



2016 ANNUAL TECHNOLOGY PROJECTS BENEFITS REPORT

OFFICE OF PERFORMANCE, STRATEGY AND BUDGET

APRIL 2017

Background

Ordinance 17654 requires the Office of Performance, Strategy and Budget (PSB) to submit an annual report on the benefits resulting from technology projects (KCC 2.16.025B.8(i)). All projects, completed or ongoing, are required to update the Benefit Achievement Plan (BAP) set at the time of the project's appropriation to convey any progress made in the prior year toward the project's expected benefits.

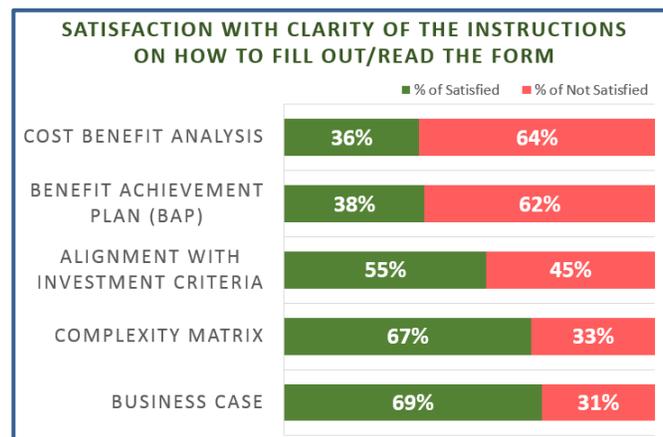
The primary focus of the annual reporting is completed projects. Those projects have to report on the measures and against the targets last-approved by the Council. Completed projects that require more time to measure the outcomes following completion are required to continue reporting in the subsequent years until a final BAP with final results is provided. Ongoing projects may propose revisions to the targets, measures, or benefits during the annual BAP update but those changes must be supported with exhaustive justifications.

2016 Experience with Benefit Achievement Planning & Reporting

Over the past three 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 annually. In a survey conducted in late 2016, respondents rated the BAP form the second highest when comparing its value to the four other forms required in proposing new technology projects.

The same survey also highlighted the need to improve the BAP template, so it is easier to capture progress toward the benefits and any changes made during annual updates. Specifically, 62 percent of respondents expressed dissatisfaction with the clarity of the instructions on how to fill out or read the form. This result puts the BAP template second highest in dissatisfaction among the five required forms, after the Cost-Benefit Analysis template (see Figure 1).

Figure 1: IT Investment Process Survey, December 2016



In addition, 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. PSB would like to partner with Council staff to improve the template in response to this feedback.

The aggregate time spent by PSB, KCIT, and agency staff collectively on the benefits reporting this year has increased compared to the prior year. Beginning this year, PSB has decentralized the BAP review function within its office and now, instead of having one budget analyst to collect and review all BAPs for the entire County, all budget analysts work with assigned

departments and agencies to review the BAPs for projects being sponsored by those agencies. While this change required more of PSB staff hours to compile the report, the process resulted in a greater quality of the report and contributes to PSB's overall budget monitoring efforts.

We believe that improvements to the BAP template and greater efforts to increase countywide capacity in how to define and measure project outcomes will help to make the reporting easier and reduce the time that goes into it. We look forward to continuing to improve and streamline the IT benefits reporting process where appropriate, and appreciate the efforts of all involved in this process.

Summary Statistics

The 2016 Annual IT Benefits Report includes a set of 85 BAPs. Twenty of those BAPs are for new projects that were approved in the 2017-2018 budget cycle. Another 45 are for projects that were still underway as of December 2016. Consistent with the Council's requirement, these 65 projects were not expected to report on completed benefits and, therefore, these BAPs have minimal updates. Twenty of the 85 projects were for completed projects and, therefore, were expected to report on the benefits achieved.

Table A: Breakdown of BAPs by Type

BAP Type	Count
Final BAP	14
BAP Update - Completed Projects	6
BAP Update - Ongoing Projects	45
Approved Original BAP - New Projects Starting in 2017	20
TOTAL	85

These technology projects are implemented across sixteen different departments. The Department of Transportation (DOT) has the highest number of projects (23 out of 85). King County Information Technology Department (KCIT) has the second largest portfolio (13 out of 85), followed by the Department of Executive Services (DES) and the Department of Natural Resources and Parks (9 out of 85 each). Table B provides the breakdown by department.

Table B: Technology Project Count by Department

Department	Project Count	Department	Project Count
DOT	23	KCSO	3
KCIT	13	PAO	2
DES	9	Elections	2
DNRP	9	KCEO PSB	2
Public Health	6	DJA	1

Department	Project Count	Department	Project Count
DCHS	5	DPER	1
DAJD	4	FMD	1
DOA	3	KCDC	1
TOTAL: 85			

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, and (4) reduced costs. While many projects identify and track benefits from multiple categories, Table C below summarizes the portfolio breakdown by the project's primary category.

Table C: Project Count by Primary Benefit Category in Years 2014-2016

Primary Benefit Category	2014		2015		2016	
	Project Count	% of Total	Project Count	% of Total	Project Count	% of Total
Category 1: Public Benefit	16	18%	12	17%	16	19%
Category 2: Improved Internal Operations	32	35%	27	38%	32	38%
Category 3: Maintaining Service	39	43%	30	42%	34	40%
Category 4: Cost Savings	4	4%	2	3%	3	4%
TOTAL	91	100%	71	100%	85	100%

Consistent with the prior years, the majority (78 percent) of technology projects in the 2016 County portfolio fell under Categories 2 and 3, Improved Internal Operations and Maintain Service Levels, respectively. Nineteen (19) percent of the projects were primarily intended to improve external County services.

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 compliance with changing regulations, industry standards, and business requirements.

Analysis of the Benefits Achieved In 2016

The below series of four tables provide a summary of each of the 85 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 or Measure Full Benefits

Table F: Summary of the Ongoing Projects

Table G: Projects That Received 2017-2018 Appropriations

Table D lists fourteen completed projects that are providing final BAPs as part of the 2016 report. Out of the fourteen, ten projects have met or exceeded the target benefits. The following four projects achieved some but not all of the target benefits (see Table D for more detail):

- Transit P&F Timekeeping
- DAJD Distributed Antenna Network II
- DCHS DDD Financial System
- DOA Electronic Valuation Notice

The DCHS DDD Financial System Project is included in this list despite that it was not yet closed as of the end of December 2016. The project did not achieve its full benefits and is being closed as of the writing of this report.

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

#	Department	Project Name	Summary
Improved Public Services (Category 1)			
1	DOA	Property Assessment Appeals	In 2016 there were three minor releases to the production environment to address two technical bugs and for restrictions on petitioner supporting documentation uploads. The overall usage of eAppeals increased to 68% (in 2016) for the 2016 Assessment appeals.
Improved Internal Operations (Category 2)			
2	DAJD	Distributed Antenna Network (DAN) Phase II	This project extended 800MHz radio coverage to floors 5, 6, and 7 of the King County Correctional Facility. The project was completed, but the hardware that was installed has a limited lifespan and will need to be replaced. DAJD is currently exploring options.
3	DCHS	DDD Financial System	The project team recommended that the work be discontinued due to concerns with the vendor's ability to deliver a timely and responsive product. The project did complete the business rules, which can be used for a future procurement process to solicit a new vendor.
4	DOT	Transit P&F Timekeeping	This project was to move Transit Power & Facilities (P&F) Section from using a separate timekeeping system to using an embedded timekeeping system existing within the organization's asset management

#	Department	Project Name	Summary
			system (EAM). Unfortunately, the original project assumptions were not borne out. This project was closed following completion of requirements gathering and the expected benefits were not achieved.
5	Elections	Election Management System Replacement	Elections staff were able to eliminate 9 time consuming custom-built applications and 100 custom queries. Department IT staff are now focusing on projects in the department's Strategic Plan focused on customer service improvements, outreach, and human resources.
6	KCIT	Systems Management	The system and business process have 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 new process.
Maintaining Service (Category 3)			
7	DOT	Transit On-Board Systems/ Communications Center System	The project was substantially completed in 2016 and all benefits have been achieved. The project provided the user interfaces and controls required to implement the new Transit Radio System.
8	KCIT	Business Empowerment & User Mobility (BEUM)	The project is completed and achieved target benefits. The wireless system provided the mobility bandwidth that previously did not exist or was available with only minimum bandwidth.
9	KCIT	Mainframe Migration	The project is successfully completed and the primary benefit of risk mitigation is realized. In addition, the annual infrastructure operating cost went down from \$3.3 million at the project outset to \$1.4 million. The cost savings are slightly lower than anticipated (by \$400,000) due to (a) continued need for batch processing, originally expected to be discontinued, and (b) a higher than originally estimated platform cost.
10	KCIT	Westin Network Connection Upgrade	The project was completed in December 2016 and no further benefits are expected. County now has access to the communication hub preventing delay in trouble shooting and maintenance of county equipment.
11	KCIT	2015-2016 Regional Aerials Project	The project successfully replaced outdated aerial imagery data, significantly reducing County risks of not having accurate, up to date data on the conditions on the ground. In addition, the project realized the 60% target cost share in the total cost of this regional project.

