Krecklow	Revised to reflect Council staff comments	1 hour
2016 Annual Update	2/17/17	Kathleen McMurray	Minor updates only. This project was just funded and has not yet started.	.25 hours
Spring 2019 BAP Report	2/5/19	Paula Adams	No change to intent, but Section 2 rewritten for improved clarity and accuracy, given a new PM has been assigned to this project since the last update. Sections 1 and 3 added by new PM (Adams).	1 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public

2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

<u>Category #1</u>: **External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.**

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. Describe why you expect the proposed IT investment to produce the benefit(s).
The ability to report on event (incidents, accidents and risks) root causes and locations provides Transit leadership with the critical data they need to deploy corrective resources effectively in order to reduce accidents, incidents and risks involving the public. The solution will also reduce adverse events limited to Transit facilities and employees, thereby indirectly getting more coaches into service.

2. How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)
Listed below are only some of the potential benefits from the Safety and Security Management System. The maximum benefit for Metro Transit is achieved only when a comprehensive Safety Management System is in place. Such a system is likely to take up to 2 years to fully implement. The end state is achieved when Transit leadership can routinely discuss and prioritize safety incidents, accidents and risks, and feel confident that resources are applied for the greatest positive effect.

A. Identification and Use of Leading Indicators and Trends: Transit will know that this benefit has been achieved when data and reports identifying the frequency, location, severity and root causes of incidents, accidents and risks are routinely available.

B. Efficient Application of Limited Financial Resources: With the data referenced in Item A above, Transit can identify opportunities for improving safety. Decisions relating to allocation of safety-related resources will be data-driven, rather than merely instinctive, or based on the observations of only a few key individuals.

C. Decision Tracking: Similarly, KCM will have the ability to track the decisions resulting from relational safety data.

D. Monitoring Effectiveness of Corrective Action: Transit will have the ability to measure the frequency and root causes of incidents, accidents and risks both before and after the date of a corrective action; *and thereby assess the effectiveness of any given training, corrective or preventative action.*

Examples of data types include:
A. Near Miss Data: Transit will have the ability to generate a report showing precisely where near misses are occurring and the frequency and root cause of each location. This will allow Transit to adjust training, communication and counseling protocols with drivers, mechanics and other associated employees in order to mitigate risk. Note that the solution will have robust GIS capability.

B. Accident Data: Transit will have the ability to generate a report showing precisely where accidents are occurring and the frequency and root cause of each location. This will allow Transit to adjust training, communication and counseling protocols with drivers, mechanics and other associated employees in order to mitigate risk. Note that the solution will have robust GIS capability.

C. Security Data at Stops, Parks and Rides and on Coaches and Rail Lines: Transit will have the ability to generate a report showing precisely where and under what circumstances security incidents are occurring and the frequency and core vulnerability of each location. This will allow Transit to adjust training, external communication and facilities amenities that support public safety. Note that the solution will have robust GIS capability.

3. What is the current baseline for this measure?
There is no baseline in terms of detailed, relational reporting. As noted above, the tools currently utilized by Metro Transit to manage safety-related data and workflows are disparate, static and unsophisticated. In most cases, Excel spreadsheets, SharePoint lists or Access databases are used for 20-25 different purposes associated to safety. This makes relational, dynamic and predictive data analysis essentially impossible. This can result in recurring incidents, accidents and risks, with root causes either never addressed or not addressed timely.

4. What is the target for this measure? (How much improvement will this project achieve?)
The target for this measure will be to establish automated reports and data sets that are effective for KCM safety-related decision-making. Once the reporting capability is established, KCM will establish multiple measurable baselines (for adverse incidents), then seek to reduce those baseline numbers over time.

5. When is the benefit likely to be achieved?

Useful data sets will be observable at project completion, currently scheduled for Q4 2020. Full absorption of the solution into the KCM safety culture will likely take another 1 to 2 years to fully realize. However, the chosen vendor, Origami Risk, will utilize iterative development cycles that will produce a series of go-live milestones, one module at a time. Some preliminary data sets should be available late in 2019.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. Describe why you expect the proposed IT investment to produce the benefit(s).

~~The benefit of this project will be how it enables Metro Transit to achieve an organization-wide 'Safety Management System' (SMS) that meets the requirements of the Federal Transit Administration. An SMS approach introduces requirements and expectations that cannot be met with existing data sources and processes. Having complete data that is accessible with business intelligence tools will allow Metro to be proactive in addressing safety situations, rather than today's reactive responses. Proactive safety agencies are able to use data sources to identify potential hazards so that resources can effectively be allocated to address the risks.~~

~~In 2015, Metro with funding from the King County Risk Administration Group, initiated a Comprehensive Safety System Review (CSSR). The review was completed in 2016 and the final report issued on 9/13/2016. A key element of the review is looking at Metro's safety culture, practices and procedures in light of the Federal Transit Administration's move require that each agency have a Safety Management System (SMS). While the exact rules associated with an SMS are still being finalized, there are many elements that are expected to be included. Language from the FTA's February 2016 Notice of proposed rulemaking included the following:~~

~~*"such practices call for setting safety goals and objectives, defining clear levels of accountability and responsibility for safety, establishing proactive approaches to identifying hazards and managing safety risks in day-to-day activities, establishing safety risk-based*~~

resource allocation monitoring and evaluating performance towards goals and continuously *learning and improvement."*[1]

The review identified a total of 48 recommendations across 5 areas: Safety Infrastructure, Safety Policies and Procedures, Safety Training, Employee Engagement and Safety Culture and the area where this project fits – Safety Data and Performance Management.

As stated in the report: "The collection, management, and analysis of reliable safety data lies at the heart of a mature safety organization. Due to a number of homegrown safety data systems, we observed "islands of data" that rarely connect with each other. For example, the process of accident investigation/validation on the part of each and every safety officer is burdensome, time-consuming and duplicative. In addition, there is very little proactive data mining that is occurring.

We recommend the establishment of a safety risk management framework, to include the goal of a robust enterprise risk management (ERM) data system or interrelated data systems. **The end state will be achieved when executive leadership can routinely discuss and prioritize agency-wide safety hazards and their associated risks and feel confident they are directing precious organizational resources in the right directions."**

In order to meet these requirements, Metro needs a comprehensive Safety and Security Data and Reporting System.

The tools currently utilized by King County Metro (KCM) to manage safety-related data and workflows are disparate, static and unsophisticated. In most cases, Excel spreadsheets, SharePoint lists or Access databases are used for 20-25 different purposes associated to safety. This makes relational, dynamic and predictive data analysis essentially impossible. Without comprehensive and interrelated data sets, KCM cannot perform the following safety-related work: 1) root cause analysis for groups of incidents, accidents and risks; 2) comparative analysis before and after a risk mitigation strategy or training protocol is executed; or 3) predict the most likely incidents and accidents, or where and when they will likely occur. This type of sophisticated analysis is essential to institutionalizing a culture of safety and reducing risk.

Given the rate of population growth in King County and the associated demand for public transportation, KCM must modernize its approach to safety management. Specifically, KCM must automate workflow, data processing and reporting tools, thereby driving quality decision-making and effective deployment of safety-related resources.

As further background, Metro partnered with the King County Risk Administration Group in 2015 and initiated a Comprehensive Safety System Review (CSSR). The final report was issued on 9/13/2016. A key outcome was review of Metro's safety culture, practices and procedures; a response to the Federal Transit Administration's requirement that each agency have a Safety Management System (SMS).

Language from the FTA's February 2016 Notice of proposed rulemaking included the following:

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[1] US Department of Transportation. Federal Transit Administration (2016) "Public Transportation Agency Safety Plan; Notice of proposed rulemaking request for comments." Vol. 81 No. 24., 49 CFR Park 673

"Such practices call for setting safety goals and objectives, defining clear levels of accountability and responsibility for safety, establishing proactive approaches to identifying hazards and managing safety risks in day-to-day activities, establishing safety risk-based resource allocation monitoring and evaluating performance towards goals and continuously learning and improvement."[2]

The review identified a total of 48 recommendations across 5 areas: Safety Infrastructure, Safety Policies and Procedures, Safety Training, Employee Engagement and Safety Culture and the area where this project fits – ***Safety Data and Performance Management***.

As stated in the report:

"The collection, management, and analysis of reliable safety data lies at the heart of a mature safety organization. Due to a number of homegrown safety data systems, we observed "islands of data" that rarely connect with each other. For example, the process of accident investigation/validation on the part of each and every safety officer is burdensome, time-consuming and duplicative. In addition, there is very little proactive data mining that is occurring.

*We recommend the establishment of a safety risk management framework, to include the goal of a robust enterprise risk management (ERM) data system or interrelated data systems. **The end state will be achieved when executive leadership can routinely discuss and prioritize agency-wide safety hazards and their associated risks, and feel confident they are directing precious organizational resources in the right directions."***

In order to both meet these requirements and institute modern, effective safety analysis, Metro needs a comprehensive Safety and Security System.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   ~~The following are a list of potential benefits to result from the project. The maximum benefit for the agency is achieved only when a comprehensive Safety Management System is in place. Such a system is likely to take up to 3 years to implement, but a continual effort to continue. As mentioned in the report, the end state is achieved when leadership is able to routinely discuss and prioritize safety hazards and risk and feel confident that resources are appropriately directed. The items below are samples of what improved data collection and reporting could provide for decision-making. Also, until the FTA has completed their rulemaking, the information required for reporting will not be available. As work continues to implement the 48 recommendations from the CSSR, the benefits of this system will also become clearer.~~

   ~~Safety information currently produced focuses on trailing indicators related to the frequency of incidents, claims filed, and other lagging indicators. As a result, factual reporting replaces analysis in most cases. For Metro to become more proactive, the organization will need to develop leading indicators and perform trend analysis. Currently, the data to produce such analysis does not exist or is painstaking to access.~~

   ~~Current safety data management systems in use are older point solutions which require data to be extracted and loaded into another platform, such as Excel, for reporting. This is a time-consuming~~

[2] US Department of Transportation. Federal Transit Administration (2016) "Public Transportation Agency Safety Plan; Notice of proposed rulemaking request for comments." Vol. 81 No. 24., 49 CFR Park 673

Listed below are only some of the potential benefits from the Safety and Security Management System. The maximum benefit for Metro Transit is achieved only when a comprehensive Safety Management System is in place. Such a system is likely to take up to 2 years to fully implement. The end state is achieved when Transit leadership can routinely discuss and prioritize safety incidents, accidents and risks, and feel confident that resources are applied for the greatest positive effect.

A. Identification and Use of Leading Indicators and Trends: Transit will know that this benefit has been achieved when data and reports identifying the frequency, location, severity and root causes of incidents, accidents and risks are routinely available.

B. Efficient Application of Limited Financial Resources: With the data referenced in Item A above, Transit can identify opportunities for improving safety. Decisions relating to allocation of safety-related resources will be data-driven, rather than merely instinctive, or based on the observations of only a few key individuals.

C. Decision Tracking: Similarly, KCM will have the ability to track the decisions resulting from relational safety data.

D. Monitoring Effectiveness of Corrective Action: Transit will have the ability to measure the frequency and root causes of incidents, accidents and risks both before and after the date of a

corrective action; *and thereby assess the effectiveness of any given training, corrective or preventative action.*

Examples of data types include:

A. <u>Near Miss Data</u>: With a solution in place, a report will be generated showing precisely where such incidents are occurring and the status and root cause of each, so that KCM can adjust training, communication and counseling protocols with drivers, mechanics and other associated employees in order to mitigate risk.

B. <u>Root Cause Analysis</u>: For example, the solution might identify that operators driving a certain bus model have more on the job injuries than other groups. Again, KCM can adjust training, communication and counseling protocols with the specific group of drivers in order to mitigate risk.

C. <u>Certification Review</u>: Another example could be identifying which staff must update professional certifications. Responsive training could then be either deployed internally or purchased from an outside source.

D. <u>Location-Specific Review</u>: Finally, the solution will generate reports showing the largest number of incident, accident and risk root causes at each Transit base, allowing base superintendents to pinpoint the training needs of their own workforce, rather than implement generalized training that may or may not reduce negative occurrences.

~~Allow data-driven decision making – Current safety data management systems in use are older point solutions which require data to be extracted and loaded into another platform, such as Excel, for reporting. This is a time-consuming process that makes answering additional questions about the data difficult or impossible and that precludes proactive safety management. We will know that this benefit has been achieved when reports are routinely and timely available that identify opportunities for changes or that provide information to inform other processes without relying on anecdotal information. We will report back on the actual significant uses of this tool in decision making. An example could be identifying which staff need to receive updated certifications in order to be current on requirements so that training can occur in an appropriate time frame. Or the ability to gather information the type of accidents that are occurring and then using the information to make changes to procedures, operations or vehicles/equipment.~~

3. ***What is the current baseline for this measure?***

~~Identification of leading indicators and trends   The baseline for this measure is that information is not readily available to be evaluated to identify recurring instances and determine changes that could be made to operations, facilities, vehicles/equipment that would reduce job injuries or help to prevent accidents.~~

~~Allow data-driven decision making –M The baseline for this measure is that it is that many decisions are currently made on anecdotal evidence and may not adequately and appropriately address the situation. This can result in recurring incidents as the 'real issue' is not addressed.~~

There is no baseline in terms of detailed, relational reporting. As noted above, the tools currently utilized by Metro Transit to manage safety-related data and workflows are disparate, static and unsophisticated.

In most cases, Excel spreadsheets, SharePoint lists or Access databases are used for 20-25 different purposes associated to safety. This makes relational, dynamic and predictive data analysis essentially impossible. This can result in recurring incidents, accidents and risks, with root causes either never addressed or not addressed timely.

4. *What is the target for this measure? (How much improvement will this project achieve?)*

    A. ~~Identification of leading indicators and trends – The target for this measure will be defined during system design as the type of questions to be addressed by the system and the data that will be collected is determined. We will identify the key reports Transit expects to achieve from this project. Data availability and reporting will be demonstrated in the safety committees as reports are provided that identify trends of emerging risks and opportunities for improvements/changes that directly reduce recurrence of similar injuries.~~

    B. ~~Allow data-driven decision making –~~ ~~The target for this measure will be defined during system design when information will be available to determine the type of data that will be available and the types of decisions that will be able to be made. Data and report availability will be demonstrated in the decision-making process for identifying improvements and changes and in analyzing results.~~ ~~We will report on the types of decisions/actions that are actually informed by this tool.~~

   The target for this measure will be to establish automated reports and data sets that are effective for KCM safety-related decision-making. Once the reporting capability is established, KCM will establish multiple measurable baselines (for adverse incidents), then seek to reduce those baseline numbers over time.

5. *When is the benefit likely to be achieved?*
   Useful data sets will be observable at project completion, currently scheduled for Q4 2020. Full absorption of the solution into the KCM safety culture will likely take another 1 to 2 years to fully realize. However, the chosen vendor, Origami Risk, will utilize iterative development cycles that will produce a series of go-live milestones, one module at a time. Some preliminary data sets should be available late in 2019.

   Allow data-driven decision making – This benefit will be achieved within 2 years of system implementation (Q4 2021).

Category #3: **Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.**

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

In 2015, Metro with funding from the King County Risk Administration Group, initiated a Comprehensive Safety System Review (CSSR). A key element of the review looked at Metro's safety culture, practices and procedures in light of the Federal Transit Administration's move require that each agency have a Safety Management System (SMS). As stated in the report:

> "The collection, management, and analysis of reliable safety data lies at the heart of a mature safety organization. Due to a number of homegrown safety data systems, we observed "islands of data" that rarely connect with each other. For example, the process of accident investigation/validation on the part of each and every safety officer is burdensome, time-consuming and duplicative. In addition, there is very little proactive data mining that is occurring.

The proposed **measure** is Compliance with MAP-21. This system will allow Metro to comply with the *new* federal requirements for safety and risk management under MAP-21. The current data systems do not allow for such compliance. The statement above reflects the current state of safety data in KCM, as described in Category #2, Question #1 above. In order to both meet the new regulatory requirements, and modernize its safety reporting and corrective action response time and effectiveness, KCM must implement a successful Safety Management System.

The **baseline** for this measure is that Metro cannot report on safety and risk management efforts to comply with new federal requirements using our current systems.

The **target** for this measure is that Metro will be in compliance with new federal requirements. This benefit will be achieved within 2 years of system implementation.

2. If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.

The SMS project is a risk reduction effort in the truest sense. As background, approximately half of the data managed by King County's Office of Risk Management associates to Transit business. Given the high number of bases, vehicles and direct service providers managed by Transit, the potential for accidents and adverse incidents and risks remains ever-present. Transit cannot effectively or efficiently mitigate/reduce these risks without high-quality safety data that can sort by location and root cause, among other essential variables and factors. Once this data is readily available in the solution, Transit can then effectively deploy safety-related resources and reduce risk across the Metro Transit enterprise.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

> **Example:** _Cost Avoidance._ _Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000._
>
> **The above examples are summaries. Please respond to each question listed below rather than provide a summary.**

1. _Describe why you expect the proposed IT investment to reduce costs?_
2. _How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)_
3. _What is the current baseline?_
4. _What is the target for this measure? (How much savings will this project achieve)_
5. _When is the cost reduction likely to be achieved?_

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

**Example:** This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional five years. This project is currently functioning at 99.999% up-time and will report annually for the next five years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

**Example:** This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

**Example:**

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	Processing Time annual savings, and percentage of purchases receiving prompt payment discounts	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Spring 2019 BAP Report: This project is underway. See next page for the summary metrics.

Summary – **Safety and Security IT Project**

Benefit	Metrics	Baseline	Target	Actual
Category 2: Ability of executive leadership to routinely discuss and prioritize agency-wide safety hazards and their associated risks and feel confident they are directing precious organizational resources in the right directions	Identification and use of leading indicators and trends (survey of data analysts)	Information is not readily available to be evaluated to identify recurring instances and determine changes that could be made to operations, facilities, vehicles/equipment that would reduce job injuries and/or help to prevent accidents. Many decisions are made on anecdotal evidence and may not adequately and appropriately address the situation	To be determined during system design	Within 2 years of system implementation (Q2, 2021)
Category 3: Meet the new regulatory requirements	Compliance with MAP-21	Currently, Metro cannot report on safety and risk management efforts to comply with new federal requirements (anticipated to be passed in late 2016)	Metro is in compliance with new federal requirements	Within 2 years of system implementation (Q2, 2021)

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Transportation/Transit
Project Title	TDC COMFORT STAT MGMT SYS
Project Number	1134110
Project Timeframe	2019-2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Tim Flanagan, Division Director, Business Operations, Metro Transit

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Jon Bez	Logistics Manager/Metro	Business Lead
Craig Simmons	Transit Supervisor/Metro	Budget Support
Alex Rampley	IT PM II/Metro	Budget Support
Diane Sutherland	IT PM II/Metro	Budget Support

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Budget Process	5/4/18	Jon Bez, Diane Sutherland	New	2 hours
2019-20 Budget Process	6/1/18	Craig Simmons/ Alex Rampley	New	.5 hours
2019-20 Budget Process	6/5/18	Paula Adams	High level Edits and Review	.25 hour
Spring 2019 BAP Report	2/5/19	Diane Sutherland	Review Only	.25 hour

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Section 6. Description of Project Benefits

Benefit Category	Primary (select only one)	Secondary (select all that apply)

Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	% of customer satisfaction (to be determined through a survey)	45%	95%	By 12/31/2018
Example: Reduced time for customers to obtain a license	# days it takes to issue licenses	5 business days	1 business day	By 09/30/2018

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Currently Metro staff use manual process to identify and manage required comfort station locations and schedule timed breaks for bus operators. Gaps currently exist in comfort station availability and a lack of automation make identifying gaps time difficult and time consuming. Metro has set standards around this issue in the Comfort Station Policy. Achieving and maintaining policy compliance is the key goal of this project. Upgrades to HASTUS (scheduling and operations software) and Metro Geographic Information System (GIS) will provide integrated tools for Transit staff to effectively plan and schedule transit service including timing for use of comfort stations. The system will allow creation, modification and tracking of comfort station location and operating hours. The system will allow generation of reports to allow staff to monitor and assess performance over time.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The project will introduce reporting to measure the percentage of trips that include appropriate comfort station identification.

3. *What is the current baseline for this measure?*
   The baseline has not been quantified. As service changes are made several times a year, gaps change faster than current manual processes can identify and quantify them. The baseline will be measured against the service plan for the period prior to implementation, after the reporting has been created.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   The target is to ensure that 90% or more of scheduled trips with layover time have comfort stations identified.

5. *When is the benefit likely to be achieved?*
   The Baseline will be achieved within two years of project implementation.

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved

Achieve and maintain Metro Operator Restroom policy compliance	Percentage of each week's scheduled trips followed by a scheduled layover, and have restroom access	Initial measures to be established at system implementation	90% of each week's scheduled trips followed by a scheduled layover have restroom access	By 4/1/2022

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	# of system outages per month	5 outages	No outages	By 06/30/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*

4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

<u>Spring 2019 BAP Report</u>: This is a new project that was approved in the 2019-2020 biennial budget.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Transportation/Transit
Project Title	TDC EL SIGN IN FOR OPRTORS
Project Number	1134108
Project Timeframe	2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Timothy Flanagan

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Timothy Flanagan	Managing Director, Transit	Sponsor
Kenneth Johnson	Base Superintendent, Transit	Business Owner
Alex Rampley	IT PM II, Transit	Budget Support
Craig Simmons	Supervisor, Transit SDO	BAP Support
Scott Peterson	IT PM II, Transit	2019 Review

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Budget Process	5/11/18	Alex Rampley	New, Initial draft	1 hour
2019-20 Budget Process	6/4/18	Craig Simmons	Revisions and updates	1 hour
Spring 2019 BAP Report	2/6/19	Scott Peterson	Review only	15 min

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the <u>primary </u>type of benefit that is driving the project from the <u>secon</u>dary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☒

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. **Describe why you expect the proposed IT investment to produce the benefit(s).**
2. **How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)**
3. **What is the current baseline for this measure?**
4. **What is the target for this measure? (How much improvement will this project achieve?)**
5. **When is the benefit likely to be achieved?**
6. **Summary table for Category #1:**

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the

wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	*# sites inspected per day per inspector*	*6 sites/day per inspector*	*10 sites/day per inspector*	*By 12/31/2018*

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   In fall 2017 Metro entered into a settlement agreement with the U.S. Department of Labor to rectify deficient practices, in part around accurately tracking Transit operator time. Achieving and maintaining regulatory and policy compliance is the key goal of this project. The interim system for tracking operator time is a pen-and-paper system that does not leverage technology to make the process simple and efficient. This project will implement an Electronic Sign In/Out system for transit operators that will automate this manual process while addressing the DOL's concerns about the current system and process for recording operator time. a

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

In 2017, the DOL reviewed the time keeping and payroll practices for coach operators and found that Metro Transit was not adequately- or consistently – recording certain tasks such as Unscheduled Overtime, Chief Visit Pay, Working Off the Clock, and Pre-Trip tasks. The DOL asked Metro Transit to remedy this and implement a system that ensures accurate time and task tracking for operators. If Metro Transit does not automate and standardize this time keeping process, the DOL will return to assess our progress and will almost certainly issue additional findings and penalties against Transit.

3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*
Automated sign-in / out process will resolve DOL concerns about adequate time/task tracking for Operators	Transit operators will no longer need to manually record time.	100% of operators currently use the manual system	An automated sign in/out system available at all transit operator work locations.	1/1/2020

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
   Transit advertised and filled four special duty administrative support positions to enter the data that will be collected via the new technology solution, in order to gain compliance with the Department of Labor settlement. Upon completion of this project, those admin positions will no longer be required, and the staff will be able to return to their normal functions.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   Metro Transit will avoid the costs when special duty administrative support staff are released to their normal function/position at completion of the project.

*3. **What is the current baseline?***
Four special duty administrative support specialists to support payroll data entry.

*4. **What is the target for this measure? (How much savings will this project achieve)***
No special duty administrative support specialists required to support payroll data entry.

*5. **When is the cost reduction likely to be achieved?***
Completion of project, December 2019

*6. **Summary Table for Benefit Category #4:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*
Reduction of staff required to support manual entry of actual sign in/sign out of transit operators	4 special duty staff with benefits	$300,000	$0	By 12/31/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

IT Project Benefits Achievement Plan (Version 3)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

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3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Transportation/Transit
Project Title	TDC FARE ENFORC ENHANCMTS
Project Number	1134106
Project Timeframe	2019-2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Grantley Martelly, KCM Safety and Security Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Robert Pascoe	Contract Sec Coordinator	Overall Project Owner
Paula Adams	IT Project Manager	Subject Matter Expert
Charles Gatlin (external)	Contract Security Acct Mgr	Execution of device utilization
Mario Nunez (external)	FE Operations Mgr	Day-to-Day monitoring

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document

to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table

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Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Budget Process	05/09/18	Robert Pascoe	New, initial draft	2 hours
2019-20 Budget Process	05/09/18	Paula Adams	New, initial draft	3 hours
2019-20 Budget Process	06/13/18	Craig Simmons	Revised per Transit TTOC	1 hour
Spring 2019 BAP Report	02/07/19	Alex Rampley	Review only	.25 hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   This proposal combines two technology concepts in order to modernize fare enforcement tools and deliver dramatic business process efficiencies: 1) Automated data push to and storage in a third-party vendor's cloud environment, *thereby saving 4 hours of manual data input per officer per week*; and 2) Modernized fare enforcement hardware will replace end of life and fragile handheld devices used by fare enforcement officers (FEOs) with lightweight Android devices and software facilitating an automated data-push to the cloud each night.

   Implementation of new devices and software will reduce customer interaction times and automate data collection for Fare Enforcement Officers (FEOs). Reduced interaction times with riders allows for an increase in the number of riders contacted/better productivity from the FEOs. FEOs also currently spend 4 hours per week performing manual entry of information collected in the field. By automating the process with newer more effective tools, the FEOs will gain efficiencies allowing them to conduct more inspections and nearly eliminate manual data entry. This maximized time spent in the field (on routes).

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   A. Manual Data Entry by FEOs will be eliminated.
   B. Repair costs for end of life and fragile Portable Fare Transaction Devices (PFTPs) will be eliminated.
   C. New equipment will streamline FEO contact with the public and allow for increased numbers of fare scans each day.
   D. Fare Enforcement Officers will have a smaller technology profile (reduce number of devices FEOs carry).

3. *What is the current baseline for this measure?*
   A. <u>Manual Data Entry</u>: FEOs currently spend at least four (4) hours each week performing manual data entry in FEO offices.
   B. <u>Repair Costs</u>: Today, Transit spends between $4,000 and $5,000 each year on PFTP repair costs.
   C. <u>Rider Contacts</u>: Today, each FEO touches approximately 400 riders each day.
   D. <u>Required Equipment</u>: Currently, FEOs must carry four (4) separate devices.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   A. <u>Manual Data Entry</u>: Should be nearly eliminated.
   B. <u>Equipment Repair Costs</u>: Equipment repair costs are expected to decrease by at least 80%.
   C. <u>Rider Contacts</u>: Each FEO should touch 500 riders each day.
   D. <u>Required Equipment</u>: The amount of equipment that FEOs are required to carry will decrease by 75%.

5. *When is the benefit likely to be achieved?*
   Benefits should be achieved nearly immediately after go-live.

6. *Summary Table for Benefit Category #2:*

Outcome/ Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved

	Manual Data Entry	Amount of time FEOs spend performing manual data input each year.	Average 4 hours per week	Practice is nearly eliminated (there could be special cases)	At project completion

Repair Costs	How much Transit spends on hardware repair costs?	$4-5K annually	$1,000 or less annually	At project completion
Rider Contact	How many riders do we contact to ensure their fares are paid?	Average 400 per day	500 per day	At project Completion
Equipment Carried	How much equipment do Fare Enforcement Officers have to carry?	4 pieces of hardware	1 Android device	At project Completion

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

   This project will replace the Portable Fare Transaction Processors (PFTPs) which have been in use since 2010. The PFTPs have reached end of life and are out of warranty, resulting in increased maintenance expenses and steady repair costs. In addition, they are heavy, bulky and limited in function to the point that the Fare Enforcement Program cannot modernize business processes or achieve cost efficiencies while they are in use. The PFTP devices are no longer manufactured.

   The automated data push and cloud storage portion of the project will dramatically modernize existing business processes by eliminating manual data input; thereby giving FEOs more time in the field and the ability to contact more riders in a single day.

   If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.
   N/A

2. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Ability to expand the Fare Enforcement program as new routes are added	Availability of replacement PFTPs	PFTPs are no longer manufactured	Android devices available for purchase on demand	At project completion
Manual Data Entry	Amount of time FEOs spend performing manual data input each year.	Average 4 hours per week	Practice is nearly eliminated (there could be special cases)	At project completion

Repair Costs	How much Transit spends on hardware repair costs?	$4-5K annually	$1,000 or less annually	At project completion

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal).
Please describe how the cost savings will be used by your organization. This category also includes cost avoidance.
Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be
avoided due to the project.

*Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we
will automate three tasks that are currently done manually by agency and central purchasing employees. Based
on experience of other users of the software, this will reduce processing time from the current average of ten
days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of
annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in
savings in department expenditures for those items qualifying for prompt payment discounts.*

*Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to
upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to
make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.*

**The above examples are summaries. Please respond to each question listed below rather than provide a
summary.**

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has
   been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Summary Table for Benefit Category #4:

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the
benefits you identified above, explain whether benefits were achieved at target levels. Please include both
quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures
identified above. If not achieved, explain why.

*Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The
anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project
is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.*

*If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of
$500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio
system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic
failures due to lack of maintenance.*

*Example: This project to automate accounts payable software was implemented and did improve the processing
time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally,*

only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

<u>Spring 2019 BAP Report:</u> This project is new. It was approved in the 2019-2020 biennial budget.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Transportation/Transit
Project Title	TDC HASTUS UPGR FROM V2014
Project Number	1134104
Project Timeframe	2019-2021

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Business Owner: Rob Gannon, General Manager, King County Metro Transit

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Dan Root	HASTUS Business Lead/Transit	Sponsor
Diane Sutherland	IT Project Manager II	Budget Support
Alex Rampley	IT Project Manager II	CIP Support
Craig Simmons	Supervisor, Transit SDO	CIP Support

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Example: *2017-18 3ʳᵈ Omnibus budget process*	*07/01/13*	*Jack Smith*	*New, initial draft*	*2 hours*
Example: *2019-20 Budget Process*	*11/01/13*	*Jack Smith*	*Changed the metrics we will measure*	*2 hours*
2019-20 Budget Process	5/2/18	Diane Sutherland	New	2.5 hours
2019-20 Budget Process	6/1/18	Alex Rampley	High level edits	1 hour
2019-20 Budget Process	6/5/18	Craig Simmons	High level Edits and Review	.5 hour
2019-20 Budget Process	6/29/18	Paula Adams	High level Edits and Review	.5 hour
Spring 2019 BAP Report	2/7/19	Alex Rampley	Review Only	.25 hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	*# sites inspected per day per inspector*	*6 sites/day per inspector*	*10 sites/day per inspector*	*By 12/31/2018*

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. **Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.**
   The mission critical HASTUS system, used daily for transit service scheduling and operations, was last upgraded from version 2006 to version 2014 after a lengthy upgrade project. A more frequent upgrade cycle is recommended to help avoid the complexities and delays experienced in the previous upgrade. In addition, a substantial number of system improvements have been made by the HASTUS vendor, GIRO, each year since the 2014 version was released. Upgrading to a more recent HASTUS

version will provide additional functionality and improved system performance that will benefit both our operations and scheduling groups within Transit.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

Upgrading the mission critical HASTUS system at an optimal frequency will help mitigate the risks of an inherently complex system upgrade and increase the likelihood of success. The updates and system changes will tend to be smaller, easier to adapt, test and validate. This also allows business owners and support staff to leverage the potential benefits of new functionality and options with the upgrade. An upgraded, modern HASTUS implementation benefits Transit internal operations providing business continuity and more effective tools for scheduling efficient transit service and managing daily transit base operations and staffing.

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*
Maintain technical investment by upgrading older technology for continued operations	HASTUS in use by Transit Scheduling and Operations staff	HASTUS fully operational	Upgraded HASTUS fully operational	10/1/2021

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: *Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.*

Example: *Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
3. ***What is the current baseline?***
4. ***What is the target for this measure? (How much savings will this project achieve)***
5. ***When is the cost reduction likely to be achieved?***

6. Summary Table for Benefit Category #4:

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

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Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Spring 2019 BAP Report: This is a new project that was approved in the 2019-2020 biennial budget.

IT Project Benefits Achievement Plan (Version 3)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

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3. To establish accountability for identifying and achieving benefits
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King County Department/ Agency Name	Transportation/Transit
Project Title	TDC ONLINE REDUCD FARE REG
Project Number	1134101
Project Timeframe	2019-2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Matt Hansen

Section 3. Who is involved in developing the BAP?

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Name	Title / Agency	Project Role
Mark Konecny	PPM III, DOT-CCS	Lead Project Manager
Matt Hansen	Manager, DOT-CCS	Sponsor
Laurie Elder	Supervisor, DOC – CCS	Technical support, integration to NG Orca
Kathy Kelly	B&F Officer III, DOT-CCS	Advisor

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

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Once the project is complete and benefits are achieved and reported, no additional reporting is required.

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Example: *2019-20 Budget Process*	*11/01/13*	*Jack Smith*	*Changed the metrics we will measure*	*2 hours*
2019-20 Budget Process	5/11/18	Mark Konecny	New, initial draft	3 hours
2019-20 Budget Process	6/6/18	Craig Simmons	New, revise draft	.5 hours
Spring 2019 BAP Report	2/7/19	Alex Rampley	Review Only	.25 hours

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☒	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

<u>CATEGORY #1:</u> **External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.**

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The ORCA card (One Regional Card for All) is a contactless, stored-value smart card system for public transit in the Puget Sound region. The ORCA card is used for payment on King County Metro, King County Water Taxi, Community Transit, Pierce Transit, Everett Transit, Kitsap Transit, Washington State Ferry, Sound Transit and the Seattle Streetcar. In 2017 there were over 97 million boardings on all agencies of which 20 million used reduced fare cards.

   The system has five passenger types:
   - Full fare Adult card - available online, by mail, by phone, at ticket vending machines and at Retail Outlets
   - Reduced fare: Youth card - available by mail or in-person at Customer Service Center
   - Reduced fare: Senior card - available by mail or in-person at Customer Service Center
   - Reduced fare: Disabled card - only available in-person
   - Reduced fare: Lift-low-income card - only available in-person.

   The ORCA system does not currently support an online application process for reduced fare cards. The current in-person requirement places an unfair burden on some of the most vulnerable people in our county, the disabled and low-income. Providing an online application would substantially increase accessibility & registrations while following King County's Equity and Social Justice (ESJ) goals and supports Metro's goals for excellent customer service. This project will reduce barriers for senior,

disabled and low-income people who are currently required to apply in-person. The change would also allow customers to apply on their own time, after work, evening or on weekends.

The costs to the customers include the time it takes, the number of buses, transfers between buses or the cost of a Lyft/Uber ride or the cost of an Access ride. The cost to the customer also includes the loss of income as they may need to take off work to come in-person. King County Metro currently issues 72% of the Regional Reduced Fare Permits (RRFP) in the ORCA system, which is, on average between 25,000 -27,000 per year. The low-income customers would have similar benefits as the RRFP customer while expanding the service area by making the application process available throughout King County, basically in any home.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
A measurable outcome will be an increase in the low-income ORCA Lift & RRFP registrations processed online. There will also be a reduction of in-person customers in our Customer Service Center.

3. *What is the current baseline for this measure?*
The current baseline for this project is zero online applications as the ability to apply for a reduced fare product/card does not exist in the ORCA card system. The baseline for ORCA Lift registration is currently at an average of 1,500 per month and the RRFP baseline average is 2,000.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
We would target an increase in the first year following implementation of 10% of registrations for ORCA Lift and 25% of the RRFP registrations will use the online option.

5. *When is the benefit likely to be achieved?*
The benefit to each customer would be immediate with the savings of their travel time, parking cost and lost wages. Not providing an online application is contrary to King County's goals for Equity & Social Justice. Online registrations will be measured and reported over the year following implementation.

6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: *Residents are able to schedule athletic fields over the Internet and make payments by credit card.*	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: *Reduced time for customers to obtain a license*	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*
Customers apply for LIFT registration online	% of customers who apply online	0%	10%	One year following project completion
Customers apply for RRFP registration online	% of customers who apply online	0%	25%	One year following project completion

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	*# sites inspected per day per inspector*	*6 sites/day per inspector*	*10 sites/day per inspector*	*By 12/31/2018*

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?

Example: Reduced system outages	# of system outages per month	5 outages	No outages	By 06/30/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio

system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Spring 2019 BAP Report: This is a new project that was approved in the 2019-2020 biennial budget.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Transportation/Transit
Project Title	Transit Business Intelligence Resource Data (TBIRD)
Project Number	1129801
Project Timeframe	September 2017 – December 2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

John Resha, Assistant General Manager, MTD

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
John Resha	Assistant General Manager, MTD	Sponsor
Alex Rampley	IT Project Manager II, MTD	Budget Support
Craig Simmons	Supervisor, Transit SDO	BAP Support
Andrew Brick	Strategy & Planning Analyst	Business Owner
Cecilia Florescu	IT Project Manager II, MTD	2019 Review

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Budget Process	7/30/2018	Alex Rampley	Revise, convert from BAP v.2.0 (on file)	1 hour
Spring 2019 BAP Report	2/06/2019	Cecilia Florescu	Review only	1 hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐

	Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐

Category #3: Maintaining service levels by replacing or upgrading older technology		☐	☐
Category #4: Reduced cost or cost avoidance to produce services		☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   The Transit Business Intelligence Resource Data (TBIRD) project is implementing a new, scalable, enterprise-class reporting platform that will not only replace multiple limited-function legacy reporting tools but significantly advance Transit's analysis capabilities to include data mining, data discovery, business intelligence and data visualization tools, and geo-spatial analysis and presentation. Current legacy tools and processes do not support any kind of data mining, data discovery, business intelligence, data visualization and geo-spatial analysis. It is possible to create maps and charts, but the process is very labor-intensive and thus inherently limiting in terms of issues that can be explored and decisions that can be supported with data-driven analysis.

   TBIRD will take a phased approach to combining data from disparate datasets and provide more flexible and effective analysis tools, enabling Transit to better answer pressing questions about the service it provides. With the results of TBIRD, Transit foresees using standard business intelligence tools, as well as continuous process improvements, to increase efficiencies and accountability in its bus services and operations.

   The overall effort to provision the new data warehouse will take multiple biennia. The current scope for this project includes development of the scalable data warehouse and connection of multiple existing data systems. As this technology and body of work are new to both Metro Transit and King County Information Technology, it is unknown how quickly each system can be connected to the data warehouse, as multiple steps and processes are required. [Update 2.6.2019] ~~After the initial~~ During the development phase (running from August 2018 to ~~January~~ March 2019), ~~future forecasts for total deployment will be possible.~~ the project team has determined four (4) additional phases of this project. Using the Agile project model, the development team will be processing and incorporating MTD data-sources into the Azure data-warehouse.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

   We will know when the benefits are achieved when:

   a. Staff has **timely access to better data (e.g., ridership and on-time performance) in support of data-based decision making and service planning.** We will measure this benefit by surveying Metro staff and staff in council member officers to determine how satisfied they are with the information that is coming from the system and their ability to analyze and make data-based decisions. We will also measure and compare the time it takes to evaluate system-wide changes as well as individual changes before and after the system is in place. Some examples of data analysis that cannot be performed in a timely way with current tools are listed in 3.a.

   The current tools available to planners and others—typically, Excel and Access—are very limited in capability and performance for working with large datasets, resulting in a fundamental problem of data access. Although Transit has a substantial amount of historical data stored in different systems, the data are not optimized for quick extraction, compilation and analysis. Using Office

tools, the extraction process for a single analytical query can take anywhere from 2-8 hours, followed by several additional hours of processing time to combine multiple sources and then run the queries. For questions involving longer spans of time or more data, the planner must run multiple queries just to extract the data in smaller chunks, and then perform additional manual steps to combine, organize and run the actual analysis. With these tools, the analytical questions can take several hours to run, due to the size of the datasets. These technical constraints limit the depth, quality, and quantity of analysis that staff can perform in support of strategic planning scenarios and decisions.

Large analytical efforts, such as analyzing the impacts of potential revisions to the Service Guidelines, or the development of major network restructuring require a substantial investment of time and effort because of the manual effort required and limited capabilities of the tools. These technical constraints limit staff ability to run multiple "what if" scenarios to fully develop or explore results. More time is required to run regular performance reports, respond to ad hoc council and executive questions, and prepare supporting analyses for requested reports and documents.

The TBIRD project will implement a modern reporting platform in the "business intelligence" (BI) category of enterprise-class products. The solution will include capabilities that eliminate or significantly improve on the issues above. An enterprise BI platform typically includes the following:
- Automated data extract and load processes to gather data from the source systems, so the latest available data is regularly loaded for reporting purposes;
- Automated, rule-based filters that scrub incoming data from source systems, so that data quality is ensured, and the reporting system will provide consistent, reliable results;
- Data organization that is optimized for reporting and analysis, with added indexes and links for commonly used analysis, which eliminates repetitive manual steps for combining data from different sources;
- Advanced analytical tools such as visualization, specialized charting beyond standard Office capabilities, geo-spatial analysis and presentation tools.

The practical benefit of TBIRD's capabilities is that the analyst can sit down and immediately run queries to support the analytical questions that have been posed, rather than spending time on the preliminary mechanics of retrieving, combining, and organizing the data. In addition the platform will support many concurrent users. The advanced analytical tools also support a wider diversity of analysis questions (exploration) and will provide the results in higher quality presentations to decision-makers. The expected benefit is that staff will be able to produce standard performance measure reports in less time, and will be able to more productively use their time performing additional research and analysis that cannot be done today.

b. Transit can **comply more fully with 2009 Transit Performance Audit**. Ridership and performance data will be incorporated in the new database.

As context for this benefit, it would be helpful to revisit some of the findings in the 2009 Performance Audit. In summary, Finding F1 identified some issues with Transit data sources and reporting capabilities.

The audit report focused on the following areas of data reporting: boardings, linked trips, passenger load, on-time performance and running time. The report looked at two systems which are new or replacing legacy systems: One Regional Card for All (ORCA) and On-Board System/Communication Center System (OBS/CCS).

The report noted that in the current, early ORCA implementation, Service Development staff has two options for receiving ORCA reports: ad hoc queries and ORCA's standard ridership reports. The ad hoc reports can cover any element required by Service Development but there are not currently any reports developed specifically for their use. The auditors observed that Transit states that they are continuing to research the quality and value of the ORCA data and determine the best methods to make the information available to service development staff.

The report also noted that the new OBS/CCS system will ensure that the new APC data and AVL systems will be integrated on-board the buses and create a single integrated data stream. However, the auditors raised the concern that although Transit notes that they intend to use the OBS/CCS system to the maximum extent possible, they have not yet developed detailed plans for integrating these new sources of data with their existing data processing tools or data streams. The auditors stated that integration of data will provide additional useful ridership data from multiple sources to Transit's service development staff and will reduce manual effort involved in summarizing and integrating data from multiple sources for users. They noted that Transit has begun some integration planning; however, Transit should develop a detailed implementation plan for integrating new OBS/CCS data into their new data streams and data processing tools.

The 2009 audit overlapped with early days of full ORCA system operations and system integration and testing phases of the OBS/CCS project. The focus at that time was ensuring that production systems were operational and that basic performance reporting needs could be met. Fully integrating the data from these two systems was not within the scope of either project. TBIRD was originally proposed in 2014 for the 2015-16 cycle.

As proposed, TBIRD will integrate these and other data sources, and provide significant new data mining, trend analysis and analytical capabilities. The modern business intelligence platform and tools will address and even exceed these recommendations from the audit.

3. *What is the current baseline for this measure?*
   a. **Timely access to better data (e.g., ridership and on-time performance) in support of data-based decision making and service planning.** Baseline is to be determined by survey of staff, review of customer feedback and survey of councilmembers to determine the current satisfaction with the tools that are provided, the data that is provided, confidence in the data and the responsive of the data to customer and councilmember communication. The project will take a sample of typical analytical reports or investigative queries, and run before and after comparisons in order to develop a comparison. As noted in Question 2a, the expected benefit is that staff will be able to produce standard performance measure reports in less time, and will be able to more productively use their time performing additional research and analysis that cannot be done today.

   The following analysis cannot be currently performed:
   i. An analysis of passenger by street segment with geographical display.
   ii. An analysis of fare and ridership profile on a trip.

<blockquote>

   iii. A geographical analysis of travel time variability for a particular route and time period.

  b. **Comply more fully with 2009 Transit Performance Audit**. Baseline is that not all ridership and performance data is collected in legacy systems. TBIRD will integrate these data sources and others into a modern business intelligence platform. See additional information above under 2.b.

4. *What is the target for this measure? (How much improvement will this project achieve?)*

  a. **Timely access to better data (e.g., ridership and on-time performance) in support of data-based decision making and service planning.** Target for user satisfaction with the data will be set as part of the planning phases of this project. Target for timely access to data is that the data will be available to users 24 hours after the data is available in the collecting systems and staff perform timely analyses such as:

   i. An analysis of passenger by street segment with geographical display.

   ii. An analysis of fare and ridership profile on a trip.

   iii. A geographical analysis of travel time variability for a particular route and time period.

  b. **Comply more fully with 2009 Transit Performance Audit**. Target is that ridership and performance data is collected in new database. See additional description above under 2.b.

5. *When is the benefit likely to be achieved?*

  a. **Timely access to better data (e.g., ridership and on-time performance) in support of data-based decision making and service planning.** Within three months of inclusion of each data set, on a rolling basis. This will allow time for data mapping and validation, as well as delivering production reports and analyses. The project will break development/implementation into a series of six month phases, with multiple data sets connected during each phase.

  b. **Comply more fully with 2009 Transit Performance Audit**. End of 2019. The initial phase will implement data warehousing for systems used to track ridership and on time performance. Benefits are expected to be realized within 1 year of completion of the initial data implementation, which allows time for training, building experience with the new tools, and delivering production reports and analyses.

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Timely access to data	# of days after initial collection that data becomes available	90 – 120 days	1 business day	By 8/1/2019 (first phase)
Compliance with 2009 Transit Performance Audit	Availability of data in near real time to analyze transit metrics	Manual reporting, limited scope	Access to data for appropriate staff on demand	By 8/1/2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

</blockquote>

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Spring 2019 BAP Report: This is an ongoing project. The project started in 2017 and is in the implementation phase.

IT Project Benefits Achievement Plan (Version 5)
To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Metro Transit Department ~~of Transportation (DOT)/~~
Project Title	Data Infrastructure Replacement Project
EBS Project Number	1112007

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: ~~Kevin Desmond~~ Rob Gannon, Transit General Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Amy Spangler	IT Project Manager II, DOT Transit Division	Project Manager
Dan Overgaard	Systems Development and Operations Supervisor, DOT Transit Division	Project Sponsor
Bill Bryant	Service Development Managing Director	Project Sponsor (since retirement of previous sponsor Dan Overgaard)

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners

that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2013 Annual Report	12/6/13	Amy Spangler	Converted plan from Benefit Realization Plan into Benefit Achievement Plan format	2 hours
2013 Annual Report	3/11/2014	Amy Spangler	Revised per feedback	1 hour
2014 Annual Report	3/6/2015	Amy Spangler	Review Only	1 hour
2015 Annual Report	2/5/2016	Amy Spangler	Review Only	.25 hour
2016 Annual Report	2/17/2017	Amy Spangler	Update Section 6 (add measures to Category 2)	1 hour
Spring 2019 BAP Report	2/6/2019	Amy Spangler	Updated Project Sponsor	.25 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underlined primary type of benefit for the project. For most projects, the primary type benefit will be

Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

X☐ Category #2 **(secondary)**: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

X Category #3 **(primary)**: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Update of 02/2017:
   The Data Infrastructure Replacement Project is expected to enable transit staff to
   - deliver data to operations system such as On-Board Systems, so that buses are consistently provided with current schedule data in time to operate on that schedule
   - combine the creation of transit schedules with bus stop information, reducing the inconsistencies in the schedule information that are discovered during data production, which leads to delays in data production and publication~~customers see~~.
   - reduce the amount of programs required to translate the data into different forms in the data infrastructure.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Update of 02/2017:
   These benefits can be measured in the following ways:
   - Reduction in the combination of nightly processing jobs and following-day data production cycles required to produce schedule data. Once schedule data is published from the source system, there will no longer be a need for data production in the system in which users map bus routing, the overnight process to publish to the system that manages stop information, and the following data production time required to assign stops within service routing.
   - Reduction in the measurable number of instances when inconsistencies between schedule and stop data has caused Transit to republish schedule data and perform the following multi-day data production steps of revising routing and stop assignment to service.
   - Two in-house developed software programs will be retired through this project. The work will be performed in vendor software programs currently employed by Transit.

3. *What is the current baseline for this measure?*
   Update of 02/2017:
   The data production process is documented, including the duration of each step within the overall process, within IT and Transit data production documentation.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   Update of 02/2017:
   Even reducing a single iteration of errors which cause re-executing the data production cycle saves Transit staff investigation time, time to re-run overnight processes and fix data inconsistencies. The project expects to eliminate all multi-day data production cycles through systems that will be retired, and reduce the number of publication cycles significantly through software and business process controls implemented by the project.

5. *When is the benefit likely to be achieved?*
   Update of 02/2017:
   The benefit will be achieved at the time the software is fully implemented in production.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

   King County Transit has a set of databases that store critical fixed route bus service, schedule and geographic data needed by many transit vendor applications including ORCA, On-board Systems/ Control Center Systems (OBS/CCS) and various customer information systems. The transit "data infrastructure" consists of
   - this set of databases
   - programs that populate the data into the databases from transit source applications
   - programs that translate the data into different forms as necessary for use
   - programs that retrieve data from the databases and send it to transit applications that rely on the data

   The current data infrastructure was developed over 30 years ago. The data stored in the databases is of a different format than newer transit vendor applications require. As a result, adding new transit vendor applications has placed an ever-increasing strain on this method of supplying data. There are more and more data translations that need to occur, leading to delays in delivering the data. In addition, errors are introduced when extensive processing is required to create and translate this data.

   The errors and delays in processing data have impacted both fare collection and bus operations – including radio operations. Customer related information systems such as bus stop signage and trip planning require extensive data manipulation to work properly. Though there are no industry standards on average life cycle replacement timeframe, the current transit infrastructure is not sustainable. Transit needs a new foundation of data and data delivery methods upon which to operate current and future technology.

   The Data Infrastructure Replacement Project is expected to enable transit staff to
   - deliver data to operations system such as On-Board Systems, so that buses are consistently provided with current schedule data in time to operate on that schedule
   - combine the creation of transit schedules with bus stop information, reducing the inconsistencies in the schedule information that customers see.
   - reduce the amount of programs required to translate the data into different forms in the data infrastructure.

   As part of this project, Transit is developing an "enterprise architecture model", a set of information that captures the business processes, data, applications, and hardware currently in place to support transit. This will help the project understand the pieces of the current data infrastructure and all of the transit systems to which it is connected.   This model will help project planning and analysis for

the data infrastructure replacement, and help transit and IT maintain transit systems and prioritize future transit projects. The project is employing a federally-funded "standard" Enterprise Architecture model, called Transit Enterprise Architecture and Planning framework (TEAP), from which to customize a model for King County Transit.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

The impacts to fare collection, operations, and customer information from the outdated data infrastructure already occur today. For example, after the completed transition to the new On-Board Systems in 2012, there were repeated occurrences during bi-weekly schedule adjustments of buses not being provided with the current schedule data in time to operate on that schedule. This led to problems such as some customer information being inaccurate, or bus operators needing assistance in system sign-on processes. This and other impacts to transit systems have been handled through extra efforts on the part of transit and IT staff to mitigate the impacts and fix the problems. These efforts take staff away from their regular responsibilities. The intention with a new data infrastructure is to alleviate these impacts that occur today, and allow transit and IT to focus their efforts back on their primary responsibilities.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

<u>Spring 2019 BAP Report</u>: The project started in 2012 and is in the implementation phase. The baseline completion date was December 2017 but the current estimated end date is July 2019.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	Transportation/Transit
Project Title	Transit Signal Priority System Replacement
Project Number	1124427
Project Timeframe	Q4 2022

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Diane Carlson – Assistant Division Director, Transit

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Diane Carlson	Assistant Division Director, Transit	Project Sponsor
Jill Krecklow	Finance Manager, Transit	Finance Manager
John Toone	Transit ITS Manager	ITS Subject Matter Expert
Owen Kehoe	Transit Engineer IV	Business Subject Matter Expert
Scott Niskanen	IT Project Manager II, Transit SDO	Project Manager

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-2020 Budget Process	7/25/18	Scott Niskanen	Moved content into the version 3 BAP template	1 Hour
Spring 2019 BAP Report	2/6/19	Scott Niskanen	Review only	10 min

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☒
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. **Describe why you expect the proposed IT investment to produce the benefit(s).**
2. **How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)**
3. **What is the current baseline for this measure?**
4. **What is the target for this measure? (How much improvement will this project achieve?)**
5. **When is the benefit likely to be achieved?**
6. **Summary table for Category #1:**

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the

wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   The Transit Signal Priority (TSP) project will replace current equipment with a new system to improve performance, reliability, and support new functionality. Additionally, the new system will reduce the complexity and cost of deployment to intersection.

   Current TSP equipment is owned and operated by King County in cooperation with regional transit agencies. TSP expansion requires King County to procure additional equipment and negotiate with each jurisdiction for installation. The proposed approach will be a software based system so deployment to new intersections will be a configuration change in the software. This approach will allow King County and jurisdictions to expand TSP rapidly without incurring significant cost.
   Performance and reliability improvements are achieved through leveraging more accurate data from coaches. Location data is retrieved from on board systems to request traffic signal changes vs a derived location approach used currently. Derived locations are less accurate and can lead to requests hindering performance. For example, a request to extend a green signal made too early would not benefit the coach and could lead to arrival at a red light, the opposite of what the system is intended to achieve.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   Reducing King County owned and operated equipment will be realized upon the decommission of existing equipment. Service benefits to TSP are measured by comparing TSP intersections with TSP turned on vs turned off. The new system will analyze these criteria:
   - Cost of deployment to new intersections
   - In-service travel time
   - Layover/recovery time through reducing run-time variability
   - Schedule Reliability
   - Number of requests successfully sent to transit agencies
   - Number of requests fulfilled by transit agencies

3. ***What is the current baseline for this measure?***
   Baselines were collected for the current TSP system as part of the deployment of TSP on several corridors. Current baselines:
   - $60K or more - Cost of deployment to new intersections
   - 2%-10% - In-service travel time improvement
   - 2%-10% - Layover/recovery time through reducing run-time variability
   - 2%-10% - Schedule Reliability
   - 80% - Number of requests successfully sent to transit agencies
   - 55%-60% - Number of requested fulfilled by transit agencies

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   Targets for these measures will be updated once the RFP selection process is. The new system will either meet or exceed the existing equipment baselines.
   - Decommissioning of current equipment at roadside cabinets where possible
   - +5% - In-service travel time improvement
   - +5% - Layover/recovery time through reducing run-time variability
   - +5% - Schedule Reliability
   - 90% - Number of requests successfully sent to transit agencies
   - 70% - Number of requested fulfilled by transit agencies

5. ***When is the benefit likely to be achieved?***
   Q4 2022

6. ***Summary Table for Benefit Category #2:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
In-service travel time improvement	Travel time on route	Route travel time w/out TSP	+5% improvement	12/31/2022
Layover/recovery time through reducing run-time variability	Layover/recovery time between routes	Layover/recovery time w/out TSP	+5% Improvement	12/31/2022
Schedule Reliability	Schedule Reliability	Schedule reliability w/out TSP	+5% improvement	12/31/2022
Number of requests successfully sent to transit agencies	# of Requests successfully sent	Current system sends requests with 80% efficiency	90% of requests sent	12/31/2022
Number of requested fulfilled by transit agencies	# of requests fulfilled	Current system fulfills 55%-60% of sent requests	70% system fulfillment	12/31/2022

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: *This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.*

Example: *This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.*

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   Legacy equipment is approaching end-of-life and a new solution is needed for TSP. Average replacement cycle is 8 years.

2. If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.

3. Summary Table for Benefit Category #3:

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. Describe why you expect the proposed IT investment to reduce costs?
2. How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)
3. What is the current baseline?
4. What is the target for this measure? (How much savings will this project achieve)
5. When is the cost reduction likely to be achieved?
6. Summary Table for Benefit Category #4:

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Spring 2019 BAP Report: The project is in Planning Phase. The project was reset in May 2018.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Transportation/ Transit Division
Project Title	Vanpool Information System Modernization
EBS Project Number	1123913

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

~~Kevin Desmond, Transit General Manager~~ Rob Gannon, Transit General Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Karen Martin	Transit Rideshare Operations Chief/DOT	Project Business Lead
Jill Krecklow	Finance Manager, Transit	Stakeholder
Alex Rampley	Transit Supervisor -Systems Ops, Metro Transit Department	Sponsor

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Initial PRB Funding Release	5/14/14	Catherine Boon	Draft for review	1 hour
Initial PRB Funding Release	5/21/14	Karen Martin	Review and edits for submittal	1 hour
Initial PRB Funding Release	6/23/14	Catherine Boon	Revisions following review	20 min
2014 Annual Report	2/18/2014	Catherine Boon	Review only	.25 hour
2015 Annual Report	1/31/2016	Randy Boshart	Review only – no changes	.25 hour
2015 Annual Report	4/4/2016	Kathleen McMurray	Updated Business Owner and Category 3 sections.	.25 hour
2016 Annual Report	2/17/2017	Randy Boshart	Review only – change to sponsor title only. This project has just been restarted (it was on hold).	.25 hour
2016 Annual Report	6/23/2017	Jill Krecklow	Update based on council staff direction to provide dates for benefit achievement and status.	.50 hour
2017 Annual Report (Final BAP)	2/28/2018	Randy Boshart	Update for completed project	1 hour
Spring 2019 BAP Report	2/7/2019	Alex Rampley	Review Only (final BAP)	.25 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

X Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications

such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
Metro Transit's Vanpool Program is the oldest and largest publicly operated program in the United States with nearly 1800 vehicles supporting over 1300 vanpool groups and over 10,000 participants. Staff in Transit's Rideshare Operations group use a suite of information system tools to manage all aspects of the Vanpool Program including setting up and managing vanpool groups, tracking vehicle mileage and scheduling maintenance, and collecting monthly payment from each vanpool group. Based on recent experience, Rideshare Operations projects that the Vanpool Program will grow by 15% by the end of 2016. ~~Pending cuts of regular transit service can be expected to generate even more customer demand for transportation alternatives like vanpools.~~

This project will move two primary tools used by Rideshare Operations staff from an obsolete client-server architecture to a modern browser-based architecture. The legacy systems are the original Vanpool Information System (VIS), a contractor-developed desktop application custom built for Metro in 1995 using Visual Basic 6 (VB6) and an in-house developed desktop application known as Vanshare, implemented in 2004 using Visual Basic for Applications (VBA). Microsoft stopped supporting VB6 in 2008.

The VIS application is well past its useful life, risky to modify, difficult to maintain and 3rd party software is no longer supported. The Vanshare application was introduced 10 years ago to augment VIS and work around some of its technical constraints. It is highly integrated with VIS and combining the two will result in reduced duplicate entry of data.

The project is included in the Transit Information Systems Preservation budget which funds replacements and upgrades of systems that face failure due to their age and changes in business requirements.

This project is aligned with Goal 6 of King County Metro's Strategic Plan, Financial Stewardship, specifically the strategy to "provide and maintain capital assets to support efficient and effective service delivery." In addition, this project supports King County's Strategic Technology Plan objective of Technology Modernization of Applications to "enable business solutions that are flexible, timely and dependable by pro-actively evolving modern application technologies and processes."

2. If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.

The legacy systems have been fairly stable and the risk of them failing is estimated to be between 25 and 40%. If either application fails, it could take weeks to fix the problem during which time there would be a significant customer and financial impact. The real risk is that as time goes on these applications will not be able to support the business in a practical way. For example, the applications will not be able to be moved into a Windows 8 environment and the SQL Server database will not be able to be kept current because the applications won't support the new version.

[Update 6/23/2017: While this project was on hold as of 12/31/2016, KCIT resources became available in early 2017, and the project is currently underway. KCIT resources are going to be higher than originally provided and a funding release from PRB is being requested in July 2017. The project will receive emergent contingency funds from the Transit capital program to pay the additional cost of KCIT resources. Information on the use of emergent contingency funds will be provided to the council per standard process. Assuming appropriation and funding release are approved without delay, project implementation is projected at 4Q/2017.]

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Spring 2019 BAP Report: This project updated and combined the Vanpool and Vanshare applications from outdated software that that could not be efficiently and safely maintained. These applications are used to operate the largest vanpool and Vanshare program in the United States supporting over 1300 vehicles and 14,000 riders across King County. These applications were updated and combined into a single application using a modern software platform (C#.net) that will be supportable using modern software tools that are in use and maintainable by King County resources. The expected benefits have been achieved. This is the final BAP.

Metric Description	Metrics	Baseline	Target	Actual
VIS application and Vanshare application modernized to browser based application.	Vanpool and Vanshare applications operational	Separate Vanpool application using Visual Basic 6 and Vanshare application using an in-house developed application in use.	Vanpool and Vanshare application combined and in use using C#.net MVC application	Vanpool and Vanshare application combined and in use using C#.net MVC application

IT Project Benefits Achievement Plan (Version 2)
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For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Transportation, Transit
Project Title	M5 Yard Manager – Dispatch Replacement
Project Number	1125054

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

~~Kevin Desmond~~ Rob Gannon, General Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Randy Winders~~ Chris Parrott	Vehicle Maintenance Manager, Transit Vehicle Maintenance	Project Sponsor
Jill Krecklow	Finance Manager, Transit	Finance Manager
Scott Peterson	IT PM II, Transit	Project Manager

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document

to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
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Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	06/04/14	Yan Zhang	New, initial draft	.5 hours
Conceptual review	07/01/14	Kathleen McMurray	Update	.5 hours
Conceptual Review	10/02/14	J. Krecklow	Update	2 hours
2014 Annual Report	02/18/15	Catherine Boon	Update	.5 hour
2015 Annual Report	01/29/16	Diane Sutherland	Review only	.25 hour
2016 Annual Report	02/17/17	Alex Rampley	Update Business Owner, Sponsor, Section 3-1. This project is currently On Hold due to resource constraints. It will restart February 2017.	.5 hour
2016 Annual Report	06/23/17	Jill Krecklow	Revise per council staff direction to include timeline for benefit achievement (QQ/YY) format.	.25 hour
Spring 2019 BAP Report	2/6/19	Scott Peterson	Review only	.25 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications

such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   ~~The potential for automated yard mapping of coaches would produce operational benefits as coach location would be known without any need for manual tracking. Currently vehicle location is identified and entered into a dispatch system that provides location information to Operators looking to leave the base in their assigned coach and vehicle maintenance staff bringing coaches in for scheduled maintenance. The benefit would be time savings likely in the form of reduced overtime.~~

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   ~~Many factors influence overtime paid to Transit Operators and VM staff. Quick location of vehicles eliminates the need to source parking lanes for the right bus and lane position. Capturing savings from operators would be difficult to achieve. Within VM before and after time studies could be done to identify the amount of time savings from the use of automated vehicle location.~~

3. *What is the current baseline for this measure?*
   ~~The current baseline has not yet been established but will be captured as part of the project planning. Cost benefit of the time savings against future operating costs of the identified system will be evalua~~ted.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   ~~A cost benefit analysis will be conducted with the preferred solution prior to completing a contract. A positive NPV will be required demonstrating that the benefits exceed the costs.~~

5. *When is the benefit likely to be achieved?*
   ~~When the complete project is implemented.~~

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. **Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.**
   Vehicle dispatch software is used by Transit Vehicle Maintenance to locate coaches for pull-out, maintenance, fueling and servicing. The dispatch software currently in use is over 18 years old, outdated and no longer supported by the vendor. The current dispatch software, built on Power-

Builder, is at the end of its life cycle. 2/17/17: PowerBuilder was discontinued by its original vendor in 2011. Subsequently (~2015) PowerBuilder was sold to a new vendor and resurrected. The effort required now to purchase the software and train KCIT staff to allow updates to the legacy system would not be cost effective, and would still leave a program that is outdated and lacks vendor support. ~~Power Builder was discontinued in 2011 and support ended in 2012. Therefore, no software updates are available and the application is not able to operate with newer operating systems such as Windows 7 requiring workarounds.~~

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

The risk is currently occurring. While KCIT has been able to keep the system operating on current operating environments, there is risk that this may not be possible with future operating systems. If the system fails, we would be required to revert to manual yard mapping requiring staff that would continually identify coach location and provide information to Operations so that operators can be informed of location of their assigned coach. Failure to adequately identify locations, can result in buses being blocked in lanes and unable to leave the base at the intended time resulting in late trips.

[Update 6/23/2017]: Solutions to replace this aging software are underway. Estimated completion date assuming replacement is still an option is 4Q/2018.

[Update 2/6/2019]: Project is on hold as the project evaluates the option of updating the existing vendor to meet requirements, as the originally proposed solution will not meet Transits requirements.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of 10 days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Spring 2019 BAP Report: Project on hold while additional analysis is performed. No change to anticipated project benefits, but achievement of benefits will be delayed. Project benefits achievement plan will be updated in next round of reporting.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DOT/Transit
Project Title	Vehicle Telematics for Transit Coaches
Project Number	1129799 (Updated 2/17/17)

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Rob Gannon, ~~Interim~~ General Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Kathleen McMurray	Supervisor, Transit Systems Development & Operations (SDO)	Subject Matter Expert
Dan Overgaard	Manager, Transit SDO	Stakeholder
Larry Schwerzler	FAIII, Transit Vehicle Maintenance (VM)	Stakeholder
Cindy Sattler	FAIV, Transit VM	Stakeholder
Jill Krecklow	Finance Manager, Transit Enterprise Operations	Chair, Transit Technology Oversight
Scott Peterson	Project Manager, Transit Systems Development & Operations (SDO)	Project Manager (Update 2/17/17)
Scott Peterson	IT PM II, Transit	Project Manager
Chris Parrott	Div Dir-MT Vehicle Maint, Metro Transit Department	Project Sponsor

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	07/07/16	Kathleen McMurray	New, initial draft	4 hours
2017-18 Budget Process	10/06/16	Kathleen McMurray	Revised throughout in response to Council staff feedback	4 hours
2017-18 Council Review	10/11/16	Jill Krecklow	Revised to further reflect council staff feedback	1 hour
2016 Annual Report	2/17/17	Scott Peterson	New Project Sponsor and a Project Manager assigned	.5 hours
Spring 2019 BAP Report	2/6/19	Scott Peterson	Benefit is being achieved now.	.25 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

<u>Category #1</u>: **External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.**

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

<u>Category #2</u>: **Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.**

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to

other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   This project just started and is in the planning phase. ~~If the Vehicle Telematics for Transit Coaches project is approved,~~ Metro will procure and install a vehicle telematics system fleet-wide. This system will provide the agency with more accurate mileage and telematics data to allow for more efficient and effective vehicle maintenance. The Vehicle Telematics system will automatically provide diagnostic error codes and operational data from systems such as the engine, transmission, and brakes for all buses. Currently, this information is retrieved manually at the vehicle. The new automated data provision will ensure vehicle maintenance occurs when necessary as operational performance is actively tracked, and reduces the risk of providing more maintenance than necessary or missing required maintenance.

   In the future, the data generated from the telematics system could be combined with GPS, ridership, and other transit data, to support operations-related decision making. As an example, Transit could match a route with a vehicle that gets better mileage at the speeds the route requires.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***

   a. <u>Increased accuracy of vehicle mileage and fuel consumption data</u> – Transit Vehicle Maintenance (VM) currently lacks a precise method of tracking vehicle mileage, and must rely upon planned (or scheduled) miles to estimate mileage for a coach. Scheduled miles are determined by the route and scheduled trips to which a coach is assigned. This information is then loaded into M5, the system of record for fleet management. When there are known schedule deviations, such as re-routes or special events, staff must estimate the mileage difference based on historical knowledge and enter it manually. Unknown schedule and route deviations, such accident diversions, are not accounted for in mileage calculations.

   Fuel consumption is derived, in part, from vehicle mileage. As the accuracy of mileage data increases, so will the accuracy of fuel consumption data. Fuel consumption data, in turn, is used to measure energy efficiency.

   We will know that this benefit has been achieved when fuel efficiency can be automatically derived based upon actual vehicle mileage.

   b. <u>Percentage of coaches that missed scheduled maintenance that is based on mileage</u> – Currently, maintenance is performed on a set schedule. With the availability of accurate mileage data, VM can perform maintenance on each vehicle only needed or precisely when the warranty service is required (for example, the 6,000 mile service requirement).

   We will know that this benefit has been achieved when required preventative maintenance is

performed per warranty requirements.

c. <u>Percentage of pump lockout occurrences during coach fueling</u> – In today's fueling process, personnel manually enter the vehicle identification number. For safety (fuel spills) and security (fuel theft), the system is very unforgiving of data entry errors. After 3 unsuccessful attempts to log into the system, the fuel pump is locked for all subsequent uses until unlocked by someone remotely. This causes delays in coaches being fueled. This problem is often identified at night and requires after hours support.

Under the new system, the vehicle identity, engine condition, mileage and required fuel amount/type will automatically be transmitted to M5 when the coach is brought to the fuel bay.

We will know that this benefit has been achieved when fuel pump lockouts due to manual data entry at the point of coach fueling have been eliminated.

d. <u>Time (hours) spent on troubleshooting of mechanical and system operations</u> - VM needs a method to efficiently retrieve diagnostic error codes and other operational data from major vehicle systems, such as the engine, transmission, brakes, and other related systems. Currently these codes must be manually retrieved from each individual coach by plugging a laptop into the onboard diagnostics unit. The vehicle telematics system would allow for automated fleet-wide collection and analysis of these fault codes. This is a reactive process based upon driver feedback. The new system will automatically provide this information, removing the driver and the Transit Control Center from the process.

We will know that this benefit has been fully achieved when diagnostic codes are used to develop work orders, thereby identifying the work that needs to be done on a coach and reducing time previously spent on diagnostics or troubleshooting.

3. ***What is the current baseline for this measure?***

a. <u>Increased accuracy of vehicle mileage and fuel consumption data</u> – The baseline for this measure is that coach mileage derived based upon planned bus schedule and manual adjustments is inaccurate. Based upon pilot project results, Transit estimates scheduled miles under reports actual miles by approximately 10%. This will be validated as the project proceeds.

b. <u>Percentage of coaches that missed scheduled maintenance that is based on mileage</u> – The baseline for this measure is that maintenance is performed on a set schedule without respect to actual mileage. Assuming a 10% under reporting of actual miles, we hypothesize the accuracy of untimely maintenance is 10% as well. This will be validated as the project proceeds.

c. <u>Percentage of pump lockout occurrences during coach fueling</u> – The baseline for this measure is that during the fueling process, fuel pump lockouts due to data entry errors occur approximately two times a week.

d. <u>Time (hours) spent on troubleshooting of mechanical and system operations</u> – The baseline is for this benefit will be hours spent troubleshooting mechanical and system operations that can be identified with the data from the system. The baseline measure will be quantified as the project proceeds.

4. *What is the target for this measure? (How much improvement will this project achieve?)*

   a. <u>Increased accuracy of vehicle mileage and fuel consumption data</u> – The target for this measure is that coach mileage is based upon actual mileage from the vehicle resulting in no under reporting of actual miles.

   b. <u>Percentage of coaches that missed scheduled maintenance that is based on mileage</u> – The target for this measure is that maintenance will occur based on actual, rather than estimated mileage. The number of coaches exceeding their mileage limits will be identified and can be prioritized for maintenance.

   c. <u>Percentage of pump lockouts (occurrences) during coach fueling</u> – The target for this measure is automated entry of the vehicle identity, mileage and other data during the fueling process that will result in zero occurrences per week due to manual error.

   d. <u>Time (hours) spent on troubleshooting of mechanical and system operations</u> – The target for this measure will be a reduction in the time currently spent troubleshooting and diagnosing a coach. A specific target will be determined as the project moves forward and specific data elements are identified and training is developed.

5. *When is the benefit likely to be achieved?*

   a. <u>Increased accuracy of vehicle mileage and fuel consumption data</u> – This benefit will begin to be seen immediately upon implementation, but will not be fully realized until installation is complete across the fleet. Installation is currently planned for completion Q3 2018.

   b. <u>Reduced percentage of coaches that missed scheduled maintenance that is based on mileage</u> – This benefit will begin to be seen immediately upon implementation, but will not be fully realized until installation is complete across the fleet. Installation is currently planned for completion Q3 2018.

   c. <u>Reduced occurrences of pump lockouts during coach fueling</u> – This benefit will begin to be seen immediately upon implementation, but will not be fully realized until installation is complete across the fleet. Installation is currently planned for completion Q3 2018.

   d. <u>Time (hours) spent on troubleshooting of mechanical and system operations</u> – The timing of this benefit will be dependent upon completion of training by mechanics on how to use and trust the data that is provided on the work orders. Data will begin to be available at system implementation, but if there are labor issues, full realization could take a contract cycle.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
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Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	Processing Time annual savings, and percentage of purchases receiving prompt payment discounts	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Spring 2019 BAP Report: The project started in 2017 and is in Implementation Phase. See next page for the summary metrics.

Summary – **Vehicle Telematics IT Project**

Benefit	Metrics	Baseline	Target	Actual
Category 2: Transit will have more accurate mileage and telematics data to allow for more efficient and effective vehicle maintenance.	1) Increased accuracy of vehicle mileage and fuel consumption data	Coach mileage derived based upon planned bus schedule and manual adjustments is inaccurate. Based upon pilot project results, Transit estimates scheduled miles under reports actual miles by approximately 10%. This will be validated as the project proceeds.	No under reporting of actual miles.	This benefit will begin to be seen immediately upon implementation, but will not be fully realized until installation is complete across the fleet. Installation is currently planned for completion Q3 2018.
	2) Percentage of coaches that missed their scheduled maintenance that is based on mileage	Maintenance is performed on a set schedule without respect to actual mileage. Assuming a 10% under reporting of actual miles, we hypothesize the accuracy of untimely maintenance is 10% as well. This will be validated as the project proceeds.	To be determined.	This benefit will begin to be seen immediately upon implementation, but will not be fully realized until installation is complete across the fleet. Installation is currently planned for completion Q3 2018.
	3) Percentage of pump lockout occurrences during coach fueling	Approximately two fuel pump lockouts per week (due to manual data entry errors)	Zero occurrences per week due to manual error.	This benefit will begin to be seen immediately upon implementation, but will not be fully realized until installation is complete across the fleet. Installation is currently planned for completion Q3 2018.
	4) Time (hours) spent on troubleshooting of mechanical and system operations	The baseline measure will be quantified as the project proceeds.	To be determined as the project moves forward and specific data elements are identified and training is developed.	The timing of this benefit will be dependent upon completion of training by mechanics on how to use and trust the data that is provided on the work orders. Data will begin to be available at system implementation, but if there are labor issues, full realization could take a contract cycle.

IT Project Benefits Achievement Plan (Version 2)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

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2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	KCIT
Project Title	800 MHz Trunked Radio System Sprint/Nextel Rebanding
Project Number	~~347302~~ 1047313

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: Bob Potts, Regional Services Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Tony Minor	Manager/KCIT	Technical O&M

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

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2. For the annual Benefits report that PSB compiles.
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5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

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Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*Amount of time to complete/ update the form*
2013 Annual Report	3/4/2014	Hai Phung	New, Initial	1 hour
2014 Annual Report	3/12/2015	Hai Phung	No Changes Required	N/A
2015 Annual Report	2/23/2016	Hai Phung	No Changes Required	N/A
2016 Annual Report (ongoing project)	2/6/2017	Tony Minor	Section 6 Update	.25 hour
2018 Annual Report	2/14/2018	Tony Minor	Sections 2, 6 & 7 Updated	.5 hour
2019 Project Completion	1/9/2019	Tony Minor	Final BAP. Sections 2 & 7 Update.	.5 hour
2019 BAP Report	2/6/2019	George Vida	Final BAP. Review of Section 7.	.5 Hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
   1) **External service benefits**: Improving the quality or quantity of services provided to the public
   2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
   3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
   4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will

result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   This project is to comply with Federal Communications Commission's mandate in reconfiguring the 800 MHz band that being used by King County Police, Fire and Public Works agencies. It involves replacing radio units that cannot be complied with the mandate, reprogramming all radios and the infrastructure equipment. The risk is if the work is not done, King County will be out of compliance of FCC regulations and lose the licenses to use the 800 MHz radio frequencies.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   This project is to mitigate the risk of losing the FCC 800 MHz licenses by completing the user radios replacement and reprogramming and infrastructure equipment reprogramming.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update as of Feb 2017:
The project is on track to complete in Q2, 2017, and achieve its target benefit of risk reduction upon completion.

Update as of Feb 2018:
Project completion was delayed by final implementation equipment replacement activities involving Sprint/Nextel. These activities are nearing completion. Project completion is scheduled for Q3 of 2018.

Update as of Jan 2019:
The project is complete. This is the final BAP. Benefits have been fully realized. King County is in compliance with Federal Communications Commission's licensing regulation for the 800 MHz radio band used by King County Police, Fire and Public Works agencies.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Name	KCIT
Project Title	Countywide Telephony System Replacement/Unified Communications
Project Number	1111962

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

~~Bill Kehoe, Chief Information Officer~~ Tanya Hannah, Chief Information Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Christine Chou	KCIT	Finance Officer
~~Trever Esko~~	~~KCIT~~	~~Project Director~~
~~Bill Kehoe~~	~~KCIT~~	~~CIO~~
Zita Pryor	KCIT	Service Owner
Ashley Boyd	KCIT	Director of Operations

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process	3/4/2014	Christine Chou	New, initial draft	2 hours
2014 Annual Report	3/20/2015	Zita Pryor	No Changes, benefits still on target	
2015 Annual Report	1/29/2016	Zita Pryor	Benefits Changes	
2016 Annual Report (ongoing project)	1/23/2017	Zita Pryor	Update BAP - 2016 survey information	
Project Completion	1/16/2018	Zita Pryor	Final - Updated BAP - 2017 survey information	
2019 BAP Report	1/31/2019	George Vida	Final review (final BAP)	0.5 hrs

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits:** Improving the quality or quantity of services provided to the public
2) **Internal service benefits:** Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved

quality of service, such as faster response times and better access to services for the public.

Example: *If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.*

Example: *If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: *If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.*

Example: *If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.*

Example: *The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: *This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.*

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   This project is to replace the functionality of the existing County voice PBX technology that is 20 years old. Average life cycle of this type of technology should be 5 years.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   The current PBX system is out of vendor support/maintenance. Countywide voice outage will significantly interrupt County business operations; which is likely to occur due to lack of maintenance.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
   The Unified Communication (UC) project is expected to not only replace the older technology to a newer more robust technology, but also provide more functionality at much less cost. The savings from this newer technology will enable the County to payback the investment. The standard video conferencing solution that is a key component of UC/Lync is a technology that did not exist in the County before 2011 when Lync was rolled out to county employees. To purchase and implement and maintain a standalone video conferencing solution for the County would cost the County millions in project and on-going maintenance cost that is included in the cost of Lync licenses under the Microsoft Enterprise Agreement.

   In addition, the on-going efficiency savings to staff are realized every time a video meeting occurs and staff do not have to travel to an external location to attend a meeting. Savings are also realized with Instant Messaging and Presence and the integration of voice mail to email that provide an overall more efficient integrated communication experience for county employees and external customers that will utilize Lync to engage with county services such as video hearings and customer

service inquiries. This purchase cost avoidance and the value of the efficient integrated communication were not included in the updated CBA. The cost avoidance was removed from the original CBA.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   The 2015-2016 rates will reflect savings from current status quo voice charges that will be used to repay the bond that is due annually until 2019. Starting in 2020, agencies will see a significant drop in their rates.

3. *What is the current baseline?*
   Current baseline is the 2015 PSQ Countywide voice charges: $6,680,037 (excluding agency specific needs)

4. *What is the target for this measure? (How much savings will this project achieve)*
   Tangible benefits (excluding cost avoidance): This project will produce ~~$3M~~ $2.5M annual savings that will be used for bond repayment until 2019.

5. *When is the cost reduction likely to be achieved?*
   Annual tangible savings of ~~$3M~~ $2.5M ~~will start~~ in ~~2016~~ 2017 have been achieved. ~~upon completion of the project.~~

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing time annual savings, and % of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

2015 Survey Results: Below are the survey results for the Unified Communications (UC)/Lync service rollout in 2015. The line in the chart is to distinguish between the results reported in June 2015 and the results for the remainder of the year. The ongoing survey demonstrates that customer satisfaction for the UC/Lync service has continued to grow as the service and deployment process matured with 100% satisfaction for all of departments except for DPD. The DPD deployment had a special requirement for call screening that required implementing a third party solution adding complexity to their deployment and the service. We have met with the customer to document the issues and created a remediation plan. The customer is very happy with the process and steps to resolve the issues.

% Satisfied
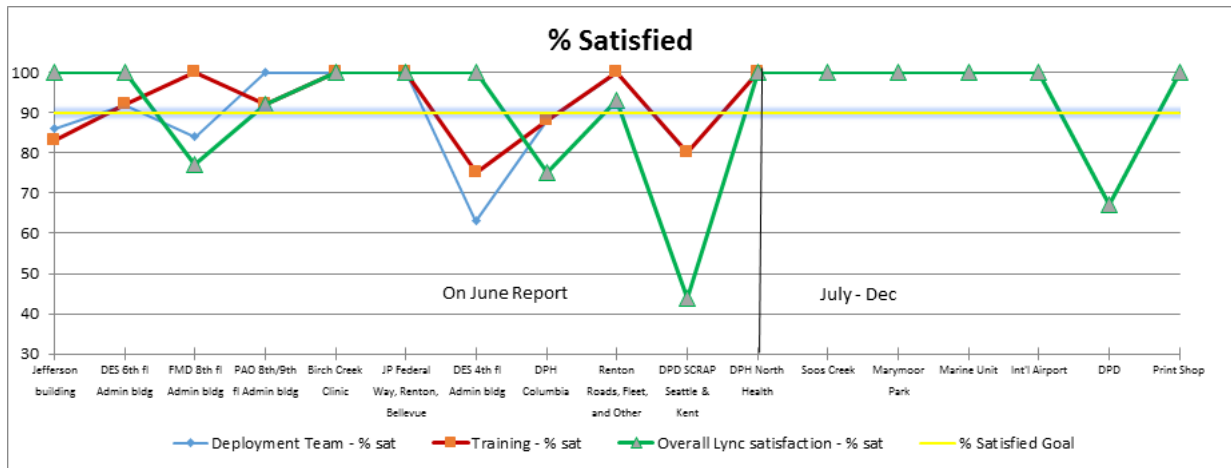
1/23/2017 update

2016 Survey Results: The UC/Skype for Business survey was sent to users on October 31. The survey was active for one week and consisted of 16 questions. There are over 10,000 Skype for Business accounts with 995 responses to the survey from 20 different departments and over 15 different work locations. 82.7 % of the respondents categorized themselves as being an average user working Monday–Friday at a desk and 10.14% work from home frequently.

Overall, majority of the respondents are satisfied with the service. With Skype for Business phone service having a 74.79% satisfaction rating. Compared to the satisfaction rating in 2014 of 61.69% that is a 13.10% increase in satisfaction. Previous experience shows that people respond to surveys when they are experiencing issues, problems, or unhappy with service. With only 995 responses to the survey, this indicates the service is meeting expectations for majority of the users.

Satisfied Customers using Skype For Business Services

90 Days Customers Experience (5 or less issues)
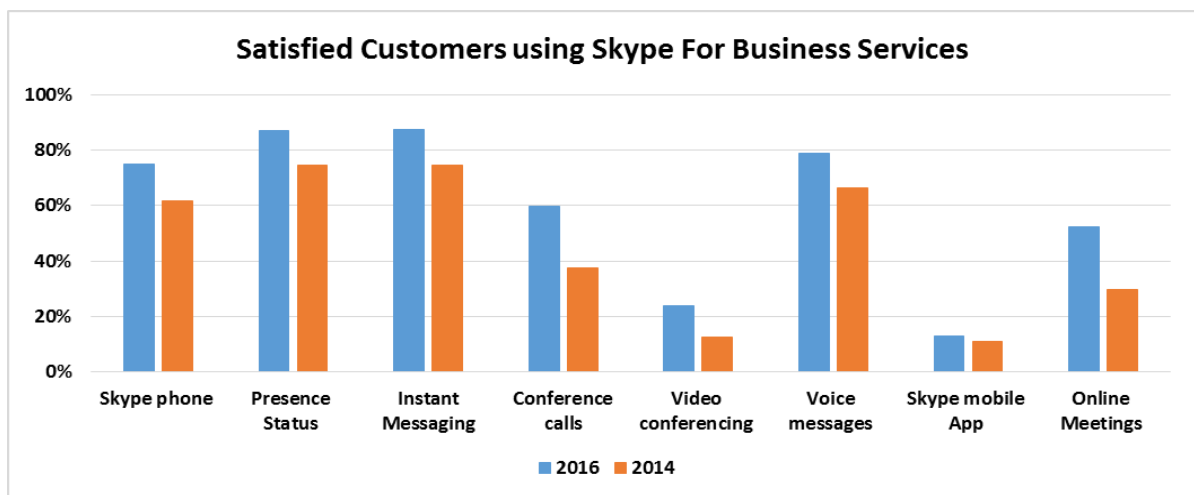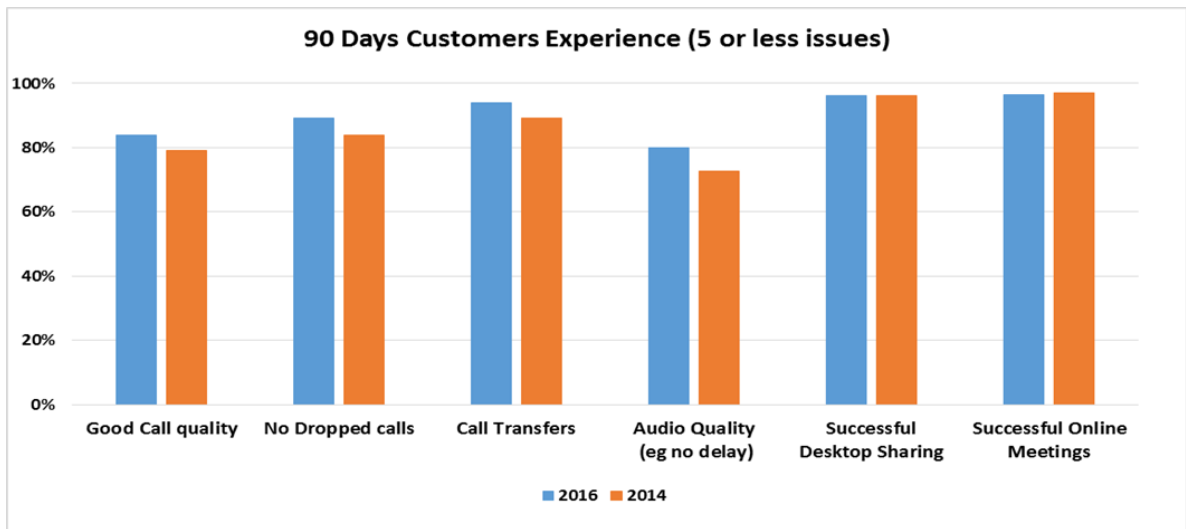
Feb 2018 Update

2017 Survey Results: The UC/Skype for Business survey was sent to users on November 21, 2017. The survey was active for several weeks and consisted of 16 questions. There are over 11,000 Skype for Business accounts with 650 responses to the survey from 20 different departments and over 15 different work locations. 94.7% of the responses used Skype for Business with 82.35% of the respondents categorized themselves as being an average user working Monday–Friday at a desk and 10.29% work from home frequently.