#	Department	Project Name	Summary
12	Public Health	Criteria Based Dispatch (CBD)/CAD Integration at NORCOM	The primary benefit to this CBD project is to ensure that NORCOM Call Receivers have a quality eCBD product that interfaces seamlessly with the new version of Tri Tech CAD at a major communications (911) center in King County. The project has reached mature benefit and has met expectations.
Cost Savings (Category 4)			
13	DOA	Electronic Valuation Notice	The EVN project went live April 2016. In less than 1 year of active operation, the project registered 5,895 parcels into the EVN system representing 2,272 taxpayers. This resulted in \$1,957 in savings. The number of parcels and savings is trending below the target identified in the BAP of having 74,000 taxpayers opt into the EVN program in the first full year of implementation. DOA will develop low/no-cost options for increasing EVN registrations.
14	KCIT	ESOP (Phase III Government Cloud Computing)	The project is completed and exceeded the target benefits. The project realized cost avoidance of \$6.3 million in operating server hosting, which exceeded the target of \$5.6 million for period 2012–2015.

Table E lists six 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 2017.

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

#	Department	Project Name	Summary
Improved Public Services (Category 1)			
1	DES	RALS Archives Collection Management System	The initial performance measure (application usage) fell short of expectations, as customers took longer than expected to grow accustomed to the new tool (though rollout got late start). After review of metrics, RALS will conduct new customer surveys in spring 2017.
2	DPER	Permit Integration	This project implemented a new permitting data system for use by DPER and other agencies. Although the project is now closed, implementation of online permitting through the MyBuildingPermit.com portal is continuing (target completion of the end of 2017) and will be reported through this project.
3	KCIT	CRM Expansion/ Constituent Engagement Services	The project is completed and achieved its benefits related to improved customer service response times

#	Department	Project Name	Summary
			and cost savings. Additional benefits will be measured in 2017.
Improved Internal Operations (Category 2)			
4	DCHS	Designated Mental Health Professionals (DMHP) & Public Safety	The DMHPs experienced some equipment challenges at the beginning, but they continue to use the laptops out in the field. DCHS expects to continue seeing a reduction in time spent on obtaining resource information through travel and phone calls as laptop use continues to increase.
5	KCSO	ATLAS Electronic Scheduling System	This project implemented a scheduling and reporting system that automates tasks that were previously performed manually. The system was successfully implemented, but final benefits are pending completion of post-implementation rollout of an auto-communication tool to reduce processing time for sergeants to fill overtime shifts.
Maintaining Service (Category 3)			
6	KCIT	Exchange to Office 365 (Pilot)	The project was successfully completed in late 2016. Benefits will be measured in late 2017.

Table F lists 45 technology projects (grouped by primary benefit category) still underway as of the time of this reporting and provides a brief summary of the status of each project.

Table F: Summary of the Ongoing Projects

#	Department	Project Name	Summary
Improved Public Services (Category 1)			
1	DES	FBOD Countywide ePayment Implementation Support	There were a number of new ePayment services installed in agencies in 2016, including at Judicial Administration, RALS, RASKC, Parks, and DPER, among others. Additionally, a new 10-year contract for ePayment services was signed with Point&Pay. The project received an additional appropriation in the 2017-2018 budget cycle.
2	DES	RALS Records & Licensing Software (Anthem) Replacement	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."
3	DNRP	Parks Facilities Scheduling System (CLASS) Replacement	The project will replace the aging Parks reservation system with an online self-service portal system customers can use to reserve Parks' facilities. The new system went live January 2017 and will be fully rolled out throughout 2017.

#	Department	Project Name	Summary
4	DNRP	WTD IBIS and Business Objects Retirement (Phases 1-2) & Data Migration and KCIT System Retirement (Phase 3)	The project is in Phase 3 – migrating historical IBIS data to a stable environment that can be accessed by users. This phase is on time and budget.
5	DOT	Transit Real-Time Improvements	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 2017-18 budget and is in the project initiation phase.
6	DOT	Transit Regional Fare Coordination Enhancements	This project provides enhancements to the ORCA fare collection system. This project is underway. The following benefits were achieved in the last year and documented in the BAP: (a) ORCA usage on streetcars; (b) Legacy point of sale system was retired; and (c) King County Employee card usage for both building access and fare payment.
7	Public Health	eCBD/CAD Interface at Valley Communications	This Criteria Based Dispatch (CBD) 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.
8	Public Health	Health Info Technology Improvement 974	In 2015, Jail Health Services went live on Epic at two sites operating 24x7 with about 200 users. The project recently completed a re-baseline request to extend the project into 2017 to complete the remaining implementations. The project experienced delays due to vendor performance and has an upgrade from Epic v2014 to Epic v2016, scheduled for May 2017. Due to the upgrade, additional build configurations will be delayed and plan to resume mid-2017. The project budget remains unchanged. Thus far, Public Health has received \$2 million of the anticipated \$4 million in Meaningful Use revenue over the next 4 years. Additionally, for all patients that have been seen since clinics have gone live on the new system, 99% of the time the health record is available.
Improved Internal Operations (Category 2)			

#	Department	Project Name	Summary
9	DAJD	Roster Management System Employee Interface	This project implements a scheduling system that will allow for employee self-entry of requests. This project is expected to move into full production mode later in 2017.
10	DES	HRD ATS Replacement (NeoGov Replacement)	Benefits have not yet been achieved. The project is working to improve applicant experiences, attract a more diverse candidate pool, and streamline the recruiting and hiring experience for agencies. In 2016, the project was put on hold temporarily in order to secure an additional appropriation for 2017-2018.
11	DES	Risk Management RiskMaster Replacement	2016 saw significant progress on the RiskMaster project. ORMS and the KCIT project manager worked with the KCIT business analysts to complete the business requirements for the software solution. ORMS created and issued an RFP, received responses, and began the evaluation process. ORMS is also working through the negotiation phase and will likely select a vendor by late March 2017 and anticipate full implementation by the end of 2017.
12	DNRP-PSB	Green Building Reporting Module	The Green Building Reporting project has updated its measures to reflect the fact that there are more projects reporting on green building than when the project was originally scoped. The project is reassessing its business needs with KCIT and DNRP as the leads.
13	DOT	Airport Maximo Upgrade	Final design and implementation are in process. The project is on track to improve internal processing and reporting.
14	DOT	Transit Capital Management and Reporting System	This project will provide a single, Transit-wide repository of relevant, up-to-date capital project data (scope, schedule and budget/cost). This project is underway.
15	DOT	Transit HASTUS Planning Module	This project will implement a new module of the HASTUS application, the software suite currently used by the Scheduling group to produce vehicle and operator/crew schedules. This project is on hold pending completion of the HASTUS Upgrade project.
16	DOT	Transit Mobile Ticketing Pilot--Cashless Fare Technologies	This project is piloting technology that provides customers the ability to pay their transit fares using their smartphones. The pilot test began in November 2016 and is underway.
17	KCDC	District Court Unified Case Management System	District Court is working with Journal Technologies Inc. on Configuration of its new Case Management System. The Court is working toward implementing