Again, this year, the overall satisfaction rating increasing slightly. The 2017 satisfaction rating is 77.72%, compared to 74.79% in 2016 and 61.69% in 2014. That is a 2.93% increase from last year and 16% increase from 2014. As stated in 2016, people tend to respond to surveys when they are experiencing issues, problems, or unhappy with service. In 2017 the number of people responding decreased by 34.6%, indicating the service is meeting expectations for majority of the users.

Satisfied Customers using Skype For Business Services

90 Days Customers Experience (5 or less issues)

Bar chart showing customer experience percentages across six categories (Good Call quality, No Dropped calls, Call Transfers, Audio Quality (eg no delay), Successful Desktop Sharing, Successful Online Meetings) for years 2017, 2016, and 2014.

The project successfully replaced the County's 20-year-old phone system, which had been out of vendor support. The new system provides more functionality at a much lower cost. This project resulted in $2.5M annual savings (excluding cost avoidance), which was used to pay back the bond that had been issued to fund this investment. The 2017 survey showed a user satisfaction rating of 78% and a nearly 100% rate of successful online meetings (5 issues or less) in a 90-day period. The project fully met the target benefits.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	KCIT/E911
Project Title	E911 Call reporting Upgrade
Project Number	1133687
Project Timeframe	January 2019 – August 2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Tanya Hannah / Bob Potts

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Ben Breier	E-911 Program Manager, KCIT/E-911	SME
Laura Pitarys	Finance Manager, KCIT/E-911	SME
Marlys Davis	Project Manager, KCIT/E-911	SME

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Budget process	5/21/18	Ben Breier	New, initial draft	3 hours

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
  1) **External service benefits**: Improving the quality or quantity of services provided to the public
  2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
  3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
  4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the underline primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)

Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	X
Category #3: Maintaining service levels by replacing or upgrading older technology	X	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

3. *What is the current baseline for this measure?*

4. *What is the target for this measure? (How much improvement will this project achieve?)*

5. *When is the benefit likely to be achieved?*

6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	% of customer satisfaction (to be determined through a survey)	45%	95%	By 12/31/2018
Example: Reduced time for customers to obtain a license	# days it takes to issue licenses	5 business days	1 business day	By 09/30/2018
N/A	*N/A*	*N/A*	*N/A*	*N/A*

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   In addition to the traditional voice call, new technologies such as text and video are emerging as acceptable methods for contacting 9-1-1; the proposed call management system will allow the County to collect data on, and derive subsequent reports on attempts to contact 9-1-1 using these new technologies which the current system cannot do. As a cloud-based application, E9-1-1 will have greater access to the call data, this new accessibility will enable the E-911 Office to make more data-driven decisions and ability to report text to 911 statistics. In addition, there is often confusion today amongst the PSAP community as to how to report call counts, call transfers, time to answer in the proper manner. This new cloud-based application will allow the County to create a single report template that can then be shared amongst all the users for more consistent reporting Furthermore, the current call reporting system takes an employee approximately 16-20 hours per month to run and correlate the required call statistics and produce the reports. The proposed system should allow that time to decrease to approximately 4-6 hours per month by allowing technical staff to automate and schedule the required the reports.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Continuity in call management reporting to meet monthly state reporting requirements, ability to report text to 911 statistics, and consistent call reports for PSAPs with less staff time required to produce the reports will indicate that the benefits have been achieved.

3. *What is the current baseline for this measure?*
   The current baseline is just consistently meeting the state monthly reporting requirement

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   The project completion will ensure that the Program Office is able to continue to meet the state requirements without interruption and provide additional and consistent reports for PSAPs in a more streamlined fashion.

5. *When is the benefit likely to be achieved?*
   The benefit is anticipated to be achieved at the completion of the project around 8/31/2019.

6. Summary Table for Benefit Category #2:

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	# sites inspected per day per inspector	6 sites/day per inspector	10 sites/day per inspector	By 12/31/2018
Text to 9-1-1 "call" statistics	Create a report that counts text "calls" to 9-1-1	Cannot report today	Be able to generate report	By 8/31/2019
Consistent call reports	Must manipulate call data via Excel	12 Excel spreadsheets to normalize data	No Excel spreadsheets to normalize data	By 8/31/2019
Reduce monthly staff time	Hours to produce reports	18 hrs/month	6 hrs/month	By 8/31/2019

CATEGORY #3: **Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.**

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   The current call reporting system has been in use since 2008, is out of date, and hard to use. Further, the system will be out of support after 2019. The County is required under state statue to provide monthly call answering statistics that provide information on the number of calls, answer time, and type of call (wireline vs. wireless). This proposed upgrade and modernization will allow the County to continue being compliant with the state statute.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   Without an upgrade, the system will be out of vendor support and the County may be at risk of the state statue violation due to inability to report

3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	# of system outages per month	5 outages	No outages	By 06/30/2019

Continue to meet State reporting requirements	Monthly call statistic report	100% On-time Monthly	100% On-time Monthly	By 8/31/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

3. *What is the current baseline for this measure?*

4. *What is the target for this measure? (How much improvement will this project achieve?)*

5. *When is the benefit likely to be achieved?*

6. *Summary table for Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	KCIT / E-911
Project Title	E911 Map Modernization
Project Number	1133686
Project Timeframe	August 2018 – July 2020 (24 months)

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Tanya Hannah / Bob Potts

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Ben Breier	IT Services Supervisor, KCIT / E911	Technical Lead
Laura Pitarys	Finance Manager, KCIT / E911	Finance Lead
Tom Ahlborn	Project Manager, KCIT	Project Manager

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5.   How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process (2017-18 3rd Omnibus)	3/16/18	Laura Pitarys	New; initial draft	2 hours
Spring 2019 BAP Report	3/2019	Kate Davis	Review	15 min

Section 6.   Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	X
Category #3: Maintaining service levels by replacing or upgrading older technology	X	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   - The new application will allow access to newer tools that allow for increased map accuracy.
   - The current map update process is manual and time consuming. The new technology will allow for an automated process which will save significant time and staff resources.
   - The current publication process is entirely manual with staff travel to each of the 12 public safety answering points (PSAPs) located throughout King County. With the new technology, the publication process can be automated from a centralized location, saving staff travel & processing time.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   - Map accuracy can be measured by comparing the map data to the Master Street Address Guide (MSAG).
   - GIS staff reported time to update maps.
   - Tech staff reported time to publish maps.

3. *What is the current baseline for this measure?*
   - Map accuracy is currently measured through a reporting against the MSAG.
   - GIS staff reported time to update maps.
   - Tech staff reported time to publish maps.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   See below.

5. *When is the benefit likely to be achieved?*
   Within the project completion timeline (2020)

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Improve map accuracy	Increased map accuracy %	~90% map accuracy	98% map accuracy	By 12/31/2019
Faster generation of monthly map updates	Reduce time to generate map updates	10 days	3 days	By 06/01/2019
Publish maps to PSAPs in more timely manner	Reduce time to publish maps to PSAPs	> 3 weeks	< 1 week	By 06/30/2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   The system has been in continuous use since 2002 with minor periodic software upgrades. The lifecycle for similar 911 technology is typically 7-10 years. The software is no longer supported and the company that provided the application is no longer in existence.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   The 911 Program Office is required by state statute to provide accurate maps and map data. If the system is not updated, the Program Office will be out of compliance and no longer able to provide accurate map data for 911 call routing and response agency identification.

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Reduced risk of non-compliance	No current measure for non-compliance	N/A	Minimize risk	By 06/30/2019
Reduced time of system outage	Latest outages have lasted approx. 5 days	5 days	<1 day	By 06/30/2020

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update 3/8/19: Project ongoing. Project team identified. System requirements gathered and completed and written into RFP. RFP due to release no later than 3/31/19. Project is on track and anticipated to complete in the timeframe identified.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	KCIT/E-911
Project Title	E911 Pltfrm Mdrnztn Plan
Project Number	1133685
Project Timeframe	8/2018 - 9/2020 (Phase I); 10/2020 – 3/2022 (Phase II)

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Tanya Hannah / Bob Potts

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Ben Breier	Program Manager	Lead and oversight.
Laura Pitarys	Finance Manager	Finance and budgeting.
Bob Potts	Regional Services Manager	Review and oversight.

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
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4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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<tr>
<td align="center">**Stage**</td>
<td align="center">**Date**</td>
<td align="center">**Revised By**</td>
<td align="center">**Description**</td>
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<td>Budget process (2017-18 3rd Omnibus)</td>
<td>4/3/18</td>
<td>Ben Breier / Laura Pitarys</td>
<td>New, initial draft</td>
<td>3 hours</td>
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<tr>
<td>Spring 2019 BAP Report</td>
<td>3/2019</td>
<td>Kate Davis</td>
<td>Review</td>
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Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	X

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	X	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	X
Category #4: Reduced cost or cost avoidance to produce services	☐	X

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

The overall project will consist of a Planning Phase (Phase 1) and Implementation Phase (Phase 2). While this BAP covers the benefits of the plan in its entirety, the appropriation request for 2019/2020 includes only a funding request for Phase 1.

1. *Describe why you expect the proposed IT investment to produce the benefit(s)*
   In conjunction with the new Washington State Emergency Services Network (ESINet II), the proposed single platform architecture will allow for more efficient call routing to the public safety answering points (PSAPs) located throughout King County, resulting in fewer busy signals received by callers.

   With more than 70% of all calls to 9-1-1 being made on Wireless devices, the accuracy of the caller's location is of paramount importance. With the proposed single platform architecture, King County will be able to implement emerging services that provide enhanced wireless call location accuracy, resulting in more accurate routing of first-responders.

2. *How will you measure the benefit(s)?*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure?*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Fewer busy signals	# of busy signals per call	No more than 1 in 100 calls	No more than 1 in 200 calls	By 12/31/2021
Increased wireless location accuracy	Improved confidence factor in the location of wireless caller	Average location estimate of >500 feet	Average location accuracy of <250 feet	By 6/30/2021

The overall project will consist of a Planning Phase (Phase 1) and Implementation Phase (Phase 2). While this BAP covers the benefits of the plan in its entirety, the appropriation request for 2019/2020 includes only a funding request for Phase 1.

1. *Describe why you expect the proposed IT investment to produce the benefit(s)*
   During the Phase 1 planning portion, the E-911 will contract with a specialty 9-1-1 consulting firm that will work with the PO and PSAPs to gather specific functional requirements and overall system design for development and release of an RFP for the selection of the single platform vendor. The contracted firm will also facilitate the selection process and assist with the contract negotiation. It is the goal that this phase of the project will culminate in a contract between King County and the selected single-platform provider in Q3 of 2020.

   The King County regional E-911 system currently uses a decentralized architecture with equipment located at each of the 12 Public Safety Answering Points (PSAPs) that directly interconnects them to the statewide Emergency Services Network (ESInet). The State of Washington is replacing the current statewide ESInet with a network that will require new security and interfaces to allow the PSAPs to interface with the next generation ESInet (ESInet II). To address these issues, we evaluated the overall architecture of the regional E 911 system and developed a new strategy to respond to regional system objectives and evolving future conditions.

   In the Single Platform Architecture, the core elements of the 911 telephone system infrastructure are moved from each individual PSAP to a multi-node host platform. The State's ESInet II delivers calls to this shared system platform, and the PSAPs are then networked to the platform.

   The Single Platform Architecture provides a host of underlined benefits to the County:

   Increased NG911 Readiness *(to be measured)*
   Emerging capabilities of NG911 would need to be implemented only once across the platform as opposed to the 12 system implementations today

Integrated and Interoperable Systems
An integrated and interoperable across organizations and functions allows for the seamless delivery of 911 services

Security and Resiliency
Emerging NG911 technologies shift the traditional paradigm of 911 services by exposing the system to threat actors to a much greater extent than traditional 911 networks. By focusing on only a single platform, county resources can be better focused to ensure a safe, secure and reliable system.

Optimized Operations *(to be measured)*
By providing a single, centralized platform, King County resources can be better focused on providing services that meet or exceed current industry standard in terms of location accuracy and the most efficient routing of 9-1-1 calls.

Accessible and Equitable Service
Increasing equitable access to the 911 services for all communities and individuals served, with specific focus on lessening obstacles faced by groups with unique needs; the single platform will allow the County to more quickly offer emerging NG911 service like text-to-911.

2. *How will you measure the benefit(s)?* see summary table below
3. *What is the current baseline for this measure?* see summary table below
4. *What is the target for this measure?* see summary table below
5. *When is the benefit likely to be achieved?* see summary table below
6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	*# sites inspected per day per inspector*	*6 sites/day per inspector*	*10 sites/day per inspector*	*By 12/31/2018*
Increased NG911 Readiness	Deployment time of new technology	18 months for each new technology	6-9 months per technology	By 3/31/2022
Optimized Operations	Deployment of new system configurations	9-12 months per configuration	3-6 months per configuration	By 6/30/2021

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of the existing technology and the average life cycle replacement for this type of technology.***

   The overall project will consist of a Planning Phase (Phase 1) and Implementation Phase (Phase 2). While this BAP covers the benefits of the plan in its entirety, the appropriation request for 2019-2020 includes only a funding request for Phase 1.

2. ***If the primary reason for the project is risk reduction, please estimate the probability of the risk or describe how likely it is to occur.***

   The current system has proven to be problematic when interfacing with the provided statewide emergency services network (ESINet), as the State completes the deployment and cutover to a new ESInet II call routing and transport to the PSAPs a new NENA i3 call delivery mechanism will be used to bring the 911 call to the PSAP. While it is the goal to accept this NENA i3 call delivery, if the current telephony system is not able to support elements of ESInet II, these IP-based calls will then be converted to legacy CAMA interfaces on the existing 911 telephone systems at each of the PSAPs.

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*
Ability to accept SIP call delivery	Yes/No – delivery of SIP 9-1-1 calls	No	Yes	By 12/31/19

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: <u>Reduced cost to produce service</u>. *If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.*

Example: <u>Cost Avoidance.</u> *Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

The overall project will consist of a Planning Phase (Phase 1) and Implementation Phase (Phase 2). While this BAP covers the benefits of the plan in its entirety, the appropriation request for 2019-2020 includes only a funding request for Phase 1.

1. ***Describe why you expect the proposed IT investment to reduce costs?***

The current distributed system architecture model requires King County to purchase, support and maintain 13 complete 9-1-1 call handling systems (i.e., 12 PSAPs plus the Test PSAP). With the single platform model, King County's expenditure shifts to a host-remote architecture with only two or three sets of backroom server hardware and no required server or supporting hardware at each of the remote (PSAP) locations. When implemented at other agencies across the country, this architecture has produced a significant decrease in non-recurring expense.

The single platform solution has resulted in reduced support and maintenance costs as well at other similar implementations across the country. The model does require new expenditures in wide area networks that are not currently fully realized in the current system architecture.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*

Implementing the platform architecture will be a multi-phase process with key decision milestones as each phase concludes. A more detailed analysis and planning phase will be necessary. This will involve updating cost estimates, developing detailed requirements, and evaluating staffing needs and issuing a request for proposal. Once the proposals have been received and fully reviewed, the true cost analysis can be completed.

Phase 1 of the project provides for the detailed planning, requirements gathering, development and release of a request for proposals, evaluation of the proposals, selection of the winning proposal and negotiation with the selected vendor. Phase 2 of the project moves into the detailed system design and implementation of the selected proposal.

5. *What is the current baseline?*

6. *What is the target for this measure? (How much savings will this project achieve)*

7. *When is the cost reduction likely to be achieved*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

<u>Update 3/8/19</u>: Project ongoing. External QA vendor and beginning oversite. Project team assigned. RFP written and getting ready for release. RFP planned for release by 3/31/19. Project is slightly behind schedule, however it is still anticipated to complete within the indicated timeframe.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Name	~~Department of Executive Services/Office of Emergency Management/~~ KCIT/E-911 Program Office
Project Title	E-911 System Security
Project Number	1127690

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Aaron Barak, Chief Technology Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Deb Flewelling	E-911 Program Manager	E-911 Program Manager
Tom Ahlborn	Project Manager/KCIT	Project Manager
Laura Pitarys	E-911 Finance Manager	Finances
Steve Lagreid	E-911 PSAP Equipment Administrator	Installation in PSAPs
Beth Wigley	E-911 PSAP Equipment Administrator	Installation in PSAPs, Retrieve and Review Security Logs
PSAP E-911 IT Staff	IT System Specialists	Project Team, Contact at each PSAP

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Project implementation	10/11/15	Marlys Davis	New, initial draft	2 hours
2016 Annual Report	06/13/17	Tom Ahlborn	Updated Section 3 (Project team) and Category 1	30 Min
Annual Report	08/08/17	Tom Ahlborn	Updated description of project benefits	30 Min
2019 BAP Report (Cancelled Project)	5/17/18	Bryan Karol	E-911 has shifted business practice and is addressing network/cyber security on an ongoing and project by project basis as opposed to the approach of this standalone project.	10 Min

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   The current system needs to be upgraded to support future technology advancements, as well as, assessing the security risk associated with the new technology.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   Due to the current call delivery methodology, i.e., cama trunk conversion, the probability of risk is low; however, moving into the NG911 platform and more exposure to the Internet, the risk level increases. To obtain a baseline, a security assessment should be completed prior to moving to a new platform.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update of March 2019:
This is the final BAP. The project was cancelled. E-911 has shifted business practice and is addressing network/cyber security on an ongoing and project-by-project basis, as opposed to the approach of this standalone project.

IT Project Benefits Achievement Plan (Version 2)

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4. To ensure that benefits are achieved

King County Department/Agency Name	~~Department of Executive Services/Office of Emergency~~ Management/KCIT/E-911 Program Office
Project Title	Text-to-911
Project Number	1127689

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Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Aaron Barak, Chief Technology Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Kathy Lombardo	E-911 Program Manager/E-911 Program Office	E-911 Program Manager
Deb Flewelling	E-911 Program Manager/E-911 Program Office	E-911 Program Manager
Kayreen Lum	E-911 Program Manager III/E-911 Program Office	Training, Public Education, Statistics
Tom Ahlborn	Project Manager/ KCIT PMO	Project Manager
Steve Lagreid	E-911 PSAP Network Administrator	Installation in PSAPs
Beth Wigley	E-911 PSAP Network Administrator	Installation in PSAPs

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
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4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Project implementation	09/01/15	Marlys Davis	New, initial draft	2 hours
2016 Annual Report	06/13/17	Tom Ahlborn	Updated Section 3 (Project team) and Category 1	30 Min
Project completion	2/1/2019	Ben Breier	Updated Category #1	30 Min
2019 BAP Report	2/1/2019	George Vida	Final review	
2019 BAP Report (Completed Project)	3/8/2019	Ben Breier	Updated sections 6 and 7	45 min

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
Interim text-to-911 will provide individuals who are deaf, hard of hearing, or have speech disabilities with direct access to 911. In addition, people who are in a domestic violence or another situation in which they must silently contact 911 will be able to do so. Suicidal persons have also demonstrated that they are willing to text but not call 911. In disaster situations or low cell coverage situations, texts will often get through when voice calls cannot.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
Maintain statistics for texts to 911, track the quantity of emergency texts to 911. Tracking an appropriate text, i.e., an emergency where the caller is unable to speak vs. a real text, i.e., still an emergency, but should have called. Texting will also be tracked for non-emergency type interactions, testing and training, as well as, percentage of abandoned texts, percentage of unreadable texts and system uptime.

3. *What is the current baseline for this measure?*
The PSAPs currently have no capability of receiving text-to-911, so the baseline is 0; however, we know in 2015, there were 3030 bounce back texts for all of King County.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
There is no target. The number of texts received will correspond to the need for emergency response from the public.

As text to 9-1-1 is not in place today, there is not a specific target identified for the number of texts received in a given time period, nor is there a target for a specific number or percentage of "valid" texts in that same time period. The E-911 Program will continually monitor text to 9-1-1 statistics to determine the usage of the system and engineer public education efforts should the usage model differ significantly from plan.

To effectively track the success of the service in the short term, the E-911 Program targets a total system uptime for text to 9-1-1 or 99.999% (consistent with other uptime measures in the 9-1-1 community).

5. *When is the benefit likely to be achieved?*

Immediately upon completion of the project December 2017. PSAPs who have implemented text-to-911 have begun to receive emergency texts within the first few days.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

This is a final BAP. While the E-911 Program will continue to monitor the effectiveness of the text to 9-1-1 service over the long term, the anticipated benefits to the County have been fully met and the project is closed out.

The project was fully implemented, and the public advised December 20, 2019. Since the launch date, the County has received a number of valid texts. Further, the service was a valuable resource during the 9-1-1 voice call interruption December 27-28, 2019. The E-911 Program Office has received excellent positive feedback from the deaf and hard of hearing community on the availability of the service. Up time for the system as a whole has been 100% since the launch.

The E-911 Program Office is actively monitoring text activity to determine the level of use and appropriateness of the service. To date we have received 607 texts which is above the anticipated number.

IT Project Benefits Achievement Plan (Version 2)

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

To complete this document fully, please read all of the colored sections and fill in the white cells. For assistance in completing this form, please contact your PSB analyst.

King County Department/Agency Name	King County Information Technology Department
Project Title	Enhance Wireless Connectivity – Phase 1
Project Number	1124574

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: ~~Jayne Pendergast, Deputy Chief Information Officer~~ Aaron Barak, Director of IT Operations

Section 3. Who is involved in developing the Benefit Achievement Plan?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Bill Kehoe~~	~~Chief Information Officer, KCIT~~	Has left King County
~~Jayne Pendergast~~	~~Deputy Chief Information Officer, KCIT~~	Has left King County
~~John Storch~~	~~Regional Communication Manager~~, KCIT	Has left King County
Lori Dickneite	Network Services Manager, KCIT	Business Owner
~~Behzad Shirinzadeh~~	~~Network Services Manager, KCIT~~	Has left King County
Aaron Barak	Operations Director	Project Sponsor
Lloyd Jordan	IT Project Manager III, KCIT	Project Manager

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, simply indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	5/29/14	John Storch, Lori Dickneite	New, initial draft	1 hours
Conceptual review	6/28/14	Lori Dickneite	Updated final document	1.5 hours
Project Planning	3/20/15	Aaron Barack	Review	.5 hours
Project Implementation	2/10/16	Lloyd Jordan	Review	1.0 hours
Project Implementation	10/13/16	Lloyd Jordan	Review	.5 hours
Annual Report	2/6/17	Lloyd Jordan	BAP Update	.5 hours
Project Completion	2/20/18	Lloyd Jordan	Final BAP	.5 hours
2019 BAP Report	2/6/19	George Vida	Review of the final BAP	.5 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underline primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s). How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   This investment will expand wireless experience for users in the county's facilities and will double the number of users from the current capacity with increased capabilities. The upgrade will support video, audio, and file downloads. Security access will also increase by leveraging virtual network logic to improve administration of access, security, and logical partitioning of public and business environment.

   Current wireless environment (about 1 ~~Meg~~ MB per user) allows average user ability to do only email, chat, phone text, but not large downloads, video, and most audio

2. ***What is the current baseline for this measure?***

- 10-25 users per wireless access point at 1 ~~Meg~~ MB per user. Allow only for email, chat, phone text, but not large downloads, video, and most audio
- Lync is not available via wireless
- Connection/response time for email is about 3-5 seconds

3. What is the target for this measure? (How much improvement will this project achieve?)
- 50 users per wireless access point at 10 ~~Meg~~ MB per user. 10 ~~Meg~~ MB will support video, audio, and file downloads
- Lync will be available for conference calls or general communications throughout the building
- Average connection/response time for Email and Web access will be about 2-4 seconds. This is also depending on end user's device and other non-wireless factors such as email server load

4. When is the benefit likely to be achieved?
Benefit will be achieved upon deployment and installation of equipment throughout the project. The project has an estimated end date of 12/31/2016

As part of Project Management Institute (PMI) framework, the project went through an analysis phase, encompassing a detailed review of the requirements based on the wireless architectural design. From the analysis, it was determined that the existing funding would be insufficient to complete the stated deliverables. This was brought before the PRB and the project has been placed on hold until further discussion.

Updated 2/6/2017:
After discussion the scope of the project was reduced and the implementation phase commenced in June 2016; project estimated to be completed on 3/31/2017. There will be 7 sites included in this project: King County Courthouse and six District Court sites (Auburn, Bellevue, Burien, Issaquah, Redmond, Shoreline)

Updated 2/20/2018
The 7 sites included in this project: King County Courthouse and six District Court sites (Auburn, Bellevue, Burien, Issaquah, Redmond, Shoreline) were completed in 2017. The project is preparing for the King Street building for Phase II

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.
The current wireless access points system serving King County high occupancy were installed in years 2007/2010/2011 and have passed end of life. Some equipment is no longer supported by vendor.

The current system provides an average of 1 MB per user for up to 1950 concurrent users in a high user density building (eg. Chinook). Any additional users reduce the wireless speed/bandwith for everyone. The wireless industry rapidly upgrading the standard in response to demand in consumers' mobility and vast growing mobile devices that require more and more bandwith to keep up with consumers' demand of high speed connections. The latest industry standard that will be available 4th quarter 2015, provides a potential up to 100 MB per user. Average life of equipment replacement would be five years, but business demands for higher speed over time may dictate a shorter replacement cycle.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

The current wireless system is more than five year old and must be replaced. Not upgrading the system will lead to degradation of wireless performance as more users (King County employees and visitors to County's facilities) deploy their mobile devices and depend on them. Not providing an optimum wireless performance will contradict the County's mobility strategy and discourage users to use their wireless device. New upcoming applications such as case management system will rely heavily on wireless infrastructure for usage in the courts environment.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.
The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	*2 day processing time* *20 percent of purchases are receiving prompt payment discounts* *$200,000 savings*

Updated 2/20/2018
The 7 sites included in this project: King County Courthouse and six District Court sites (Auburn, Bellevue, Burien, Issaquah, Redmond, Shoreline) were completed in 2017 with the following metrics:

Description	Metrics	Baseline	Target	Actual
Increase wireless capacity in the building	Number of users per wireless access point and available bandwidth per user	10-25 users per wireless access point at 1 MB/user	50 users/wireless access point at 10 MB/user	As targeted
Enhance users experience with wireless	Users ability of performing tasks with wireless	Allow only email, chat, phone text	Support video, audio and file downloads	As targeted
Expand experience to communicate via wireless	Ability to use Lync/Skype via wireless	No ability	Able to use Lync/skype via wireless	As targeted

In addition to the above, the enhanced wireless now allows District Court to utilize their applications that require a robust wireless connections to perform effectively.

Updated 03/15/2019: Project is completed and all benefit targets achieved.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	King County Information Technology Department
Project Title	Enhanced Wireless Connectivity – Phase 2
Project Number	1132334
Project Timeframe	January 2018-December 2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Aaron Barak – Chief Technology Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Aaron Barak	Chief Technology Officer	Project Sponsor
Lori Dickneite	Network Services Manager, KCIT	Business Owner
Amy Hitchcock	IT Project Manager III	Project Manager

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process (2017 2nd Omnibus)	6/23/2017	Lori Dickneite	New, initial draft	2 hours
Budget Process (2017 2nd Omnibus)	11/2/2017	Lori Dickneite	Modified/Added benefits and measurements	1 hour
Budget Process (2018 3rd Omnibus)	4/18/2018	Lloyd Jordan	Scope change resulting in a budget increase request	1 hour
Funding release	2/14/19	Amy Hitchcock	Funding release submitted to initiate jail facilities effort	.5 hour
2019 BAP Report	2/14/19	George Vida	Updated Sections 6 and 7.	.5 Hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
  1) **External service benefits**: Improving the quality or quantity of services provided to the public
  2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
  3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
  4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☒
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	*% of customer satisfaction (to be determined through a survey)*	*45%*	*95%*	*By 12/31/2018*
Example: Reduced time for customers to obtain a license	*# days it takes to issue licenses*	*5 business days*	*1 business day*	*By 09/30/2018*

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   This investment will continue the investment made with the Business Empowerment and User Mobility (BEUM) project and the Enhanced Wireless Connectivity project (Phase 1) to expand and improve the wireless experience for users in the county's facilities. This phase of the project will increase user capacity in three locations, doubling the number of users that can connect to the wireless network and provide the same user experience as a wired connection. The upgrade will support video, audio, and file downloads. Security access will also increase by leveraging virtual network logic to improve administration of access, security, and logical partitioning of public and business environment.

   The current wireless environment in these locations (Chinook, King Street Center, and Administration Buildings), depending on saturation (# of connections) only allows average user ability to do only email, chat, and phone text. The environment does not perform under load and users are unable to move large files, stream video, or perform any voice calls.

   In addition, the King County Jail, Maleng Regional Justice Center, Detention facility on the 10th and 12th floors of the King County Courthouse and the Hiawatha community work program facility have been requested to be added to Phase 2 to meet the requirements and needs of the new Jail Management System implementation. In addition, the enhanced wireless will enable other staff in the jail building to conduct their work anywhere in the building when serving clients face to face, for example:
   - Jail Health – ability to pull up and update medical and medication information
   - DPD – ability to review & pull up documents/show video for discovery during client interview

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   We will monitor increase of wireless use and wireless connections performance.

3. ***What is the current baseline for this measure?***
   - Maximum of 10 users per wireless access point at approximately 1MB per user which only allow for email, chat, and phone text, but not processing large files (download/upload), video, and most audio
   - Skype for Business performance is not supported via existing wireless
   - Connection/loading time for email is about 3-5 seconds

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
   - 50 users per wireless access point at approximately 10MB per user. 10MB will support streaming video, Skype for Business voice calls, and file downloads.

- Skype for Business performance will be equivalent to a wired connection for conference calls or general communications throughout the building
- Average connection/response time for email and web access will be about 2-4 seconds. This is also depending on end user's device and other non-wireless factors such as email server load

5. ***When is the benefit likely to be achieved?***
Benefit will be achieved at the completion of each facility. It is estimated that each facility will take approximately 2 months for full deployment with the project completion Quarter 3 of 2018. With the requested addition to scope the project will be extended for completion to December 31, 2019.

6. ***Summary Table for Benefit Category #2:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	Target will be achieved /measured by…
Example: Increased site inspector efficiency	*# sites inspected per day per inspector*	*6 sites/day per inspector*	*10 sites/day per inspector*	*~~By 12/31/2018~~*
Increase number of users per facility	Number of users per facility before performance issues occur due to load	Chinook: 780 Admin: 540 King Street: 420	Chinook: 1560 Admin: 1100 King Street: 840	~~06/30/2019~~ 12/31/2019
Effective use of skype for business and jail management system, and other applications in the enhanced buildings	Level of performance	Weak or no connection under wireless	Equivalent performance as wired connection	~~06/30/2019~~ 12/31/2019
Customer Satisfaction in wireless accessibility and performance	Increase in customer satisfaction with the accessibility of wireless access and performance	Pre-survey results (will be conducted prior to project start)	Chinook: 50% increase Admin: 80% increase King Street: 80% increase	12/31/2019
Faster email connection	Time to load email	3 to 5 second	2 to 4 second	~~06/30/2019~~ 12/31/2019

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

The current wireless access points system serving King County locations were installed in years 2007/2010/2011 and have passed hardware end of life and the ability to meet business needs. Some equipment is no longer supported by vendor. The current system provides an average of 1MB per user for up to 10 concurrent user's connections to 1 access point which only allows emails, chats, and texts. In a high user density building (e.g., Chinook), maximum users before performance impacts is up to 1950 concurrent users. Any additional users above the identified concurrent connections reduce the wireless speed/bandwidth for everyone. The wireless industry rapidly upgrading the standard in response to demand in consumers' mobility and vast growing mobile devices that require more and more bandwidth to keep up with consumers' demand of high speed connections. The wireless standard that is being deployed as part of this project provides a potential up 50 concurrent users per access point and up to 10 MB per user allowing for skype, file downloads, etc. Average life of equipment replacement would be five years, but business demands for higher speed over time may dictate a shorter replacement cycle

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   The current wireless system is the Chinook, Admin, and King Street buildings and King County Jail, Maleng Regional Justice Center, Detention facility on the 10th and 12th floors of the King County Courthouse and the Hiawatha community work program facility are more than five years old and must be replaced. Not upgrading the system will lead to inconsistent user experience between buildings with enhanced wireless and buildings without, along with poor wireless performance for users. Not providing an optimum wireless performance will contradict the County's mobility strategy and discourage users to use their wireless device. Business practices and applications/ technologies promote the use of wireless, such as case management system that relies heavily on wireless infrastructure

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	Target will be achieved /measured by …
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*
Increased and enhanced wireless access at County facilities	Facilities with enhanced wireless	8 Sites: - Courthouse & - 7 District Court sites	11 sites deployed: - Courthouse, - 7 District Court sites, - King Street, - Admin, - Chinook - KC Jail - Detention facility KCCH - Regional Justice Center - Hiawatha community work program facility	12/31/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 12/31/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual

| Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts. | • Processing time (in days),
• % of purchases receiving prompt payment discounts, and
• Annual savings | • 10-day processing time
• 10% of purchases are receiving discount
• $100,000 savings | • 1-day processing time
• 30% of purchases are receiving prompt payment discounts
• $400,000 savings | • 2-day processing time
• 20% of purchases are receiving prompt payment discounts
• $200,000 savings |

Update of 03/15/2019:

In progress, new completion date is December 31, 2019 (6 months delay from the original scope). Project is on track to achieve full benefits with a 6 month delay. Scope change in 2018 to add to Phase II the following buildings: the King County Jail, Maleng Regional Justice Center, Detention facility on the 10th and 12th floors of the King County Courthouse and the Hiawatha community work program facility in order to meet the requirements and needs of the new Jail Management System. In addition, the enhanced wireless will enable other staff in the jail building to conduct their work anywhere in the building when serving clients face to face.

Outcome/Benefit	Metrics/Measure	Baseline	Target	Actual
Increase number of users per facility	Number of users per facility before performance issues occur due to load	Chinook: 780 Admin: 540 King Street: 420	Chinook: 1560 Admin: 1100 King Street: 840 By ~~06/30/2019~~ 12/31/2019	*To be reported upon project completion*
Effective use of skype for business and jail management system, and other applications in the enhanced buildings	Level of performance	Weak or no connection under wireless	Equivalent performance as wired connection By ~~06/30/2019~~ 12/31/2019	*To be reported upon project completion*
Customer Satisfaction in wireless accessibility and performance	Increase in customer satisfaction with the accessibility of wireless access and performance	Pre-survey results (will be conducted prior to project start)	Chinook: 50% increase Admin: 80% increase King Street: 80% increase By 12/31/2019	*To be reported upon project completion*
Faster email connection	Time to load email	3 to 5 second	2 to 4 second By ~~06/30/2019~~ 12/31/2019	*To be reported upon project completion*
Increased and enhanced wireless access at County facilities	Facilities with enhanced wireless	8 Sites: - Courthouse & - 7 District Court sites	11 sites deployed (by 12/31/2019): - Courthouse, - 7 District Court sites, - King Street, - Admin, - Chinook - KC Jail - Detention facility KCCH - Regional Justice Center - Hiawatha community work program facility	*To be reported upon project completion*

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Name	KCIT
Project Title	Exchange to Office 365 Adoption Phase I (Pilot)
Project Number	1127266

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Tanya Hannah ~~Bill Kehoe~~, King County Chief Information Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the benefit achievement plan below:

Name	Title / Agency	Project Role
Temujin Baker	IT Enterprise Manager I/KCIT	Service Owner
Molly Gordon	IT Business Analyst/KCIT	BA Assigned to Business Case Writing
Bob Johnson	IT Project Manager/KCIT	PMO project manager

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County.

More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

		Revision History Table		
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual Review/Business Case	4/1/2015	Molly Gordon	New, initial draft	1 hour
Conceptual Review/Business Case	4/9/2015	Molly Gordon	Made updates based on recommendations of Service Owner (Temujin Baker)	30 minutes
Conceptual Review/Business Case	7/1/2015	Molly Gordon	Validate data with new dates	30 minutes
Conceptual Review/Business Case	7/31/2015	Temujin Baker	Validation and review of data	1 hour
Annual Reporting	2/12/2016	Temujin Baker	Annual BAP Reporting	
Council staff review of annual BAP	6/20/2016	Jenny Giambattista	Annual BAP Report	30 minutes
Annual BAP Report	6/22/2016	Temujin Baker	Added category 2 and metrics per Council staff review	
Annual BAP Report	2/7/2017	Temujin Baker, Bob Johnson	Update	1 hour
2019 BAP Report	2/23/2018	Temujin Baker	Final BAP; results reporting	1 hour
2019 BAP Report	03/10/2019	George Vida	Review of the final BAP	.5 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: *If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.*

Example: *If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at anytime, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: *If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 yrs without adding more staff.*

Example: *If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.*

Example: *The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

Update 6/20/16, 2/7/17, and 2/23/18: Added benefits and measures for internal operations

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   We're just moving employee email from on-premise servers to a cloud service. It is expected to be a seamless experience for the user. Larger mailboxes will enable employees to focus more on doing their jobs than managing email. ~~Not having to maintain costly infrastructure (servers and storage) frees up engineer time for more value-added work. Being able to search in one place files (SharePoint and OneDrive) and email for public disclosure requests reduces time for collection. Cloud architecture builds into it an expectation of 100% uptime.~~
   Cloud architecture builds into it an expectation of 99.9% uptime. When countywide emails are moved to the Cloud, not having to maintain costly infrastructure (servers and storage) frees up

engineering & operations time for more value-added work. Being able to search in one place files (SharePoint and OneDrive) and email for public disclosure requests reduces time for collection.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   We will survey users and report on a summary of user experience in the 2 initial agencies (KCIT and Superior Court) with the new solution including at least:
   1) overall satisfaction by user with the migration of their email
   2) overall satisfaction by user of the new cloud solution as compared to on-premise exchange
   3) ~~improvement in managing e-mails and responding to public disclosure requests~~
   4) Increase size of mailbox and easy access to the PST (saved emails) files
   5) system uptime versus on-premise solution
   6) ~~IT staff time to maintain cloud solution vs on-premise solution~~

   Update of 02/07/2017:
   Measures 3 and 6 relate to future phases, when all emails are moved to the Cloud.

3. *What is the current baseline for this measure?*
   1) User satisfaction on the migration n/a; will conduct survey after migration
   2) User satisfaction for cloud: We don't have a current baseline for the on-premise, but will use the survey questions to measure this. Survey questions to be sent shortly. 2017-02-07
   3) ~~E-mail management: We will poll PIOs and others involved in gathering data (investigations) to determine current time to deliver the requested information.~~
   4) System uptime: We will calculate total downtime for on-premise solution from all planned and unplanned downtime activities. We will monitor and verify any downtime of the cloud solution through the Microsoft Office 365 Administrator Portal combined with user experience. There was 1.25 hours of downtime for on-premise email in 2016. There was .75 hours of downtime for on-premise email in 2017.
   5) Current on premise email storage is 2GB/mail box. PST email only can be accessed remotely via VPN
   6) ~~IT staff time to maintain: query operations staff on time to support on-premise solution.~~

   Update of 02/23/2018:
   Survey results were sent to Council for review in 2017. They were approved.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   1) We expect that 95% of users are satisfied with the migration of their email.
   2) We expect that 95% of users are neutral, satisfied or report improvement with their email now in the cloud.
   3) ~~We expect that 95% of applicable users (eg. PIOs) report improvement in responding to public disclosure requests~~
   4) We expect to have 99.99% uptime (availability)
   5) Emails storage will increase to at least 10~~5~~0 GB per mailbox and no VPN needed when working remotely

5. *When is the benefit likely to be achieved?*
   6 months to 1 year after the project is completed due to time needed for users' familiarization with the new available features and operational transition period for staff.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project

will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

   ~~King County currently operates email through on-premises servers and ad-hoc local license purchases, despite having an existing Office 365 Enterprise agreement that would allow email to be operated in the secure G-cloud. The county's current email/productivity app practices, developed two decades ago, contribute to several operational challenges, such as:~~
   - ~~Limited and scattered email storage~~
   - ~~Costly maintenance, support and monitoring (back-up) of on-premises servers~~
   - ~~Costly, ad-hoc staff time associated with manual software updates and upgrades~~
   - ~~Lack of access to collaboration, integration and security innovations~~

   ~~With SharePoint already successfully operating in the G-cloud, King County is now positioned to fully utilize its existing strategic investment. Without any extra capital costs, funding the migration to cloud-based email will reduce infrastructure costs, maximize IT enterprise investments, leverage modern industry-standard technology, and increase mobility.~~

   ~~Migrating to the G-cloud allows King County to increase its operations in the enhanced environment that is compliant with government regulatory requirements like CJIS and HIPPA.~~

   Updated 02/12/2016:
   We are currently running Exchange 2010 which is eight ~~six~~ years old software and no longer in Mainstream Support by Microsoft. We are in what's called Extended Support which means if they find any bugs with the software, they won't fix them. Only critical security issues.

   Also, the server hardware entered ~~is approaching~~ end of life on 10/1/2016. We are currently leveraging a 3rd party support vendor to provide hardware support. If we simply upgrade what we have then we will need to purchase servers, training, and services to come up with an architectural design (as Exchange 2016 is vastly different than 2010), install Exchange 2016, and then help us migrate to Exchange 2016. We leverage the cloud or a new, costly infrastructure for on-premise Exchange. Either way, we will have to migrate the County off of our old system. Our proposal is to the cloud.

   King County currently operates email through on-premises servers and ad-hoc local license purchases, despite having an existing Office 365 Enterprise agreement that would allow email to be operated in the secure G-cloud. The county's current email/productivity app practices, developed two decades ago, contribute to several operational challenges, such as:
   - Costly maintenance, support, and back-up of on-premises servers
   - Costly, ad-hoc staff time associated with manual software updates and upgrades
   - Continual hardware and software upgrades

With SharePoint already successfully operating in the G-cloud, King County is now positioned to fully utilize its existing strategic investment. Funding the migration to cloud-based email will reduce infrastructure costs, maximize IT enterprise investments, leverage modern industry-standard technology, and increase mobility.

Costs to run and support Exchange on-premise for the next 10 years are $8.4 million. Costs to migrate email and run it in the cloud for the next 10 years are $2.0 million.