#	Department	Project Name	Summary
			its Pilot of limited civil case types Summer 2017. The Statewide Data Exchange implementation will likely be delayed. While the Court continues to work closely with AOC so that the Court is ready to implement when available, the Court is planning to proceed its new system interface without the Data Exchange if necessary. The King County Criminal Justice Data Sharing Committee is on hold at present. The project is 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 project implementation.
18	KCEO-PSB	Budget System PIC 2014 Modifications	The project is on track. The PIC Capital Budget System is in the "production" mode and was used to prepare the 2017-18 Adopted Budget, the 1st 2017 Omnibus Supplemental, and the 2016 4th Quarter Report for CIP Budgets.
19	KCSO	Wireless CAD Upgrade	The final stage of this project, will install GPS units in all patrol vehicles to allow KCSO to track vehicles in the field. The project is currently on hold due to interface issues between the GPS devices and CAD. The project's requirements are being merged with the Fleet Automated Vehicle Locator (AVL) project, and the two projects will proceed in tandem.
20	PAO	Integrated Document Exchange Project (IDX)	The IDX project is working with KCIT to complete Phase 2 improvements to the eLODI application, these changes are primarily focused on improved user experience and are currently planned to be complete in June 2017. A satisfaction survey of law enforcement users of eLODI was conducted with the application receiving relatively high satisfaction ratings – a second survey will be completed after Phase 2 to measure the improvements gained.
21	Public Health	Emergency Medical Dispatch-CPR Quality Improvement Application Replacement	This project will enable a regional solution for emergency medical dispatch quality improvement oversight that will directly benefit our constituents through improved telecommunicator performance and internal service improvements based on improved data access and productivity. These benefits will likely to be achieved by Q1-2018 after this project is fully implemented, following the go-live of the solution at each dispatch agency.
22	Public Health	eMAR	No benefits were achieved in 2016 as the project remains on hold while Epic is stabilized and then upgraded in May 2017.

#	Department	Project Name	Summary
Maintaining Services (Category 3)			
23	DCHS	Behavioral Health Integration	Phase I is almost complete and providers are getting paid in a timely manner. Phase II is almost complete with the upgrade of the database system.
24	DES	BRC BI Reporting	The planned date for Release 1 (of 3) Go Live 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. Currently the target completion date of Release 2 (of 3) is September 2017 and the target completion date of Release 3 (of 3) is March 2018, at which point all of the benefits listed in the BAP should be realized.
24	DES	BRC Oracle EBS 12.2 Upgrade	The Oracle EBS reporting tools and applications were upgraded in May and July 2016 respectively, allowing the County to continue to receive premier levels of support from Oracle. EBS hardware implementation will occur the end of February 2017, allowing for full project completion in June 2017.
26	DJA	Systems Replacement Project (SRP)	The SRP project is on track to be completed on time. The project will deliver case and financial management systems to support DJA's business operations: 1) case management functions will support case processing between case initiation and case closure; and 2) the financial management functions will support intake, accounting and public distribution of case funds, as well as management of various accounts associated with Superior Court cases.
27	DNRP	WTD West Section Control System Replacement	In 2016, the project to replace the existing control system at the West Point Treatment Plant was on track. The potential impact of the February 2017 plant equipment breakdown on this project is being assessed.
28	DNRP	Solid Waste: Paradigm Upgrade (Transfer Station Transaction System)	The project will replace the current cashiering system used at transfer stations. The old system is no longer supported by vendors. This project was completed in mid-December 2016 and results will be measured in 2017.
29	DOT	Transit 4.9 Network and Mobile Access Routers Replacement	This project will implement a replacement for the 4.9 GHz wireless network in use within the Transit system. This project is underway.

#	Department	Project Name	Summary
30	DOT	Transit Customer Information Systems	This project replaces or upgrades legacy at-risk Transit customer information systems. This project is underway.
31	DOT	Transit Data Infrastructure Replacement	This project will a) develop an enterprise architecture that will ensure strategic alignment between business goals and IT solutions and b) implement a modernized Transit data infrastructure that will be the foundation of all Transit Information Systems, will reflect industry standards, and model transit business more closely. This project is underway.
32	DOT	Transit HASTUS Upgrade	This project upgrades HASTUS, a mission critical system used by both Transit Operations and Scheduling, from version 2006 to the current version. This project is underway and is expected to complete Q1 2017.
33	DOT	Transit ORCA Replacement Planning	This project will replace the existing ORCA smart card fare collection system. This project is underway.
34	DOT	Transit Rider Information Systems - TABS Replacement	Project will replace the outdated tool for creating bus schedules and timetables. Project was on hold, received additional funding in the 2017-18 budget and is now in the process of restarting.
35	DOT	Transit TSP System Replacement Conceptual Design and Specification	This project will replace the legacy Transit Signal Priority (TSP) system with a new, modern solution. This project is underway.
36	DOT	Transit Vanpool Information System Modernization	This project will migrate two legacy desktop applications that support Vanpool operations to a modern browser-based platform. Project was on hold due to resource limitations and is now in the process of restarting.
37	DOT	Transit Vehicle Maintenance Dispatch Replacement	This project will implement Yard Manager, a replacement for the legacy Vehicle Dispatch system. It is currently on hold due to resource limitations but is expected to restart Q1 2017.
38	KCIT	800 MHz Trunked Radio System Sprint/Nextel Rebanding	The project is on track to complete in Q2, 2017, and to achieve its intended benefit of risk reduction upon completion.
39	KCIT	Enhance Wireless Connectivity	The project is set to complete in Q2, 2017. The scope was reduced to 7 sites (King County Courthouse and six District Courts). Implementation commenced in June 2016.
40	KCIT	IP Fax Service Project	The project is on track to complete in mid-2017. OpenText, a managed service that works via Outlook, was selected for the countywide fax system. KCIT is finalizing its inventory of agencies' fax lines

#	Department	Project Name	Summary
			(approximately, 800 lines) and discussing the associated costs with agencies.
41	KCIT	Puget Sound Emergency Radio Network (PSERN)	In mid-2016, the PSERN project completed Phase II (Preliminary Design) and transitioned to Phase III (final system design). In Phase II, the project completed system vendor procurement and signed a \$112 million contract with Motorola Solutions Inc. During this period, the project also completed a procurement for the Architectural & Engineering Consultant and started site development activities including surveying, geotechnical and environmental studies, permitting, leasing, and construction. Construction is substantially complete at 5 radio sites and the rest will be completed over approximately the next 2 years. As part of Phase III, the project team and Motorola are developing design documents with the target completion in July 2017.
42	KCIT	Unified Communication/ County Telephony System Replacement Phase 3e	The project is on track to complete in Q3, 2017. According to the 2016 survey, 75% of respondents were satisfied with the Skype for Business phone service. In 2014, the rate was under 62%.
43	KCSO	IRIS/TESS Replacement Project	This project will replace the >20 year old legacy records management system and the newer system used to manage KCSO's evidence with a new cloud-based system that is easier to use and compliant with federal reporting requirements. Implementation is currently expected in Q4-2017.
44	PAO	Case Management (PROMIS Replacement) Implementation	The Juvenile Division deployment is underway with target completion in July 2017. A survey of the District Court unit was conducted to measure their satisfaction with PbK, overall results were very good with all 6 questions receiving 89.4% agree or strongly agree positive responses.
45	Public Health	Jail Health Digitizing X-Rays	No benefits were achieved in 2016 as the project remains on hold until Epic is stabilized and upgraded in May 2017.

Table G lists 30 technology projects that received appropriations in fall 2016, as part of the 2017-18 budget. Twenty of those appropriations were for new projects that will be starting in 2017 and the remaining ten were for existing projects that needed additional appropriations. This report includes approved BAPs for the new projects.

Table G: Projects That Received 2017-2018 Appropriations

#	Department	Project Name	Status at the Time of 2017-2018 Appropriation
Improved Public Services (Category 1)			
1	DCHS	Physical Behavioral Health Integration	New Project
2	DCHS	DCHS-DPH Data Integration	New Project
3	DES	FBOD Countywide ePayment Implementation Support	<i>Existing Project</i>
4	DES	RALS For-Hire License System	New Project
5	DNRP	WTD Capacity Charge Escrow and Customer Add	New Project
6	DOT	Transit Real-Time Improvements	<i>Existing Project</i>
Improved Internal Operations (Category 2)			
7	DAJD	Distributed Antenna Network (DAN) Phase III	New Project
8	DAJD	Jail Management System	New Project
9	DES	HRD ATS Replacement (NeoGov Replacement)	<i>Existing Project</i>
10	DES	RALS ERMS Upgrade	New Project
11	DNRP	WLRD SWM Billing System Replacement	New Project
12	DNRP	WLRD SWSS Cityworks	New Project
13	DOA	PTAS/PBS Replacement (Phase I)	New Project
14	DOT	Fleet Automated Vehicle Locator	New Project
15	DOT	Transit BI Resource DB (TBIRD)	New Project
16	DOT	Transit HASTUS Planning Module	<i>Existing Project</i>
17	DOT	Transit Safety and Security Project	New Project
18	DOT	Transit Vehicle Telematics for Transit Coaches	New Project
19	FMD	Comprehensive Facilities Asset Management System	New Project
Maintaining Service (Category 3)			
20	DNRP	WTD/WLRD LIMS Replacement	New Project
21	DOT	Airport PIDS	New Project
22	DOT	Transit 4.9 Network and Mobile Access Routers Replacement	<i>Existing Project</i>
23	DOT	Transit Customer Information Systems	<i>Existing Project</i>
24	DOT	Transit ORCA Replacement	<i>Existing Project</i>
25	DOT	Transit Rider Information Systems - TABS Replacement	<i>Existing Project</i>
26	DOT	Transit Signal Priority (TSP) Equipment Replacement	<i>Existing Project</i>
27	DOT	Transit Vehicle Maintenance Dispatch Replacement	<i>Existing Project</i>
28	Elections	Tabulation System Replacement	New Project
29	KCEO-PSB	Hyperion Upgrade	New Project
Cost Savings (Category 4)			
30	DOT	Transit On-Board Camera Management System	New Project

The following section includes a complete set of the 85 BAPs.