2. *If the primary reason for the project is risk reduction, please estimate the probability of the risk or describe how likely it is to occur.*
   N/A. The primary reasons for migrating email to the G-cloud are to contain and decrease operating costs, to maximize existing IT investments, to increase the utilization of the secure G-cloud environment, and to increase mobility.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the

emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and % of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

03/15/2019 Update:
The pilot project is complete. The project partially achieved the target benefits. Overall, users were satisfied with the migration and with the new Exchange Online service. The lessons learned from the pilot informed the second phase of the project, which is currently underway. The following represents results from Office365 deployment at Superior Court (SC).

Metric Description	Metrics	Baseline	Target	Actual (Update of 02/2018)
User satisfaction with the migration	Survey Results	N/A	95% of users are satisfied with the migration of their email	82% of SC users satisfied with the migration process; 92% of SC users satisfied with access to archived email.
Users satisfied with the new Cloud Solution	Survey Results	On Premise	95% of users are neutral, satisfied or report improvement with their email now in the cloud	In aggregate (across multiple survey questions), 80% of SC users were satisfied with the solution overall
Increased emails capacity	Mailbox Size	2 GB need VPN	100 GB; No VPN	100 GB VPN only for PST files
Anytime access to emails	Availability of emails	1.25 hrs unplanned downtime in 2016	No unplanned downtime	0.75 hours of downtime for on-premise email in 2017.

Survey Results from 2017 Proviso Response Report: We conducted two surveys. The first was immediately after users were migrated and focused on the migration process itself. The second was focused on satisfaction with the new Exchange Online service after 3 months of use. A majority of respondents in both surveys reported a positive experience with the migration itself and with the new Exchange Online service.

The post-migration survey covered satisfaction with four areas: the overall migration process, access to files, downtime and availability. KCIT was migrated first, and lessons learned in that migration were applied prior to beginning the Superior Court migration, and the results of those process improvements are visible in the survey, with Superior Court employees reporting higher satisfaction on each of our four metrics. The results are shown below:

Were you pleased with the migration process, communications and training?[1]
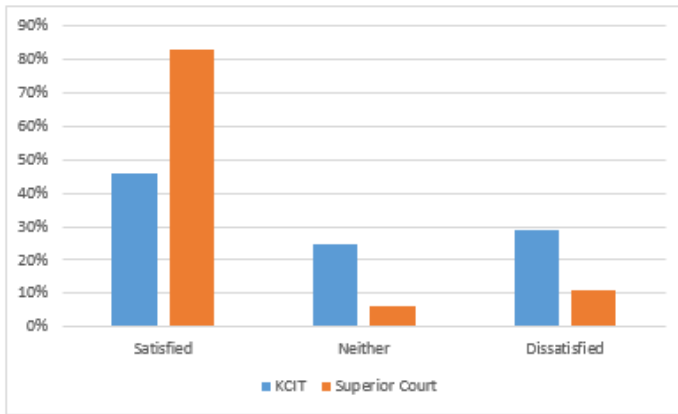
Were you satisfied with your access to archived email[1]
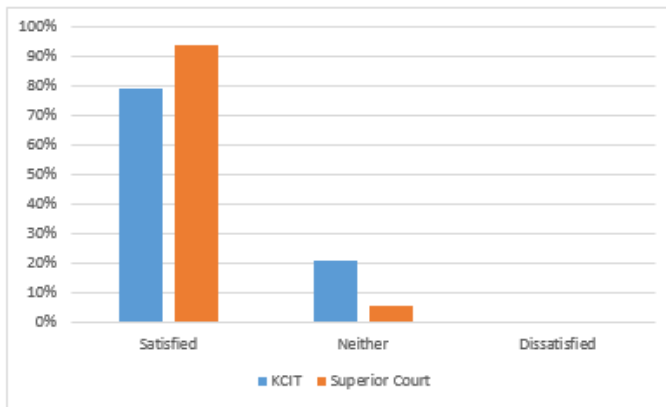
Note: migrations were handled overnight and there was no downtime associated with the migration for all but one of the 1143 mailboxes migrated, but some customers (less than 20 percent) had issues with mobile devices that required assistance, the downtime referred to in the next question is for that subset of users who use mobile devices.

Are you satisfied with any downtime incurred on the day you were migrated[3]
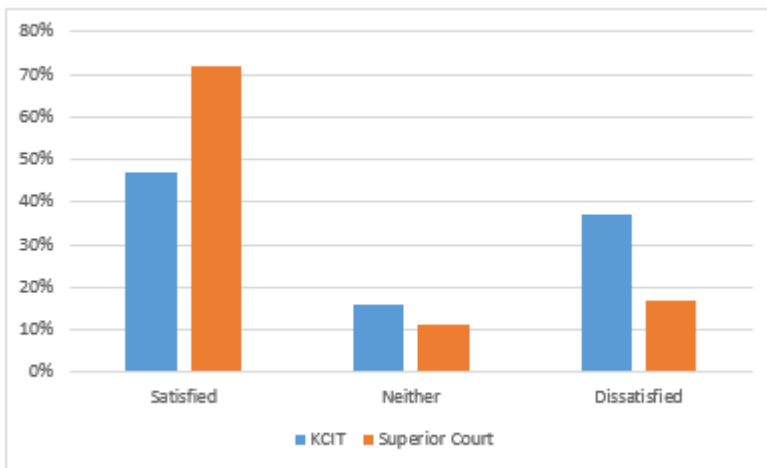
The second survey was conducted after employees had been using Exchange Online for at least 90 days. We asked a number of questions related to the expected benefits from a user experience perspective. The results are shown below:

Have you received any notifications saying you've reached your space limit?[4]
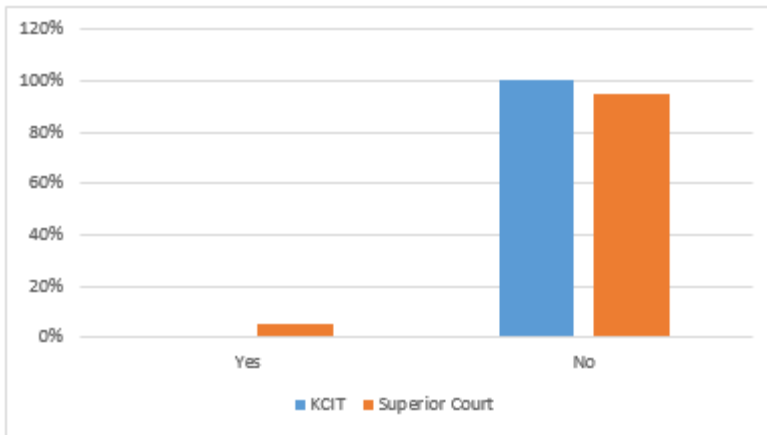
Are you using your new unlimited online email archive?[5]

Would you use your unlimited online archive if instructions were provided?[6]
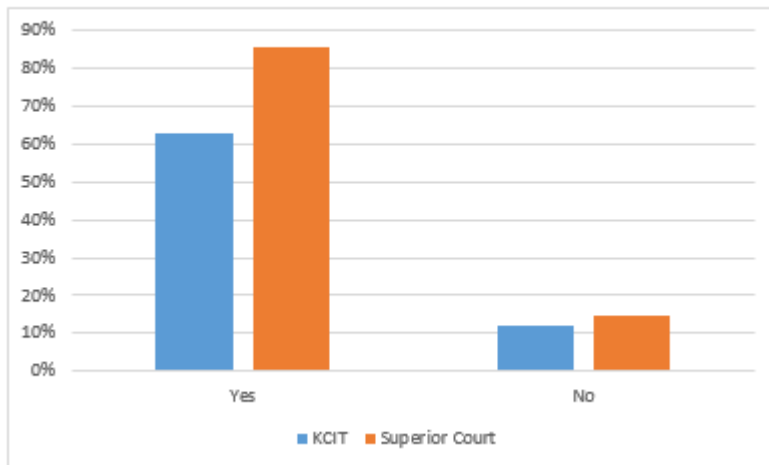
Have you accessed your email without using VPN[7]

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	KCIT
Project Title	Exchange to Office 365 Phase II
Project Number	1132332
Project Timeframe	January 2018-March 2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Aaron Barak, Chief Technology Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Temujin Baker	Infrastructure Engineering Manager/KCIT	Project Owner

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget process (2017 2nd Omnibus)	7/10/2017	Temujin Baker	New, initial draft	1 hour
Budget process (2017 2nd Omnibus)	7/11/2017	Temujin Baker	Updates	1 hour
Budget process (2017 2nd Omnibus)	11/3/2017	Temujin Baker	Minor updates	.5 hour
Project Completion	2/1/2019	Temujin Baker	Minor updates	.5 hour
2019 BAP Report	2/1/2019	George Vida	Review	.5 Hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☒

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	% of customer satisfaction (to be determined through a survey)	45%	95%	By 12/31/2018
Example: Reduced time for customers to obtain a license	# days it takes to issue licenses	5 business days	1 business day	By 09/30/2018

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the

wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	# sites inspected per day per inspector	6 sites/day per inspector	10 sites/day per inspector	By 12/31/2018

CATEGORY #3: **Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.**

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

   King County currently still operates email through on-premises servers and local license purchases, despite having an existing Office 365 Enterprise agreement that would allow email to be operated in the secure G-cloud. The county's current email/productivity app practices, developed two decades ago, contribute to a number of operational challenges, such as:

   - Limited and scattered email storage
   - Costly maintenance, support, monitoring, and back-up of on-premises servers
   - Manual software updates and upgrades
   - Lack of access to collaboration, integration and security innovations
   - Due to limited email storage, most employees us PST files which are files that store email in on-premise Outlook. These files are scattered across workstations, servers, and other unknown

areas. This poses business risk from being unable to discover data during investigations and public disclosure requests.

- Current software is 8 years old with extremely limited support. Hardware is over 5 years old and past warranty. We already experienced a major outage recently due to failing hardware. We have to replace the old system with either another on-premise system or migrate it to the cloud.

We are proposing to migrate the email system to the cloud to follow the County's technology strategy directions and to avoid a large expense in replacing the on-premise system. In addition, the Exchange Online offers 100GB of storage per user (compared to 4GB per user with current on-premises servers). Also, every user can receive a second mailbox, with no space restrictions (unlimited size), as a storage location for older email eliminating the need for having many, separate PST files. All emails and PST files will be stored in the cloud, enabling robust search features, increased mobility, and easy access. Currently, remote users must use a private network connection (VPN) to access the PST files.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
The current on-premise email system is past end of life and has started to fail. We already experienced a major failure earlier this year when multiple redundant systems failed at once and an entire Exchange server became unrecoverable. We had to enact our disaster recovery processes to restore service. The aging hardware means multiple components can fail at the same time. It was very challenging to recover that one server and bring the system back up and we are not certain we would be able to do the same in the future if similar situation occurs. The current system is extremely brittle and will cause dramatic business disruption if we have another or possibly two servers fail at the same time.

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/ measured?
Prevent major email outages	# of major system outages which put the business at risk	3 major outages per year	No outages	~~6/30/2019~~ 10/31/2019
Eliminate scheduled maintenance, minor upgrades, and operational support of on-premise systems	Hours per month performing regular operations and maintenance	108 hours per month	4 hours per month	~~06/30/2018~~ 10/31/2019
Increase email storage	Storage Size per User	4GB	100GB	~~6/30/2018~~ 10/31/2018
More convenient mobile and remote access	Way to connect to email	VPN, OWA	Direct access via browser; not needing VPN to access all email	~~6/30/2018~~ 10/31/2018

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
   By migrating email to the Microsoft SaaS offering in Office 365, we will avoid the need to upgrade the existing system to the newest version. The current environment is using an 8-year-old software running on hardware that is past warranty. If we do not migrate the rest of the County to Office 365, it will require significant costs to purchase hardware and consulting services to migrate the County to the latest version of the on-premise Exchange Server. This is a cost which requires repeating approximately every 4-5 years. We have to migrate one way or another. We recommend proceeding with the migration for the rest of the County to Exchange Online.

2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
   - The decommissioning of the on-premise mailbox Exchange Servers hardware, their associated storage, and backups.
   - Not having to engage with 3rd party consulting for major upgrades every 4-5 years.
   - Reduction in Exchange Server licensing costs during Microsoft Enterprise Agreement renewals.

3. ***What is the current baseline?***
   Operational spend of $500K per year.

4. ***What is the target for this measure? (How much savings will this project achieve)***
   Operational spend of $22K per year.

5. ***When is the cost reduction likely to be achieved?***
   Immediately following the complete migration of the County to Exchange Online and the decommissioning of all associated hardware, storage, backups, and licensing for the on-premise mailbox Exchange servers.

6. ***Summary Table for Benefit Category #4:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Yearly maintenance reduction	Yearly maintenance cost	$500K	$22K	Q1 2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update of 03/15/2019:
Project was completed October 31, 2018. The October 31, 2019 reporting date is to measure results for one full year of operation. The project is expected to fully meet the target benefits.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	KCIT-IT Operations and Business Solutions
Project Title	IP Fax Service
Project Number	1124575

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Aaron Barak, Director of IT Operations

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Molly Cherkin	KCIT	IT Business Analyst
Zita Pryor	KCIT	UC Service Owner
Ashley Boyd	KCIT	Director of Operations

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

		Revision History Table			
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**	
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*	
Business Case	5/28/14	Molly Cherkin and Trever Esko	New, initial draft	30 minutes	
BAP Annual Report	3/20/15	Zita Pryor	No Changes; project has not started		
2015 Annual Report	2/15/16	Zita Pryor	No Changes; project is ready for deployment in conjunction with the final phase of the UC project	30 minutes	
2016 Annual Report	02/7/17	Zita Pryor	Update of Section 6	15 minutes	
Project Completion	01/29/18	Zita Pryor	Final update	30 minutes	
2019 BAP Report	02/01/19	George Vida	Review of the final BAP	.5 Hours	

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service** levels by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved

quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

   As a result of many changes to communication technology in King County, residents and the County government now have multiple methods for sharing documents. These changes include:

   - E-mail, which was the first system to support sharing of digital documents independent of faxing
   - Court eFililng, which requires parties to upload digital documents to the court instead of faxing paper
   - Secure FTP, which provides secured infrastructure for uploading and emailing critical documents including medical records
   - Integrated Document Exchange (IDX), which enables law enforcement to submit digital criminal case files to the PAO without faxing documents
   - Unified Communications initiative, which has replaced the majority of analog communication systems throughout the County

   One major component that was not included in the scope of the UC project is fax machine service. Fax machines require that some component of land-line based telephony service remain in every building, on every floor, and often in many locations on a floor throughout the County. Countywide, there will be 1,470 fax lines remaining in the County at the conclusion of the UC project.

   Machine-based faxing is an outdated technology originally invented in 1843. Almost all organizations have chosen to replace fax machines over the past 25 years. Modern technology enables online (IP) fax services, which both transmit and receive documents in a digital format. This will reduce the risk of having confidential hard copy documents exposed to unauthorized access. Inbound documents are routed to a recipient's workstation, where they can be saved, archived, and/or printed. Outbound documents can be sent digitally from a workstation, or scanned and sent from a printer/scanner. Adopting such technology would enhance user operations and capabilities, enable a more mobile workforce, reduce environmental impact, and allow the County to reduce the fax telephony infrastructure, hardware and associated maintenance costs. The average life-cycle replacement for fax machines is 5-7 years.

   Update of Feb 2017: Current list shows 804 fax lines with 11% converted. Many of the departments are still determining next steps from the business perspective.

   Update of Feb, 2018: The project was completed in October 2017. There were 840 phone numbers to be reviewed for the project. The final status for these 840 lines is as follows:
   - 293 lines were converted to IP Fax
   - 344 lines were disconnected
   - 35 numbers did not support fax services
   - 168 lines remained as onsite fax service

   Update of Mar 2019:

- To date, 345 lines have been converted to IP Fax
- Currently, 97 POTS lines remain as dedicated fax lines
- Some agencies still use Analog phone lines for faxing.

*2. **If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

NA

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: <u>Reduced cost to produce service</u>. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: <u>Cost Avoidance.</u> Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally,

only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and % of purchases receiving prompt payment discounts*	*10 days processing time* *10% of purchases are receiving discount* *Savings of $100,000*	*1 day processing time* *30% of purchases are receiving prompt payment discounts* *$400,000 savings*	*2 day processing time* *20% of purchases are receiving prompt payment discounts* *$200,000 savings*

Update of Feb 2017:
The project is on track. KCIT has selected a managed service, OpenText, which works via Outlook, as the IT solution for the countywide fax system. KCIT is finalizing the inventory of agencies' fax needs and talking with customers about the associated costs. The target project completion is June 2017.

Update Feb 2018:
The project budget was $120,000. The project came in under budget at $117,717. Project results include:
- 293 lines (36% of the total lines reviewed in this project) were converted to IP Fax
- 344 lines (42% of the reviewed lines) were disconnected, saving an average of $6,880 a month
- 35 numbers did not support fax services
- 168 lines (21% of the reviewed lines) remained as onsite fax service

Update of March 15, 2019:
This is the final BAP for a completed project. Completed in October 2017, the project partially met the target benefits (replacing old technology and reducing the risk of exposing confidential hard copy documents to unauthorized access). Overall, the County has converted 345 lines to IP Fax. Currently, 97 POTS lines remain as dedicated fax lines. Some agencies still use Analog phone lines for faxing.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	KCIT
Project Title	IT Cybersecurity Enhancement
Project Number	1132331
Project Timeframe	January 2018 to June 2018

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Aaron Barak, Chief Technology Officer and Selena Tonti ~~Ralph Johnson~~, Chief Information Security ~~and Privacy~~ Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Ralph Johnson~~ Selena Tonti	~~Chief Security and Privacy Officer /KCIT~~ Chief Information Security Officer/KCIT	Co-Sponsor
Aaron Barak	Chief Technology Officer/KCIT	Co-Sponsor
Lori Dickneite	Network Manager/KCIT	Implementation and O&M

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget process (2017 2nd Omnibus)	7-2-17	Ralph Johnson	Initial draft	5 hours
Budget process (2017 2nd Omnibus)	7-14-17	Ralph Johnson	Completion	2 hour
2019 BAP Report	2/5/2019	Cheryl Ann Gunderson	Updated information in Red	2 Hours
2019 BAP Report	2/5/2019	George Vida	Review	.5 Hours

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐

Category #3: Maintaining service levels by replacing or upgrading older technology		☐	☐
Category #4: Reduced cost or cost avoidance to produce services		☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	% of customer satisfaction (to be determined through a survey)	45%	95%	By 12/31/2018
Example: Reduced time for customers to obtain a license	# days it takes to issue licenses	5 business days	1 business day	By 09/30/2018

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The ability of this system to monitor traffic traversing the internal King County network that will result in more rapid identification, containment and remediation of compromised information systems and assets. The benefits focus on prevention and minimization of impact of compromised systems.

   Update of 2/5/2019:
   IDPS is one layer of an in depth architecture of a layered strategy. IDPS gives King County the ability to intervene in real-time with intrusion events and threats. Additionally we have gained increased visibility into traffic traversing the King County Network and decrease the time it takes to identify and contain security threats. An additional benefit is the ability to detect attacks and other unwanted or regulated activity which is only significant to King County. The ability to integrate with and protect other enterprise security controls by preventing attacks from reaching these security controls will reduce the workload on these systems and allow them to operate effectively.

   - **Reducing impactful security incidents.** While King County staff may not notice an intervention the IDPS ensures that there are less disruptions to King County internal systems and a reduced number of security incidents.

   - **Reputation-managed protection.** The IDPS subscribes to a reputation-based list of known malicious sites and domains, which it uses to proactively protect King County data.

     Example: Phishing or Malware attempts: If a staff member clicks on a link in a phishing email or a malware ad for a site that is on the IDPS blacklist of known malicious sites, traffic would be blocked and the staff member would see a security message.

   - **Zero Day threat protection.** The IDPS offers zero-day threat protection, it mitigates brute force password attempts, and provides protection against availability threats, such as DDoS and DoS attempts.

     Example: If an attacker attempts to gain access to a King County account through brute force (e.g., repeated login attempts), the IDPS can recognize the unusual patterns, and block access.

   - **Infrastructure Protection and Dynamic threat response.** The IDPS can be fine-tuned to recognize and respond to particular threats, allowing King County to react to identify threats to government.

   - **Logging.** The IDPS records network activity when it takes action that aid in forensic investigation and remediation after blocking the initial incident.

   - **Security Zones.** The IDPS segments network traffic to contain and interdict, the IDPS can become a "jail" for hostile traffic such as a Virus, Trojan, Worms, or Blended attacks.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   There is currently no baseline to determine the time it takes to identify, contain and remediate from malicious activity so measurement is difficult. However possible metrics include:

   - Time to notify technical staff: This feature will provide KCIT technical support staff enhanced notification of compromised systems.

   - Time to identify compromised systems: The automated alerts will assist in identifying and locating those systems that are compromised. Currently various tools may provide information about a compromised system, however, locating the system is often a manual process. The new features will provide assistance in physically locating compromised systems.

   - Time to respond: Using the items mentioned in the two previous bullets, the technical support will be able to respond quicker and reduce potential impacts from compromises.

3. *What is the current baseline for this measure?*
   There is no identified baseline

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   Undetermined since no baseline exists

5. *When is the benefit likely to be achieved?*
   Shortly after project completion (end of 2018)

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target & Result	When will the target be achieved/measured?
More rapid identification, containment and remediation of compromised information systems and assets	Time to notify	N/A	Notification of compromised systems time is anticipated as 5 minutes or less. Initial target would be response to this timeframe in 60% of compromises, increasing to 95% by final target date. **Achieved. IDPS does Real-Time identification and interdiction of compromised systems.**	12/31/2018
	Time to identify the affected system/s	N/A	Identification of compromised systems time is anticipated as 5 minutes or less. Initial target would be response to this timeframe in 60% of compromises, increasing to 95% by final target date **Achieved. IDPS does Real-Time identification and interdiction of compromised systems.**	12/31/2018

	Time to respond	N/A	30 minutes or less. Initial target would be response to this timeframe in 60% of compromises, increasing to 95% by final target date **KCIT is still working through the logistics of operational response teams**	~~12/31/2018~~ 06/30/2019

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	# of system outages per month	5 outages	No outages	By 06/30/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Outcome/Benefit	Metrics/Measure	Baseline	Target & Result	When will the target be achieved/measured?
More rapid identification, containment and remediation of compromised information systems and assets	Time to notify	N/A	Notification of compromised systems time is anticipated as 5 minutes or less. Initial target would be response to this timeframe in 60% of compromises, increasing to 95% by final target date. **Achieved. IDPS does Real-Time identification and interdiction of compromised systems.**	12/31/2018
	Time to identify the affected system/s	N/A	Identification of compromised systems time is anticipated as 5 minutes or less. Initial target would be response to this timeframe in 60% of compromises, increasing to 95% by final target date **Achieved. IDPS does Real-Time identification and interdiction of compromised systems.**	12/31/2018
	Time to respond	N/A	30 minutes or less. Initial target would be response to this timeframe in 60% of compromises, increasing to 95% by final target date **KCIT is still working through the logistics of operational response teams**	~~12/31/2018~~ 06/30/2019

IT Project Benefits Achievement Plan (Version 3)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
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King County Department/ Agency Name	KCIT/DEL
Project Title	KC.gov Web Presence
Project Number	Project 1134308, Award 119045, Org C78101, Task 1-6
Project Timeframe	2019-2020 Biennium

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Tanya Hannah, CIO

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Pam Shales	DCE Service Manager	Business Owner
Stephen Heard	KCIT Engineering	Technical Owner

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

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Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Budget Conceptual Review	2/15/18	Pam Shales	New, initial draft	2 hours
2019-20 Budget Request	6/13/18	Pam Shales	Edit Benefits narratives	1 hour
2019 BAP Report	2/5/19	Pam Shales	No changes made. New project.	10 minutes

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☒

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒	
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐	
Category #4: Reduced cost or cost avoidance to produce services	☐	☐	

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The upgrade to the WCMS platform will help us improve and enforce ADA compliance, and ensure that the website is accessible for all. We will introduce new structures that will prevent staff from creating content that does not comply with ADA standards, and reduce pages that have mixed content and HTML code.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   We will experience a reduction in compliance errors as well as a reduction of pages that have a mixture of content and HTML code.

3. *What is the current baseline for this measure?*
   The current baseline of Web Content Accessibility Guidelines issues on Kingcounty.gov estimates over 81,000 problems across 20,000 pages.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   This measurement is literally a moving target, since content is being updated daily. This improvement to the platform should easily reduce these issues by 50%.

5. *When is the benefit likely to be achieved?*
   At project completion.

6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
People with disabilities will be able to consume and navigate KC.gov with access to more content and improved	Reduction of pages with issues found	Issues: +81,500	Issues: 40,000	By 12/31/2020

results from assistive technologies than is available today.	as well as reduction of the issues.	Pages: +20,000	Pages: 5,000	
Most content in KC.gov will be in compliance with ADA requirements. The remaining 5k pages refer to content that is displayed in the website, but is generated from other sources.	Significant reduction of pages with ADA compliance issues.	Pages: +20,000	Pages: 5,000	By 12/31/2020

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   If this project is approved, we will spend less time on O & M and break-fix work, and be able to continue to implement updates that allow for repeatability of code use, increase the cadence of refreshing site content, and improve the site experience for visitors.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   We will see a reduction in hours for routine break-fix work; users will spend less time on the site, will view fewer pages, and will rely on searching less (they will find their information more easily, so will spend less time looking for it).

3. *What is the current baseline for this measure?*
   Staff is spending 90% of their time working on break-fix efforts. Site analytics show a strong dependence on using search.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   Staff will spend the majority of their time on new enhancements and clean-up of content, rather than break-fix work. Use of search will decrease. Number of pages will decrease.

5. *When is the benefit likely to be achieved?*
   This will be ongoing, as behavior changes and content is refactored across the site.

6. Summary Table for Benefit Category #2:

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Reduced time on break-fix	Staff hours per quarter	30-50 hours per quarter	1-5 hours per quarter	By 12/31/2020
Reduced number of web pages	# pages published	20,000+	15,000 10,000	By 12/31/2019 By 12/31/2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   This project will upgrade our Web Content Management System (WCMS), Sitecore, from 7.5 to 9.0., and refresh the product infrastructure to be in alignment with current web architecture. The existing platform has not been upgraded for 3 years. The current support ended 31 December 2017. We are also planning on infrastructure modernization.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
KC.gov is on a vendor-supported platform	n/a	No	Yes	By 12/31/2020
The need for repetitive break-fix processes that need to be run during non-business hours to keep the platform running is eliminated.	Time spent on maintenance required due to misaligned technology	Repair process runs 4 times a year, 20 hours each time (i.e., 80 hours/year)	0 hours/year	By 12/31/2020

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average often days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual

Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings
Update of 03/15/2019: This is a new project that is starting in Q2 of 2019.				

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	KCIT
Project Title	Network Security Planning
Project Number	1134402
Project Timeframe	January 2019 – June 2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Aaron Barak, Chief Technology Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Aaron Barak	CTO/KCIT	Business Owner

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document

to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-2020 Budget	6/21/18	Aaron Barak	Original Draft	2 hours
2019-2020 Budget	7/23/18	Aaron Barak	Additional edits	1 hour
2019 Annual Report	2/1/19	Temujin Baker	Minor edits	1 hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☒
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☒	☐

Category #3: **Maintaining service levels** by replacing or upgrading older technology	☐	☐
Category #4: **Reduced cost** or cost avoidance to produce services	☐	☐

<u>CATEGORY #1</u>: **External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.**

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The network segmentation will provide enhanced security segmenting sensitive information and compliance to HIPAA, CJIS, and PCI regulatory statutes. The compliance will instill public trust in King County knowing that the County considers cybersecurity measures and protecting sensitive information as a high priority.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Audit result on King County compliance with HIPAA, CJIS, and PCI regulatory statutes with network segmentation

3. *What is the current baseline for this measure?*
   Lack of network segmentation is a current 2018 audit finding on both our PCI and HIPAA external audits requiring a corrective action plan (CAP). Currently no plans

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   A published clean audit on King County compliance with HIPAA, CJIS, and PCI regulatory statutes with network segmentation as a final target measure. For this planning phase, the target is to have ART approved full design that identify technical requirements for network segmentation

5. *When is the benefit likely to be achieved?*
   June 2019 for approved solutions design

6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields	*% of customer satisfaction (to be*	*45%*	*95%*	*By 12/31/2018*

over the Internet and make payments by credit card.	determined through a survey)			
Example: Reduced time for customers to obtain a license	# days it takes to issue licenses	5 business days	1 business day	By 09/30/2018
Full Design identifying requirements (planning phase)	Approved ART Design	Unapproved	Approved	6/1/2019
Clean Audit on HIPPA, CJIS, PCI (after project implementation) finding on network segmentation.	Audit Result	Material weakness for lack of network segmentation	No audit material weakness's related to network segmentation	TBD depending on future funding and next project start date

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The initial planning of network segmentation will provide full design to support the network segmentation. The core product for network segmentation is Cisco ACI. Network segmentation is critical to obtain compliance with HIPAA, CJIS, and PCI regulatory statutes. The two primary benefits that segmenting our internal network provides is 1.) Regulatory Compliance, and 2.) Reduction of risk for the county from bad actors (internal & external) on our internal county network.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Lack of network segmentation is a current 2018 audit finding on both our PCI and HIPAA external audits requiring a corrective action plan (CAP). We will measure the effort in two ways, 1.) Successful Architecture Review gate sign off for the solution design of the segmentation, and 2.) Successful implementation of the design confirmed by external auditor's acceptance of our corrective action plan. A full design approved by the Architecture Review Team (ART) will be the target for this initial phase.

3. *What is the current baseline for this measure?*

Our current baseline is our network is flat and fully routable internally. No plan or design is available for network segmentation.

4. **What is the target for this measure? (How much improvement will this project achieve?)**
Final target measure is that we have an internally segmented network that meets our regulatory compliance commitments. For this planning phase, the target is to have ART approved full design that identify technical requirements for network segmentation.

5. **When is the benefit likely to be achieved?**
June 2019 for approved solutions design

6. **Summary Table for Benefit Category #2:**

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	*# sites inspected per day per inspector*	*6 sites/day per inspector*	*10 sites/day per inspector*	*By 12/31/2018*
Full Design identifying requirements	Approved ART Design	Unapproved	Approved	6/1/2019
Regulatory compliance is met (after next project implementation)	Segmented network to meet regulatory compliance (after next project implementation)	Flat network	Segmented network	TBD depending on future funding and next project start date

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. **Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.**

2. **If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.**

3. **Summary Table for Benefit Category #3:**

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	*# of system outages per month*	*5 outages*	*No outages*	*By 06/30/2019*

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*

3. *What is the current baseline?*

4. *What is the target for this measure? (How much savings will this project achieve)*

5. *When is the cost reduction likely to be achieved?* 2019

6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	*Cost of producing X*	*$568,000*	*$35,000*	*By 06/30/2019*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio

system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update of 03/15/2019:
The project is ongoing and on time. Project is on track to achieve full benefits with no delays.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	KCIT
Project Title	PSERN (Puget Sound Emergency Radio Network) Project
EBS Project Number	1126875

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: ~~Bill Kehoe~~ Tanya Hannah, CIO

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Tony Minor	Manager/KCIT	Technical Input (O&M)
Sean Douglas	Electronic Communications Specialist /KCIT	Technical Input (O&M)

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2015 Annual Reporting	2/12/16	Hai Phung	New, initial	N/A
2016 Annual Reporting	1/23/17	Hai Phung	BAP Update – No changes	
2018 Annual Reporting	1/25/19	Hai Phung	BAP Update	
2019 BAP Report	2/01/19	George Vida	Review	.5 Hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ **Category #1:** External service benefits: Improving the quality or quantity of services provided to the public

☐ **Category #2:** Internal service benefits: Improving internal operations, including the quality or quantity of internal services

■ **Category #3:** Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ **Category #4:** Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   The criteria for the system design calls for a more stringent level of radio signal throughout the radio service areas. Because of this the system vendor has been asked to design a network that will increase the amount of signal present in any given location within the service area. The service area is also defined in a new and enhanced manner which also equates to a greater probability that signal will be present at locations within the service areas. Rather than having a single large area of coverage, the county was divided into 43 separate areas (39 Cities, 3 major highways in the mountains, plus a large portion of unincorporated county) with each of these areas having specified

coverage requirements. In-building radio coverage will also be enhanced for the Downtown Seattle, Downtown Bellevue and South Lake Washington Renton areas (update of Jan 2019).

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
Extensive coverage testing will be completed over several months after all infrastructure operational and functional testing is complete and before users are placed on the system. During this testing teams of testers will conduct several types of tests in "test tiles" that are 1/10th of one mile by 1/10th of one mile square.

Each test tile accessible by automobile or boat will be tested by measuring the radio signal strength (for informational purposes only), by measuring the data accuracy (called a Bit error rate, or BER test) and lastly in a subjective "can you hear me now" test (known as a delivered audio quality, or DAQ test).

For each accessible test tile, both the BER and DAQ tests must both pass to pass the tile. 97% of all tiles must pass the testing to be considered a pass. This compares today with approximately 94% coverage of the county where there is a single coverage area is specified. With a single coverage area coverage holes can be very large and yet still meet the standards. By splitting the county into 43 coverage areas, this will ensure not only increased coverage but that thee coverage holes are much smaller. For the Downtown Seattle, Downtown Bellevue and South Lake Washington Renton areas, radio signal strength will be tested to ensure that additional radio signal strength is available (above on street signal) for providing in-building radio coverage (update of Jan 2019).

3. ***What is the current baseline for this measure?***
The current baseline is 94% coverage.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
97% Coverage of the Primary Bounded Coverage area, which is the area of the county west of a line at 1250' above sea level. Also, the 3 highways heading to the east (US-2, I-90, and SR-410) will have 95% coverage requirements.

5. ***When is the benefit likely to be achieved?***
The benefit will be achieved when the infrastructure is completely built, all radio sites have been proven to be operating according to specifications, system optimization has been completed and testing has been satisfactorily completed. The current project end date is May 2023 (update of March 2019).

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: *This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.*

Example: *This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.*

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

   The current emergency radio system (ERS) contains electronic components that are eighteen (18) years old. Typically emergency radio systems have a life cycle of approximately twenty (20) years. The likelihood and frequency of component failures is increasing as the system ages and Motorola no longer sells or supports some of the system's critical components and plans to discontinue the sale and repair of all components in phases over the next few years. Components are still available on the secondary market; however, reliance upon the secondary market equipment is risky because the needed version of a critical component may not be available and the condition and service history of the components is unknown. In addition, certain geographic areas within the service region require improved radio coverage to meet the needs of a growing population within King County to include boundary limits that were not considered when the initial ERS was built eighteen years ago. At this time, radio sites cannot be added to expand coverage because Motorola no longer sells the necessary new equipment.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

   Radio System technology is extremely complicated. There are layers of operability, failure modes and redundancy that are purposely built into the system to ensure that it will meet end user needs. Today, when something breaks, it often does so without indication to the end users because of the requirements for 99.999% reliability.

   Single components in the radio system fail nearly every day. This could mean that one radio channel in one location is no longer available, but 22 other channels are available. It could also mean that a device called a "system controller" fails, but a redundant device takes over operations for the failed component. Again, these could go unnoticed by end users in nearly all "normal' use scenarios today. What is clear is that as time advances, the risk of failures increase due to system component age. Simultaneously, the ability to repair parts and get new parts is decreasing.

   The ability of the County to get parts on any secondary market is fraught with problems such as incompatibility, parts unavailability, and lack of functionality of the parts with our system. It is therefore probable that at some point after the secession of parts support from the vendor, the system will begin to suffer failures that will decrease capacity, reliability and/or coverage if something is not done to address this. It is not a sudden "event" that will occur on a certain date, but rather is likely to be a gradual chain of events that will impact the radio system over a period of time.

   By implementing a new more reliable system with new components, the potential for the risk of equipment and software failures, service outages and system interruptions will be reduced. The need for replacement parts will no longer be a concern and the risk of using secondary parts will be eliminated.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: *Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on*

experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional five years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing time annual savings, and % of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update of January 2019:

The project is in Phase IV (Implementation). Due to delay in getting the site leases executed, radio site development has been behind schedule in getting radio sites ready for system equipment deployment. The PSERN Joint Board has approved for the project to re-baseline the project schedule in Q1.2018 to reflect the delay. In 2017, the project team and Motorola completed Phase III (final system design), and conducted and completed Backhaul System factory acceptance test. In 2018, the project conducted and completed Land Mobile Radio (LMR) System factory acceptance test. The project has begun deploying Backhaul and LMR system equipment at radio sites that are ready. PSERN Joint Board added in-building coverage to the project scope for Downtown Seattle, Downtown Bellevue and South Lake Washington Renton areas. The additional scope of work will not impact the project's end date. The project is scheduled to transition all dispatch centers to new PSERN core in October 2019.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	KCIT/Radio
Project Title	KCIT Radio Infrastructure Risk Reduction
Project Number	1133711
Project Timeframe	Q2 2018 to Q1 2022

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Bob Potts, Regional Services Manager

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Tony Minor	Manager/KCIT	Technical O&M
Rich Richardson	Supervisor/KCIT	Technical O&M

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2017-18 3rd Omnibus Budget Process	3/15/18	Tony Minor	New, initial draft	2 hours
	4/26/2018	Zlata Kauzlaric	Minor edits/review	
2019 BAP Report	1/9/2019	Tony Minor	Updated project timeframe in section 1	1 hour
2019 BAP Report	2/6/2019	George Vida	Review. Updated Section 7.	.5 hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary	Secondary

	(select only one)	(select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

3. *What is the current baseline for this measure?*

4. *What is the target for this measure? (How much improvement will this project achieve?)*

5. *When is the benefit likely to be achieved?*

6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	% of customer satisfaction (to be determined through a survey)	45%	95%	By 12/31/2018
Example: Reduced time for customers to obtain a license	# days it takes to issue licenses	5 business days	1 business day	By 09/30/2018

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

3. *What is the current baseline for this measure?*

4. *What is the target for this measure? (How much improvement will this project achieve?)*

5. *When is the benefit likely to be achieved?*

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	# sites inspected per day per inspector	6 sites/day per inspector	10 sites/day per inspector	By 12/31/2018

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   This project is intended to reduce component and system failure of the King County 800 MHz Emergency Radio Communication System (KCERCS) infrastructure by replacing or sparing components at risk. The objective is to maintain current radio service availability and reliability until the Radio System is replaced by Puget Sound Emergency Radio Network (PSERN). KCERCS was built, and put into operation over a four year period from 1993 to 1997. Many of the system components are no longer supported by the vendor. Historically KCERCS, a Motorola system, and similar public safety, Land Mobile Radio (LMR) communication systems are typically vendor supported for approximately 20 years. During this 20 year lifecycle, it is common for several upgrades to be needed to due to advances by the vendor. There is usually a period of time, approximately 10+ years when developed systems and components are sold, and then a 5 to 7 year support period after the final sales. KCERC is more than 20 years old, and several key system components are no longer supported by the vendor. Component sparing and replacement is needed to reduce failure risk.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   The components at risk are experiencing failures and due to system design redundancy and equipment spares, (most sourced from secondary markets, like Ebay and system owners who've upgraded their systems) repairs have been successful. Some risks due to the lack of vendor support for KCERCS sub-systems and equipment have been realized and others are approaching. Vendor Motorola has defined the risk to many key system components to be medium (yellow) and high (red).

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Reduced degradations and outages to KCERCS	Mitigate all equipment categorized as "no longer supported" (black), "high" (red) and "medium" (orange) support risks	24 Device category as black, red & orange	Zero Device categories as black, red & orange (Except 6809 which will move from the black to orange category and remain there)	By 06/30/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: *Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.*

Example: <u>Cost Avoidance.</u> *Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*

3. *What is the current baseline?*

4. *What is the target for this measure? (How much savings will this project achieve)*

5. *When is the cost reduction likely to be achieved?*

6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual

Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings
Update as of 03/15/2019: This is an ongoing project. The project is on track to achieve its target benefits. The project started in Q2 2018, no significant purchases were made in 2018.				

IT Project Benefits Achievement Plan

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	KCIT
Project Title	Systems Management
EBS Project Number	1122188

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: Aaron Barak (1/10/17), KCIT Director of Operations
~~Jayne Pendergast~~, ~~King County Deputy Chief Information Officer~~

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Bob Micielli~~ Temujin Baker (12/19/16)	~~Technical Services Manager~~ Engineering & Architecture Manager	Problem Management Process Owner
~~Krista Bautista~~ ~~Tom McBroom~~ Keola Ohumukini (12/19/16)	~~IT Service Center~~ KCIT Customer Support Services Manager	IT Service Center Manager
Kristin Colburn	ITSM Strategy and Process Manager	Development of ITSM strategy and implementation of processes
Lori Dickneite	KCIT Network Manager	Major Incident Process Owner
Diana Chism	KCIT Production Operations Manager	Change Management Process Owner
Ashley Boyd	KCIT Customer Support Services Manager	Incident & Request Process Owner

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.

5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual Review	7/22/13	Marivic Kokorowski	New, initial draft	3 hours
Update to new BAP V2	10/24/13	Jayne Pendergast	Update for new format	1 hour
Update to new BAP V3	10/29/13	Christine Chou	Update baseline	1 hour
2013 Annual Report	2/13/14	Jayne Pendergast	Update for 2/14/14 reporting	.5 hour
2014 Annual report	3/9/15	Kristin Colburn	Changes to Category 2 Benefits 1a, 1b, 1d, 2 and 5. Section 7.	2 hours
2015 Annual report	2/12/16	Kristin Colburn	Change in Business Owner; Strikeout name of Project Point of Contact who is no longer with KCIT; benefit will be measured in April, one year after implementation.	1 hour
2016 Annual Report	2/1/17	Ashley Boyd	Final BAP for a completed project	15 hours
2017 Annual Report	2/8/18	Ashley Boyd	Final BAP for a completed project	20 hours
2019 BAP Report	2/8/19	George Vida	Final BAP for a completed project	.5 Hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits:** Improving the quality or quantity of services provided to the public
2) **Internal service benefits:** Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)
□ Category #1: External service benefits: Improving the quality or quantity of services provided to the public
X Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services
□ Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
□ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

3. *What is the current baseline for this measure?*

4. *What is the target for this measure? (How much improvement will this project achieve?)*

5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

1. **Describe why you expect the proposed IT investment to produce the benefit(s).**
   This project is to implement Information Technology Infrastructure Library (ITIL) recommended industry best practices and its supporting tools, the following benefits relate to *increased quality of service*:

   Update – 3/9/2015: *Reduced number of high-impact technology outages*. Implementation of best practices for problem management and change management and the tools that support these practices will allow for more proactive solutions to prevent technology outages rather than reactively dealing with these major incidents after they have affected business operations. The improved change management process supports a more disciplined approach to assessing risk associated with making changes, resulting in higher volumes of successful changes. Implementing the problem management tool in LANDESK will enable higher visibility into the types of recurring issues that require long-term solutions and provide information to help reduce the duration and frequency of service outages. In addition, a shared best practice vocabulary will result in more meaningful conversations and more accurate reporting associated with "incidents", "problems" and "changes" across agencies and support groups.

   ~~Reduced number of major incidents causing technology outages – Implementation of best practices for problem management and tools that support these practices will allow for more visibility of technology allowing for more proactive rather than reactive resolution of major incidents before they occur. Implementing the Change Management tool in LanDesk will enable tracking of major incidents caused by controlled changes; and implementing the Problem Management tool in LanDesk will enable better and more consistent problem management to prevent more major outages. Meanwhile, the problem caused by the use of various definitions of "major incident" across agencies and support groups and inconsistency of reporting process will be resolved by following best business practices and common terminology that will result in a more accurate counts and comparison.~~

   Update – 3/9/2015:
   The application of ITIL best practices and improved tools will result in *quicker and more effective response and resolution of incidents related to unplanned technology outages*. The addition of the problem management module in LANDESK supports the separation of incident records from problem records, which is impossible today, enabling us to identify and invest in the permanent resolution of issues that are chronic and continue to interrupt business operations. Adopting and implementing standard and consistent problem management practices will reduce the frequency and duration of service outages. *Currently, the average time it takes to resolve a major incident is 3.4 hours. By applying new problem and incident management techniques, we expect to reduce this by 30% in the short term*.

~~Reduced meantime to resolution (MTR) of technology outages during major incidents – Applying ITIL best practices and enhancing existing tools will allow for more visibility of technology, allowing for quicker response and resolution of major incidents. The Problem Management tool in LanDesk will allow for incidents and problems to be separated into groups, which is not done today. Better incident organization along with best practices will enable better and more consistent problem management to resolve issues more quickly and prevent more major outages. At this time, the average MTR to fix a major incident is about 3.4 hours. The goal is to reduce this by 30% by the close of the project.~~

Better customer satisfaction through reduced hold time with the Service Center. Implementing standards and improving ~~LanDesk~~ LANDESK will ensure better visibility on the status of incidents and problems and accessibility for both Service Center agents and customers. This resolves a problem of high number of calls related to same incidents, creating long hold times for customers. Because there is no standard process for responding to incidents or problems, there are customers that are left on hold for long periods of time while Service Center agents attempt to respond to similar calls. This can create a backlog of customers on hold. We are anticipating that by putting out a system that actually will identify the incident early and communicate that, we will prevent or decrease the calls that will be made due to that incident.

The goal is to reduce the number of calls during major incidents by 30% after implementation.

Update – 3/9/2015:
Reduction in change-related incidents. By providing change management process automation in LANDESK and applying change management best practices, incidents related to authorized changes will be reduced. There will be a single focal point for changes to supported services, minimizing the probability of conflicting changes and potential disruption. Standard methods and procedures will be used for efficient and prompt handling of all changes in order to minimize the impact of change-related incidents on business continuity, service quality and re-work. The impact and information related to these types of incidents will now be tracked, measured and analyzed for improvement. An improvement goal will be determined after a reliable baseline is identified.

~~Reduced issues related to scheduled changes – By implementing the Change Management tool in LanDesk and applying ITIL Change Management best practices, issues related to planned changes will be reduced. At this time, there is no ability to count the number of incidents that are related to scheduled changes. By implementing the Change Management tool, we can begin tracking and monitoring those issues. Also by using the LanDesk Problem Management tool and ITIL best practices, those issues can be resolved and prevented. After implementation of the Change Management tool, we can create a baseline and count the number of change related issues reported. The goal would be determined after the baseline is identified.~~

Each of the above benefits can provide avoidance of employee time spent waiting for technology outages to be resolved.

Update - 1/17/2017
Major Incident Management process was implemented in 2016 with the purpose to ensure a standardized method and procedure is used for efficient and prompt response to major incidents. This ITIL practice tracks a major incident from start to completion, kicking off the Problem Management to focus on root cause and managing the problem to minimize re-occurrence. In 2016, after implementation, the data collected is used as a baseline to establish aggressive targets for 2017. As part

of the process, a SharePoint site was created that outlines the process, roles & responsibilities, and tracks Major Incidents by month.

Incident Management and **Request Management** disciplines were both implemented in 2016 that included the following activities:
- Process owner assigned – Ashley Boyd
- Standardized reporting across all KCIT groups created
- Deep dive sessions conducted with Level 1 support for improvement discoveries
- Incident and Request ticket handling best practices developed
- Tier Board metrics and targets defined
- Best practices training program developed and began rollout

Several improvements have been completed for **Change Management** functions in 2016, including:
1) Change Advisory Board (CAB) rotating facilitator role
2) CAB meeting standard agenda
3) Enhanced moratorium process
4) Change Governance – steering committee
5) Onboarding BSS, Separate Elects, GIS, FMD, etc.
6) Change manager participation in CAB
7) Added new processes – linking Major Incidents to Change; reviewing Emergency changes; reviewing backed out changes
8) Recorded Sessions for FAQs
9) Documentation on Sharepoint site
10) Changes must be approved prior to CAB meeting
11) Tracking CAB attendance
12) Preliminary metrics to show change counts

By improving visibility and communication of our change management processes and applying change management best practices, incidents related to authorized changes are reduced. With a single focal point for changes to supported services, we minimize the probability of conflicting changes and potential disruption. Standard methods and procedures are used for efficient and prompt handling of all changes in order to minimize the impact of change-related incidents on business continuity, service quality and re-work. The impact and information related to these types of incidents is tracked, measured and analyzed for improvement.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
Update – 3/9/2015:
1. Reduced number of technology outages resulting in major service interruptions
2. ~~Reduced number of major incidents causing technology outages,~~
3. Reduced time to restore service during a major incident
4. Reduced number of Customer calls during major incidents
5. Tracked and reduced number of issues related to scheduled changes

Update – 1/10/2017:
Major Incident Management
1) Reduced number of technology outages resulting in major service interruptions
2) ~~Reduced number of major incidents causing technology outages,~~
3) ~~Reduced time to restore service during a major incident~~

4) Reduced number of Customer calls during major incidents
5) Tracked and reduced number of major incidents related to scheduled changes
6) Reduced time to communicate Major Incident to IT Support staff and the business
7) Improved communication during Major Incidents

Incident & Request Management
1) Incidents and Requests completed within their stated targets, based upon assigned priority
2) Ticket handling according to best practices, accurate updates to status and completion.

Change Management
1) Reduce the number of Major Incidents caused by changes
2) Reduce the number of changes introduced into production without an RFC (request for change)
3) Improve communication of Changes (CAB meetings, change management process improvements)

3. **What is the current baseline for this measure?**
Update – 3/9/2015:
We will use current Metrics as captured in ~~the LanDesk~~ LANDESK (our incident ticket tracking system) and manually from 2013. We also have a Root Cause Analysis process that we do after every major incident that we manually capture as a metric. We will use this as a baseline to see a decreased # of major incidents and amount of time to resolution.

4. **What is the target for this measure? (How much improvement will this project achieve?)**
Update 2/1/17:

Major Incident Management
1. Major Incidents reduced by 30%, currently at ~~42~~ 88 (2016) major incidents per year
2. ~~Reduce the meantime to resolve major incidents by 30%, current average is 3.4 hours~~
3. Reduce the time to report/communicate Major Incidents to < 1 hour 90% of the time
4. Reduce number of customer calls during major incidents by 30%, currently at 5,013 per year
5. We will start measuring, tracking issues, and setting improvement target related to scheduled changes after the implementation of the project that will enable this effort.

Change Management
- Reduce the number of Major Incidents caused by changes to <10%, currently >40%.

Incident & Request Management
- Tickets meeting their defined targets by type & priority based upon impact and urgency, 95% of the time:

Incident Management Targets	Request Management Targets
P1 = 2 Clock Hours	P1 = 1 Business Day
P2 = 4 Clock Hours	P2 = 2 Business Days
P3 = 8 Business Hours	P3 = 3 Business Days
P4 = 3 Business Days	P4 = 5 Business Days
P5 = 5 Business Days or Negotiated	P5 = 10 Business Days or Negotiated

5. **When is the benefit likely to be achieved?**
Update - 3/9/2015:

We expect to start seeing some benefits in the middle of ~~2014~~ 2015 once we have the training and some processes in place for Major Incident ~~Reduction~~ resolution. The metrics will really show the results after a process has been in place for a year (mid88/30 ~~2015~~ 2016).

Note: Timelines for benefit realization have been changed. When the BAP was written the project was expected to start at the beginning of 2014, but didn't kick-off until April of 2014. In addition, the implementation of the tool to enable the improved processes will not be complete until April of this year (2015). Due to these changes the described benefits will not be reported until 2016.

Update – 2/1/17:
Benefits are being realized at different levels depending on the length of time an ITIL process has been in place, along with varying activity levels within each process. Benefits will continue, incrementally over time as process continue to mature and addition ITIL processes are activated. More details on current state are below.

Major Incident Management
- Documented process that clearly identifies roles and responsibilities and established the KCIT Customer Support Services group as the responsible party for the communication. This is a benefit as the KCIT CSS group is the intake for incidents & requests for KCIT and are able to see patterns and identify impact.
- We have reduced the amount of time to call a Major Incident to <1 hour, the target is 30 minutes.
- We have improved communication by utilizing templated emails and focusing on non-technical explanations for our customers, and ensuring they are updated on a regular basis until the incident is resolved.
- We track all Major Incidents in SharePoint and we are able to report valuable metric, such as total of Major Incidents due to a change.

Change Management
- With maturing Problem Management process to help identify Major Incidents related to Change, we will be able to accurately measure and set targets.
- Change Management process improvements, including greater attention to testing, improved communication and documentation, will reduce the number of Major Incidents related to change.

Incident & Request Management
- Best practices training completes 1Q17
- Incidents and Requests meeting their targets 95% of the time – 2018

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*

3. *What is the current baseline?*

4. *What is the target for this measure? (How much savings will this project achieve)*

5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency

radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update of Feb 2017:
This is the final BAP. The system and business process has been implemented and the project was closed. KCIT is tracking the performance as part of tier 3 board and applying continuous improvement practice to this process.

Update – 3/8/19:
In the Spring 2017 BAP Report, KCIT submitted this BAP as final. In the course of the Council review, KCIT and the Council agreed that this project needs to report again. KCIT would like to submit this BAP as final. This project has increased visibility of major incidents. This project partially met the target benefits mainly because the set targets were overly ambitious. KCIT has since re-baselined the targets for incident and request management completion. The new re-baselined targets are now the basis of KCIT's service level agreements with departments/agencies.

Update – 2/8/18:
Tickets meeting their defined targets by type and priority based upon impact and urgency, 95% of the time Customer Support Services team structure changes in March 2017 are showing improvements in many areas late 2017. Data below represents all KCIT areas.

% of KCIT **Incidents** Resolved That Met The Resolution Target (P1-P4) in 2017
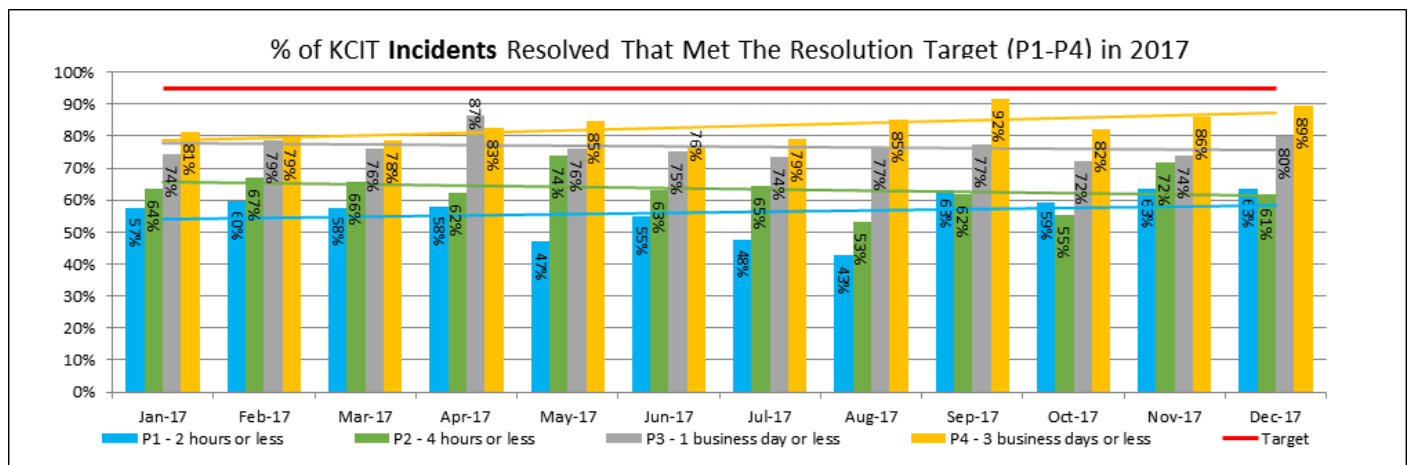
% of KCIT **Requests** Fulfilled That Met The Resolution Target (P1-P4) in 2017
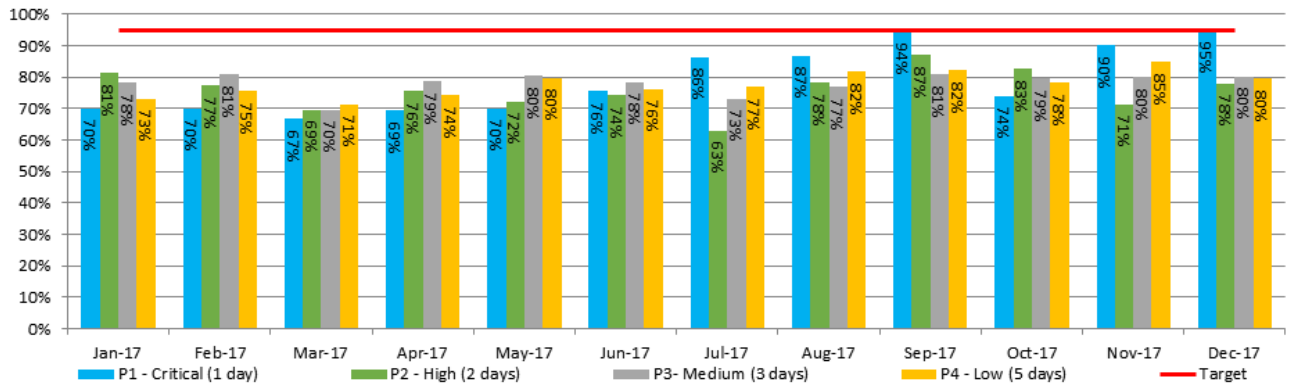
Major Incidents reduced by 30%, 2016 had 88 major incidents
For 2017 we actually increased by 31%. This is due to more groups (some from outside KCIT) being brought onto the Major Incident process and general increase in visibility and reporting of these events than was done in the past. This is not necessarily a bad thing as visibility to all major events is of primary importance. We expect this to continue to increase a bit as a few remaining groups on brought into this process, but then downward trends will start to be seen later in 2018 onward.

Reduce the time to report/communicate Major Incidents to < 1 hour 90% of the time
For 2017, April through December, we met this objective 41% of the time. Work continues on methods to speed up determination from an Early Warning to actual Major Incident designation. Importantly, KCIT has a higher visibility and understanding of major incidents, which was part of this improvement effort.

Major Incident Communication Process Compliance
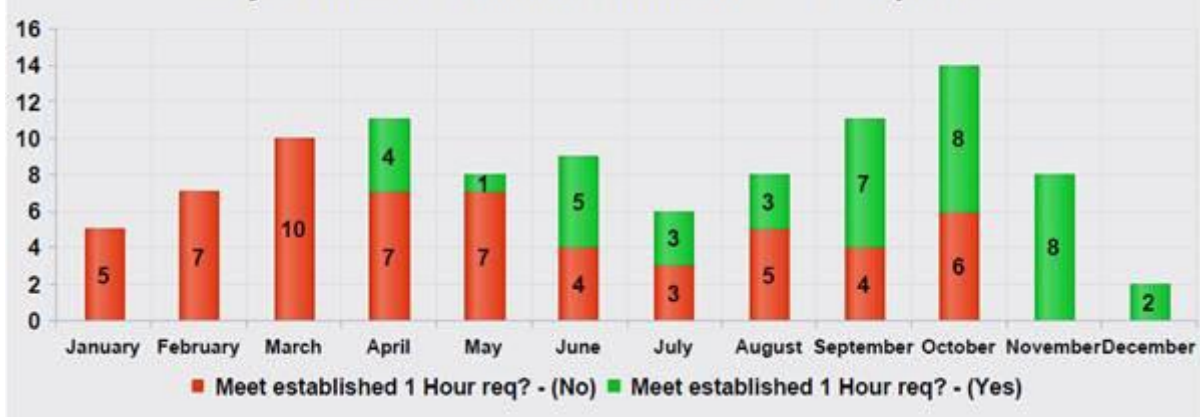
Reduce the number of Major Incidents caused by changes to <10%, 2016 was >40%
Major incidents caused by changes to the environment decreased to 34% in 2017. While not <10% originally targeted, it is definitely trending in the right direction.

Percentage Major Incidents caused by Change
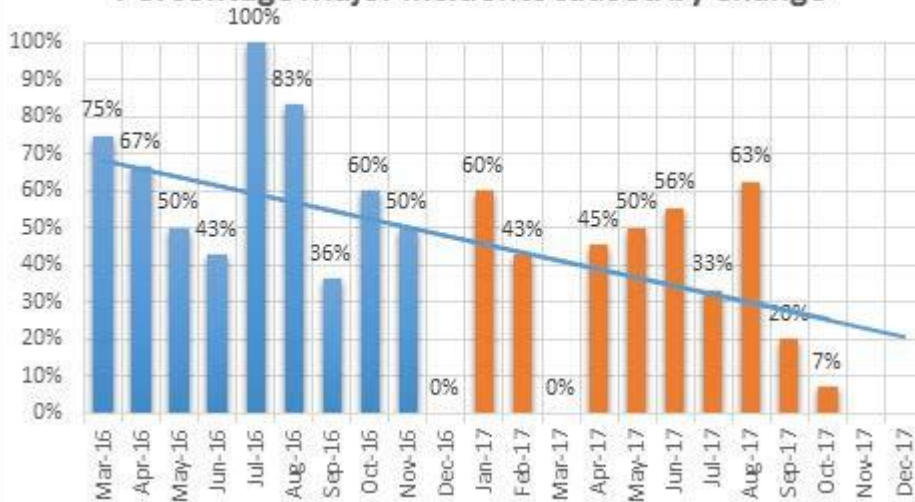
Percentage Major Incidents caused by Change
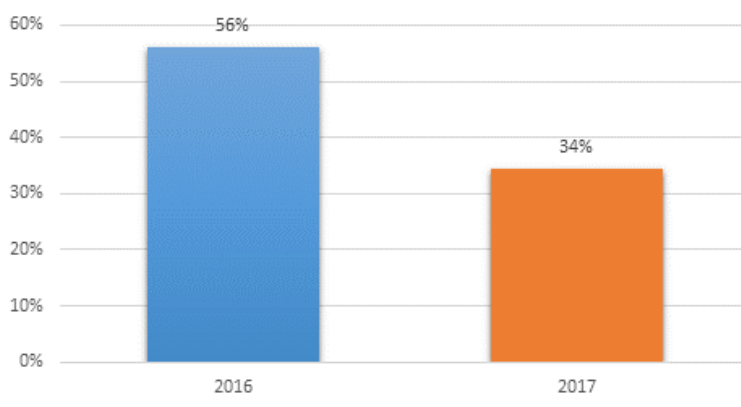
Reduce number of customer calls during major incidents by 30%

While this was reported previously to be 5,013 calls during MIs per year for 2016, ticket data was pulled again and reviewed for parent/child ticket associations that are used during major incident events, and the data does not support the 5,013 calls previously stated. The ticket data for the past three years shows the following call volumes associated with a MI event:

Year	Calls	% Change from previous year
2015	339	
2016	258	- 24%
2017	71	- 72%

Summary Table:

Metric Description	Metrics	Baseline	Target	Actual
1/18/17: Reduce technology outages causing major incidents.	Number of incidents per year	1/17/17: Total Major Incidents for 2016 = 88 3/9/15: 42 major incidents per year	1/17/17: Target reset to 26	1/17/17: With the implementation of the Major Incident process, we have an accurate baseline of 2016 major incidents. With this data and the implementation of the Problem

| | | | 3/9/15: 29 major incidents per year | Management process, we expect to see a decrease in Major Incidents in 2017 by at least 30%.

The Problem Management process was not implemented as planned, due to conflicting priorities and organizational changes. This process was key to reducing technology outages. It is planned for implementation this year (2016).

2/28/18: For 2017 we actually increased by 31% due to more groups (incl non KCIT) participating in the Major Incident process and improvements in reporting these events. This is not necessarily a bad thing as visibility to all major events is of primary importance. |
|---|---|---|---|---|
| 1/17/17:~~Reduced time to restore service during a major incident~~

Every incident is different and the effort to restore service is unpredictable due to the type of failure. Accurate measurement is in the notification process. Reduce the time to notify users of Major Incidents ~~Reduced time to restore service during a major incident~~ | ~~Meantime to resolve (MTR) a major incident~~

Reduce the time to communicate Major Incident to IT Support staff and the business | 4 hours ~~3.4 hours~~ | < 1 hour ~~2.4 hours~~ | Clarified roles and improved communication resulted in meeting the communication target of < 1 hour 90% of the time ~~Clarified roles and improved communication resulted in meeting the 2.4 hour target improvement.~~

2/28/18:
For 2017, April through December, we met this objective 41% of the time. Work continues on methods to speed up determination from an Early Warning to actual Major Incident designation. |
| Reduce number of customer calls during major incidents | Number of calls during major incidents per year | 5,013 calls per year

2/28/18: Call reports reviewed again and | 3,509 calls per year

2/28/18: Revised 30% | Still working to validate the number of calls during major incidents. |

		corrected starting number for 2015 is 339 calls.	reduction target is 237.	2/28/18: Calls during Major Incidents decreased to 71 calls (72% reduction in 2017 as compared to 2016).
Ability to track issues related to planned changes	~~Availability of metrics~~ Major Incidents caused by scheduled change	~~N/A~~ 88 MIs – 34 associated with scheduled change – 38%	~~Reporting metrics one year after project implementation~~ Reduce the Major Incidents caused by scheduled changes by 30% (to <10%)?	With the maturity of Change, Major Incident and Problem Management, we are able to provide a metric for Major Incidents related to scheduled changes. Our goal is to work with Problem Management to identify and resolve root cause and reduce our percentage of Major Incidents caused by scheduled changes.

2/28/18: Major Incidents caused by changes to the environment decreased to 34% of all MIs in 2017. |

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.

For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Name	King County Prosecuting Attorney
Project Title	Prosecutor Case Management Project – PROSECUTORbyKarpel (PbK)
Project Number	1111941

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Dan Satterberg, King County Prosecuting Attorney

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Kassie Tadsen	Karpel Program Manager - KCPAO	Project Manager
Erin Ehlert	Assistant Chief – Criminal Division - PAO	Sponsor
Daniel Clark	Assistant Chief – Criminal Division - PAO	Sponsor
Mark Buening	Finance Manager - PAO	~~Sponsor~~ Finance Manager
Mike Fisher	Karpel Program Manager – KCPAO	Program Manager

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

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2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
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5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

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Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

<table>
<tr><td colspan="5" align="center">Revision History Table</td></tr>
<tr><td align="center">Stage</td><td align="center">Date</td><td align="center">Revised By</td><td align="center">Description</td><td align="center">How long did it take?</td></tr>
<tr><td><i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i></td><td><i>Date this document was updated</i></td><td><i>Who did the document updates?</i></td><td><i>A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".</i></td><td><i>How long did it take to complete or revise the form at this stage?</i></td></tr>
<tr><td>Annual report</td><td>1/30/14</td><td>M. Buening</td><td>Initial draft</td><td>2 hours</td></tr>
<tr><td></td><td>1/30/14</td><td>K. Tadsen</td><td>Added additional supporting information</td><td>2 hours</td></tr>
<tr><td></td><td>3/14/14</td><td>K. Tadsen</td><td>Rev 2</td><td>2 hours</td></tr>
<tr><td></td><td>3/18/14</td><td>K. Tadsen</td><td>Rev 2</td><td>1 hour</td></tr>
<tr><td>2014 Annual report and benefits measurement</td><td>3/18/15</td><td>K. Tadsen, A. Summers, D. Clark, E. Ehlert</td><td>Rev 3</td><td>4 hours</td></tr>
<tr><td>2015 Annual Report</td><td>3/09/16</td><td>M. Fisher</td><td>Rev 1</td><td>1 hour</td></tr>
<tr><td>2016 Annual Report</td><td>02.03.17</td><td>M. Fisher</td><td>Rev 1</td><td>1 hour</td></tr>
<tr><td>2016 Annual Report</td><td>02.10.17</td><td>M.Fisher</td><td>Rev 1.1</td><td>1 hour</td></tr>
<tr><td>2016 Annual Report – additional requests</td><td>03.09.17</td><td>M.Fisher</td><td>Rev 1.2</td><td>15 min</td></tr>
<tr><td>2017 Annual Report - BAP update for closed project</td><td>02.26.18</td><td>M.Fisher</td><td>Review and updates</td><td>1 hour</td></tr>
<tr><td>Spring 2019 BAP Report (Project Completion)</td><td>2/7/2019</td><td>Denise Cody</td><td>Review only for project closure - FINAL BAP</td><td>1 Hour</td></tr>
</table>

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary </u>type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

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Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   PROSECUTORbyKarpel (PbK) will allow the PAO to do justice with significantly more and better information. PbK replaced the PROMIS system and multiple side systems and paper files with an integrated system for case tracking and management, workload management, event management, calendar generation, victim and investigative services, and case document generation and storage.

   PbK has the capability to provide a wide variety of historical person data to assist with risk assessment and provide criminal case data. The integration of all the data and electronic documents in one system instead of multiple systems gives the Deputy Prosecutors much greater ability to view the case data "holistically" and will allow them to prioritize the cases on which to spend their limited time and resources.

   The added information will assist in nearly every decision the prosecutor makes. For example: By identifying the most prolific offenders it will help prioritize which cases to address sooner. By having more information about the background of witnesses and victims, a prosecutor is better able to make charging decisions, and potentially decide which cases should not be filed at all. Knowing when a defendant is arrested for a new charge, it will assist in negotiating his pending cases potentially avoid the filing of new charges.

   By having all person and case data in one system will greatly improve the office's ability to manage cases after filing. Maintaining a central location for officer unavailability will assist in ensuring that witnesses are subpoenaed for days they can actual appear in court.

   Maintaining contact information in one location will help locate and contact witnesses. Storing certified copies of criminal history will reduce the number of times paralegals need to reorder documents from agencies around the country.

   The Sexually Violent Predator Unit and Involuntary Treatment Unit will be able to see the criminal cases for their respondents, which will better inform their commitment cases. The DV Unit will be able to see protection order case history for both defendants and victims, and know about escalation of violence.

   By having more accurate and comprehensive information all in one system earlier in the prosecution process, it will be possible to identify and move forward with cases with merit.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The PAO will survey the deputing prosecuting attorneys to determine if they believe that the new case management system has allowed them to prioritize cases better, and has resulted in better, more informed decisions in their work and management of their cases.

3. *What is the current baseline for this measure?*
   Since the PROMIS system was around for nearly 40 years, including in the survey a simple comparison between the two systems should be fairly straightforward to assess if employees believe that PbK has resulted in a more informed system to achieve just results.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   An overall satisfaction rating of 70% would be a success.

5. *When is the benefit likely to be achieved?*
   The benefit will be achieved over several years as more complete case data is entered, including documents, and as we are able to bring the District Court and Juvenile Units onto the system.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   The previous case management system was the 35-year-old PROMIS system running on a mainframe platform, which was several generations of technology behind current systems. The PROMIS system had long passed the end of its useful life; and the decision to phase out the County's mainframe systems necessitated the replacement of the legacy system.

   The PAO's needs long ago surpassed the capabilities of the PROMIS system, which resulted in a proliferation of proprietary side systems and workarounds to manage critical business processes. The PAO handles nearly 10,000 felony referrals annually.

   With the increasing complexity of cases, the violent and more significant property crimes arrive with an average exceeding 150 pages. These files may include multiple witnesses; documentation of physical evidence processing, and frequently electronic media such as footage from surveillance cameras or recordings of 911 calls.

   The result is that felony cases now consist of twice as much documentation and evidentiary and forensic issues as the same volume of cases just a few years ago. The current staff of the PAO, especially since reduced by severe budget cuts from 2009 to 2011, could not handle this volume of documentation with the existing staffing levels and the old PROMIS technology.

   The legacy system did not provide the capability for integrated document storage or the maintenance of critical data for record keeping and statistical analysis. Important data was stored in a number of different repositories including numerous paper case files which resulted in a disjointed and unconnected system which made it difficult and labor intensive to track and report statistical information with any consistency (many statistical reports were tracked and compiled manually with great effort).

   Most case-related documents were generated on paper with no way to tie them back to other information kept in the mainframe system. This necessitated the storage and maintenance of large number of paper files.

In addition, several key PAO employees that are the most knowledgeable PROMIS users are approaching retirement age. Implementing a new system on which more people can become proficient mitigates this risk. The PAO can use a modern case management system as a state-of-the-art tool to attract and retain talented staff.

The maintenance of the PROMIS system was dependent on a shrinking pool of technical staff with the skills to support '80s-era technology. The new PbK system takes advantage of several new up-to date technologies:

- Microsoft SQL Server database along with the robust SQL Server Reporting Services for reporting and statistical analysis;
- Microsoft Word for document generation and Microsoft SharePoint for a document repository;
- Adobe Acrobat for electronic discovery;
- Web services for interface development; and
- A web-based architecture to make all of these capabilities accessible to the PAO, as well as to its criminal justice partners.

1. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
   The probability of these risks occurring was 100%. KCIT has a current project for moving the mainframe applications to another platform, and KCIT and PAO employees that know PROMIS continue to approach retirement age.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update Feb 2019- This is a final BAP. The project fully met the targeted benefits.
This project to implement a modern case management system for the PAO was implemented for the felony criminal division, Sexually Violent Predator Unit, Involuntary Treatment Unit, Appellate Unit, and three small units in the District Court Unit (DV Court, Mental Health Court, and Regional Veterans Court). We went live with the system in June 2013 with basic case processing and have continued to streamline our processes and implement new features and functions. The District Court Unit was deployed in Q4 2015 but we have not yet implemented the Juvenile unit.

Our measure is the users' opinion on whether the system provides the benefit of allowing the PAO to do justice with more and better information. We conducted our first survey in 1Q2015. Based on 100 responses to six questions (with only two questions skipped once each), we have easily exceeded our target of a 70% approval rating with an overall score of 86%.

We will be conducting another survey in 3Q2016 to measure the District Court division, and an additional survey will be conducted when the Juvenile division is deployed on PbK.
Update:
- The Juvenile Division of the PAO went live on PbK in December of 2017, and there hasn't been enough time to gather meaningful survey results. However, the benefits to the office have already been felt due to the following:

- o Increased awareness of past cases
- o Integration between juvenile and adult criminal history
- o Easier inter-office communication on current and past cases
- o Ability for staff to integrate from Juvenile to Adult (or Adult to Juvenile) case work without learning a new case management system

[02.2017] District Court survey results are below.

Metric Description	Metrics	Baseline	Target	Actual (reported 02/2017)
Allow the PAO to do justice with significantly more and better information. Greater ability to view case data holistically and better prioritization of cases. Improvement in the office's ability to manage cases after filing.	Satisfaction rating by users of the system: 1. More information to perform duties 2. More information about criminal cases. 3. More information about defendants. 4. More information about witnesses. 5. More ability to organize information. 6. Access to information more quickly		1. 70% agreement 2. 70% agreement 3. 70% agreement 4. 70% agreement 5. 70% agreement 6. 70% agreement	Strongly agree or agree: 1. 94.4% 2. 94.4% 3. 94.4% 4. 94.7% 5. 94.7% 6. 89.4%

2015 Annual Report data:

Metric Description	Metrics	Baseline	Target	Actual (reported 03/2016)
Allow the PAO to do justice with significantly more and better information. Greater ability to view case data holistically and better prioritization of cases. Improvement in the office's ability to manage cases after filing.	Satisfaction rating by users of the system: 1. More information to perform duties 2. More information about criminal cases. 3. More information about defendants. 4. More information about witnesses. 5. More ability to organize information. 6. Access to information more quickly		1. 70% agreement 2. 70% agreement 3. 70% agreement 4. 70% agreement 5. 70% agreement 6. 70% agreement	Strongly agree or agree: 1. 89% 2. 91% 3. 93% 4. 89% 5. 73% 6. 83%

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	King County Prosecuting Attorney's Office, Criminal Division
Project Title	Integrated Document Exchange Project (IDX)
Project Number	1111938

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Erin Ehlert and Daniel Clark, Assistant Chief Criminal Deputies

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

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Erin Ehlert	Assistant Chief – Criminal Division - PAO	Sponsor
Mark Buening	Finance Director – PAO	Department Finance Director
Kassie Tadsen	Karpel Program Manager - KCPAO	Project Manager
Latasha Battle	IT Project Manager – KCIT	Project Manager
Mike Fisher	Karpel Program Manager – KCPAO	Program Manager

Section 4. When should the BAP be started, updated and completed?

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Annual report	1-28-14	Dan Clark	New, Initial Draft	3 hours
Annual report	3/19/14	Kassie Tadsen	Revisions for council	3 hours
Annual report	3/20/14	Kassie Tadsen	Revisions for council	4 hours
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Annual report updates	3.29.16	Mike Fisher	Updates requested by Elly Slakie	1 hour
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Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits:** Improving the quality or quantity of services provided to the public
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4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the underlined primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

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☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

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Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

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The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   The IDX project was created to integrate with the new PAO Case Management System launched in June 2013 entitled PROSECUTORbyKarpel (PbK). Currently, law enforcement must bring original hard copy paper cases to our office for processing. The data associated with these cases must be entered by PAO staff, and the documents must be scanned and uploaded into PbK. Large files such as audio and video are submitted on DVD or CD, and these disks must be copied by PAO staff to provide discovery to defense.

   The IDX project will create a unified, integrated system called eLODI for the 40 law enforcement agencies in King County to submit criminal case data and documents and digital evidence electronically into PbK. There are two of components to the IDX project: eLodi and eEvidence.

   With eLODI, Law Enforcement agencies will submit data concerning the identification of a suspect and a crime, including victims and witnesses, in a consistent and uniform way, and will be able to upload voluminous police reports, photographs and other digital evidence electronically. PAO staff will be able to transfer this electronic information directly into PbK without having to manually type the data or scan the documents.

   eEvidence will allow the police agencies and the PAO to upload and store large files, including audio and video, which can then be made available as electronic discovery to defense. Each of these automated functions will replace labor-intensive processes that currently draw upon the scarce resources of the PAO. In addition, because of the safeguards built into IDX, these functions will result in more consistent data entry, quicker outcomes, and improved quality of work.

   A. Allowing police to remain on patrol in their respective jurisdictions is an enormous benefit in terms of productivity and public safety.

   B. Each of these automated functions will replace labor-intensive data entry and scanning that currently draw upon the scarce resources of the PAO. Up to five temporary staff have been hired (depending on work volume) using the PbK project budget to manually scan and upload initial case documents, and 6 staff have been assigned to discovery and backfilled to follow-up materials into PbK, as there are simply no resources available to accomplish this significant workload. With the automation of much of this work, the PAO will not need to permanently budget for these staffing levels.

   C. With current staffing levels and even with the addition of temporary help, we have a lag between the time the case is received and the time it is entered into the system and ready for a prosecutor to work, resulting in a backlog of several days' worth to several weeks' worth of cases. With eLODI we will be able to eliminate the lag time and backlog, and Deputy Prosecutors will be able identify the most prolific reoffenders sooner and turn their attention to filing charges against them before they commit more crimes that could result additional victims and in longer (and more expensive) sentences for offenders. By getting cases loaded into the system and assigned to prosecutors sooner, the high costs of recidivism borne by victims, law enforcement, defense counsel, courts and incarceration can be mitigated.

   D. Like most modern case management systems, PbK is designed for the front-loading of data. Due to the siloed and sequential nature of our former systems (PROMIS and side systems), the PAO is

not staffed to handle the volume of data entry at the beginning of our process. Currently, witness data is entered into the PbK system by word processing staff <u>after</u> a filing decision has been made. Victim information is fleshed out by the Victim Assistance Unit, also after filing. This means that prosecutors are making filing decisions without the benefit of knowing much about the background of the people involved in the case. For example, a prosecutor may think twice about filing charges in a case that rests entirely on a witness who has significant convictions for Perjury and Making False Statements. Under the new IDX system, the witnesses' names will be submitted by law enforcement up front, allowing a prosecutor to check witness history at the time of the filing decision and perhaps avoid filing a charge at all.

E. Reduce time spent on follow-up discovery by receiving post-referral materials electronically instead of having to scan, and storing/transferring large files electronically instead of retaining disks that must be circulated around the office and be copied for discovery to defense. In recent months, our office had to move two paralegals and four LAS staff from their trial-preparation functions just to upload and process these materials.

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
There are a number of different metrics that can be employed to measure the benefits of IDX. Some of the most important benefits, however, are less quantifiable than others.

A. Electronic submission of case data, documents and evidence to the PAO will result in the savings of hundreds of hours each year when 40 police agencies and 5000+ police officers are no longer required to print out their cases on paper, drive to the PAO offices in Seattle or Kent and physically submit their cases or follow-up work in person. Allowing police to remain on patrol in their respective jurisdictions is an enormous benefit in terms of both public safety and productivity. We will conduct a survey of police agencies to determine how their adoption of the system has impacted them.

B. The temporary staff are spending approximately 800-1000 person hours a month scanning and loading documents into PbK, and could cost the PAO up to $500,000 until the eLODI/eEvidence system is in place. The IDX project essentially moves this work to the originators of the information, law enforcement, who will be doing the initial data entry and uploading of digital evidence at the time of electronic submission. Now law enforcement will be doing all of this from their desks at their own offices in a fraction of the time it took to print out hard copies of reports and evidence, burn disks, print photos, etc., and drive to our office to hand-deliver them. The measure for this benefit is whether we are still reliant upon temporary workers and word processing to manually enter witness information and case documents into the system, or are able to accommodate this task within our existing sustainable resources.

C. We can measure the average time between two key case events (case receipt and assignment to a prosecutor). This will let us determine how much sooner prosecutors are able to receive and work on new cases, that is, the reduction in lag time, especially for prolific offenders, thereby reducing the impact of recidivism.

D. Under the new IDX system, the witnesses' name will be submitted by law enforcement up front, allowing a prosecutor to have that information at the time of the filing decision and perhaps avoid filing a charge at all. A decision to not file a charge and keep a suspect from entering the

criminal justice system is obviously hugely impactful to the suspect, but also significantly saves resources for everyone in the system: public defense, courts, jail, etc. We will survey the deputy prosecuting attorneys for their assessment of the quality and quantity of victim and witness information available to them to make filing decisions and prioritize repeat offenders before and after the implementation of eLODI.

E.   If post-filing follow-up materials were uploaded, categorized and processed by IDX, then the 6 employees currently assigned solely to discovery could return to their trial-assistance functions.

3. *What is the current baseline for this measure?*
   A.   Currently, we receive approximately 7,000-8,000 cases annually that are physically brought into our office in paper format which must be entered and scanned manually into PbK. We can assume that it takes an officer a minimum of 1-2 hours to print and assemble the hardcopy report, burn any disks, and bring the case into our office. This could be much higher for more complex cases.

   B.   We have 9 temporary funded positions who have been hired to do data entry and upload documents into PbK.

   Update:
   C.   We will develop a report in PbK to monitor the lag time between case intake and assignment to a DPA. This report will compare traditional LODI cases to eLODI cases. Historical numbers to follow. This report has not been developed yet, but will be before final BAP submission. The historical data is in the source system so it is just a matter of developing the SSRS report.
   Update:
   - This data proved harder to quantify than originally thought and we were not able to gather this data. There are many factors that go in to the time between case submission and case assignment that aren't related to the case management system.
   Update:
   D.   We will need to do the survey to get a baseline for this. A baseline survey was not done, but the report discussed in item C will be used instead.
   [02.17] Survey results to date are as follows:
   Question: Does eLODI make your job easier?
   - 81.82% say eLODI makes their job easier
   - 18.18% say eLODI does not make their job easier
   Question: How satisfied are you with eLODI?
   - 9.09% are very dissatisfied with eLODI
   - 9.09% are somewhat dissatisfied with eLODI
   - 18.18% are neutral on their satisfaction with eLODI
   - 54.55% are somewhat satisfied with eLODI
   - 9.09% are very satisified with eLODI

   D.E.   Currently we have 6 reassigned employees working on discovery.

   With IDX we hope that 100% of the potential witnesses will be uploaded into PBK prior to a charging decision. This will result in a much better informed charging decision.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***

   A. We will be doing acceptance testing with police in 2Q-3Q2014 and should have more information at that point for this target.
   Update:
      a. The project has received feedback from police agencies and we are currently in the requirements gathering stage for enhancements to the e-LODI application. This feedback has been gathered from comments made to staff since the deployment of eLODI. Update:
         - KCIT required us to close this project before any additional updates were done. Based on the positive feedback we received during our 2016 BAP update survey we determined the updates were not necessary at this time.

   B. The goal is to be able to complete the work with regular employees without for extra temporary staff.

   C. The target will be that the case is received into PbK from eLODI and assigned to a prosecutor within 2 days of receipt.

   ~~C.~~D. We would like to see an improvement of 30% in prosecutors' opinion of the quality and quantity of victim and witness information they have to make filing decisions.
   ~~We would like to see an improvement of 30% in prosecutors' opinion of the quality and quantity of victim and witness information they have to make fining decisions.~~
   ~~D.~~E. 2017 Update: For phase 2 we would like to see an improvement in the Law Enforcement survey results, taking the Very Satisfied category to over 20%
   ~~E.~~F. This number should drop to 2 once IDX allows for police to upload and submit this information electronically. 2017 Update: Not sure what this is referring to.
   ~~This number should drop to 2 once IDX allows for police to upload and submit this information el~~

5. ***When is the benefit likely to be achieved?***
   IDX should be completed and implemented by the end of 2014. Within 6 months after IDX is fully implemented and working properly we hope to see less demand for our temporary staff and can minimize those extra resources. As police adopt the use of the system, the benefits will increase over 2015.
   Update:
   While we have seen some adoption of eLODI by the police agencies, the full benefit of IDX is still under review and the PAO and IDX project team have identified a number of areas for improving the system. Once this second phase is implemented the surveys and measures discussed abvove will be taken so the full impact of the system can be measured.
   [02.17] Survey results are detailed above.
   Phase 2 of the project should be complete by June 2017, final benefit reporting will be included in the 2017 report.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the

emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

<mark>Update February 2</mark>019: This is a final BAP. This project has been completed and met the target benefits.

The IDX project has achieved many of the benefits originally expected. While usage was initially somewhat low compared to original expectations, new requests for access continue to be submitted on an almost daily basis and we are seeing more cases submitted to our office through the system each month.

This project has also been successful from a law enforcement perspective with over 81% of survey respondents indicating that the system has made their jobs easier.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	King County Prosecuting Attorney's Office
Project Title	PAO Data Modernization
Project Number	1133959
Project Timeframe	Jan - Dec 2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Leesa Manion, Chief of Staff, PAO

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Leesa Manion	Chief of Staff - PAO	Sponsor
Jo Anne Fox	Finance Director – PAO	Department Finance Director
Denise Cody	Director of IT – PAO	IT System Sponsor
To Be Determined	IT Project Manager-KCIT	Project Manager

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 budget process	05/18/2018	Denise Cody	New, initial draft	3 hours
Spring 2019 BAP Report (Project Initiation)	02/06/2019	Denise Cody	Review Only No changes made. New project.	1 hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☒

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒	
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐	
Category #4: Reduced cost or cost avoidance to produce services	☐	☒	

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   90% of the data is related to the diversion programs for the PAO. These programs were created to:
   1. Improve public safety though fostering trusting relationship with our communities.
   2. Deploying diversion programs supported by a data modernization project (criminal reform) - can lead to decreased cost when it comes lowering the number of cases going to trial and further improving public safety.