List of Technology Projects in the 2016 Annual BAP Report

#	Agency	Project Name	Project Status as of December 2016	Primary Benefit Category	Page
1	DAJD	Distributed Antenna Network (DAN) Phase II	Completed (Final BAP)	Category 2	1
2	DAJD	DAN Phase III	New Project	Category 2	7
3	DAJD	Jail Management System	New Project	Category 2	13
4	DAJD	Roster Management System (RMS) Employee Interface	Underway (Active)	Category 2	26
5	DCHS	Behavioral Health Integration	Underway (Active)	Category 3	33
6	DCHS	DCHS-DPH Data Integration	New Project	Category 1	40
7	DCHS	DDD Financial System	Closing (Final BAP)	Category 2	47
8	DCHS	DMHP & Public Safety	Completed	Category 2	54
9	DCHS	Physical Behavioral Health Integration	New Project	Category 1	63
10	DES	BRC BI Reporting	Underway (Active)	Category 3	70
11	DES	BRC Oracle EBS 12.2 Upgrade	Underway (Active)	Category 3	82
12	DES	FBOD Countywide ePayment Implementation Support	Underway (Active)	Category 1	89
13	DES	HRD ATS Replacement (NeoGov Replacement)	Underway (Active)	Category 2	102
14	DES	RALS Archives Collection Management System	Completed	Category 1	110
15	DES	RALS ERMS Upgrade	New Project	Category 2	117
16	DES	RALS For-Hire License System	New Project	Category 1	125
17	DES	RALS Records & Licensing Software (Anthem) Replacement	Underway (Active)	Category 1	133
18	DES	Risk Management Risk Master Replacement	Underway (Active)	Category 2	143
19	DJA	Systems Replacement Project	Underway (Active)	Category 3	151
20	DNRP	Parks Facilities Scheduling System (CLASS) Replacement	Underway (Active)	Category 1	162
21	DNRP	Solid Waste: Paradigm Upgrade--Transfer Station Transaction System	Underway (Active)	Category 3	169

#	Agency	Project Name	Project Status as of December 2016	Primary Benefit Category	Page
22	DNRP	WLRD SWM Billing System Replacement	New Project	Category 2	174
23	DNRP	WLRD SWSS Cityworks	New Project	Category 2	181
24	DNRP	WTD Capacity Charge Escrow and Customer Add	New Project	Category 1	189
25	DNRP	WTD IBIS and Business Objects Retirement (Phases 1-2) & Data Migration and KCIT System Retirement (Phase 3)	Underway (Active)	Category 1	196
26	DNRP	WTD West Section Control System Replacement	Underway (Active)	Category 3	205
27	DNRP	WTD/WLRD LIMS Replacement	New Project	Category 3	209
28	DNRP-PSB	Green Building Reporting Module	Underway (Active)	Category 2	218
29	DOA	Electronic Valuation Notice (EVN)	Completed (Final BAP)	Category 4	225
30	DOA	Property Assessment Appeals	Completed (Final BAP)	Category 1	231
31	DOA	PTAS/PBS Replacement (Phase I)	New Project	Category 2	237
32	DOT	Airport Maximo Upgrade	Underway (Active)	Category 2	243
33	DOT	Airport PIDS	New Project	Category 3	248
34	DOT	Fleet Automated Vehicle Locator	New Project	Category 2	255
35	DOT	Transit Business Intelligence Resource Database (TBIRD)	New Project	Category 2	264
36	DOT	Transit Capital Management and Reporting System	Underway (Active)	Category 2	273
37	DOT	Transit Customer Information Systems	Underway (Active)	Category 3	281
38	DOT	Transit Data Infrastructure Replacement	Underway (Active)	Category 3	290
39	DOT	Transit HASTUS Planning Module	Underway (On Hold)	Category 2	297
40	DOT	Transit HASTUS Upgrade	Underway (Active)	Category 3	304
41	DOT	Transit Mobile Ticketing Pilot--Cashless Fare Technologies	Underway (Active)	Category 2	308
42	DOT	Transit 4.9 Network and Mobile Access Routers Replacement	Underway (Active)	Category 3	316
43	DOT	Transit On-Board Camera Management System	New Project	Category 4	325
44	DOT	Transit On-Board Systems/Communications Center System	Completed (Final BAP)	Category 3	332

#	Agency	Project Name	Project Status as of December 2016	Primary Benefit Category	Page
45	DOT	Transit ORCA Replacement Planning	Underway (Active)	Category 3	339
46	DOT	Transit P&F Timekeeping	Completed (Final BAP)	Category 2	349
47	DOT	Transit Real-Time Improvements	Underway (Active)	Category 1	356
48	DOT	Transit Regional Fare Coordination Enhancements	Underway (Active)	Category 1	364
49	DOT	Transit Rider Information Systems - TABS Replacement	Underway (On Hold)	Category 3	373
50	DOT	Transit Safety and Security Project	New Project	Category 2	379
51	DOT	Transit TSP System Replacement--Conceptual Design & Specification	Underway (Active)	Category 3	389
52	DOT	Transit Vanpool Information System Modernization	Underway (On Hold)	Category 3	397
53	DOT	Transit Vehicle Maintenance Dispatch Replacement	Underway (On Hold)	Category 3	403
54	DOT	Transit Vehicle Telematics for Transit Coaches	New Project	Category 2	409
55	DPER	Permit Integration	Completed	Category 1	418
56	Elections	Election Management System Replacement	Completed (Final BAP)	Category 2	424
57	Elections	Tabulation System Replacement	New Project	Category 3	431
58	FMD	Comprehensive Facilities Asset Management System	New Project	Category 2	436
59	KCDC	District Court Unified Case Management System	Underway (Active)	Category 2	444
60	KCEO PSB	Budget System PIC 2014 Modifications	Underway (Active)	Category 2	462
61	KCEO PSB	Hyperion Upgrade	New Project	Category 3	470
62	KCIT	800 MHz Trunked Radio System Sprint/Nextel Rebanding	Underway (Active)	Category 3	478
63	KCIT	2015-2016 Regional Aerials Project	Completed (Final BAP)	Category 3	483
64	KCIT	Business Empowerment & User Mobility (BEUM)	Completed (Final BAP)	Category 3	490
65	KCIT	CRM Expansion/Constituent Engagement SVCS	Underway (Active)	Category 1	496
66	KCIT	Enhance Wireless Connectivity	Underway (Active)	Category 3	504

#	Agency	Project Name	Project Status as of December 2016	Primary Benefit Category	Page
67	KCIT	ESOP (Phase III Government Cloud Computing)	Completed (Final BAP)	Category 4	510
68	KCIT	Exchange to Office 365 (Pilot)	Completed	Category 3	522
69	KCIT	IP Fax Service Project	Underway (Active)	Category 3	529
70	KCIT	Mainframe Migration	Completed (Final BAP)	Category 3	535
71	KCIT	Puget Sound Emergency Radio Network (PSERN)	Underway (Active)	Category 3	542
72	KCIT	Systems Management	Completed (Final BAP)	Category 2	549
73	KCIT	Unified Communication/County Telephony System Replacement Phase 3e	Underway (Active)	Category 3	560
74	KCIT	Westin Network Connection Upgrade	Completed (Final BAP)	Category 3	567
75	KCSO	ATLAS Electronic Scheduling System	Underway (Active)	Category 2	575
76	KCSO	IRIS/TESS Replacement Project	Underway (Active)	Category 3	582
77	KCSO	Wireless CAD Upgrade	Underway (On Hold)	Category 2	590
78	PAO	Case Management (PROMIS Replacement) Implementation	Underway (Active)	Category 3	596
79	PAO	Integrated Document Exchange Project (IDX)	Underway (Active)	Category 2	604
80	PH	CBD/CAD Integration at NORCOM	Completed (Final BAP)	Category 3	613
81	PH	eCBD/CAD Interface at Valley Communications	Underway (Active)	Category 1	619
82	PH	Emergency Medical Dispatch (EMD)-CPR Quality Improvement Application Replacement	Underway (Active)	Category 2	626
83	PH	Health Info Technology (HIT) Improvement 974	Underway (Active)	Category 1	635
84	PH	Jail Health Digitizing X-Rays	Underway (On Hold)	Category 3	645
85	PH	Jail Health Electronic Medication Administration Record (eMAR)	Underway (On Hold)	Category 2	652



2016 ANNUAL TECHNOLOGY PROJECTS BENEFITS REPORT

SET OF 85 BENEFIT ACHIEVEMENT PLANS

OFFICE OF PERFORMANCE, STRATEGY AND BUDGET

APRIL 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

King County Department/Agency Name	Department of Adult and Juvenile Detention
Project Title	Distributed Antenna network (DAN) Phase II
EBS Project Number	<u>1122182</u>

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](#) ~~[Claudia Balducci](#)~~, Director, Department of Adult & Juvenile Detention

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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
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Tony Minor	Radio Manager, KCIT	800 MHz Radio Manager
John Slomnicki	IT Sr. LAN Admin, KCIT-DAJD	800 MHz Radio Consultant
Scott Peterson Lackey	IT PM	IT PM

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.

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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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Budget Process	07/09/13	Mike Holland	New, initial draft	2 hours
Budget Process	08/15/13	Mike Holland	Per evaluation feedback from Council Analysis, moved benefits from Category #2 or Category #3. Also provided additional information about the current "dead spot" in KCCF and how many of them will be addressed by this project.	3 hours
Budget Process	10/25/13	Scott Lackey, John Slomnicki	Reformatted to the new v.2 BAP doc format	2 hours
Change of IT PM	06/01/14	Scott Peterson	New KCIT PM Assignment	30 min
BAP Review	02/12/15	Mike Holland, Scott Peterson	2015 BAP Review – NO CHANGES	30 min
BAP Review	01/26/16	Mike Holland, Scott Peterson	2016 BAP Review – Change in scope – Reflects change in Benefits. See section 6 Category #2	30 min
2016 Annual Report - Final BAP for a completed project	2/2/2017	Commander Karlsson	2016 Annual BAP Review - Final BAP as anticipated benefits have been achieved. Section 7 has been updated with benefit/target information.	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.

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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: 1/26/2016 – Project had to reduce scope due to funding restrictions. The project will upgrade the DAS on floors 5, 6, and 7 only in this phase II.

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

This project is simply the continuation of an already-successful pilot from Phase I. In Phase I, 800 MHz radio coverage 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.

The goal of the DAJD KCCF Distributed Antenna Network (DAN) *Phase II* project is to provide 800 MHz staff radio coverage ~~throughout the remaining floors (floors 4-12)~~ on floors 5, 6 and 7 of the King County Correctional Facility.

~~Once completed, the entire facility would have seamless radio coverage throughout all floors, including the elevators and emergency stairwells. 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 II head end changes.~~

[NEW 1/26/2016] Once completed, floors 5, 6, and 7 will be updated with the current radio frequency system as floors 1, 2 and 3. The remaining floors, 8-12 and the tie into the Seattle Simulcast will need to be included in the Phase III request.

End Result: This project will significantly improve the safety of our operations. Minor emergencies occur daily in a correctional setting within DAJD facilities. The Phase I has 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. Today, many areas in our facility have no coverage whatsoever, and for areas that do, there is currently no capacity to support our broader set of customers including Seattle Police or King County Sheriff / SWAT, Seattle Firefighters, or other broader emergency services. Phase II would remedy both of these issues.

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 ~~4 through 12~~ [NEW 1/26/2016] 5-7 and if we have the capacity to support the additional user groups mentioned above.

3. What is the current baseline for this measure?

There is currently no reliable radio coverage throughout floors ~~4 through 12~~ [NEW 1/26/2016] 5-7

and the user groups mentioned above cannot be supported due to capacity issues.

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 through 12~~ [NEW 1/26/2016] 5-7 as well as the related stairwells and elevators.

5. When is the benefit likely to be achieved?

Full radio coverage on floors ~~4 through 12~~ [NEW 1/26/2016] 5-7 is anticipated by Q4 / 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.

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
<i>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.</i>	<i>Processing time, annual savings, and % of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

UPDATE: 1/26/2016 – Project had to reduce scope due to funding restrictions. The project will upgrade the DAS on floors 5, 6, and 7 only in this phase II. Additional funding is to be requested for Phase III.

Update: 2/2/2017 - The DAN Phase II project is the continuation of an already successful DAN Phase I initiative. DAN Phase II provided enhanced 800 MHz communications on floors 5, 6 and 7 of the King County Correctional Facility. DAN Phase III will continue this effort by completing the enhanced 800 MHz on floors 8 to 12 and is scheduled to begin later in 2017. As a validation of the work performed, vendor testing of the 800 MHz signal has been performed on floors 1 - 7 and the anticipated targets have been satisfied. This is the Final BAP for this project.

While the planned project benefits have been achieved, there is an issue that will need mitigation in the future. The hardware installed in early 2015 as part of DAN Phase II has a limited life span and will need to be replaced. Options under consideration at this time are to add this hardware replacement to the DAN Phase III project or submit a new budget request that would address this risk.

IT Project Benefits Achievement Plan (Version 2)

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

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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.

Business Owner Name and Title: William Hayes, Director, Department of Adult & Juvenile Detention

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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

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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
2016 Annual Report - BAP for new project that starts in 2017	2/2/2017	Mike Holland Commander Karlsson	2016 Annual Report - "No changes" BAP for a new project.	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:

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

Update: 02/02/2017 - Project start is anticipated to occur in April 2017.

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.

The DAN Phase III project will complete the 800 MHz communication upgrade on the remaining floors (8 – 12) of KCCF. Once completed, the entire facility would have seamless radio coverage throughout all floors, including the elevators and emergency stairwells. 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) would not be able to use their talk group within the KCCF facility. Once DAN Phase III is in place, this talk-group limitation issue will no longer be present.

End Result: 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 8-12 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.

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 1-12 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 8-12 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 8-12 as well as the related stairwells and elevators.

Talk groups will increase from 8 to 20 channels.

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

Full radio coverage on floors 8-12 is anticipated by Q3 / 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 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
<i>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.</i>	<i>Processing Time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 % of purchases are receiving prompt payment discounts • \$200,000 savings

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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 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.

William Hayes – 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
William Hayes	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
Mike Holland	Service Delivery Manager – KCIT	Steering Committee Member/ KCIT
Hugh Furubayashi	Project Program Analyst - DAJD	Business Analysis

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, 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 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
2017-18 Budget Process	June 2016	Mike Holland, Steve Larsen, Hugh Furubayashi	New Initial Draft	21 hours
2017-18 Budget Process	Sept 2016	Hugh Furubayashi	Revised: Cat #2 (2,3,4) & Cat #3 (1)	4 hours
2016 Annual Report - Updated BAP for a new project	Feb 2017	Steve Larsen Mike Holland	2016 Annual BAP Review - updated to reflect Council Budget Proviso.	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)

****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.

- 1) *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*
- 2) *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 #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.

Updated: 02/02/2017 - This project has a planned scheduled start date of April 2017.

Updated: 02/02/2017 - As part of the budget funding process, Council added a proviso that will help to ensure the project is successful and achieves its full benefit potential. In March 2017, the project will release an RFP to solicit the assistance of an independent Quality Assurance (QA) Consultant that will provide quarterly assessments of the overall project health and project management factors that are important to project success. The health assessment includes scope, schedule, budget, resources, milestones, risks and other applicable reviews per QA consultant methodology. The

assessment will also include a change management evaluation of DAJD's ability to transform their business to take advantage of the benefits offered by a modern Jail Management System.