   The project will allow improved tracking of recidivism and will contribute to better policy decisions related to these programs.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   To measure whether the project leads to improved recidivism and prevention by way of established diversion programs tracking, the number of programs that track recidivism rates will be counted.

3. *What is the current baseline for this measure?*
   Currently 15% of programs track recidivism and diversion programs outcomes.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   The target is 35% of programs will measure recidivism by 12/30/2020.

5. *When is the benefit likely to be achieved?*
   A full year after completion and deployment of effort, the goal is to be operational by the end of year 2019 then benefit likely achieved by end of year 2020.

6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Gain understanding of how community outreach with the partnership of the PAO impacts the measure of the reduction recidivism rates	Number of programs for which rate of recidivism can be measured.	15%	35%	12/30/2020

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   The following benefits are achievable:
   - Streamlined data entry and data management
   - Modern reporting environment, with richer data analytics, shared dashboards, complex searching and improved performance tracking
   - Use of audit trails for data updates; ability to limit access by roles and division
   - Reduction of duplicate data and improved data sharing
   - GIS Integration and use of map-based reports/dashboards
   - Introduction of remote access: data entry "in the field" with tablets, mobile devices

   In addition, there is indirect benefit to county residents who are served by PAO processes. This data supports a variety of functions - tracking defendants, witnesses and appellants, public disclosure, and tracking "shots fired" - among many other processes. PAO's ability to improve decision-making and analytics in support of public safety is another project benefit.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The benefit will be measured by:
   1. Timing of report availability
   2. Ability to audit data
   3. Ability to access data remotely

4. Decreased risk of invalid data, measured via survey as % of programs where data in system is valid and complete
5. Increased ability to track internal initiatives, measured via survey as % of initiatives where managers and policy-makers can use the system to track key initiative measures (outputs and outcomes)

3. *What is the current baseline for this measure?*
   1. Current time from request to report is 30 days
   2. There is currently no ability to audit data
   3. Currently 35% of data is at risk of being invalid
   4. Currently no data is available on mobile devices
   5. Currently only 25% of initiatives can be tracked

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   1. Reports will be available within 2 weeks of request
   2. Capability will be in place to audit all data
   3. All data will be available on mobile devices
   4. 15% of data will be at risk of being invalid
   5. 50% of initiatives will be tracked

6. *When is the benefit likely to be achieved?*
   A full year after completion and deployment of effort the goal is to be operational by the end of year 2019 then benefit likely achieved by end of year 2020.

7. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Reports available for rapid decision making	Time measured from Report Request and Report Availability.	From 30 days	To 2 weeks	By 12/30/2020
Improved data auditing capacity	Ability to track who accessed what and when	0%	100%	12/31/2020
Greater data accessibility	Ability to access specific data from remote locations	0%	100%	12/31/2020
Reduce the probability of invalid data	Probability of invalid data: measured as a % of data reported as valid and complete	35% invalid	15% invalid	By 12/30/2020
Improved performance management and resource planning	Ability / capacity to measure and track internal initiatives and related resources: measured by % of programs where managers report they can track key initiative measures	25% (currently able to track some internal initiatives, albeit limited)	50% (presumes additional process changes to performance management and resource planning)	12/31/2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   PAO currently houses 30% of its data in legacy Microsoft 2010 Access databases this has resulted in: Duplication of data, Poor technical architecture and low level security, The result is a drain on IT resources and increase storage cost. The age of the databases varies from 10 to 5 years ago, every time that Microsoft office upgrade then all respective databases have to been modified to be compatible with that Office version. Reducing staff time will give staff the availability to work on more innovative technologies for the agency.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   The probability of risk for corruption of data is at 45%, therefore there is a risk of not having the correct or most valid information for decision making purposes. Inconsistencies with the use of the Microsoft Databases has had a negative impact on the completeness of the data i.e., Jail Calls. Due to poor technical design downloading audio calls can take long periods of time. As a result this has led to a degradation of the completeness of data and the creation of duplicate of side systems.

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Reduced IT staff time to maintain/upgrade/develop systems	% staff hours on maintenance /development tasks	20 to 40 hrs a week	2 to 4 hrs a week	12/31/2020

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*

   Modernization of the PAO data will lead to decrease in storage cost 10% to 25% because any audio or video files associated with and access database can be moved to cloud storage therefore decreasing the cost of storage with the KCIT infrastructure and any respective cost. Currently we utilize $67,600 annually in consultant cost to maintain the database; this cost will be eliminated once solution has been deployed.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*

   This can be measured by baselining the current storage consumption and cost to date. Then preforming a cross analysis of the decrease once the project has become operational. We will measure the consultant cost, which will be $0 after implementation.

3. *What is the current baseline?*

   The PAO currently has 34 TB of storage and has consumed 18 TB with a balance of 16. PAO spends $67,600 annually on maintenance (consultant cost).

4. *What is the target for this measure? (How much savings will this project achieve)*

   The target will be 10 % to 25% savings.

5. *When is the cost reduction likely to be achieved?*

   A full year after completion and deployment of effort the goal is to be operational by the end of year 2019 then benefit likely achieved by end of year 2020.

6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/ Measure	Baseline	Target	When the target will be achieved
Reduction in annual storages cost	Cost of storage used	175,883 ($54,000 @ $3,000 per TB)	10% - 25% decrease ($5,400-$13,500 reduction)	By 12/30/2020
Decrease Consultant Cost/Maintenance	Service No Longer Needed	67,600.00 (Annual)	0	By 12/30/2020

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio

system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update Feb 2019: work is projected to start in Quarter 2 of 2019. A Project Manager and Business Analyst have been assigned.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.

For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Public Health – Seattle and King County Emergency Medical Services Division
Project Title	eCBD/CAD Interface at Valley Communications
Project Number	377216 (legacy); 1113977 (new)

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: ~~Jim F~~ogarty, Michele Plorde, Division Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Linda Culley~~	~~Manager, Community Programs, EMS Division, PHSKC~~	~~Project Manager~~
Erik Friedrichsen (Updated 02/2019)	Manager, Community Programs, EMS Division, PHSKC	Project Manager
Michele Plorde	Division Manager, EMS Division, PHSKC	Project Sponsor
Cleo Subido	EMD Program Administrator, EMS Division, PHSKC	Assist Project Manager, manage content, user interface, testing and communication with com center.
Dan Anderson	IT Project Manager, PH IT	IT Project Manager
Julie Buckingham	EMD QI Program Manager, EMS Division, PHSKC	QI Manager, product testing
Lindsey Hergert	EMD TCPR QI Program Manager, EMS Division, PHSKC	QI subject matter expert, product testing
Earlene Smith (Updated 02/2019)	EMD QI Program Manager, EMS Division, PHSKC	QI subject matter expert, product testing

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	2/14/14	Linda Culley	New, initial draft	3 hours
2015 Annual BAP	3/19/15	Linda Culley	One name correction in Section 3	10 minutes
2016 Annual BAP	2/12/16	Linda Culley	No changes	5 minutes
2015 Benefits Review	6/16/16	Linda Culley	Changed Director name	10 minutes
2016 Annual Report	2/15/17	Cleo Subido	Review document, update project staff names and roles, update anticipated start quarter.	10 minutes
2019 BAP Review and update	1/16/19	Erik Friedrichsen	Updated contacts, reviewed and updated document	2 hours

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures

4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   An electronic Criteria Based Dispatch (eCBD) application that successfully interfaces with the communication center CAD system will benefit our customers, i.e. the 9-1-1 communication centers, dispatchers, and King County residents who call 9-1-1 during medical emergencies.

   This interfaced application will improve internal and external access to county records, services and resources. It will integrate existing systems, enhance system reliability and improve the quality, accuracy and transparency of data that is used to make decisions about revisions to the emergency medical triage system.

   The goal of the CBD Guidelines is to implement methods to manage costly, existing EMS resources more effectively and efficiently. Enhanced technology will enable data collection on Emergency Medical Dispatch (EMD) call processing, improving the ability of the EMS Division to perform efficient EMD ~~case~~ QI review. (Updated 02/2019)

   A. Benefits to dispatchers include:

1) Increased functionality of their primary call processing tool during medical emergencies. This increased functionality will produce process benefits including but not limited to:
   a. Increase instances of appropriate resource deployment as a result of inadequate triage.
   b. Increased opportunity for provision of medical pre-arrival instructions (PAI).

B. Benefits to Communication Center Supervisors and EMS Division staff include:
1) Ability to collect accurate and timely documentation for the purposes of quality improvement to evaluate 9-1-1- call handling techniques;
2) Ability to identify calls by specific call type and employee for Quality Improvement (QI) review.

C. Benefits to EMS Administrators include:
1) Access to aggregate data and reports for purposes of quality improvement review, trend identification, training needs analysis and EMS levy performance standard compliance review.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   A. EMD QI performance outcomes:
      1) Correctly Rule Out Cardiac Arrest
      2) Appropriate Level of Response (LOR) Chosen
      3) Applicable PAI Provided
      4) Assigned Correct Initial Dispatch Code (IDC)
   B. Access to call data based upon chief complaint or employee in order to perform QI reviews.
   C. Access to performance and trending reports.

3. *What is the current baseline for this measure?*
   A. The baseline for Item 2.A., 2013 performance outcomes:
      1) Correctly Rule Out Cardiac Arrest: 62% (of reviewed calls) (Updated 02/2019)
      2) Appropriate Level of Response (LOR) Chosen: 78% (of reviewed calls) (Updated 02/2019)
      3) Pre-Arrivals Given When Needed: 83% (of reviewed calls) (Updated 02/2019)
      4) Assigned Correct IDC: 74% (of reviewed calls) (Updated 02/2019)
   B. The baseline for Item 2.B., prior to project implementation is zero eCBD call records could be accessed.
   C. The baseline for Item 2.C., prior to project implementation is zero performance or trending reports can be accessed.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   A. The target for measure 2.A., is
      1) Correctly Rule Out Cardiac Arrest across a wider number of calls and to identify trends or areas to correct (via training or other development)
         a) Year 1: 75%
         b) Year 2: 80%
         c) Year 3: 85% (Updated 02/2019)
      2) Appropriate Level of Response (LOR) Chosen across a wider number of calls and to identify trends or areas to correct (via training or other development)
         a) Year 1: 75%
         b) Year 2: 80%
         c) Year 3: 85% (Updated 02/2019)
      3) Pre-Arrival Instructions Given When Needed across a wider number of calls and to identify trends or areas to correct (via training or other development)

~~a) Year 1: 75%~~
~~b) Year 2: 80%~~
~~c) Year 3: 85%~~ (Updated 02/2019)

4) Assigned Correct IDC <u>across a wider number of calls and to identify trends or areas to correct (via training or other development)</u>
~~a) Year 1: 75%~~
~~b) Year 2: 80%~~
~~c) Year 3: 85%~~ (Updated 02/2019)

B. The target for measure 2.B., Within one year of implementation, 95% of 9-1-1 calls under EMD QI review will have an eCBD call record available.

C. The target for measure 2.C., is nine performance or trending reports available to EMS staff.

5. ***When is the benefit likely to be achieved?***
The benefit is expected to be achieved within 6 months to 3 years of project implementation. There are different target milestones for each benefit.

<u>6/16/16 – The interface project has been put on hold due to technical upgrades to the Monitors at Valley Com. As a result of this technical upgrade, the eCBD Software must also be upgraded, as the software was not coded to work with the monitors to be used by Valley Com. The eCBD Software is now 10 years old and has only had one upgrade during that time. An eCBD Modernization project has begun to bring this software up to current standards prior to developing the interface with Tiburon CAD. The eCBD Modernization Project is expected to take 6-9 months and the interface project is expected to be started in Q1 or Q2, 2017.</u>

<u>2/15/17 – The interface project is still being evaluated for the most efficient solution to the changes in technology as well as how these changes will affect the customers of King County EMS in the use of Criteria Based Dispatch. The eCBD Modernization Project is expected to take 6-9 months and the interface project is expected to be started in Q2 or Q3 of 2017.</u>

<u>1/16/19 update – The eCBD Modernization Project has been targeted for completion by 2020, with the bulk of the work completed in 2019 except for the actual implementation at Valley Com that will take place in 2020 (delayed due to Valley Com's focus on PSERN project for 2019). The EMS Division and KCIT staff will continue to work with Valley Com and other dispatch centers on implementation plans at each location of the eCBD software. Updated communication with CAD vendors show that no major changes are expected for developing the interface and this work can be continued.</u>

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators

at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   What is the current baseline for this measure?
3. *What is the target for this measure? (How much improvement will this project achieve?)*
4. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update 1/16/19: This is an ongoing project. The eCBD Modernization Project has been targeted for completion by 2020, with the bulk of the work completed in 2019 except for the actual implementation at Valley Com that will take place in 2020 (delayed due to Valley Com's focus on PSERN project for 2019). The EMS Division and KCIT staff will continue to work with Valley Com and other dispatch centers on implementation plans at each location of the eCBD software. Updated communication with CAD vendors show that no major changes are expected for developing the interface and this work can be continued.

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	DPH / Environmental Health
Project Title	Envision Connect System
Project Number	1134305
Project Timeframe	2019-2020

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Cyndi Schaeffer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Dee Dhlamini/~~ Dylan Orr	Deputy Director / PH-EH	Project Sponsor
Warren Cheney	Finance/IT Manager /DPER	County Business Partner
Ruth Harbaugh	Sr. Business Analyst/ EH	EH Project Manager
Feben Asfaw	Functional Analyst/ EH	EH Operations Functional Analyst
Amy Hitchcock	IT Project Manager III/ Dept. of Information Technology	IT Project Manager

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None").

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
2019-20 Budget Process	5/8/18	Ruth Harbaugh	New, initial draft	3 hours
2019-20 Budget Process	5/24/18	Ruth Harbaugh	Revised draft to clarify scope	2 hours
2019-20 Budget Process	7/23/18	Ruth Harbaugh	Revised draft per PSB feedback	1 hour
Annual Report	2/4/19	Amy Hitchcock	Status update	1 hour

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☒	☐

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☒
Category #4: Reduced cost or cost avoidance to produce services	☐	☒

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   If this project to evaluate and upgrade Environmental Heath's work management system is approved, customers seeking permits with King County will experience enhanced online services across EH programs and benefits of improved workflows between DPER's building permitting and EH's onsite and plumbing permitting processes.

   EHS and DPER currently have limited workflow coordination between the departments. Though there are process improvement efforts to share statuses more readily between EH and DPER, customers still have to navigate separate agency platforms, log-ins and payments to obtain permits. With an enhanced platform, both DPER and EH seek to offer more coordinated and standardized public service offerings such as: a unified public portal, participation in regional permitting for all services, and enhanced customer service with clear online workflows between combination building/plumbing permits. With the County's new Point and Pay system, EH and DPER can also seek to offer a fully integrated payment option.

   Furthermore, in the absence of County online payment options and the option for a customer facing portal with Envision Connect, EH invested in an online portal side system in 2010. This portal allows customers to purchase and renew permits online, file complaints and view permit status. Though this portal offers many efficiencies for the business and customer, the platform is not intuitive and many customer inquiries or change requests require EH or the vendor to troubleshoot and resolve their issues on the backend. This leads to frequent customer requests for help which both takes a significant amount of staff time to resolve and is a frustrating experience for the customer.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

1 –A more streamlined process for customers to obtain permits between DPER and EH including reduced processed steps, reduced number of separate log-ins, an integrated payment option, etc.

2- Improved online customer satisfaction with our customer facing portal using a CSAT scoring methodology.

3. **What is the current baseline for this measure?**

   1- EH and DPER are currently undergoing scoping for interagency process improvement as part of the Local Services Initiative. This effort will establish baseline measures for our current interagency process and improvements from an operational alignment and IT perspective. Some examples of metrics that would indicate improvement include: number of touch points, number of separate log ins, number of customer help requests, and reduction in manual processes.

   2- EH will build an online CSAT customer satisfaction measure to establish a current state by 9/1/2018. ~~As we go to RFP, we~~ We will use the information to seek a solution that addresses points of customer frustration including the non-intuitive interface and lack of customer available modification options. Upon implementation, we will begin tracking customer satisfaction by February 1st 2020. (Updated 02/2019)

4. **What is the target for this measure? (How much improvement will this project achieve?)**

   The target for the measures will be established ~~post-RFP~~ by June 30th, 2019 during the implementation phase. (Updated 02/2019)

5. **When is the benefit likely to be achieved?**

   Benefits will begin being realized post implementation and be measurable and consistent by December 31st, 2020

6. **Summary table for Category #1:**

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/ measured?
Customers will have an integrated experience between DPER and EH applications *(goal includes integrated online payment options with County Point and Pay process per vendor availability)*	Steps for permit issuance and payment between EH and DPER, number of user log-ins, etc.	To be established by ~~9/30/2018~~ 7/1/2019. (Updated 03/2019)	To be established during the requirements phase working with the vendor	Post implementation: 12/31/2020
Customer experience with county services will be more in line	Improved quality of online service offerings:	~~Baseline survey to be established by 8/31/2018~~ August 2018 customer survey	To be established during the	Post implementation: 12/31/2020

with other customer service experiences they have in the marketplace	• Customer satisfaction (CSAT) survey results • Number and type of complaints in relation to the online portal	Using a range of 1 to 5, with 1 being very difficult, and 5 being very easy: • How easy or difficult is it to use the EH Web Portal? Average Score: 3.4 • How well does our portal meet your needs? Average score: 3.3 • How would you rate your overall satisfaction with the web portal? Average score: 3.5 • On a scale of 1-5, how likely are you to recommend our portal to others? Average score: 3.5. Number and type of complaints baseline to be established by 7/1/2019. (Updated 03/2019)	requirements phase	

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   A challenge with our current Envision system is how our field inspection data requires a manual synchronization with the Envision system. Our business requires that inspectors are able to record their field inspection data onto our work management software reliably. Though there is a wireless functionality with Envision Connect, due to the nature of inspections often being performed in remote places, inside buildings, in crawl spaces, basements or industrial refrigerators, mobile or

wireless connectivity is not guaranteed. Envision Connect wireless doesn't have the ability to hold and send data if the wireless connection is lost, the data is just lost.

To adequate for this low failure tolerance, the Envision Connect Remote (ECR) field tool was developed to record inspection data on tablets in the field offline. This tool holds the information locally and requires a manual data synchronization process with the Envision Connect system that on average takes 15 minutes at the beginning and end of the work day and can at times take longer (45 minutes+). If the post-inspection sync is not completed the same or following day, it can negatively affect our restaurant scoring quality assurance, i.e. how our restaurant scores are calculated and creates lags in the customer's ability to see their inspection status. We have instituted business processes to ensure data is synched timely, however a better system will allow us to be less dependent on manual processes and free up inspector time. A desired functionality for our future system is to hold data locally and automatically sync once a connection is re-gained.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Staff time dedicated to manually syncing between field inspection reports and the software database will no longer be required.

3. *What is the current baseline for this measure?*
   On average it takes food program staff 30 minutes to sync every day that they perform inspections. To have the up-to-date data needed to calculate accurate restaurant inspection scores, staff currently spend on average 15 minutes to sync their tablet with the database software before and after their field inspections.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   Remove the requirement to manually sync inspection data with the software. This will result in approximately 30 minutes staff time saved daily.

5. *When is the benefit likely to be achieved?*
   Post implementation

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Time for restaurant inspection synchronization will be eliminated.	Amount of time spent dedicated to manual synchronization between inspection reports and the database	Average of 30 minutes/day	0 minutes/day	By 12/31/2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

   Environmental Health has used the Envision system since 1998. Typical ERP operating life cycles range from five to ten years. At twenty years, Envision is reaching the end of its useful life as business, customer and technological requirements evolve. When Envision was recently purchased by Accela, rather than enhancing Envision, Accela determined to invest their development into building a new Environmental Health software module which will offer a more comprehensive solution than Envision. As KCIT and industry has shifted away from supporting on-prem solutions and towards SaaS solutions, there is also a risk is that the vendor will sunset the application.

   Since Envision is no longer supported for upgrades or new functionality, we are limited in our ability to improve our service offerings or system processes despite the high costs EH pays to sustain the system. EH's current 15 month Envision contract costs $439,000 with an additional $437,000 for system maintenance, including two dedicated KCIT resources to manage the system's updates, program customizations, requests and maintenance. To improve our services, EH has and will continue to make investments in side-systems that meet customer and business expectations, such as processing permits and payments online with the EH customer web portal.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

   Accela has a pattern of purchasing smaller software companies, integrating their customers and then phasing out the purchased application within a few years. The vendor indicated this will also occur with the purchase of Decade, the creator of Envision Connect. It is in King County's best interest to act ahead of this risk and upgrade to the new software before Envision Connect is no longer supported.

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Software will be supported and improved by the vendor with functionality to meet the evolving needs of our business and customers	Ability to add new capabilities and evolve with business needs on the platform	Our Envision platform will remain as-is, so new functionality has to be generated through side systems like our web portal, and Envision Connect Remote (ECR).	A single platform system that offers live syncing (and ability to hold and send data), and an integrated customer facing web-portal.	Will be established by 6/30/2019 and included as part of the analysis and requirements phase

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
   Now that Envision is owned by Accela, DPER and Environmental Health are both owned by the same vendor but on separate sole source contracts. In anticipation of the ability to negotiate together, DPER and Public Health limited their usual 5 year contracts to 15 month contracts through December 2018. We are seeking to use Environmental Health and DPER's combined leveraging power with Accela to realize efficiencies in how the county contracts with Accela.

2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
   Environmental Health and DPER will be on a single contract with Accela. We anticipate that some costs that are now paid separately by both agencies may be shared which will reduce the overall cost burden for King County. The benefit will be determined as part of the vendor negotiation process in Q1-Q2 2019.

3. ***What is the current baseline?***
   Environmental Health paid $351,200 and DPER paid $279,605 for their respective 2018 annual Accela contracts.

4. ***What is the target for this measure? (How much savings will this project achieve)***
   The target will be established when both agencies jointly negotiate with the vendor in Q1-Q2 2019.

5. ***When is the cost reduction likely to be achieved?***
   The cost reduction will be realized after negotiating a joint contract that will begin in 2020.

6. ***Summary Table for Benefit Category #4:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Reduction in overall cost burden that Environmental Health and DPER pay currently on separate Accela contracts.	Cost of King County Accela contract	$630,805	TBD	By 12/31/2020

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both

quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500k - $1M per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

This is an ongoing project. Progress to date includes:
- Customer survey was conducted and responses evaluated.
- Equity Impact Review was completed by December 2018 target deadline.
- Business Analysis Approach is complete.
- Preliminary request for information from vendors was conducted. Vendor responses have been received and evaluated.
- Vendors with responses that closely matched Environmental Health's needs are being scheduled for on-site demos.
- Current vendor reviewed and responded to requirements and is developing a detailed quote.

(Updated 03/2019)

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/ Agency Name	Public Health – Seattle & King County, Environmental Health Division
Project Title	Food Safety Rating System – Online search tool enhancements
Project Number	N/A
Project Timeframe	Q1 2017- ~~Q3 2018~~ Q1 2019 (Updated 02/2019)

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

~~Dee Dhlamini and Becky Elias~~ Dylan Orr and Eyob Mazengia (Updated 02/2019)

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Dee Dhlamini	Deputy Director, Environmental Health Deputy Director	Business owner
Becky Elias	Food & Facilities Section Manager, Environmental Health	Business owner
Diep Nguyen	Service Delivery Manager, KCIT-PH	Service delivery management over the project
Kathryn Gish	Project Manager, KCIT	PM on the project
Drew Pounds	Performance, Strategy and Budget	Strategy and metric review

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Omnibus funding request	10/20/17	Becky Elias	New, initial draft	2.5 hours
Spring 2019 BAP report	02/06/19	Eyob Mazengia	Update	3 hours

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary	Secondary

	(select only one)	(select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☒	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☐
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   Jurisdictions across the country and around the world are experimenting with the most efficient, credible and fair method of collecting and reporting inspection results. Our efforts to do so will indicate industry best practices, for both the rating system itself, and how the results of the rating system are made available and accessible to the public. They are available through public-facing signs at each business; text for more information directions on the sign with information available in eight languages, through an online-search tool, and a mobile enabled search tool. While the broader program aims to make information accessible and easy to understand to inform dining decisions and possibly motivate food business owners and operators to improve their food safety practices, this BAP focuses on the online-search tool.

   In 2016, KCIT and the Food Program led a focus group with stakeholder about what they wanted to see out of an online search tool. The upgraded search tool and enhancements included in this final stage are based on direct feedback from stakeholders participating in the focus group session.

   Specific search tool enhancements include:
   - A map enabled search tool.
   - Users can search by restaurant name, city or zip code.
   - Users can filter by rating type.
   - The tool provides a count of how many results appear with each unique search.
   - The search tool is mobile enabled to be easily viewed/used from mobile devices.
   - Each business has a unique ULR for tracking a business performance history.

- The feed of the food safety rating system to Yelp will enable Yelp to have a rating and inspection history displayed for each food business on the Yelp website. This will enable a Yelp customer to see food safety rating information in the same page where they are reviewing overall business reviews. This will be added public health information available to consumers to assist in their dining decisions.

The metrics in the BAP are specific to the expansion of the search tool. For broader context, in addition to the metrics in this BAP, the program is conducting a comprehensive evaluation of the Food Safety Rating System as a whole. This evaluation includes a stakeholder process developed in partnership with Stanford University. As part of these joint efforts, the program will be examining food safety practices in businesses, hospitalization data, consumer and business perceptions of the rating system, and gathering community feedback and suggestions for ways to improve the rating system and general program operations. As part of ongoing continuous improvement monitoring the program will leverage the monthly stakeholder meeting to solicit customer feedback on search tool functionality etc...The evaluation will be conducted through 2018, and the program has an MOU with Stanford to continue to monitor the data impacts through 2020.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Number of restaurant grades online; number of website visits. Number of businesses' food safety ratings on Yelp.

3. *What is the current baseline for this measure?*
   At baseline, there were ~~There are currently~~ 5,130 businesses with ratings on the search tool. This is ~55% of the total number of businesses eligible to receive ratings. Additional restaurants will be added as they get converted to the new rating system. (Updated 02/2019)
   ~~KCIT is working to generate the report of number of visits to the webpage – page visit analytics are not currently built in, and KCIT is working to capture the information.~~
   ~~Rating data will be on Yelp.~~

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   The target is to have 100% of eligible businesses with a rating by the end of ~~2018~~ Q1 2019. Relevant rating data will be on Yelp. There are currently 8,313 businesses with ratings on the search tool. This is ~95% of the total number of businesses eligible to receive ratings.

   Upon request, KCIT will send EH basic analytics, like how many people visited that page. EH will need to send their request to **webteam@kingcounty.gov** asking for an automated monthly analytics report to be emailed to them. (Updated 02/2019)

5. *When is the benefit likely to be achieved?*
   The benefit of 100% of eligible businesses with a rating posted on Yelp is likely to be achieved by the end of ~~the 3rd quarter of 2018. Relevant data is likely to be posted on Yelp by Q1 of 2018.~~ Q1-2019. We are currently testing match rates with Yelp database and preparing documentation for to go Live on Yelp by the end Q1 of 2019. (Updated 02/2019)

6. *Summary table for Category #1:*

Outcome/Benefit	Measure	Baseline	Target	When the target will be achieved

Inform residents' decision making by providing online a single metric of food safety performance on public health search page	# of businesses with food safety ratings	5,130	8,830	~~12/31/2018~~ 3/31/2019 (Updated 02/2019)
Inform residents' decision making by providing online a single metric of food safety performance on public health search page	# of visits to the search tool and average amount of time spent on the tool	Original search tool averaged ~200 views per day, with an average of 30 seconds per view	Average of ~200 views per day with an average of 45 seconds per view	Monitored quarterly starting in 2018
Inform residents' decision making by providing online a single metric of food safety performance on Yelp reviews	# of businesses with food safety ratings on Yelp	Zero	100% of relevant businesses	~~3/31/2018~~ 3/31/3019 (Updated 02/2019)

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Increased site inspector efficiency	# sites inspected per day per inspector	6 sites/day per inspector	10 sites/day per inspector	By 12/31/2018

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in

improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
3. *Summary Table for Benefit Category #3:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	# of system outages per month	5 outages	No outages	By 06/30/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Updated 02/2019: This is an ongoing project. Key milestones achieved in 2017-2018 include a go-live for the new website search in 2017 and completion of the Yelp data feed development and automation in 2018. The Yelp integration is currently undergoing testing with an anticipated go-live in early 2019.

IT Project Benefits Achievement Plan (Version 2)

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

To complete this document fully, please read all of the colored sections and fill in the white cells. For assistance in completing this form, please contact your PSB analyst.

Department/Agency Name	Public Health / Jail Health Services
Project Title	Jail Health Services Electronic Medication Administration Project
Project Number	1116742

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: Danotra McBride, Deputy Director, Jail Health Services

Section 3. Who is involved in developing the Benefit Achievement Plan?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Harjinder Sandhu	Pharmacist / JHS	Process Owner
Bella Charurat	Pharmacist / JHS	Process Owner
Sean Dumas;	Nursing Supervisor/JHS	Process Owner
Shawna Harris	FA III	Functional Analyst
TBD	TBD	Project Manager

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More

complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Funding Release	12/09/2013	Judy MacCully	Migrated data from approved project materials to the New Benefits Achievement Plan Version 2	2 hours
Project Implementation	12/13/2013	Judy MacCully	5-day Medication Management Kaizen Event that occurred November 4th – November 8th, 2013.	1 hour
Spring 2019 BAP Report	1/7/2019	Marietess Koslosky	General document review and formatting, and changes listed below: **Section 2.** Updated Business Owner Accountability. Previously Judy MacCully was listed; Danotra McBride now listed. **Section 3.** (1) Replaced previous listing "Payshan Lee" to "Bella Charurat". (2) Replaced previous listing "Patrick Kuritz" to "Shawna Harris". (3) Replaced previous listing "Danotra McBride" to "TBD" for Project Manager role. (4) Removed photo and text pertaining to a Lean Kaizen Event which took place in 2013. **Section 6. Category 2.** Update to Question 5. When is the benefit likely to be achieved? Previous statement: "Currently JHS plans to Go-Live in April 2014". Updated statement: "Currently JHS plans to Go-Live by 2019 year end."	1 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   Once the eMAR system is implemented, the JHS medication administration process will include technology enabled, streamlined steps for the preparation, administration, and documentation of medications. Removing the non-valued added steps will then allow a reallocation of the staff time to activities that add value to our patients. Clinicians and administrative staff will have more timely and improved access to the medication records along with improved accuracy and readability of medication administration data. In November 2013 JHS held a 5-day medication Kazien Event which served as a way of creating a foundation for an improved future state for medication management and the integration of the eMar technology to meet customer (our patient) needs. The expectation going into the event was **"To improve the overall process efficiency with higher first pass quality, with a more consistent, reliable, and connected production system that results in a 50% reduction in administrative non-value added activities."**

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   There are four areas where JHS expects to see measurable and demonstrated improvement. They include: a reduction in Pharmacy Technician staff time to print and organize paper Medication Administration Records; a
   reduction in Administrative Specialist II staff time to scan and perform quality assurance on scanned paper MAR; a reduction in nursing hours preparing for medication pass including time spent by nurses to review paper MARs for errors and patient refusals, comparing paper MARs with patient lists, and flagging MARs for narcotics; and, a reduction in the time it takes medical and psychiatric providers to retrieve paper MARs and adjust scanned images in order to review scanned MARs.

   A draft measurement plan was a deliverable from the Kaizen Event. The collection of the data and reporting on the measurement plan is the responsibility of the process owners: the site Pharmacy Supervisors and site Nursing Supervisors. The process owners are finalizing the measurement plan and this BAP will be updated as the information is available during the project implementation phases.

3. ***What is the current baseline for this measure?***
   The following are the baseline measures collected at the development of the business case:
   - Pharmacy Technician staff spend approximately 521 hours/year to print and organize paper MARs;
   - Administrative Specialist II staff spend 935 hours/year to scan and perform quality assurance on scanned paper MARs;
   - Nurses dedicate approximately 2,600 hours/year to review paper MARs in preparation for the med pass;
   - Medical and Psychiatric Providers spend about 380 hours per year retrieving and adjusting images of MARs for their clinical review.
   - The process walks taken as a part of the Kaizen Event recorded an overall process time from Provider Order to Med Administration of 323 min with a total of 42 steps. Of those 11 steps or 26% were value added.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
    The target for the printing and organizing of the paper MAR (Pharm Tech) and the scanning of the paper MAR into the EHR (Administrative Staff) is zero.

    The Nurse time should be reduced by 80% as they move to a more efficient method for med pass preparation. Provider (both Medical and Psychiatric) time initially will be reduced by 50% since they will have to access the Medication Administration application to look up and review the record. Eventually the time will be further reduced when the history of medication administration is moved into the EHR and becomes part of the patient's medical record.

    The expectation from the Kaizen event was that there would be a 50% reduction in non-value added and administrative tasks in the medication management process.

5. ***When is the benefit likely to be achieved?***
    Within 30 days of implementation JHS will realize the above benefits. Currently JHS plans to Go-Live by the end of Quarter 2 2020.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	*2 day processing time* *20 percent of purchases are receiving prompt payment discounts* *$200,000 savings*

Status as of 01/07/2019:
Following a briefing with the CIO and PRB, project management has transitioned from the PH HIT team to JHS and the scope of the project will be for Public Health to procure an eMAR-only solution. The PH HIT Team will separately continue to explore other options for future consideration. JHS is working on appointing a project team including the hiring of a new resource to serve as Project Manager. JHS plans to Go-Live by the end of Quarter 2 2020, and anticipates the start of benefit realization within 30 days of implementation.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

Department/Agency Name	Department of Public Health – Emergency Medical Services Division, Community Programs Section
Project Title	Regional Emergency Medical Dispatch (EMD) and Telecommunicator-CPR (T-CPR) Quality Improvement (QI) Application Replacement (EMDQI)
Project Number	1123857 KCIT-DPH EMS EMD AND T-CPR QI APPLICATION REPLACEMENT

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Michele Plorde, EMS Division Director

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Michele Plorde	Director, EMS Division	Project Sponsor
Erik Friedrichsen	Community Programs Section Manager, EMS Division	Program Manager/Project Contact
Cleo Subido	EMD Program Administrator	EMD Training and QI Oversight
Julie Buckingham	Emergency Medical Dispatch (EMD) Quality Improvement (QI) Program/ Project Manager, EMS Division	EMD QI Manager
Dan Anderson	IT Project Manager - KCIT	IT Project Manager

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Checkpoint #2: PRB/KCIT 2015-2016 budget process	5/30/14	Julie Buckingham-Lofink/ Tracie Jacinto	New, initial draft	4 hours
BAP Update	2/10/15	Linda Culley/Dan Anderson	Draft update	30 min
BAP Update	2/11/16	Linda Culley	Significant draft rewrite due to changes in scope after cancellation of RFP	90 minutes
BAP Benefits Review	6/17/16	Linda Culley	Changed Business Owner, otherwise review only.	10 min
Close-out	3/8/18	Erik Friedrichsen	Edited to include information related to closing out project.	90 min
Project Cancelled	1/31/19	Erik Friedrichsen	Updated file to indicate the project is cancelled	5 min

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

	☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public
	☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services
	☐ Category #3: Maintaining service levels by replacing or upgrading older technology
	☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Although this project is primary aligned with Category #2 benefits, this project will enable a regional solution for emergency medical dispatch quality improvement oversight that will directly benefit our constituents through the following two benefits that will stem from improved telecommunicator performance:

   Reduced number of emergency medical calls involving incorrect instructions given by telecommunicators (B1): Telecommunicators that receive and respond to 9-1-1 calls involving emergency medical situations may deal with a stroke patient or someone that may require CPR. Our telecommunicators act as our first line of defense to instruct the caller to perform life-saving techniques over the phone.

   Reduced number of emergency medical calls involving incorrect resources dispatched to incidents (B2): Another important aspect of the telecommunicator's role is to dispatch the correct medical resources to the scene of the medical incident. If a telecommunicator dispatches the incorrect medical resources to the scene, a person's life could be at risk. Telecommunicators may dispatch advanced life support resources or basic life support resources, which have varying levels or abilities to respond to and treat emergency medical situations. With the tough economic conditions that King County faces, dispatching the correct resources the first time, without error is critical to avoid any unnecessary expenses.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   As part of the EMS Division's ongoing quality improvement program, we will continue to track and the number of emergency medical calls involving incorrect instructions given by telecommunicators. Additionally, we will continue to track the number of emergency medical calls which involve inappropriate resources to be dispatched to the scene. The benefits of this project will be achieved

by observing a downward trend and reduction in incidents which involve incorrect instructions provided by telecommunicators or inappropriate resources being dispatched to the scene.

3. *What is the current baseline for this measure?*

   In 2013, EMS' QI staff identified 237 emergency medical calls which involved incorrect instructions given by telecommunicators. This represents 9% of total calls reviewed for EMD QI purposes. As of May 2014, telecommunicators are meeting performance standards goal set forth by the EMS Division.

   In 2013, 451 emergency medical calls involved inappropriate resources being dispatched. This represents 18% of total calls reviewed for EMD QI purposes.

4. *What is the target for this measure? (How much improvement will this project achieve?)*

   The EMS Division anticipates that 85% of all telecommunicators calls reviewed for QI purposes will involve the correct instructions provided to telecommunicators and the appropriate resources to be dispatched to respond to the emergency medical incident.

5. *When is the benefit likely to be achieved?*

   These benefits will likely to be achieved by the end of 2016 after this project is fully implemented, following the go-live of the solution at each dispatch agency.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   The EMS Division conducted a formal RFP procurement process in 2015 to identify and implement a best-fit, third-party commercial-off-the-shelf solution to optimally meet the business needs related to EMD quality improvement of both the County and our partner, regional dispatch agencies – Valley Communications Center (Valley Com) in Kent; North East King County Regional Public Safety Communication Agency (NORCOM) in Bellevue; Port of Seattle; and Enumclaw.

   The scope of this RFP was scaled back in Q2 of 2015, after learning that the 911 Communications Centers could not agree to a Regional Voice Recording system that would create a single repository of 9-1-1 recordings (accessible near real-time after a call is completed) for reasons of potential

security breach to their secure networks. The revised RFP continued to seek a vendor that could offer a quality improvement and feedback module, including the ability to provide playback calls, annotate calls, generate interaction analytics, and perform quality assurance, coaching, and performance reporting functionality. The RFP also leveraged third-party implementation services and 24/7 ongoing support and maintenance. Only one vendor submitted a proposal in response to the RFP. After thorough review, the project team determined this vendor was not qualified to provide the desired level of functionality and the cost of licensing for the software was too high and over budget. The RFP was withdrawn from procurement.

The EMS Division is currently preparing a scope of work to meet the desired QI functionality using an internal product similar to the EMS Division Cardiac Case Review linked to the EMS Online platform. We will continue to work collaboratively with our partners to develop a standardized approach to emergency medical dispatch quality improvement. The following internal service benefits are expected:

Dispatchers will have easy and timely access to the annotated call and feedback via an existing EMS Online Platform (B1)
Increased employee productivity to perform EMD QI reviews due to the reduction in EMD QI staff time and effort to manually copy, rename and send files to agencies, annotate calls using an internal process rather than OTS software, and have a single point of data entry. (B2)

Reduced time to provide QI feedback to telecommunicators and dispatch agencies (B3)

Dispatch agency supervisors will have easy and timely access to annotated audio feedback and reports and all agencies will have audit tracking capabilities to view if dispatcher viewed feedback, audio and annotation (B4)

2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
   We propose the following measures for each benefit listed above, followed by a brief description of indicators of success that the benefit has been achieved:

   Dispatchers will have easy and timely access to the annotated call and feedback via an existing EMS Online Platform (B1): This will be measured by using the audit tracking tool and evaluating the percentage of QI reviews retrieved and reviewed by dispatchers and supervisors. We will also survey dispatchers and supervisors to determine ease of use and satisfaction with retrieving EMD QI feedback via EMS Online and satisfaction with the annotated audio recording process.

   Increased employee productivity to perform EMD QI reviews due to the reduction in EMD QI staff time and effort to look for and identify audio recordings, manually copy, rename and send files to agencies, annotate calls using an internal process rather than OTS software, and have a single point of data entry. (B2): As each call is reviewed, the QI staff member utilizes a Microsoft Access database to enter approximately 50 to 60 data elements which is stored in a SQL database. EMD QI reports are then generated from SQL by logging in to the PH Portal Reports section. The reduction in time to identify audio recordings, manually copy, rename and sent files and reports to agencies will result in significant gains in employee productivity in performing more QI reviews.

   Reduced time to provide QI feedback to telecommunicators and dispatch agencies (B3): After gaining access to call recordings, EMD QI staff must perform its QI reviews to provide feedback and

to recommend training targeted to correct deficiencies in telecommunicator performance or dispatch agency systems. Currently, it takes anywhere between four- (4) to six (6) weeks to provide QI feedback to the telecommunicator due to the limitations of the current system to efficiently generate reports by dispatch agency and individual telecommunicator. We expect to reduce this time to 2 weeks or less.

Dispatch agency supervisors will have easy and timely access to annotated audio feedback and reports and all agencies will have audit tracking capabilities to view if dispatcher viewed feedback, audio and annotation (B4): The EMS Online platform provides a familiar and user friendly front end for agency staff to retrieve their QI feedback. The annotated process will allow call receivers to see QI feedback tied specifically to their audio recordings. In addition, supervisors will no longer need to enter their Voice Recording system and look for and retrieve audio recordings.

3. *What is the current baseline for this measure?*
   Dispatchers will have easy and timely access to the annotated call and feedback via an existing EMS Online Platform (B1): Dispatchers do not currently have direct access to annotated call feedback and reports. The current QI review does not include audio annotation and reports are emailed to supervisors who must then review the report with the dispatcher. The average baseline for the number of audio's and reports presented to dispatchers is approximately 45%.

   Increased employee productivity to perform EMD QI reviews due to the reduction in EMD QI staff time and effort to manually copy, rename and send files to agencies, annotate calls using an internal process rather than OTS software, and have a single point of data entry. (B2): QI reviews are performed on a daily basis. The process to identify which calls to review once all audio call files are downloaded takes approximately two (2) to three (3) business days each month. If the new process is implemented, there would be a decrease in the amount of time used to identify which calls to review because the QI reviewers would be able to identify calls taken in the current eCBD Software Tool. Currently, EMD QI staff performs approximately 2,400 call reviews annually.

   Reduced time to provide QI feedback to telecommunicators and dispatch agencies (B3): Once a call is reviewed for QI purposes, it takes approximately four to six weeks after the call is received to provide feedback to individual telecommunicators due to inefficiencies in the current process which require EMS EMD QI staff to have to generate individual feedback reports and mail it to the dispatch agencies to be disseminated and reviewed by the telecommunicator.

   Dispatch agency supervisors will have easy and timely access to annotated audio feedback and reports and all agencies will have audit tracking capabilities to view if dispatcher viewed feedback, audio and annotation (B4): Supervisors currently must retrieve the audio on their own if they desire to review the audio and the QI report simultaneously with the dispatcher. EMS QI reviewers do not have tracking and audit capabilities. Baseline is zero.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   Dispatchers will have easy and timely access to the annotated call and feedback via an existing EMS Online Platform (B1): The target is 75% of calls reviewed by dispatcher in Year 1, 85% in Year 2 and 95% in Year 3.