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

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- 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. User Driven Process Changes – 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. Reduction in integration complexity and cost – 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. Support the transition from paper to electronic workflow – 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.

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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?)

- A. Process efficiency across jail operations - benefits will be measured by better utilization of staff due to time spent entering redundant data, or searching paper documents, log books, excel spreadsheets or standalone systems for pertinent inmate information.
- B. Elimination of disparate, standalone systems – benefits will be measured by the decrease in the number of systems required to support jail operations. Current estimates are that nearly 50 systems support business operations across multiple divisions. Our expectation is that 30 or so could be integrated into a comprehensive jail management solution.
- C. Improved visibility to operational data – benefits will be measured by enhanced reporting and data analysis capabilities for end-users. Our expectation is that the time spent extracting and transforming operational data into a usable format will be reduced dramatically.
- D. User Driven Process Changes – benefits will be measured by decreased cycle time for activities in core booking to release processes. Our expectation is that with electronic workflow capabilities, cycle time will be reduced by eliminating paper or verbal handoffs as inmate information moves through the process.
- E. Reduction in integration complexity and cost – benefits will be measured by improved data exchange with within DAJD, and with external partners. Our expectation is that having an infrastructure with robust, modern messaging capabilities will enhance information data sharing with our partners.

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.

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- 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.
 - a. 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.
 - a. 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.
 - a. 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.
 - a. 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.
 - a. We will measure number of missing PR screening assessments.

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- 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.
 - a. We will measure the number of medical alerts associated with inmate movements for court appearances.
 - b. We will 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.
 - a. We will measure time spent locating booking packets.
 - b. We will 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.
 - a. 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.
 - a. 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.
 - a. 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.
 - a. We will measure the time spent responding to grievances and incidents.
 - b. We will 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.
 - a. 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.
 - a. 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.
 - a. We will measure the number of inmate housing misplacements due to behavior problems.
 - b. We will 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.
 - a. 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.
 - a. We will measure time spent locating and reviewing information in booking packets.

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- b. We will 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.
 - a. 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?***

- A. Process efficiency across jail operations – Many processes that will be impacted, and the timing will be dependent on vendor capabilities and how the project will be phased. In 2010, DAJD SME's identified over 800 process points where a new JMS solution would have a major impact on process efficiency.
- B. Elimination of disparate, standalone systems – Approximately 50 applications required to support business operations across five divisions.
- C. Improved visibility to operational data – Operational data must be extracted from numerous data sources. Consequently, a great deal of time and effort is spent throughout DAJD extracting and compiling data from these sources.
- D. User Driven Process Changes – No current baseline for this measure due to system inflexibility.
- E. Reduction in integration complexity and cost – Varied technologies and methods, based on the mainframe technologies, are used to interface with external and vendor systems.
- F. Transition from paper to electronic workflow – No current baseline for this measure due to system inflexibility.

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.

- A. Process efficiency across jail operations – Our expectation is that many process points will be impacted, with focus on intake to release processes. A survey of SME's will be conducted to identify which of the process points displayed efficiencies.
- B. Elimination of disparate, standalone systems – The target is to reduce the number of standalone applications by 50%. This target will increase in subsequent years.
- C. Improved visibility to operational data – The target is to have key operational data about inmate population available and gathered for analysis. This target will increase in subsequent years.

- 15048 D. User Driven Process Changes – The target is to provide jail staff with the ability to customize workflow and event alerts, improving cycle time for processes.
- E. Reduction in integration complexity and cost – Our expectation is that data exchange and collaboration with departments and external agencies will increase.
- F. Transition from paper to electronic workflow – Our expectation is electronic documents will reduce time spent searching and tracking for them as well as reducing costs to physically store paper documents.

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.

- A. Process efficiency across jail operations – Within 6 months of implementation with ongoing improvements over time.
- B. Elimination of disparate, standalone systems – Within 1 year of implementation with ongoing improvements over time.
- C. Improved visibility to operational data - Within 1 year of implementation with ongoing improvements over time.
- D. User Driven Process Changes – Within 6 months of implementation with ongoing improvements over time.
- E. Reduction in integration complexity and cost – Within 1 year of implementation with ongoing improvements over time.
- F. Transition from paper to electronic workflow – Within 1 year of implementation with ongoing improvements over time.

Summary of Measures

Benefit	Baseline	Target	To Be Achieved
Process efficiency across jail operations	In 2010, DAJD identified over 800 process points where a new JMS solution would have a major impact on process efficiency.	A survey of SME's will be conducted to identify which of the process points displayed efficiencies, with focus on intake to release processes.	Within 6 months of implementation with ongoing improvements over time.
Elimination of disparate, standalone systems	Approximately 50 applications required to support business operations across 5 divisions.	Reduced number of standalone applications by 50%. This target will increase in subsequent years.	Within 1 year of implementation with ongoing improvements over time.
Improved visibility to operational data	Operational data must be extracted from numerous data	Dramatically reduced time spent extracting and	Within 1 year of implementation with

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User-driven process changes	No current baseline for this measure due to system inflexibility.	Decreased cycle time for activities in core booking to release processes. Electronic workflow will eliminate paper or verbal handoffs as inmate information moves through the process, reducing the cycle time.	Within 6 months of implementation with ongoing improvements over time.
Reduction in integration complexity and cost	Varied technologies and methods, based on the mainframe technologies, are used to interface with external and vendor systems.	Increased data exchange and collaboration with departments and external agencies	Within 1 year of implementation with ongoing improvements over time.
Transition from paper to electronic workflow	No current baseline for this measure due to system inflexibility.	Reduced time spent searching and tracking for them as well as reducing costs to physically store paper documents	Within 1 year of implementation with ongoing improvements over time.

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 legacy system was first developed in the 1970's. The core systems supporting booking, inmate management, inmate release, and pre-trial management were designed and built using Mainframe technologies.

Currently, DAJD has about 50 systems supporting various lines of business including a variety of ACCESS databases and Excel spreadsheets. As a result, the system has several deficiencies that affect overall efficiency, restrict information sharing internally, and require a variety of manual work-around procedures and information tracking solutions.

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	Processing Time annual savings,	• 10 days processing time	• 1 day processing time	• 2 day processing time

	<p>reduced processing time from the current average of 10 days to <1 day allowing us to take advantage of prompt payment discounts.</p>	<p>and percentage of purchases receiving prompt payment discounts</p>	<ul style="list-style-type: none"> • 10% of purchases are receiving discount • \$100,000 savings 	<ul style="list-style-type: none"> • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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	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 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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Stage	Date	Revised By	Description	How long did it take?
<i>Examples: conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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2016 Annual Report-Update for an ongoing project	2/2/2017	Steve Larsen	Provided comments to Section 6.	

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 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.

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.

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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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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
<i>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.</i>	<i>Processing time, annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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4. To ensure that benefits are achieved

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

Section 2. Business Owner Accountability

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Jim Vollendroff, DCHS-~~MHCADSD~~-BHRD Director

Section 3. Who is involved in developing the BAP?

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Name	Title / Agency	Project Role
Susan McLaughlin	Health and Human Services Integration Manager, DCHS / <u>MHCADSD</u> <u>BHRD</u>	Project Sponsor
Michael Csendes	IT Supervisor, DCHS	Technical Lead
Diep Nguyen <u>Jim Keller</u>	KCIT SDM	IT Lead
Jim Vollendroff	Division Director, <u>MHCADSD</u> <u>BHRD</u>	Articulate and lead vision for how this system functions
Ron Bishop <u>Juliette Peze</u>	KCIT	Business Analyst
Latasha Battle	<u>KCIT</u>	<u>Project Manager</u>
Karen Spoelman	<u>MHCADSD</u> <u>BHRD</u>	Subject Matter Expert
<u>Kelli Nomura</u>	<u>BHRD</u>	<u>Operations Manager</u>

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

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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	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

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.

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Primary project benefit? (Check only one)

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- 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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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
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15048

<p><i>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.</i></p>	<p><i>Processing time, annual savings, and percentage of purchases receiving prompt payment discounts</i></p>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving prompt payment discounts • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • Savings of \$400,000 	<ul style="list-style-type: none"> • 2 days processing time • 20% of purchases are receiving prompt payment discounts • Savings of \$200,000
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<u>Metric Description</u>	<u>Metrics</u>	<u>Baseline</u>	<u>Target</u>	<u>Actual</u>
<p><u>Accurate and timely payment to providers.</u></p>	<p><u>Percent providers who are paid within 60 days of submission of required data.</u></p>	<p><u>This metric is new and no baseline data was available</u></p>	<p><u>100% of contracted behavioral health providers who submit required data receive payment within 60 days</u></p>	<p><u>100% of contracted outpatient behavioral health providers who submit required data received payment within 60 days.</u></p>
<p><u>Improved coordination of care for people with co-occurring mental health and substance use disorders.</u></p>	<p><u>Percent providers who access and utilize integrated client data to coordinate care for individuals enrolled in mental health and substance use disorder treatment.</u></p>	<p><u>No baseline data available. Providers do not currently have electronic access to information about a client’s services being provided by other systems.</u></p>	<p><u>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.</u></p>	<p><u>2017 provider site visits have not started yet. The BHO has been operating for less than a year so no data is available yet.</u></p>

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, 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.

Adrienne Quinn (DCHS); Patty Hayes (PHSKC)

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	Deputy Director, (DCHS)	
Marguerite Ro	Chief, Assessment, Policy Development and Evaluation Unit (PHSKC)	
Amy Laurent	Epidemiologist III (PHSKC)	
Debra Srebnik	PPM III (DCHS)	Lead concept developer for DCHS
Jon Hoskins	PPM IV (DCHS)	
Jim Keller	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
Rene Franzen	PPM III (DCHS)	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.
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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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
- HMIS – that shows connection to housing providers

5. When is the benefit likely to be achieved?

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.

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.	<ul style="list-style-type: none"> • Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings 	<ul style="list-style-type: none"> • 10-day processing time • 10% of purchases are receiving discount • \$100,000 savings 	<ul style="list-style-type: none"> • 1-day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 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 Performance, Strategy, and Budget 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 benefits are achieved.

Department/Division Name	Department of Community and Human Services (DCHS) Developmental Disabilities Division (DDD)
Project Title	DCHS/DDD Financial System
Project Number	1124221

Section 2. Business Owner Accountability

Business owners are responsible for achieving project benefits and ensuring the BAP is regularly updated and completed when benefits are achieved. Business owners are required to be at the level of deputy department director 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. The KCIT Business Analysts or Technology Project staff may assist in benefit identification and documentation. Listed below are the staff who contribute to the BAP:

Name	Title / Division	Project Role
Kendra Hinger	Business and Finance Officer II – DDD	Subject Matter Expert
August Mecl	Project Manager III – DDD	Project Lead
Louis Lok	Program Evaluator – DDD	Subject Matter Expert
Sandy Ou	Fiscal Specialist II – DDD	Subject Matter Expert
Susy Stremel	Employment Program Manager IV - DDD	Subject Matter Expert
Magan Cromar	Early Intervention Program Manager IV - DDD	Subject Matter Expert
Scott Leonard	Employment Program Manager III - DDD	Subject Matter Expert
Wendy Harris	Early Intervention Program Manager III - DDD	Subject Matter Expert
Katherine Festa	Program Manager I - DDD	Subject Matter Expert
Richard Wilson	School-to-Work Program Manager – DDD	Subject Matter Expert
Leslie Arai	KCIT Project Manager	KCIT Project Manager
Tim Morrow	KCIT 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 two” phase of conceptual review.
2. For the annual benefits report that PSB compiles.
3. To support funding release requests and 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 and 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 Section 5 table (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 the 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	Duration
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual Review	7/02/2014	Joe Carter	Initial Draft	8 hours
Legislative Feedback	7/21/2014	Joe Carter	Revised draft	
Annual IT Benefits Update	2/25/2016	August Mecl	Updated Section 3	1 hour
Annual IT Benefits Update	1/31/2017	August Mecl	Updated Section 3 and 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 KCIT 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 and 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, so please respond to each question listed below rather than provide a summary.

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

The DDD provides administrative and contract management supports for programs funded by the Washington State Department of Social and Health Services (DSHS), Developmental Disabilities Administration (DDA), the Washington State Department of Early Learning (DEL), and numerous King County school districts.

Currently, DDD does not have an automated contracting and billing data system for processing contracts and billings. If the current system was replaced by a web-based single point of data entry database, in which data flowed in an automated fashion to other systems, and in which contract data was stored along with the billing data, the DDD will see the following benefits:

A decrease in the time contractors spend on billings

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

Contractor's decrease time spent on processing billings will be measured through a survey of the division's contractors to determine time spent on processing monthly billings.

3. What is the current baseline for this measure?

The current baseline is 9 hours per provider per month

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

A 10 percent reduction in the time required for contractors to complete billing.

5. When is the benefit likely to be achieved?

These benefits should be visible within six months of 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 percent 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 KCIT standardization. This project will make the current management of user accounts, applications, and devices easier for KCIT administrators in 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, so please respond to each question listed below rather than provide a summary.

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

Benefit A: Decrease in processing times

- Quicker and more accurate processing
- Reduced data entry
- Reduced transferring of data between data sources

Benefit B: Timely and more automated reports

- Data would be stored in a single database
- Less prone to error
- Quicker and more accurate
- New reports we have not been able to produce before

The decrease in processing time and more timely and accurate reports will generate the following benefits to the Division:

Benefit C: Improved Program Outcomes – Division staff will have more time to devote to contract oversight and management. This would include the implementation of the following projects:

- Provide intensive technical assistance for contracted service provider agencies with compliance issues.
- Implement a pilot program to provide outreach to unserved people with developmental disabilities.

2. Coordinate outreach efforts to underserved racial and ethnically diverse communities. *How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)*

Benefit A: Decrease in processing times

- We will measure time it takes from receipt to payment

Benefit B: Timely reports and new automated reports

- We will measure how long it takes to produce monthly fiscal program and management reports and whether we can produce new reports automatically

Benefit C: Improved Program Outcomes

- Increased Intensive Technical Assistance (ITA) – Reduction in the number of service providers with corrective action plans, based on contract monitoring visits performed between July 2014 and June 2015.

- Outreach to unserved adults – Increase in the number of adults who become employed.

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

Benefit A: Decrease in processing times

- Time it takes from receipt to payment is 18 working days

Benefit B: Timely reports and new automated reports

- Time it takes produce monthly fiscal program and management reports now is 8 days
- There are no automated reports
- *Note: The division is not currently able to produce demographic and program outcome reports from a single database.*

Benefit C: We will measure Improved Program Outcomes by measuring

- Increased Intensive Technical Assistance (ITA) – We will have our baseline when the 2014 contract reviews are complete.
- Outreach to unserved adults – Currently 45% of DSHS/DDA clients aged 21-65 receive day program services

4. **What is the target for this measure?**

Benefit A: Decrease in processing times from receipt of bill to payment

- We will be able to reduce this time by 10 percent

Benefit B: Timely reports and new automated reports

- We will be able to produce monthly fiscal program and management reports in 4 days
- We will be able to produce the following new automated reports
 - Monthly functional program report
 - Contract consideration versus expenditure
 - Demographic reports
 - Outcome reports

Benefit C: The target for Improved Program Outcomes will be

- Increased Intensive Technical Assistance (ITA) – 100% of agencies with contract compliance issues will be in compliance by July 2016.
- Outreach to unserved adults – 47% of DSHS/DDA clients aged 21-65 will be receiving a day program service, an increase of 2%

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

Update for 2016 Report: The project has been cancelled and no benefits are expected. The project team recommended that the work be discontinued due to concerns with the vendors ability to deliver a timely and responsive product. The project completed the business rules that can be used for a future procurement process to solicit a new vendor. ~~Full benefits for Benefit A and B should be achieved within 6 months of project completion. The target for improved program outcomes will be achieved by 12 months after 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 (AA) solution which will allow King County to comply with United States 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, 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, 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 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 two percent, 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, so please respond to each question listed below rather than provide a summary.

1. Describe why you expect the proposed KCIT 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 and use the measures identified above. If not achieved, explain why.

Update for 2016 report: The project team recommended that the work be discontinued due to concerns with the vendors ability to deliver a timely and responsive product. The project completed the business rules that can be used for a future procurement process to solicit a new vendor.

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% uptime for an additional 5 years. This project is currently functioning at 99.999% uptime and will report annually for the next 5 years on uptime 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	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2-day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

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.