   Increased employee productivity to perform EMD QI reviews due to the reduction in EMD QI staff time and effort to manually copy, rename and send files to agencies, annotate calls using an internal

process rather than OTS software, and have a single point of data entry. (B2) : We anticipate that EMD QI staff will save approximately two (2) to three (3) business days each month across two EMS staff members that perform QI to not have to manually identify audio files from our regional dispatch agencies' audio recording systems. The target for this measure is to perform 300-400 more EMD QI call reviews annually after this project is implemented at each of the dispatch agencies.

Reduced time to provide QI feedback to telecommunicators and dispatch agencies (B3): We anticipate that EMD QI call review feedback will be provided back to the telecommunicator within one week of completion of the report. Monthly reports for the dispatch agency will maintain the current schedule and will be delivered approximately one week after the close of each month.

Dispatch agency supervisors will have easy and timely access to annotated audio feedback and reports and all agencies will have audit tracking capabilities to view if dispatcher viewed feedback, audio and annotation (B4): 100 % access of the report by supervisors

5. ***When is the benefit likely to be achieved?***
   We anticipate that all benefits will be achieved immediately after the solution is implemented and utilized by each dispatch agency. EMS will monitor and track the benefits achieved as a result of this project over the course of one year after go-live at each dispatch agency.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: *This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.*

Example: *This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.*

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   The current technologies being used do not fully align with King County's technology standards as a Microsoft Access database is still being used to enter data elements. Additionally, the reports that are currently available do not fully meet the business' needs. The current EMD QI solution (Microsoft Access, Microsoft SQL Server, Microsoft SQL Server Reporting Services reports) had recently been upgraded to address short-term business needs, however, it does not provide a regional EMD QI solution that may be utilized by other non-King County dispatch agencies (Valley Com, NORCOM, Port of Seattle, Enumclaw). The average life cycle replacement for the new technology is approximately four to five years prior to a major system upgrade.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
   Not applicable.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit

analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

3/8/2018 Project Close-Out

Originally the project was to streamline the data collection aspect of performing quality-improvement (QI) on EMS calls in King County, with a design that allowed upload of audio and annotation of the calls. The calls undergoing QI would then be uploaded to a secure site that allowed the dispatch centers to listen to the call, see the annotation, and even participate in the QI effort.

For this project, $23K was expended during the course of the efforts. These charges are for IT staff time to create the RFP and re-scope this project. There was only one response back to the RFP that did not meet the business requirements or budget. After the RFP, a re-scope was completed with the decision to build the program internally. At this time the dispatch centers, based on updated call center software and organizational restructuring, decided to perform some elements of QI internally. With the rescope and delays to build a program internally, individual call centers deciding to handle portions of QI internally, this project no longer meets King County needs. Therefore, the project has been cancelled.

1/31/2019 Project Cancelled, Final BAP.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.

For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Public Health
Project Title	PH-HIT Improvement Project
Project Number	1113974

Executive Summary

The HIT project will allow PH and its staff more timely access to patient records and to improve the quality, safety and efficiency of assistance provided to clients, to help more deeply engage patients and families in their health care, while protecting privacy and security of private health information as directed by federal law and reducing health disparities across the community. This will all be accomplished within the Meaningful Use standard as set out in the American Recovery and Reinvestment Act which will provide approximately $~~4.3M in revenue over the next 6 years~~ ~~4.1M in revenue over the next 4 years~~ 3.2M in revenue over the life of the program (Updated 02/2019). Details are provided below. For more information on Meaningful Use Standard see https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html?redirect=/ehrincentiveprograms**.**

This project will plan, purchase and implement a federally qualified electronic health record (EHR) that will meet the entire Public Health Department's varied health requirements. The legacy system that the Public Health Department uses to register and schedule patients and to bill for patient services will lose vendor support at the end of 2014. An extension is being negotiated for 2015. No upgrades are available and as a result, Public Health must replace the system and views this as an important opportunity to achieve a consistent, efficient and unified system for the entire agency.

Public Health plans its new system to include an integrated EHR including Jail Health Services integrated practice management system (PMS), electronic dental systems, with a robust and scalable system that will interoperate successfully with business requirements for Public Health and meet the federal standards. This project is expected to span multiple years.

Project Success and Benefits

Success of this project can be measured by the realization of benefits as outlined in section 6 in this document. In addition, the project has established a Vision and Goals to guide the success of the project. They are:

Vision

Public Health will develop and maintain state of the art tools and systems to; protect the public's health, promote healthy communities and provide an integrated, high quality, efficient public health and clinical services.

Goals/Objectives

- Better information to provide care for the patient
- More efficient care

- Engaging the patient in their care
- Providers will have more time to engage their patients and prioritize health care and whole patient care
- Better care across systems through integrated health information
- More timely access to information
- Assurance of adequate privacy and security protections and accountability of access to safeguarded Protected Healthcare Information as required by Federal Law
- Benefit: Meet Federal Meaningful Use Criteria which will also allow for Public Health to receive Medicaid Incentive Dollars

Alignment to Business Strategy

The PH-HIT project is strategically aligned with the broader vision and goals of the County through the Public Health Operational Master Plan (PHOMP) and the King County Strategic Plan.

- Develop and maintain state of the art tools and systems to; protect the public's health, promote healthy communities and provide reliable, high quality public health services.
- Adhere to sound operational practices and systems including assuring the transparency, cost effectiveness, and accountability of its activities, services and outcomes.
- Raise capability to match modern public health practice needs with the organizational attribute domains of workforce quality, obtain information for decision making, basic systems and infrastructure.
- Rapidly and accurately assess key infections and environmental health threats and response efforts through selected enhancements in: (1) Collection and analysis of electronically transmitted data (2) Methods for measuring the health of vulnerable populations (3) Capability to monitor the health care delivery system.
- Improve the capability of Public Health to fulfill its functions through selective enhancement of key system elements including, modernizing key business tools and administrative systems to improve business efficiency.

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Michael Gedeon, Chief Administrative Officer

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Kristi Korolak	HSA II	Project Manager
Michael Gedeon	Chief Administrative Officer	Project Sponsor
~~Lisa Hillman~~ Diep Nguyen	IT Service Delivery Manager	Steering Committee Member
~~David Bibus~~	~~Division Manager, Prevention~~	Steering Committee Member
~~Donna Allis~~ (02/2019)	~~Deputy Division Director, Prevention~~	~~Steering Committee Member~~
Dennis Worsham (02/2019)	Division Director, Prevention	Steering Committee Member
~~Moffett Burgess~~ (02/2019)	~~Dental Director~~	~~Steering Committee Member~~

Maureen Peterson	~~Finance & Administrative Services Manager, CHS~~	~~Steering Committee Member~~
~~Vacant~~	~~CFO~~	~~Steering Committee Member~~
~~Dorene Hersh~~	~~Chief of Nursing~~	~~Steering Committee Member~~
~~Bill Kehoe~~	~~Chief Information Officer~~	~~Steering Committee Member~~
~~Judy MacCully~~	~~Regional Health Admin, JHS~~	~~Steering Committee Member~~
TJ Cosgrove	Division Director, CHS	Steering Committee Member
~~Ben Sanders~~ Bette Pine	Division Director, JHS	Steering Committee Member
~~Cristin Burris~~ Jason Ortiz	PPM IV	HIT Project

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Budget Process	2/7/14	Jeff Boudreau Cristin Burris	New, initial draft	
Funding Release Request	8/1/14	Cristin Burris Wendy Seese	Minor updates	30 minutes
2014 Annual update	3/12/15	Cristin Burris	Minor updates for clarification purposes. Added targets achieved to-date.	90 minutes

2015 Annual update	2/11/16	Cristin Burris	Minor updates for clarification purposes. Added targets achieved to-date.	90 minutes
2016 Annual update	02/17/17	Jason Ortiz	Minor updates	90 minutes
Spring 2019 BAP Report	02/06/19	Jason Ortiz	Minor updates	60 minutes

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

◉ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Please respond to each question listed below rather than provide a summary.

Public Health will know that it has achieved benefits through reviewing reports and data to demonstrate meeting the Meaningful Use Standard outlined in the American Recovery and Reinvestment Act. Benefits will begin at the time that the first clinic go-live can meet Meaningful Use criteria and continues as each clinic is rolled-out and meets criteria.

B-1 Benefit: Better information to provide care for the patient through integrated health information.
1. *Describe why you expect the proposed IT investment to produce the benefit?*
   - When providers can find the right information or critical information better, they make better and more personalized treatment decisions.
   - Electronic health records provide access to information that otherwise can be "buried" or misfiled in thick paper charts.
   - Prescriptions and prescription refills with pharmacies will be managed through the provider using e-prescribing technology, reducing errors and waiting times.

- Care provided by other participating organizations is accessible through records share technology, so patients' providers can quickly get "up to date" not matter where the patient last received care.

2. *How will you measure the benefit?*
Patients seen by a ~~medical~~ health care* provider will have :
- At least one problem identified or indication that no problems are known on the problem list.
- At least one medication allergy identified or indication that no allergies are known on the allergy list.
- Height, weight and blood pressure recorded.
- Smoking status recorded.

Patients seen by a provider who have medication <u>or lab</u> orders will have:
- ~~At least one medication on their medication list~~ <u>Medications and labs</u> ordered using Computerized Physician Order Entry (CPOE).
- Prescriptions transmitted electronically to identified pharmacy.

3. *What is the current baseline for this measure?*
The use of paper records means that baseline data for any of these activities is difficult to know, except for those activities that do not occur in the absence of CPOE (electronic medication orders, electronic transmission of medication orders to identified pharmacy).

4. *What is the target for this measure?*
Patients seen by a ~~medical~~ health care* provider will have all of the above that are age and developmentally appropriate for each visit they access care at a site using the electronic health record. Our target is to achieve 80% of the above for each provider clinic visit once all sites have implemented the electronic health record. These targets exceed the federal mandates.
<u>* A medical health care provider is defined as an independent health care provider (MD, Nurse Practitioner, Physician Assistant) in Primary Care, Family Planning, STD Clinic, TB Control program or Jail Health Services.</u>

B-2 Benefit: More efficient care.
1. *Describe why you expect the proposed IT investment to produce the benefit?*
- Results and information on tests, treatments and procedures that were provided at other Public Health Sites or external providers are more readily available and will not need to be repeated.
- Patients won't have to repeat the same history over and over, since the electronic health record allows for quick review and update

2. *How will you measure the benefit?*
Patients seen by a provider who have clinical lab tests ordered will have their results either in a positive/negative or numerical format incorporated in the EHR as structured data.

3. *What is the current baseline for this measure?*
0%

4. *What is the target for this measure?*
Our target is to achieve 80% of the above for each provider clinic visit once all sites have implemented the electronic health record. These targets exceed the federal mandates.

B-3 Benefit: Engaging the patient in their care.

1. Describe why you expect the proposed IT investment to produce the benefit?
- At the end of every visit, patients will be offered a printed visit summary, as well as health education and a list of necessary follow-up items.
- Patients will be able to access their record electronically through a patient portal.

2. How will you measure the benefit?
Patients seen by a ~~medical~~ health care* provider will have clinical summaries provided after office visits <u>and/or access to their patient portal.</u>
<u>Patient specific education resources are provided to patients.</u>

3. What is the current baseline for this measure?
0%

4. What is the target for this measure?
<u>For patients seen by a</u> ~~medical~~ <u>health care* provider,</u> our target is to achieve 80% of the above for each provider clinic visit once all sites have implemented the electronic health record. These targets exceed the federal mandates.
<u>* A medical health care provider is defined as an independent health care provider (MD, Nurse Practitioner, Physician Assistant) in Primary Care, Family Planning, STD Clinic, TB Control program or Jail Health Services.</u>

B-4 Benefit: Providers will have more time to engage their patients and prioritize health care and whole patient care.

1. Describe why you expect the proposed IT investment to produce the benefit?
- When providers don't have to wait for paper records to be found and spend time "digging" through paper records to find key information, they can spend more time examining and counseling their patients
- Electronic health records provide summary screens so that *all* aspects of a patient's care can be considered, including the psychological and social factors affecting health and wellness.

2. How will you measure the benefit?
Patient and provider surveys post implementation

3. What is the current baseline for this measure?
No current baseline

4. What is the target for this measure?
Patients and providers will rate their level of satisfaction with time spent in encounters post implementation at "Satisfied" or higher 50% of the time.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Please respond to each question listed below rather than provide a summary.

B-5 Benefit: More timely provider access to information.

1. Describe why you expect the proposed IT investment to produce the benefit(s).
Availability of complete patient records/health information <u>that leads to better outcomes for patient care</u> and for clinical decision making

2. How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)
Records available to provider for patient visit at another <u>King County</u> ~~site~~ <u>location or with other providers.</u>

3. What is the current baseline for this measure?
66%

4. What is the target for this measure? (How much improvement will this project achieve?)
99%

5. When is the benefit likely to be achieved?
Benefits will begin at first clinic go-live (December 2013) and continue through the roll-out of each clinic location.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

<u>**B-6 Benefit: Assurance of adequate privacy and security protections and accountability of access to safeguarded Protected Healthcare Information as required by Federal Law.**</u>

1. Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.
All Certified electronic health records (EHR) must comply with Meaningful Use requirements, which include protecting electronic health information created or maintained by the Certified EHR through the implementation of appropriate technical capabilities. The EHR will be able to provide timely reports on workforce access to Protected Health Records to meet HIPAA requirements.

2. If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.
Please respond to each question listed below rather than provide a summary.

<u>**B-7 Benefit: Meet Federal Meaningful Use Criteria which will also allow for Public Health to receive Medicaid Incentive Dollars.**</u>

1. Describe why you expect the proposed IT investment to reduce costs?
Public Health will be eligible to receive approximately ~~4.3 million over 6 years 4.1 million over 6 years~~ <u>3.2 million over the life of the program (02/2019)</u> if additional funds by implementing a Certified Electronic Health Record and using the system in a meaningful way as out lined in the Meaningful Use Standards criteria. If Public Health does not implement the system we will not receive the funds.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   Receipt of payment.

3. *What is the current baseline?*
   N/A. PHSKC is not currently meeting Meaningful Use criteria.

4. *What is the target for this measure? (How much savings will this project achieve)*
   Revenue is projected to be ~~4.3 million over 6 years 4.1 million over 6 years~~ 3.2 million over the life of the program (02/2019)

5. *When is the cost reduction likely to be achieved?*
   Benefits will begin at the time that the first clinic go-live can meet Meaningful Use Criteria and continues as each clinic is rolled-out and meets criteria for five years.

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

This is not a final BAP. (02/2019)

Metric Description	Metrics	Baseline	Target	Actual
Category 1 Benefits (Primary)				

B-1 Better information to provider care for the patient through integrated health information	1. At least one problem or no known problem on problem list 2. At least one medication allergy or no know allergies on allergy list 3. Vitals: Height, weight and BP recorded 4. Smoking status recorded	Unknown	80% of provider clinic visits	For visits at live clinics in 4th Quarter 2014: 1. Problem list = 83% 2. Med Allergy = 98% 3. Vitals = 83%
	Note: Measures 1-4 for B1 are no longer part of the Meaningful Use program and OCHIN no longer tracks/reports on them. Goal achieved 4th Quarter 2014.			
	5. Medication and lab orders through CPOE 6. Electronic prescribing (E-Rx)	0%		For visits at live clinics in 4th ~~Quarter~~ 20~~15~~6: 1. CPOE = ~~99 100~~ 99% 2. E-Rx = ~~92 94~~ 86%
	Note: OCHIN no longer tracks these measures at an organizational level they are reported by eligible providers for the MU program, 2016 is the most recent organizational numbers. (02/2019)			
B-2 More efficient care	Patients seen by a provider who have clinical lab tests ordered will have their results either in a positive/negative or numerical format incorporated in the EHR as structured data.	0%	80% of the patients for each provider clinic visit	To be measured once all sites have implemented the electronic health record
B-3 Engaging the patient in their care	1. Provide electronic access to patient portal 2. Patient specific educational resources	0%	80% or above	For visits at live clinics in 4th ~~Quarter~~ 20~~15~~6: 1. Patient Portal = ~~66~~ 47% 2. Ed resources = ~~71~~ 74%
	Note: OCHIN no longer tracks these measures at an organizational level they are reported by eligible providers for the MU program, 2016 is the most recent organizational numbers. (02/2019)			
Category 2 Benefit (Secondary)				
B-5 More timely provider access to information	Records available to provider for patient visits at another King County location or with other providers	66%	99%	For all patients that have been seen since the clinic went live on Epic, 99% of the time the record is now available.
Category 3 Benefit (Secondary)				
B-6 Assurance of adequate privacy and security	n/a	n/a	n/a	

protections and accountability of access to safeguarded Protected Healthcare Information as required by Federal Law				
Category 4 Benefit (Secondary)				
B-7 Meet Federal Meaningful Use Criteria which will also allow for Public Health to receive Medicaid Incentive dollars	Receipt of payment	N/A	~~4.3 million over 6 years 4.1 million over 6 years~~ 3.2 million over the life of the program (02/2019)	~~$1,147,500 has been received as of Feb 10, 2016. Another $42,500 is pending approval.~~ $2,006,000.00 has been received (02/2019).

IT Project Benefits Achievement Plan (Version 2)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

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4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Public Health – Seattle & King County (PHSKC), Jail Health Services (JHS) Division
Project Title	DPH KCIT JHS Digital X-Ray
Project Number	1111943

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Michael Gedeon, Chief Administrative Officer, Public Health

Section 3. Who is involved in developing the BAP?

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Name	Title / Agency	Project Role
Thomas Thompson	Business Operations Manager, Jail Health Services Division	Project Manager
Casey Cassidy	IT Manager, King County Information Technology Department (KCIT-PH)-Public Health	IT Project Manager
Tracie Jacinto	IT Business Analyst, KCIT-PH	IT Business Analyst

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

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4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date

those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Example: Conceptual review	7/1/13	Jack Smith	New, initial draft	2 hours
Example: Funding release	11/1/13	Jack Smith	Changed the metrics we will measure	2 hours
Project implementation	1/7/2014	Tracie Jacinto	New, initial draft	1 hour
2015 Annual update	2/16/16	Brandi DeFazio	Status update	10 minutes
2016 annual report - BAP update for an ongoing project	2/2/17	Brandi DeFazio	Status update	10 minutes
2016 Annual Report revised update for Council	8/1/17	Michael Gedeon	Revised update for Council 2016 Annual Report review	5 minutes
2018 annual report - BAP update for an ongoing project	1/7/19	Laura Hutchinson	Status update	10 minutes

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology or reducing risk of system failures
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐ Category #2: Internal service benefits: Improving internal operations, including the quality or

quantity of internal services

☑ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
   This project will replace outdated, 25-year old computed radiology (CR) x-ray equipment at both the King County Correctional Facility (KCCF) and Maleng Regional Justice Center (MRJC) with digital x-ray equipment. The 25+ years of productive use for this x-ray equipment, far exceeded the expected life of this type of technology. JHS will implement a modern digital x-ray system that will be result in cost savings for JHS and will not rely on environmentally hazardous chemical-based film processing that can be operated by King County JHS nursing staff versus contracted radiology staff. The average life cycle replacement for digital x-ray technology is approximately 20 to 25 years.

   Digital x-ray equipment will allow JHS to perform follow-up orthopedic X-rays in-house at King County's correctional facilities where the patient is currently being housed. Thus, this project reduces the inherent security risks and costs associated with securely transporting inmates in-and-out of the facility to a non-secured environment. This improves JHS clinical systems infrastructure and transforms a common business practice, patient X-rays, to a more streamlined and efficient process and allows for images to be stored with the patient's other clinical information in the Electronic Health Record.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
   This project will allow King County to meet regulatory compliance to provide healthcare to inmates. This project will also reduce the risk of inmate escape incidents and the risk of injury to DAJD corrections officers during the transport process from the County's correctional facilities to the hospital. Per the Department of Juvenile and Adult Detention:

   Transporting inmates is among the most dangerous, but necessary assignment for a corrections officer. While a majority of prisoner transports are accomplished without incident, prisoners have escaped killing or injuring an officer, injured themselves or been killed, harmed, or killed innocent citizens. On average there were 309 escapes reported annually in the United States.
   - 84% of the incidents, the prisoner escaped from the back seat of the caged vehicle.
   - 12% of the prisoners were injured and 3% were killed.
   - 12% of the officers were injured and less than 1% of the officers were killed as a result of the incident.

   The transport process represents some inmate's last and best chance for escape.

   Additionally, a prisoner injured during a transport may claim a Fourth Amendment right violation for the misuse of restraints, excessive use of force, and a failure to provide medical care. Additional

examples include: an estate of a deceased prisoner may file a lawsuit against the department for the wrongful death of a prisoner during transport; or a lawsuit may be filed by a citizen who was harmed or killed due to a prisoner escape during transport. Some federal courts have held that the transporting department is liable for a prisoner's behavior during an escape from a transport or an injury incurred during the transport process.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
   Acquiring digital x-ray equipment at both sites will improve internal operations by enhancing business processes which will reduce or eliminate the following costs:
   - Cost to purchase chemicals and x-ray film: ~$5,000 per year
   - Cost to transport inmates from correctional facilities to hospitals for follow-up x-rays: ~$20,500 to transport approximately 155 inmates; which includes up to three hours of Court Detail transport time, transport preparation, transport, and return

2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
   JHS will monitor the supplies and professional services expenses associated with providing x-rays to patients. A benefit will be achieved if JHS incurs little to no costs associated with the two items listed above

3. ***What is the current baseline?***
   - Cost to purchase chemicals and x-ray film: ~$5,000 per year
   - Transport inmates from correctional facilities to hospitals for follow-up x-rays: ~$20,500 per year to transport approximately 155 inmates; which includes up to three hours of Court Detail transport time, transport preparation, transport, and return

4. ***What is the target for this measure? (How much savings will this project achieve)***
   JHS targets that it will avoid incurring the following costs
   - Cost to purchase chemicals and x-ray film: ~$5,000 per year
     Transport inmates from correctional facilities to hospitals for follow-up x-rays: ~$20,500 per year

5. *When is the cost reduction likely to be achieved?*

   JHS anticipates that these benefits will be achieved by Q4 2014, immediately after the project is completed and the digital x-ray equipment is being fully utilized at both correctional facilities.

   <u>Update 2/16/16</u>: This project has been put on hold pending implementation of the Epic electronic health record, currently scheduled for May of 2016. Implementation planning for Digital X-Ray will begin again as resources become available starting in Q3 of 2016.

   <u>Update 2/2/17</u>: Implementation planning is underway, including discussions with Harborview Medical Center for an image storage solution.

   <u>Update 8/1/17</u>: Roughly, the implementation timing should be 2018 but could be the end of 2017.

   <u>Update 1/7/19</u>: Request was made to extend funding through 5/31/19. Bids have been received and are being negotiated. Procurement process will begin once negotiations are complete.

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing time, annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

<u>Update 3/18/19</u>: Request was made to extend funding through 5/31/19. Bids have been received and procurement is being initiated. The project is on track to achieve risk reduction benefits, however it now appears unlikely that the cost reduction benefits will be achieved due to updated costs of equipment and equipment maintenance in the years since the project was originally conceived.

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	Department of Public Health – Medical Examiner's Office
Project Title	MEO Case Management System Upgrade
EBS Project Number	1132329
Project Timeframe	January 2, 2018 – ~~December 31, 2018~~ June 30, 2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Dennis Worsham, Director, Prevention Division, DPH

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Richard Harruff	Chief Medical Examiner, KCMEO	Business Representative
Louise Davis	Chief Administrator, KCMEO	Business Representative
Anthony Stewart	Deputy Chief Administrator, KCMEO	Business Representative
James Sosik JR	Lead Medicolegal Death Investigator, KCMEO	Business Representative
Jessica Mahowald	Lead Forensic Autopsy Technician, KCMEO	Business Representative
Diep Nguyen	PH Service Delivery Manager, KCIT	KCIT Representative
Tesia Forbes	Budget & Policy Administrator, Prevention Division	Proposal Development/PSB liaison
Amy Harris (in Tesia's leave absence)	Accounting Manager, Prevention Division	Proposal Updates/PSB liaison

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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Budget Process	7/18/2017	Tanya Hannah	New, initial draft	2 hours
Budget Process	7/24/2017	Louise Davis	Review with updates to sections 2, 3, & 5	1 hour
Budget Process	7/24/2017	Tesia Forbes	Review & update doc with Diep and Louise	0.5 hour
Budget Process	8/8/2017	Tesia Forbes	Update BAP and CBA	2 hours
Budget Process	8/16/2017	Amy Harris for Tesia Forbes	Review and update BAP with Louise	1 hour
Budget Process	10/30/2017	Amy Harris/Louise Davis/Tony Stewart	Review and update BAP	2 hours
Spring 2019 BAP Report	1/28/19	Louise Davis	Review and update the BAP	0.5 hour

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

□ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

□ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

□ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   An upgraded, cloud-based case management system will be more reliable and require less re-work which will free up investigator time to provide more/higher quality service to residents. Additionally, Investigators will be able to enter and access data in the field, which will also improve customer service.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   The upgraded case management system will reduce the amount of time it takes to process requests from residents, attorneys, State agencies, insurance companies and other customers for reports, data, and information regarding cases. The benefit will be measured by recording the current length of time it takes to process requests, and comparing this to the processing time within the new system.

3. *What is the current baseline for this measure?*
   Current baseline is anywhere from one day to two weeks.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   The target is a response within 48 hours for all requests.

5. *When is the benefit likely to be achieved?*
   The benefit will be likely be achieved within six months of full implementation (Q2.2019)
   Update 1/28/19: The project is delayed, therefore implementation is delayed. The benefit will likely be achieved in Q4 2019. Even though we are piggybacking off the Ramsey County contract, there has

been a lot of negotiation over such things as definitions of an outage, liability, and the uniqueness of our being a Medical Examiner within Public Health. Initially, VertiQ was resistant to some of our requirements for HIPPA and business associates.

A cause of some delay in the contract signing has also been the slow reveal of versions, features, manuals, and reports on the part of VertiQ. For example, we based our initial gap analysis on the older test version of the CME software we were provided, only to learn later that many of our concerns had already been addressed in two subsequent versions, or that features that we thought required customization could now easily be configured by the user.

Some delay has been caused by the fact that VertiQ is a small company with a backlog of several customers ahead of us in the queue.

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

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Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of*

existing technology and the average life cycle replacement for this type of technology.
This business case addresses the upgrade of the case management system for the King County Medical Examiner Office (MEO). Currently, the MEO uses a third party case management system known as VertiQ/VAST. This system was originally implemented in 2004, and at that time an outside developer was employed to customize the system. In 2013 an upgrade to the original system occurred, but the original customization was not compatible with the new version. The vendor is unable to recognize and support the current version.

In its current state, the system is capable of determining statuses and managing other case information. However, the system is basic, outdated, full of defects, and lacks many key components needed to support a productive and efficient workflow. In addition, MEO staff members track statuses of open cases by adding/removing relevant information to a physical whiteboard. This manual method, which is extremely time consuming, susceptible to inaccuracies, and inefficient, has become a major pain-point for the MEO, as the whiteboard often requires multiple updates throughout the day. An upgraded case management system would provide for an electronic whiteboard integrated with the system, updated just in time and viewable from anywhere in the field.

The MEO is an essential service and must have a system that can address any declared emergency within King County and the City of Seattle. In the event of a mass fatality where traumatic injury is the mechanism (e.g. plane crash or bomb detonation), it is imperative that KCMEO be able to quickly identify and link cases so that dismembered remains can be reunited.

KCMEO supports and coordinates the process of organ and tissue donation. Just one death can help or save between 150 and 300 lives. Through July 31, 2017 KCMEO has been involved in the donation and transplantation of 316 organs, 750 tissue grafts, and 88 corneas. These activities directly affect the quality of life for many thousands of people; an upgraded case management system will increase the likelihood that this activity is continued and that more potential donors are identified and harvested before the narrow window of opportunity passes.

In 2016 King County had over 14,000 deaths, of which 2,500 were jurisdictional cases to KCMEO. Regardless of jurisdiction, the circumstances of every death in King County are reviewed by the KCMEO Disposition Authorization Program. This program allows for the detection of accidental deaths, homicides, suicides and suspicious deaths before burial or cremation takes place, essentially keeping our communities safer and less violent. As King County continues to grow, the number of deaths is expected to increase. An upgrade to the case management system would provide for more efficient handling and tracking of these cases as well as accurate and up-to-date information so that staff remain aware of norms, practices and requirements when handling the individual remains. Also, as a reminder, the MEO handles individuals that fall within the ESJ aspect.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*
The MEO experiences issues daily with the current, heavily customized VertiQ/VAST system. The impact of these issues would be significant in a mass fatality situation, when the immediate need for access to accurate information exponentially increases. This project will reduce risk to an essential service by addressing known issues with the current system such as:

- **Physical whiteboard used to track case data-** Case information is individually looked up in

VertiQ, manually added to the whiteboard, and manually updated multiple times per day which is inefficient and creates a risk of inaccurate data.

- **Inability to set auto-refresh intervals-** When the application window is open and case information is added by another user, inaccurate information may be viewed if the system doesn't automatically refresh as these changes are made.

- **Limited search and filter capabilities-** Search functions are limited to specific dates, names or case reference numbers; without this information users must tediously review date ranges to locate the record. Similarly, case list cannot be filtered, resulting in users forced to view one list containing all cases.

- **Lack of capacity for user customized/created reports and automated reporting-** Report templates with designated categorizations must go through KCIT. Users are unable to set ad hoc preferences based on desired criteria, resulting in users being forced to query/view data that is not needed. Additionally, users cannot email reports from the system.

- **System window within the application will not fit to frame-** Users must increase their actual PC's zoom settings so that they can see case details in bigger fonts.

- **Malfunction of cursor within the program-** When typing case information, cursor randomly "jumps" to different lines, fields, etc. Unless closely paying attention, users may type into incorrect areas of the record.

3. *Target Project Completion:*
   December 31, 2018
   Update 1/28/19: The project is delayed, target project completion is June 30 2019.

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service If. this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*

3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 Million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10% of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30% of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20% of purchases are receiving prompt payment discounts* • *$200,000 savings*

Update 1/28/19: This is an ongoing project. See section 6 for a status update and progress to date.

Benefit	Measure	Baseline	Target
The existing case management system produces inherent errors due to customization. An upgraded case management system will reduce the amount of time it takes to edit data entry. The time saving will enable investigators to provide more/higher quality service to residents.	Time it takes to respond to residents' requests for reports or other information.	Anywhere from one day to two weeks	Response within 48 hours for all requests (Q2.2019)
Investigators will be able to enter and access data in the field, which will also improve customer service.	Time it takes to enter a case.	1-2 hours	30-60 minutes
Reduction in reported system errors/issues, bugs, and outages to KCIT	# of issues on the SharePoint site, as well as the length of time the issues listed have remained unresolved.	TBD by end of 2017	Reduction of 75% of the system issues (Q2.2019)

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	King County Regional AFIS Program (KCRA)
Project Title	AFIS Replacement
Project Number	1133726
Project Timeframe	12 months (2019)

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Carol Gillespie, Manager, King County Regional AFIS

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Carol Gillespie	Regional AFIS Manager / KCRA	Business Owner
Patty Klopp	PPM IV / KCRA	Project Manager
Boyd Baumgartner	Latent Print Examiner / KCRA	Subject Matter Expert
Ryan Han	Senior Systems Engineer / KCRA	Subject Matter Expert

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	1/24/18	Patty Klopp	New, initial draft	3 hours
IT Investment Process	5/24/18	Patty Klopp	Modified measures	3 hours
Spring 2019 BAP Report	1/11/19	Patty Palmer	Review only	5 minutes

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.

1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒

Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Residents are able to schedule athletic fields over the Internet and make payments by credit card.	% of customer satisfaction (to be determined through a survey)	45%	95%	By 12/31/2018
Example: Reduced time for customers to obtain a license	# days it takes to issue licenses	5 business days	1 business day	By 09/30/2018

CATEGORY #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Because the MorphoBIS AFIS cloud environment includes built-in redundancy and a disaster recovery component, manual tape backups will no longer be necessary. This means there will not be a need for a file tape backup system, weekly trips to the Sabey datacenter, and no offsite storage of the backup tapes (currently through Iron Mountain). This will free up time for staff to perform overdue server operating system upgrades and also to work with KCSO personnel to consolidate a primary service currently being handled separately by KCSO and AFIS.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   a) Discontinue Iron Mountain offsite storage
   b) Track specific server operating system upgrades that staff do not have time to complete today
   c) Consolidation of two separate agency (KCSO and AFIS) WSUS Windows updates servers into one

3. *What is the current baseline for this measure?*
   a) Weekly pickups / returns by Iron Mountain
   b) Zero server operating system upgrades
   c) Zero consolidation of services within KCSO and AFIS

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   a) No service from Iron Mountain for offsite storage / no cost
   b) One server upgraded per month
   c) Consolidation of one primary service

5. *When is the benefit likely to be achieved?*
   a) Upon return of remaining tapes stored at both Seattle and Spokane Iron Mountain facilities
   b) Implementation plus one month
   c) One year

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When the target will be achieved
Redundant data backup / No offsite storage cost or process	No service contract for tape storage	1 service visit per week	0 service visits	Implementation + one (1) month
Increased staff time for other work	Increased availability to perform server operating system upgrades	0 Upgrades	1 Upgrade per month	Implementation + one (1) month
Increased staff time for other work	Consolidate duplicate services between KCSO and AFIS	No consolidation	Consolidate 1 primary service (WSUS Windows update server)	Implementation + one (1) year

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in

improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   The existing AFIS platform is 10 years old and cannot be updated to keep pace with current matching technology or security requirements. The matching technology is already old and while examiners have the ability to search other systems consisting of more current technology, the amount of time and effort in completing a case takes longer. Having the most current matching technology in the local system will allow for more identifications in a more timely manner. Implementing the cloud based SaaS MorphoBIS solution will include regular accuracy and technology upgrades to keep pace with the advanced matching algorithms.

   Maintaining the existing system would prove to be more costly due to incompatibilities with operating system upgrades, hardware failures, outdated interfaces, and compliance with the current Criminal Justice Information Services (CJIS) Security Policy. The MorphoBIS solution includes built-in redundancy which will reduce downtime for maintenance windows. It also includes a disaster recovery component which would be cost prohibitive for any on-premise AFIS. The average life cycle of an on-premise AFIS without any refresh is seven (7) years.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

1/11/19: The Project is in the Planning Phase and System Specification Documentation is currently being worked on with the vendor.

IT Project Benefits Achievement Plan (Version 2)

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

To complete this document fully, please read all of the colored sections and fill in the white cells. For assistance in completing this form, please contact your PSB analyst.

Department/Agency Name	**King County Sheriff's Office**
Project Title	**The Scheduling Project (ATLAS)**
EBS Project Number	1111956

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Business Owner Name and Title: **Chief Patti Cole-Tindall**

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Janielee Amina Osborne~~	~~IT Project Manager~~	~~Project Manager~~
Lynda Kamrath	IT Manager/KCSO	IT Manager
Lauren Main	Functional Analyst/KCSO	Supports system for all of KCSO

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the benefit achievement plan?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Initial – conversion of existing documentation into new format.	Feb 11, 2014.	Janielee Amina Osborne	Collecting and coalescing pre-existing documentation for the project into the new BAP format.	1 hour
Edited – based on 'notes/comments' in document on SharePoint.	Mar 24, 2014	Janielee Amina Osborne	Re-formatted to conform to requested standards.	1 hour
Reviewed	Feb 5, 2015	Janielee Amina Osborne	Reviewed to ensure continued accuracy.	½ hour
Reviewed	May 26, 2016	Janielee Amina Osborne	Reviewed and edited to ensure continued accuracy.	½ hour
Added Metric Matrix	Jun 14, 2016	Janielee Amina Osborne	Added metric matrix to demonstrate results.	1 ½ hours
Revised, edited as requested based on discussion with Chief P Cole-Tindall, L Kamrath, and J Giambattista on Sep 15, 2017.	Sep 19, 2017	Janielee Amina Osborne	Simplified, more applicable items listed in the metric table. Accepted changes from prior version.	¾ hour
Spring 2019 BAP Report	1/30/19	Lynda Kamrath	Project completed and closed in 2018	15 min

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) External service benefits: Improving the quality or quantity of services provided to the public
2) Internal service benefits: Improving internal operations, including the quality or quantity of internal services
3) Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance
4) Reduced cost to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary</u> type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☑ **Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services**

☐ Category #3: Maintaining service levels by replacing or upgrading older technology, reducing risk of system failures, or providing regulatory compliance

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30 percent. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

Per the original Grant write up by Joe Lewis for ORI: WAKCS00:

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   The goal of this request is that first level supervisors spend the majority of their time in the field providing direct oversight to line level employees. Additionally, the Sheriff desires to have available the tools necessary to effectively manage the scheduling of personnel from all Sections. To this end the Sheriff's Office has identified a software product that is believed to have the capability of automating most of the scheduling and reporting tasks and processes currently done manually. It is

believed that implementing this software program will free up significant first level supervisor and manager time that can be spent directing and overseeing the work of the Sheriff's Office; consequently, enhancing community policing efforts and reducing risk to King County and its' employees. In addition to the above, Superior and District courts, prosecutors and public defenders will be able to make inquiries as to an employee's availability in scheduling activities such as interviews and trials. This program also provides rapid identification and automated contact to specialty groups and available team members, such as hostage negotiators or bomb technicians, for emergency events.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   Implementation will accomplish two major measurable goals. It will allow for the accurate collection and reporting of employee work and leave information that will allow the Sheriff to make thoughtful policy, supported by data. Additionally, it will free first-level supervisors and managers from the tedious time consuming tasks of scheduling and result in better oversight of employees in the field.

3. *What is the current baseline for this measure?*
   First level supervisors and managers spend an inordinate amount of time filling absences to provide minimum shift coverage. Patrol sergeants can spend 30% to 40% of an eight-hour shift covering short-notice vacancies for the current day and trying to fill planned shortages on future days.

4. *What is the target for this measure? (How much improvement will this project achieve?)*
   Each user group (Comm Center, SeaTac, Metro, Patrol units, etc.) will have their own specific measurements and benefits based on their realized time savings.

5. *When is the benefit likely to be achieved?*
   Beginning in 2015 with larger benefits realized in 2016.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*
2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Update 3/4/2019: Project closed. This is a final BAP. The project fully met the target benefits (dates of completion for each benefit were included above). Summary metrics:

Metric Description	Baseline	Target	Actual – to date

Eliminate a paper absence slip (triplicate leave request form) for every employee on every absence request, **Eliminate** summary attendance spreadsheets by units/shifts, **Eliminate** printed paper versions of IRIS Overtime submissions.	No baseline was established. 1,116 employees with variable amounts of leave and overtime.	Electronic submission of overtime and leave requests, no summaries required as electronic reports can be created.	~~89% of KCSO Live in ATLAS discontinuing paper leave and overtime forms.~~ Completed: 100% of KCSO Live in ATLAS Phased Go Live Completed April 2014 through Oct 2016
Eliminate various scheduling tools in multiple units (Excel Spreadsheets, Big Board, etc.)	No baseline was established.	Eliminate Big Board as a scheduling tool for all of the Unincorporated Precincts (166+ officers), Eliminate Excel Spreadsheet schedules in 20 units.	~~32 units migrating to ATLAS for primary scheduling tool, a few units still using specialized or detailed scheduling tools (Comm Center, Court Security).~~ Completed: All units are using ATLAS Phased Go Live Completed April 2014 through Oct 2016
Allows for the accurate collection and reporting of employee work and leave information that will allow the Sheriff to make thoughtful policy, supported by data. New Management reports and tools for budget monitoring and overtime monitoring.	Did not exist or were manually created via spreadsheets and data extracts from IRIS.	Usable and meaningful reports built for Leave, Overtime, and Management (plus reports for HR & Payroll). This data is used by key decision makers and oversight bodies. Data and patterns can be used for making policies, bargaining and audits.	Completed as phased Go Live occurred starting April 2014 through Oct 2016: HR Reports, Payroll Reports, Management Reports: • Leave Report • Comp Time Summary Report • Scheduled Leave Hours by Employee, • OT Audit by Project/Task, • Overtime by Cost Center (Project) • Overtime by Employee, • Overtime by Location, • Overtime Detail, • Overtime % by Employee. • Added reports as needed/requested by business units, command staff or auditors
~~ATALS Auto Feed data to PeopleSoft (manually typed in prior to~~ ATLAS Auto Feed data to PeopleSoft (manually typed in prior to ATLAS)	84 hours per pay period, 168 hours per month,	Less than 10 hours per pay period re-typing or manually entering time from ATLAS to PeopleSoft.	Completed: Oct 2016 KCSO Payroll data auto feed to PeopleSoft completed. Timing of payroll cadence still requires a considerable manual entry period. Once KCSO Payroll migrates to biweekly, this manual effort will be minimized.
Free up first-level supervisors and managers from tedious time consuming tasks of scheduling and result in better oversight of employees in the field. Reduced emails and phone calls for Sergeants to fill overtime shifts (post implementation using Targeted Overtime tool).	No baseline was established.	For every overtime shift available, Captains and/or Sergeants send emails to all eligible Sergeants/Deputies generating hundreds – if not thousands – of emails. Goal is to reduce email use to just emergency overtime, not to be used for planned overtime.	Completed: The Targeted Overtime module of ATLAS is in use~~the final test stages and has been in use since Jun 2017~~. ~~Actual results to be determined once fully adopted.~~ May, 2017 ~~KCSO will report out in 2018 with additional result information.~~

IT Project Benefits Achievement Plan (Version 2)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/Agency Name	King County Sheriff's Office
Project Title	RMS Replacement
Project Number	377214

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Patti Cole-Tindall, Chief of Technical Services Division

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
~~Judy McDermott~~	~~Business Implementation Manager / KCSO~~	~~Team member~~
Lynda Kamrath	IT Manager / KCSO	Team member
Glen Connolly	911 Communications Center Supervisor	Business Operations Staff
Donna Frisk	King County IT	Project Manager

Section 4. When should the BAP be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "gate two" phase of conceptual review.
2. For the annual Benefits report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date

those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type none)

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	2/11/14	Judy McDermott	Review existing project documents and compile into BAP	3 hours
Annual Report	2/10/15	Judy McDermott	Review Only	10 min
Annual Report	5/23/16	Judy McDermott	Review Only	10 min
Annual Report	6/8/16	Judy McDermott	Update Benefit Summary	2 hours
Annual Report	1/12/17	Judy McDermott	Update BAP with new project information	3 hours
Update for Council Proviso questions	9/13/17	Patti Cole-Tindall	Update BAP	30 minutes
Update based on meeting with Council Staff	11/8/17	Lynda Kamrath	Update BAP	15 minutes
Spring BAP 2019 Report	1/30/19	Lynda Kamrath	Update BAP	15 minutes

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the primary type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☐ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☐Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☒Category #3: Maintaining service levels by replacing or upgrading older technology

☐Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites/day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

Example: The Active Directory Consolidation project is part of an overall effort to promote IT standardization. This project will make the current management of user accounts, applications, and devices easier for IT administrators at Public Health because the end user experience will also be improved by having a single sign-on to applications such as Lync, SharePoint, and Outlook. Our success will be measured by having a single set of procedures and security models rather than the multiple ones that now exist.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to produce the benefit(s).***
   KCSO is on 2 RMS systems. The current >20 yr old in-house built legacy system, IRIS, has unsupported technology that is failing and is past the end of its life cycle. The Total Enforcement (TE) system is built on newer technology and is currently managing all of KCSO's property (evidence) that

was migrated from TESS (older decommissioned property management system). KCSO is looking to replace the two RMS systems with Mark 43's government cloud based software Cobalt in 2017. However, it is necessary to continue to maintain both IRIS and TE until the new RMS is fully deployed and the pilot is proven successful. Mark 43's Cobalt will address Officer Safety concerns and potential liability issues KCSO has with the current RMS's and will provide KCSO with new features (i.e. interfaces to regional and King County systems, provides address validation, manages evidence, etc.) that will assist the Officer in solving crimes and improve service to the public. KCSO will also be compliant with Federal Government National Incident Based Reporting System (NIBRS) reporting.

~~Benefit 1: Improved officer safety (when officers receive a call, with the new system they are able to perform pre-incident investigation on all calls and get the entire history). All the RMS data will be available through one system via Mark43 and easily accessible by KCSO staff~~
~~Benefit 2: Improved ability to research and identify problem causes through full audit date/time stamp logs for activity in the RMS, including "before" and "after" values when fields have been updated.~~

Benefit 1. All the RMS data will be available through on system via Mark43 and easily accessible by KCSO staff

Benefit 2.   ~~Benefit 3:~~ Ability to report NIBRS (hence, compliance with Federal Government requirement)

Benefit 3.   ~~Benefit 4:~~ Reduced amount of officers' time spent on writing reports

Benefit 4.   ~~Benefit 5:~~ Reduced amount of time it takes the Comm. Center call takers to write a 911 call report

Benefit 5. Can query multiple systems (such as NCIC and other regional/local) from one place within the RMS to allow for data to pull directly in without retyping

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   See summary table below

3. *What is the current baseline for this measure?*
   See summary table below

4. *What is the target for this measure? (How much improvement will this project achieve?)*

Benefit	Measure	Baseline	Target
~~1. Improved officer safety due to ability to perform pre-incident investigation on all calls and get the entire history~~ **1.** All the RMS data will be available through one system via Mark43 and easily accessible by KCSO staff	~~Number of years of historical data available to officers when doing pre-incident investigations for calls~~ ~~Survey officers and/or 911 Comm Ctr that they are actually finding the data easily accessible and are using it~~ After data is migrated from IRIS/TE, survey KCSO staff that they are actually finding the data easily	~~1 year of data currently available~~ ~~What is the % now (can we check with the Comm Center? Send a survey to all officers?)~~ Survey Officers	~~from 2008 and on~~ ~~Yr 1 40% of officers are searching for the data and finding it rather than calling the COMM center~~ ~~Yr 2 95% we will not reach 100% because of internet service in remote locations~~ ~~June 2018 – 35% of all staff using Mark43's RMS to access directly~~ ~~Sept 2018 – 75% of all staff using Mark43's RMS to access directly~~

			100% Migration to be completed in 2019
2. Ability to report NIBRS (hence, compliance with Federal Government requirement)	Error rate (%) when reporting NIBRS	Currently, not able to report NIBRS	4% error rate
3. Reduced amount of officers' time spent on writing reports	Amount of time spent by officers (on average) on writing reports (information will be tracked by the new system)	Average 30 min/report 81,939 reports written in 2016, 70% or 57,358 by officers	<20 min/report
4. Reduced amount of time for the 911 Comm. Center call takers to write a 911 call report	Amount of time it takes the Comm. Center call takers to write a 911 call report	Average 30 min/report 81,939 reports written in 2016, 30% or 24,581 by 911 Comm. Center	<20 min /report
5. Can query multiple systems (such as NCIC and other regional/local) from one place within the RMS to allow for data to pull directly in without retyping	Ability to interface with WSP directly in the RMS instead of using separate systems	No longer need to run Seaking or DOL separate from the RMS	Survey to be sent out asking if expected results were met

5. ***When is the benefit likely to be achieved?***
   A. <u>Pending 2019 completion</u>: All data available in one system via migration of IRIS / TE to Mark43; currently testing round 3 of 5)
   B. **COMPLETE** - NIBRS reporting is certified as of September 2018 (after 1.5 months of data was input) ~~fter full implementation of Mark 43's Cobalt is complete (i.e., Q1 2019)~~
   C. Survey results were: 100 can do it in less than 20 min's / 200 can do it in greater than 20 min; expected learning curve with new system, additional NIBRS data collected; another survey will go out mid-2019 to re-assess; overall users have found Mark43 to be easier to use and intuitive than TE
   D. Same results as # 3 (combined)
   E. <u>Pending 2019 completion</u>: DataMaxx interface with WSP scheduled for mid-2019

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to

1. *Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.*

   This project is meant to consolidate and replace three systems.
      - TESS (Property / Evidence Management System) – decommissioned in 2014
      - IRIS (Incident Reporting and Investigation System) – For criminal activity
      - TE (Total Enforcement) – For criminal activity and evidence management

   Past State
   The legacy Records Management System (RMS), IRIS, was built in 1997 and TESS, evidence tracking system, were not designed for the demands and capabilities of current and evolving environment or for high performance, security and scalability in a heavy multi-user environment. Audit logs are not available in these legacy systems and deputies spend too much time writing case reports vs. patrol community policing. This situation causes a significant patrol productivity impact and limits participation in county and regional integration projects, such as ACCESS, DOL, Seaking, LinX, BARS. IRIS/TESS are past their end of life, very fragile, and the system platform is no longer supported. Therefore, King County Sheriff's Office (KCSO) will be implementing a Commercial Off the Shelf (COTS) system to replace the fragile IRIS/TESS systems.

   Recent State
   KCSO has been working to implement a new RMS (TE) for the past several years. Property Management Unit (PMU) went live with TE July 2014 and TESS was decommissioned. 250 (30% of KCSO) professional staff went live in October 2015. CID went live March 2016 and Kenmore/Shoreline were trained in April. As soon as TE was piloted to patrol and detectives, it became clear that police work was being compromised due to the length of time it took to writing case reports and TE was not a viable solution for patrol (70% of KCSO). On May 31st, 2016 Sheriff Urquhart made the decision to suspend TE for officers.

   Incident/case reports and property are being entered in the legacy IRIS RMS by officers. The data in IRIS is populating TE via daily periodic migration, allowing PMU to manage property/evidence. At this time TE is the repository for all KCSO RMS/Property data. However, TE is not a viable RMS option for officers to use for their incident/case reports due to the length of time spent writing reports vs being on patrol for community policing. The addition of the federal NIBRS process to TE caused the officers writing of reports to be four times greater than normal and the system required several clicks to "Apply / Save" or data would be lost. In addition, the screens did not have a logical flow and officers were having to click around to enter the report data, causing confusion and frustration.

   Future State
   Since TE is not a viable replacement solution for patrol, KCSO's selected option is a Sole-source 1 year Subscription Pilot with Mark 43 that resides in the AWS Gov-Cloud.

   Historical incident/report data from TE will either be migrated to Cobalt or housed in a Data Warehouse. Once KCSO is fully deployed on Cobalt, IRIS will be decommissioned.

2. *If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.*

Category #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver	Processing time,	• 10 days processing	• 1 day processing	• 2 day processing

service. This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	annual savings, and percentage of purchases receiving prompt payment discounts	time • 10% of purchases are receiving discount • Savings of $100,000	time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

3-18-2019 Status:

COMPLETE - NIBRS reporting certified Sept 2018

Initial Survey results: 100 can write their reports in < 20 min's / 200 in > 20 min's

Overall, users have found Mark43 to be easier to use and intuitive than TE

Another survey will go out mid-2019 to re-assess

PENDING - Full migration to be completed in 2019 for all data to be available in Mark43 (will decommission IRIS / TE legacy RMS's); testing is in round 3 of 5

DataMaxx interface with WSP scheduled for mid-2019

IT Project Benefits Achievement Plan (Version 2)

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4. To ensure that benefits are achieved

King County Department/Agency Name	King County Sheriff's Office
Project Title	Wireless CAD Project
Project Number	377196 (original) 1116728 (new)

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this Benefit Achievement Plan (BAP) is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director or higher.

Chief Patti Cole-Tindall

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The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Jeffery Flohr	Captain / KCSO	Project Manager
John Higashi	Tech Serv Manager / KCSO	Technical input
Yuvnesh Pillay	CAD Administrator / KCSO	Technical expert, User interface, testing
Mike Dunne	Sr. LAN Admin / KCSO	User interface, testing
Lynda Kamrath	CRU Manager / KCSO	Resource Coordinator
Gary Tripp	KCIT	

Section 4. When should the Benefit Achievement Plan be started, updated and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

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3. To support funding release requests. If there are no changes, indicate "review only" in the revision table.
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Once the project is complete and benefits are achieved and reported, no additional reporting is required.

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Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Annual Report	2/9/15	Pat Butschli	Project Update	1 hours
Annual Report	5/18/16	Pat Butschli	Project Update	30 min
Annual Report	2/17/17	Jessica Sullivan	The project is currently on hold pending additional functional testing. There are currently interface issues between the GPS devices and CAD. We are working with the vendor, TriTech, as well as KCSO CRU to diagnose issues and identify next steps.	2 hours
Annual Report	9/26/2017	Jessica Sullivan	Revised, edited as requested based on discussion with Chief P Cole-Tindall, L Kamrath, and J Giambattista on Sep 15, 2017. Currently pursuing an integrated solution with the county AVL for NRV project.	1 hour
Add metrics	10/18/2017	Janielee Amina Osborne	Incorporated metrics based on call times in Sammamish.	15 min
~~Add updates for 2018~~ Spring 2019 Biennial Update (final BAP)	~~02/20/201~~ 3/11/19	John Higashi Lynda Kamrath	~~KC Fleet AVL has been piloted and identified that integration with CAD is possible, however with concerns on what information can be publicly disclosed. Another concern is how to start/stop collection of AVL data as well as maintaining vehicle to person changes. Tentative installation date was stated as sometime in 2019. CAD integration date is TBD.~~ Updates to Section 7	30 min.

Section 6. Description of Project Benefits

Identify the category(ies) of benefits your project will provide and include narrative descriptions of estimated benefits. The benefits of IT investments generally fit into the following four categories:

1) **External service benefits**: Improving the quality or quantity of services provided to the public

2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service** levels by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Each category is described below. Most projects will have benefits in one or two categories. If the project does not have benefits in a category, there is no need to provide information for that category.

What is the primary benefit of your project? After reviewing the benefit categories below, please identify the <u>primary </u>type of benefit for the project. For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Primary project benefit? (Check only one)

☒ Category #1: External service benefits: Improving the quality or quantity of services provided to the public

☒ Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services

☐ Category #3: Maintaining service levels by replacing or upgrading older technology

☐ Category #4: Reduced cost or cost avoidance to produce services

Category #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

The Mobile CAD project has provided important Criminal Justice Information to Deputies on demand in the Field. This allows individual Deputies to make inquires quickly to help investigations. This is an improvement over the previous method of conducting these checks over a radio or driving to a location that had these services available. Investigations are more accurate, completed in less time and allow detained individuals to be processed much faster.

The final stage of this project is adding a GPS component that will allow the agency to track patrol vehicles in the field. This will improve call coordination and response and allow us to send the closest deputy to the call. This was previously done by sending a deputy assigned to a district. This should improve response times to calls for service. ~~The last phase of the project is the GPS installation and it is approximately 50% complete. We estimate this will be done by the end of 2016. A new AVL solution is being identified through the RFP process and a vendor will be selected by Nov 2017. Tentative implementation mid 2018.~~

Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next three years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*

(Previous completed phases of this project) Due to the success of earlier phases of this project deputies have the ability to run license plates and names remotely through a laptop computer in their police car. In addition, deputies have access to the CAD system reducing the need for communication to occur over busy radio frequencies. This portion of the project has been successfully implemented and has improved the capabilities and safety of deputies working in the field. This allows deputies to work faster and increases productivity and safety.

(The current and final phase of this project) The final phase of the Mobile CAD project is adding the capability to GPS locate deputies working in our communities. This will allow a dispatcher to instantly know what unit is the closest to any request for service. This should modestly improve response times and safety for both the community and our deputies. We can compare unit response time both before and after the implementation of the GPS component of this project to measure the impact of the GPS implementation. Response times are currently measured in minutes and seconds based on call priority. Since these response times are already very quick we anticipate a modest lowering of these response times, perhaps 10% faster. This benefit should be achieved following rollout and implementation of the GPS system.

In addition to anticipated improvements in efficiency GPS will allow us to know where patrol deputies are located while on duty. This will allow us to send help to a deputy who is unable to communicate over the radio. At present we have no way of locating a deputy if they cannot advise us of their location over the air.

The project is currently awaiting the outcome of contract negotiations with the King County Police Officer Guild. This contract is currently in the final stages and awaiting King County Council approval. Initial testing on equipment to accomplish the GPS location has begun.

Category #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
   Officer Safety – in the event of an officer incident (like injury, ambush, or collision etc.) where the deputy is unable to communicate, the vehicle can be located to send help. Location based dispatching allows KCSO to see where the closest car is to an incident for better dispatching decisions, increasing efficiency and reducing response time.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***

Category #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15,000,000 of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. ***Describe why you expect the proposed IT investment to reduce costs?***
2. ***How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)***
3. ***What is the current baseline?***
4. ***What is the target for this measure? (How much savings will this project achieve)***
5. ***When is the cost reduction likely to be achieved?***

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of

purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Metric Description	Metrics	Baseline	Target	Actual
This project reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.	*Processing Time annual savings, and percentage of purchases receiving prompt payment discounts*	• *10 days processing time* • *10 percent of purchases are receiving discount* • *Savings of $100,000*	• *1 day processing time* • *30 percent of purchases are receiving prompt payment discounts* • *$400,000 savings*	• *2 day processing time* • *20 percent of purchases are receiving prompt payment discounts* • *$200,000 savings*

3-11-19: This project was Canceled by the PRB in 2018. This is a final BAP. The Countywide AVL Project is expected to accomplish some of the same things as Wireless CAD. No further benefits are expected from the Wireless CAD project.

~~We are beginning to see the benefits of the GPS in the locations where the installation has taken place. Knowing where vehicles are located allows for a greater ability to coordinate incident response. We have some work to do to begin fully using this new capability but the process has started. We are in the middle of deploying GPS units to patrol vehicles. This is the final step of this project. The work is about 50% complete and we anticipate the final units will be installed by the end of the year.~~

Based on previous solution, changes in metric for new solution:

Metric Description	Metrics	Baseline				Target	Actual
Reduce call response times. *Note: Location based dispatching allows KCSO to see where the closest car is to an incident for better dispatching decisions, increasing efficiency and reducing response time.*	Dispatch to arrival time averages via Jim Hilmar's group. Contract City: Unincorporated:	• ~~*In progress*~~ *BASELINE: Average Response Time by Sector based on Sector: 0 (Sammamish) For: 06/01/2017-08/31/2017* • *All times in minutes, by Priority*					
			# of DCFS	**Avg Queue**	**Avg Travel**	**Avg Response**	
		0	98	3.13	11.14	14.27	
		1	155	1.12	6.81	7.92	
		2	271	2.51	8.26	10.77	
		3	1,089	9.22	12.77	21.99	
		4	4	98.1	0.26	98.36	
		6	1	4.45	0	4.45	
		X	5	1.13	3.17	4.3	
The number of vehicles that are equipped with the new AVL solution.		• *0 – no vehicles currently have AVL*			• *Patrol minus non-King County Fleet vehicles, estimate at 550.*		
Wireless CAD implementation on all County owned laptops assigned to Commissioned personnel allowing the ability to run license plates and names remotely through a laptop computer in their police car.	*Percent of County owned laptops assigned to Commissioned personnel with application installed and training provided.*	• *0% of 723*			• *100% of 723*		• *100% of 723*

IT Project Benefits Achievement Plan (Version 3)

To complete this document fully, please read all of the colored sections and fill in the white cells.
For assistance in completing this form, please contact your PSB analyst.

Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

1. To achieve a clear understanding and focus on the benefits of a project prior to its beginning
2. To update projected benefits of the project as it moves through stages of project approval, implementation, and post-project closure
3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	King County Superior Court-Court Operations
Project Title	Court Recording
Project Number	1134042
Project Timeframe	January 2019- December 2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Linda Ridge, Deputy CAO-King County Superior Court

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Rachael DelVillar	Court Ops Director/SC	
Andy Hill	IT Director/SC	
Danielle Anderson	Division Manager/DJA	
Shuyi Hu	Technology Manger/DJA	

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
2. For the Annual Benefits Report that PSB compiles.
3. To support funding release requests. If there are no changes, indicate "Review Only" in the revision table.
4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

BAP Revision History Table				
Stage	**Date**	**Revised By**	**Description**	**How long did it take?**
Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	3/22/18	Andy Hill	New, initial draft	2 hours
Creation of BAP	5/25/18	Andy Hill	Preparation for 2nd stage	2 hours
Update to BAP	6/25/2018	Andy Hill	Updated to reflect comments and feedback	1 hour
Spring 2019 BAP Report	2/8/2019	Andy Hill	New Project. No Updates	5 minutes

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☐	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒
Category #3: Maintaining service levels by replacing or upgrading older technology	☒	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☐

<u>CATEGORY #1</u>: **External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.**

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
3. *What is the current baseline for this measure?*
4. *What is the target for this measure? (How much improvement will this project achieve?)*
5. *When is the benefit likely to be achieved?*
6. *Summary table for Category #1:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?

<u>CATEGORY #2</u>: **Internal service benefits: Improving internal operations, including the quality or quantity of internal services. Be sure to explain the value of such improvements to your operations.**

Example: If this project to acquire hand-held devices and develop custom software is approved, inspectors will be able to check an average of 10 sites per day compared with the average of 6 currently checked. This will allow the agency to handle the 20% increase in workload projected in the next 3 years without adding more staff.

Example: If this project to implement a systems management tool for the Service Center is implemented we will be able to reduce the duration of technology outages during major incidents by 30%. We also will reduce the wait time for customers on hold with the Service Center. These improvements will allow us to redirect an existing position to other priorities.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*

   Running this critical business function on aging equipment with outdated software creates numerous calls to the Superior Court IT Help Desk. Each call represents an interruption to court proceedings, some minor, but some quite major. This could include important testimony not being captured and having to repeat it after the recording issue has been resolved. Because the PCs are so old, Clerks must come into the courtroom early to allow time for the machines to start up.

   Superior Court staff are very familiar with the technology and pose few technical challenges. With upgraded equipment and improved software functions (e.g., real time monitoring and improved digital signals) support questions will be reduced as will interruptions during court proceedings.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

   Superior Court's help desk logs all the service requests regarding the court recording technology in the courtroom. By upgrading the hardware and software, many tickets will be eliminated.

3. *What is the current baseline for this measure?*

   Superior Court's help desk averages 29 tickets a month relating to court recording

4. *What is the target for this measure? (How much improvement will this project achieve?)*

   This project should reduce the number of tickets from an average of 29 a month to 20.

5. *When is the benefit likely to be achieved?*

   The implementation is anticipated to take all of 2019. These benefits won't be realized until all 70 Courtrooms are upgraded. A year of data from that time will demonstrate an accurate reflection of the reductions of tickets and increased productivity.

6. *Summary Table for Benefit Category #2:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Continued audio court recordings without service interruptions.	Reduced service calls regarding court recording	29 Help Desk Tickets /month	20 Help Desk Tickets /month	By 12/31/2020 (1 year after full implementation)

CATEGORY #3: **Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.**

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***

   Superior Court is responsible for capturing the recordings of court proceedings and has transitioned to using technology to accomplish this. Superior Court still retains 8 Court Reporters to manually capture the official court record for a few hearing types (e.g. Capital Cases). Making sure there is a clear and accurate official record of court proceedings is necessary to ensure the equitable application of justice to the public and critical to any appeal process that may occur.

   The current court recording technology is running on purchased PCs that are over 6 years old using the Windows 7 operating system. The court recording software is several versions old and will not run on the latest Windows operating system. Microsoft will end support for Windows 7 in January of 2020.

   To ensure the critical function of capturing the recordings of court proceedings, this equipment and software must be upgraded before support ends for Windows 7. This project proposes the leasing of workstations through KCIT and purchasing software maintenance that will allow Superior Court to always have the latest version of the vendor's software running on current hardware.

   If there is a catastrophic failure to the court recording system, Superior Court could only operate 8 hearings at a time with the current number of Court Reporters. The 53 Judges and 8 Commissioners work load is such that the work would need to be prioritized causing significant delays in court proceedings. This would also compromise a defendant's right to a speedy trial as defined in State law due to the excessive back log would create.

2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur***.

   The primary reason for this project is to avoid any potential risks with running a critical business function on aging hardware running outdated software. The failure of aging hardware can continue to be mitigated with the amount of courtroom delays increasing. The operating systems on the old PCs running the Court Recording software will be out of support in January 2020. The current recording software will not run on Windows 10, so that must be upgraded from the version installed (5.7.2) to the current version (6.0). If the court recording system is not replaced before January 2020, there will be no way to patch the operating systems on the courtroom PCs creating security issues to the King County network. The likelihood of hardware failures will continue to increase as they age, but the security risk is the greatest risk to be mitigated by this project. Based on the current number of attacks to the King County network, it would be too dangerous to have 70 un-patchable, unsecure PCs on the King County network. The likelihood would be very high that King County would be susceptible to a larger IT security attack.

3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?

Continued audio court recordings without service interruptions.	Reduced service calls regarding court recording	29 Help Desk Tickets /month	20 Help Desk Tickets /month	By 12/31/2020 (1 year after full implementation)
Improved Courtroom experience with fewer interruptions to court proceedings and shorter periods of downtime due to court recording technology.	Survey Clerks to determine satisfaction with court recording technology including the frequency of courtroom delays and length of time of court delays due to the court recording technology.	Survey to be sent out prior to implementation to determine baseline.	Improved survey results with both the frequency of delays and length of time of court delays due to the court recording technology	By 7/1/2020 (6 months after full implementation)

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance
This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: Reduced cost to produce service. If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.

Example: Cost Avoidance. Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
3. *What is the current baseline?*
4. *What is the target for this measure? (How much savings will this project achieve)*
5. *When is the cost reduction likely to be achieved?*
6. *Summary Table for Benefit Category #4:*

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Annual savings	Cost of producing X	$568,000	$35,000	By 06/30/2019

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: The project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update 2/12/19: This is a new project that will be starting in Q2 of 2019.

IT Project Benefits Achievement Plan (Version 3)

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Section 1. What are the purposes of the Benefit Achievement Plan (BAP)?

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3. To establish accountability for identifying and achieving benefits
4. To ensure that benefits are achieved

King County Department/ Agency Name	King County Superior Court – Court Operations
Project Title	SC New Jury Management System
Project Number	1134041
Project Timeframe	January 2019 – October 2019

Section 2. Business Owner Accountability

Business Owners are responsible for achieving project benefits and ensuring this BAP is regularly updated and completed when benefits are achieved. Business Owners are required to be at the deputy department director level or higher.

Linda Ridge, Deputy CAO – King County Superior Court

Section 3. Who is involved in developing the BAP?

The development of the BAP should include significant involvement from the business operations or management staff related to this project and the services it will support. Consider involving staff who will be using the technology to help identify the benefits of the project. KCIT business analysts or technology project staff may assist in benefit identification and documentation. List the staff who contribute to the BAP below:

Name	Title / Agency	Project Role
Andy Hill	IT Director/SC	IT Budget/Implementation Project Manager
Rachael DelVillar	Court Ops Director/SC	Project Manager Operations
Greg Wheeler	Jury Supervisor II/SC	Jury SME Project Manager
Doug Buckmeier	Web/Application Developer	Jury System Implementation/Conversion Lead
Irene Szczerba	Jury –Title/SC	Jury SME/Testing Lead

Section 4. When should the BAP be started, updated, and completed?

The BAP is intended to be an iterative, evolving document that will be updated as the project evolves, as information is refined or scope changes, and when benefits are finally achieved. Department and agencies (the business owners of project benefits) are required to update this document at the following times or actions:

1. To support initial project request during "Gate 2" phase of conceptual review.
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4. When a material scope change is identified and reported.
5. Up to one year after project completion and then annually until it is determined by the business owners that anticipated benefits have been achieved or no further benefits are expected.

Once the project is complete and benefits are achieved and reported, no additional reporting is required.

Please update the document online. Do not delete your previous text. Update the text as necessary and date those updates. Make sure that you upload the updated version to Innotas. The intent is for this single document to show the history of benefits over the course of the project. List any changes in the table in section 5. (If there are no changes, type "None")

Section 5. How long will it take to complete the BAP?

Completion of the BAP depends on the project's complexity. In general, it should take a few hours to complete this BAP form once there is a shared understanding of the project and what value it will bring to the County. More complex and costly projects may require more extensive analysis. To improve this process in the future, please record the time spent on this in the table below at each stage of revision:

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Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.	*Date this document was updated*	*Who did the document updates?*	*A brief summary of what changed in the document. If this is an initial draft, please indicate new. If nothing has changed, indicate "review only".*	*How long did it take to complete or revise the form at this stage?*
Conceptual review	03/2018	Rachael DelVillar	New, initial draft	3 hours
Creation of BAP	5/15/18	Rachael DelVillar	Preparation of 2nd stage	5 hours
Spring 2019 BAP Report	2/6/19	Rachael DelVillar	Preparation to begin implementation stage; Equity Impact Review completed & preparing the RFP	10 minutes

Section 6. Description of Project Benefits

Clearly identify the primary category (select only one) and secondary category (-ies) of benefits your project will provide.
1) **External service benefits**: Improving the quality or quantity of services provided to the public
2) **Internal service benefits**: Improving internal operations, including the quality or quantity of internal services
3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
4) **Reduced cost** to produce services (internal or external)

Include narrative descriptions of estimated benefits.

Primary vs. secondary category of benefits: Each category is described below. After reviewing the below descriptions, please clearly distinguish the primary type of benefit that is driving the project from the secondary. While most projects will have benefits from more than one category, please select only one that is the primary reason for the project. Identify secondary categories if the agency intends to measure those benefits in addition to the primary benefit(s). For most projects, the primary type benefit will be Category #2 improving internal operations or Category #3 replacing or upgrading older technology.

Benefit Category	Primary (select only one)	Secondary (select all that apply)
Category #1: External service benefits: Improving the quality or quantity of services provided to the public	☒	☐
Category #2: Internal service benefits: Improving internal operations, including the quality or quantity of internal services	☐	☒
Category #3: Maintaining service levels by replacing or upgrading older technology	☐	☐
Category #4: Reduced cost or cost avoidance to produce services	☐	☒

CATEGORY #1: External service benefits: Improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public.

Example: If this project to upgrade our licensing software is approved, licenses will be issued in two business days instead of the four days currently required. This is largely due to the ability of the new software to check national and state databases more efficiently. About one-quarter of our customers currently complain about the delay in obtaining a license and this time reduction is expected to eliminate almost all complaints and allow staff resources to be directed to other customer services.

Example: If this project to accept on-line reservations is approved, residents will be able to schedule athletic fields over the Internet and make payments by credit card. This will allow scheduling to occur at any time, rather than the current limited hours available for in-person or phone reservations. In-person and phone reservations will still be available.

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   This project to replace the existing jury management system will allow Superior Court to utilize best practice methodology for our jury services. Newer jury management system technology will allow for better and more frequent communication with our jurors. The availability of mobile device options such as a jury app, text notifications, system generated reminders by email or text, and other communications for a variety of reasons would provide better access for our jurors and timely customer service. This will also address the growing expectation by our jurors to have access to technology which is self-driven and provides straightforward and uncomplicated processes. Improving our juror usage will result in a more positive experience for our citizens. Better communication allows for increased control of the juror "call off"[1] system which helps to prevent unnecessarily bringing in jurors who will not be needed by the court.

   Equity and social justice issues are also impacted by moving to a system that is more accessible to all members of the community. The current system does not lend itself readily to a smart phone version so a home computer with internet access is customary for ease in responding to a summons. Although public computers such as those at the library may be an option, this creates an extra

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[1] "Call off" is the process of notifying jurors prior to their service reporting time that they are no longer needed and are excused from service.

burden for those who do not have access to the internet other than what is available on their smart phone.

In addition, with very limited staffing it is important that we find every available efficiency for handling our check-in process. Improvements to our online check-in system and mobile options will help to streamline the in-person reporting process and thereby provide better customer service to our jurors. The use of kiosks would also increase the speed in which we are able to check-in our jurors and help to avoid long check-in lines. An efficient customer focused check-in process assists in making sure all orientation processes have been consistently followed in a timely manner so that jurors are comfortable with the process and ready for deployment to the various courtrooms which require their service.

A new system would also eliminate the current manner in which the source list updating takes place which is inefficient and problematic for our customers. The annual updating of our juror source list results in a week long disruption to our juror online portal. This type of disruption of service does not appear to be common among the other available jury management systems. The opportunity to upgrade to a newer and more sophisticated system would permit the court to explore emerging innovations in jury management to address our changing community and perhaps address social justice concerns pertaining to jury trials in King County Superior Court and District Court.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
   We will use a variety of statistics to measure the benefits of a new jury management system. We will look at any changes to our yield (percentage of jurors who appear relative to the number summonsed) and changes to the "call off" numbers and savings (excusing jurors prior to their arrival at court).

   We can also look at whether there has been an increase in access to the online jury portal which we expect will result given the additional options available to our jurors. Use of online services by those who prefer this method of contact allows court staff to focus more of their time on those customers who may not have access or the comfort level to use online services. This is an opportunity, consistent with King County objectives, to provide elevated customer service through technology to the majority of our jurors while also allowing for elevated in-person customer service for those who need it most.

   With functionality to email and text jurors, specifically targeting those groups who appeared, we have the ability to survey our jurors as to their experience with the online system, mobile options, kiosks and check-in process in general. This would be very valuable in measuring the benefits of the new system.

   Superior Court cannot function without adequate juror resources and delays in securing the appropriate number of jurors can result in delays of justice for those awaiting trial. Innovative features such as the use of surveys and kiosks may also provide new opportunities to collect helpful information about our jurors on a voluntary basis and their ideas on how to improve our process.

3. *What is the current baseline for this measure?*
   Given the current systems limited ability to produce reliable reports, some of our baseline measurements are being established by the side systems which are currently being utilized to

determine our yield and "call off" savings. Superior Court IT has also run other reports available from the back side of the system which established our baseline for the number of jurors who currently access the system for check-in in advance of appearing. In addition, the improvements to the source list update should be apparent if we are no longer required to take the juror access offline for the customary one week period.

Current baseline for juror online usage: 60% [2]
Current baseline for juror yield: 29%[3]
Current baseline for days portal offline: 5 work days
We are currently unable to electronically solicit input from our jurors.

4. ***What is the target for this measure? (How much improvement will this project achieve?)***
The target for this measure will be positive changes in our juror yield, failure to appear and "call off" numbers. We also anticipate that we will see an increase in online usage by our jurors and eliminate the need to take our jury portal offline during the source list updating process.

Target for online response: 90%
Target for juror yield: 40%
Target for days portal offline: 0 work days
Target for juror response rate inquires through survey/kiosk: 50%[4]

5. ***When is the benefit likely to be achieved?***
It is anticipated that we will see measurable benefits in the 6-12 months following implementation of the new jury management system. Jurors are able to defer service up to 12 months so this time will be required to determine what impact the new system has had on the identified benefits.

6. ***Summary table for Category #1:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?	
Increase online usage by jurors through various modes to confirm jury service	Increase % of jurors usage of the online check-in system	60%	90%	By 10/31/2020	
Improved juror yield through frequent and efficient modes of communication with jurors	Increased % of juror yield	29%	40%	By 10/31/2020	
Reduce or eliminate the time period the system is unavailable to jurors due to annual source list updating	Number of days the online portal is unavailable to our jurors	5 days	0 days	By 10/31/2020	

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[2] 60% of those summonsed currently respond online.
[3] 29% as a factor of summons sent. Significant % are excused due to physical frailty, medical necessity, elder or childcare responsibilities and undue financial hardship. Additional % are not statutorily qualified to serve and despite our best efforts, a sizeable portion of summons sent are undeliverable.
[4] 50% survey response rate of those that report for jury service.

Create efficient methods to solicit feedback to increase juror satisfaction	Survey response rate of jurors who report for service.	No baseline available	50%	By 10/31/2020

1. *Describe why you expect the proposed IT investment to produce the benefit(s).*
   Ready, reliable and usable statistics will allow for better forecasting of juror needs, allow for more accurate "call off" and save on juror expenses. A new jury management system will allow for better customer service and overall department management of this critical system for the court. The Jury Department manages large volumes of people with very limited staff. Beside the check-in process, staff are responsible for orientation of jurors, communication with the courtrooms, creation of pools and directing people to the various courtrooms. They also handle a high volume of phone calls and emails from our juror candidates. Improving our communication options with jurors is important to providing excellent customer service but also allows for more efficient management of this necessary court expense.

   Similarly, proper forecasting tools benefits court management by increasing our ability to prevent an overcall of jurors. Our experience has been that those who have the opportunity to be assigned to a jury panel and participate in the process, even if they are not selected for a jury, leave with a positive opinion of the process and are likely to share this with their family and community.

   Additional communication options such as text would allow us to send program reminders at different intervals prior to their service date. Once we have done what is possible to remove barriers to communication by providing those methods which are expected and widely available in other business and government settings, the court could then explore options for addressing jurors who fail to appear for service. Addressing this group of summonsed jurors is also best practice.

   In April of this year, General Rule 37 – Jury Selection, went into effect. The rule states "The purpose of this rule is to eliminate the unfair exclusion of potential jurors based on race or ethnicity." This rule was created following the recommendations of a workgroup which was composed of various judicial officers, attorneys, both prosecution and defense, and legal organizations from across the

state. The assigned task was to review a proposed rule change pertaining to jury selection and the use of peremptory challenges. The rule permits a party, or the court on its own objection, to object to any preemptory challenge to raise the issue of improper bias. The court has begun discussions on the implementation of this important new rule. One element of consideration is that it will likely require courts to temporarily remove jurors from the courtroom while argument on these types of jury selection objections occur. With limited jury room capacity, the availability of text messaging could be an important tool to help manage and direct these various groups of people.

Finally, our jury source list, which is comprised of approximately 2 million names, is updated annually. During this time our online customer portal is taken offline for 5 days. This results in an increase in phone calls and email that jury staff must handle and proves frustrating for our jurors. In addition, the Superior Court IT department must dedicate extensive IT staff resources to oversee this process. Our initial inquires of other jury management systems have been consistent in reporting that source list updating can be handled over the weekends and portal downtime is minimal to nonexistent. Improvements to this necessary annual process would be very beneficial to the court and our jurors.

2. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
Although some of these benefits do not have a current baseline, some measurement will be possible and anecdotal information can also prove valuable.

In addition, the new communication tools will assist in the management of large groups of jurors which could exceed our jury room capacity in Seattle and Kent. We can utilize the number of reporting jurors in comparison to room capacity to measure this area of improvement.

Improvements to the source list update can be done by comparing the number of days the juror portal is unavailable and by any reduction in hours required by the SC IT department in facilitating the annual source list update.

3. *What is the current baseline for this measure?*
Improvements in the number of jurors our current facilities can manage does not have a current baseline, however, once in place we should be able to monitor the number of groups of jurors we are able to manage on a given day as compared to the current capacity of each of our juror assembly rooms. The source list update timeframes will be easily measurable by the number hours/days the system is down and the number of IT support hours that a required to implement the update.

Current baseline for facility capacity: KCCH 265 & MRJC 165
Current baseline for source list update: 5 work days & 110 IT staff hours

4. *What is the target for this measure? (How much improvement will this project achieve?)*
As we do not have a baseline for the expected improvements in the number of jurors our current facilities can manage, once a new system is in place we should be able to monitor the number of groups of jurors we are able to manage on a given day as compared to the current capacity of each of our juror assembly rooms. The target for the source list update timeframes will be the elimination of juror portal down time and a significant reduction in Superior Court IT staff hours to manage the annual source list update.

Target for ability to handle larger groups of jurors: 10-15% above capacity
Target for source list update: 0 days of portal offline & 60% reduction in IT staff hours.

5. ***When is the benefit likely to be achieved?***
It is anticipated that we will see measurable benefits in the 6-12 months following implementation of the new jury management system. Jurors are able to defer service up to 12 months so this time will be required to determine what impact the new system has had on the identified benefits. Additionally, the source list update only occurs annually.

6. ***Summary Table for Benefit Category #2:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Increased capacity to manage large groups of jurors	Reporting jurors vs. capacity of each jury assembly room	265 KCCH 165 MRJC	10-15% of increase	By 10/31/2020
Reduce SC IT staff time required for annual source list update and time web portal is unavailable to jurors	# of days the online portal is unavailable to our jurors & SC IT hours for source list update	5 business day offline and 110 hours of SC IT staff time	0 days portal offline and required SC IT hours reduced by 60%	By 10/31/2020

CATEGORY #3: Projects that maintain service at current levels by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. If the project will result in improvements to external or internal services or cost savings, please note those benefits in the appropriate categories.

Example: This project will upgrade PeopleSoft from 9.0 to 9.2. This upgrade is necessary because vendor support for 9.0 will be ending in 2015 and that creates a large risk for the County. Without vendor support the County will not receive tax and regulatory updates and will likely result in errors in complying with tax and regulatory issues.

Example: This project will implement an Advanced Authentication solution which will allow King County to comply with U. S. Department of Justice - Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Security Policy Version 5.0, Section 5.6.2.2. Effective September 30, 2013, advanced authentication (AA) must be in place in order to access sensitive CJIS information.

1. ***Describe why you are proposing to upgrade or replace existing technology. Please include age of existing technology and the average life cycle replacement for this type of technology.***
2. ***If the primary reason for the project is risk reduction project, please estimate the probability of the risk or describe how likely it is to occur.***
3. ***Summary Table for Benefit Category #3:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Example: Reduced system outages	# of system outages per month	5 outages	No outages	By 06/30/2019

CATEGORY #4: Reduced cost to produce service (external or internal) or cost avoidance

This category is for those projects that will reduce the costs to deliver a county service (external or internal). The information provided here should be consistent with the information in the cost-benefit analysis (CBA) form. Please describe how the cost savings will be used by your organization. This category also includes cost avoidance. Cost avoidance is those costs that the County would need to pay, has the capacity and intent to pay, but will be avoided due to the project.

Example: *Reduced cost to produce service*. *If this project to install accounts payable software is approved, we will automate three tasks that are currently done manually by agency and central purchasing employees. Based on experience of other users of the software, this will reduce processing time from the current average of ten days to less than one. This will allow us to take advantage of prompt payment discounts for over $15 million of annual purchases. These discounts average 2%, yielding annual savings of about $300,000. This will result in savings in department expenditures for those items qualifying for prompt payment discounts.*

Example: *Cost Avoidance.* *Moving to this new vendor that uses a SaaS product, we will avoid the need to upgrade the system to the newest version which goes end-of-life at the end of next year. We were required to make this upgrade due to regulatory reasons, so this represents a cost avoidance of $100,000.*

The above examples are summaries. Please respond to each question listed below rather than provide a summary.

1. *Describe why you expect the proposed IT investment to reduce costs?*
   A new jury management system will provide the type of communication tools necessary to make further improvements to our court's ability to "call off" jurors, thereby only having the necessary number of jurors report for the day. Although a number of trials may be scheduled to start on a particular week, it is not uncommon for them to be continued, settled or dismissed with very short notice which means the court is paying for jurors that they will not be able to use that day. More flexibility to contact and "call off" jurors will result in greater juror expense savings.

   In addition to the benefits of improved technology to "call off" jurors, better jury management system report functions and capabilities will also allow for more accurate forecasting of upcoming juror needs. Summons are sent in batches six weeks prior to the week of service. An increased ability to analyze the changing trends with our yield (those that appear for service), which will likely occur with the use of text and email reminders, will allow for ongoing and timely adjustments to the number of summons sent. The ability to make these ongoing analysis and adjustment should result in a reduction in our expenses related to the sending of summons.

2. *How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)*
   We will use a variety of statistics to measure the benefits of a new jury management system. Instantaneous messaging options will have a positive impact on "call off" savings by excusing unneeded jurors prior to arrival. This type of flexibility of operations equates to actual savings in juror payments for the court.

   The ability to forecast juror needs with routine and easily available reports will allow jury staff to fine tune the number of summons sent to achieve the sufficient number of jurors. With the realization of the previously listed external benefits, fine-tuned adjustments will be needed and a reduction in summons mailing expenses is expected. The 2017 mailing expenses will serve as our baseline.

   Overcall results in increased juror expense for the court and creates an unnecessary burden for our jurors by requiring them to appear without the benefit of an actual opportunity to be a part of the

judicial process. Summonsing the appropriate number of jurors also prevents the unnecessary planning and arrangements that jurors must make in advance of their report date only to be called off.

3. ***What is the current baseline?***
   Given the current systems limited ability to produce reliable reports, our baseline measurements are being established by the side systems which are currently being utilized to determine our yield and "call off" savings. Current baseline measurements for improvements to our forecasting will be made through savings on the number of summons sent

   Current baseline for call off savings: $72,000[5]
   Current baseline for forecasting juror needs (summons mailing expense): $26,700

4. ***What is the target for this measure? (How much savings will this project achieve)***
   The target for this measure will be increased savings through increases to our "call off" numbers and a decrease in our mailing expenses for summons through improved forecasting of juror needs.

   Target for call off savings: $100,000
   Target for forecasting juror needs (summons mailing expense): 20% reduction

5. ***When is the cost reduction likely to be achieved?***
   It is anticipated that we will see measurable benefits in the 6-12 months following implementation of the new jury management system.

6. ***Summary Table for Benefit Category #4:***

Outcome/Benefit	Metrics/Measure	Baseline	Target	When will the target be achieved/measured?
Increase "call off" savings through better forecasting reports and tools.	Increased "call off" savings	$72,000	$100,000	By 10/31/2020
Improve ability to forecast juror needs	Summons mailings expenses	$26,700	$21,360 20% reduction	By 10/31/2020

Section 7. Benefit Achievement Summary

To be completed when benefits have been achieved or no further benefits are expected. For each of the benefits you identified above, explain whether benefits were achieved at target levels. Please include both quantitative measures and qualitative descriptions of benefits, including any monetary benefits. Use the measures identified above. If not achieved, explain why.

Example: *This project, to repair an emergency radio tower, was successfully completed in April 2014. The anticipated benefit was to maintain current service levels at 99.999% up time for an additional 5 years. This project is currently functioning at 99.999% up-time and will report annually for the next 5 years on up-time levels.*

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[5] $72,000 call off savings in 2017.

If one of these towers failed physically, the cost to the county would be enormous, generally in the neighborhood of $500K - $1 million per tower, depending on the construction techniques and size. User agencies on the emergency radio system will benefit by having infrastructure systems in place that will be assured of not experiencing catastrophic failures due to lack of maintenance.

Example: *This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 days to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings than anticipated. We did not meet the target because there were fewer purchases that qualified for prompt payment than originally estimated.*

Example:

Metric Description	Metrics	Baseline	Target	Actual
Reduce cost to deliver service. This project reduced processing time from the current average of 10 days to >1 allowing us to take advantage of prompt payment discounts.	• Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings	• 10-day processing time • 10% of purchases are receiving discount • $100,000 savings	• 1-day processing time • 30% of purchases are receiving prompt payment discounts • $400,000 savings	• 2-day processing time • 20% of purchases are receiving prompt payment discounts • $200,000 savings

Update 2/12/19: This is a new project that will be starting in Q2 of 2019.