Jim Vollendroff, 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
Jim Vollendroff	Division Director, Behavioral Health and Recovery Division/ DCHS	Project Sponsor
Brad Finegood	Assistant Division Director, Behavioral Health and Recovery Division/DCHS	Additional Sponsor
JoEllen Watson Diane Swanberg	Coordinator, Crisis and Commitment Services/ DCHS	Steering Committee Member BAP updates
Steve Wooley	Involuntary Commitment Supervisor/ DCHS	Subject Matter Expert
Diane Swanberg	Involuntary Commitment Supervisor/ DCHS	Subject Matter Expert
Don Clayton	Involuntary Commitment Supervisor/ DCHS	Subject Matter Expert
Meagan DeSart	Involuntary Commitment Supervisor/ DCHS	Subject Matter Expert
Melanie Shipley	Administrative Supervisor	Subject Matter Expert
Ken Bradford	Administrator I	Subject Matter Expert
Cherie Jones	IT Business Analyst Sr/ KCIT	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:

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 or 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?

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 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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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	# 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

15048

specific purpose of reviewing a case file or call the office to obtain case or resource information				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	18% or 11 minutes reduction 6 months after implementation

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.](#)

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/ Behavioral Health Recovery Division (BHRD)
Project Title	Physical Behavioral Health Integration (PBHI)
Project Number	<u>1129637</u>

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.

Jim Vollendroff, Behavioral Health and Recovery 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
Susan McLaughlin	Health and Human Services Integration Manager /DCHS	Project Contact
Michael Csendes	IT Supervisor, DCHS	Technical Lead
Diep Nguyen Jim Keller	KCIT SDM	IT Lead
Jim Vollendroff	BHRD Director	Articulate and lead vision for how this system functions
Karen Spoelman	BHRD, Cross System and Contracts Manager	Subject Matter Expert
Nancy Creighton	BHRD, program/data analyst	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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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
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

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).

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 managed care organization, 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 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 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 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 County takes on 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 managed care organizations gives providers more comprehensive information about the individuals they are treating so that they can provide better, 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 months of implementation

B2 Measure Timeline – initial target within one year 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.**
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 \$15million 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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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.	<ul style="list-style-type: none"> Processing time (in days), % of purchases receiving prompt payment discounts, and Annual savings 	<ul style="list-style-type: none"> 10-day processing time 10% of purchases are receiving discount \$100,000 savings 	<ul style="list-style-type: none"> 1-day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2-day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

IT Project Benefits Achievement Plan

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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	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	Nancy Buonanno Grennan, Division Director, HRD
Carmel Call, Director of BRC	Jonathan Swift, 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
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
Phillip Browning	HR Systems Manager	Product Evaluation Team – HRD Representative
Greg Brant	Enterprise Architect, IT Department	Product Evaluation Team – KCIT Representative
Tishelle Betterman	Oracle EBS Systems Manager	Oracle EBS System Owner
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	Chief Financial Officer – Public Safety	Product Evaluation Team – Agency Representative
Max Foster	Business & Finance Officer IV – Natural Resources & Parks	Product Evaluation Team – Agency Representative
Eben Sutton	Enterprise SVCS Section Manager, DNRP	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.
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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 benefit achievement plan?

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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	5 hrs

			Additional budget request for Phase 3 – Acquisition & Implementation	
2016 Annual Report	2/3/2017	Rita Popp	BAP update for an ongoing project	2 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
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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).

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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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

HRD:

- 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 reimbursements.

Benefit #3. Improve diversity hiring in the county. HRD'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

HRD:

- 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 HRD diversity hiring analysis by asking: “did the HRD analysts spend time analyzing diversity fall off reasons” and “did HRD 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

HRD 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.

HRD 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 HRD.

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, HRD, and major agencies is within 1 year after BI solution is in production.

B3: HRD 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
<i>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.</i>	<i>Processing Time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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
Eunjoo Greenhouse, Finance & Admin 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
Tishelle Betterman	EBS Systems Manager, DES-BRC	Project Sponsor
Eric Polzin	EBS Finance Lead, DES - BRC	Test Lead
Gautam Kondepudi <u>Shan Daniels</u>	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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 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 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	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

Note: Another update will follow after the last phase of the project (hardware implementation) is complete in June 2017.

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 addition, 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	12.2.5
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	11.1.1.7
Upgrade Oracle database	Upgrade Oracle database from version 11 to version 12	11	12	12.0.2
Upgrade middleware	Upgrade SOA to 11.1.1.9	11.1.1.7	11.1.1.9	11.1.1.9
Create User Guides for core financial, procurement modules, and BI Publisher	# of User Guides	1	7	9

Reduce ABT conversion programs and expired custom objects	% of 125 conversion and expired customizations removed	0%	90%	100%
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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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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

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- 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 IVR¹.
- 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

¹ IVR – Interactive Voice Response, telephone based services using touch-tone or voice commands

- Annual growth in electronic payment volume
- 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%
<u>Percentage</u> 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

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 may 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.

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 TLF~~ 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?

- Forego improved security controls. Current storefronts have varying security controls in place, with no consistency or guarantee that they are staying up to date to protect against threats.
- Forego improved audit trails 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.
- Forego a consistent look and feel for all County storefronts. 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.
- Forego up-to-date technology that keeps pace with industry best practices and avoids becoming obsolete. 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.

- Forego the ability to respond to business needs quickly. 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.
- Forego lowering of ongoing costs 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

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: 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?**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	<ul style="list-style-type: none"> ● 10 days processing time ● 10% of purchases are receiving discount ● \$100,000 savings 	<ul style="list-style-type: none"> ● 1 day processing time ● 30% of purchases are receiving prompt payment discounts ● \$400,000 savings 	<ul style="list-style-type: none"> ● 2 day processing time ● 20% of purchases are receiving prompt payment discounts ● \$200,000 savings

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.

~~Nancy Buonanno-Grennan, Director of HRD~~ Chrissy Russillo, Interim 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
Donna Frisk <u>To be determined</u>	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 and Project Business Lead	Manage and lead project as Business Lead and Subject Matter expert focusing on business process updates and changes
Margaret Brownell	Service Delivery Manager/ KCIT	Provides advice to the project team and steering committee
Nancy Buonanno-Grennan <u>Chrissy Russillo</u>	<u>Interim</u> Director, HRD Project Sponsor	Set vision, define scope, and communicate priorities to the organization. Ultimate authority to changes in scope, schedule and budget.
<u>Chrissy Russillo</u> Nancy Buonanno-Grennan James Fournier Dorene Hersh Natasha Jones Richard Moore Adrienne Leslie <u>Anita Whitfield</u> <u>Carmel Call</u> <u>Margaret Brownell</u>	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. Monitor progress against plan and budget; suggests course corrections. Assist in issue resolution

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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
2016 Annual Report	02/17/2017	James Fournier & Julie Dunn	Updated	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.*

***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?

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																	
<p>Application Drop-off Rate: # of applicants/candidates that start an application but do not complete the process</p>	<p>During 2016 Q1-Q3, there were 632,020 <u>816,164</u> unique pageviews on the King County Careers Website (including King County employees) and we received a total of 52,611 <u>69,813</u> applications. Using this data, our application drop-off rate can be implied as <u>91</u>2%.</p>	<p>Our goal is to reduce the application drop-off rate to 80% within three years of implementation.</p>																	
<p>Website Analytics: # 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.</p>	<p>Google Analytics data from 2016 Q1 through Q3 of non-King County employee unique pageviews of the King County Careers Website:</p> <table border="1"> <thead> <tr> <th rowspan="2">Traffic Type</th> <th colspan="2">Potential Job Applicant</th> </tr> <tr> <th>Unique Pageviews</th> <th>% of Total</th> </tr> </thead> <tbody> <tr> <td>Mobile</td> <td>178,409 <u>236,310</u></td> <td>39 <u>41</u>%</td> </tr> <tr> <td>Tablet</td> <td>26,912 <u>34,506</u></td> <td>6%</td> </tr> <tr> <td>Desktop</td> <td>250,393 <u>300,981</u></td> <td>55 <u>53</u>%</td> </tr> <tr> <td>Total</td> <td>455,714 <u>571,796</u></td> <td>100%</td> </tr> </tbody> </table>	Traffic Type	Potential Job Applicant		Unique Pageviews	% of Total	Mobile	178,409 <u>236,310</u>	39 <u>41</u> %	Tablet	26,912 <u>34,506</u>	6%	Desktop	250,393 <u>300,981</u>	55 <u>53</u> %	Total	455,714 <u>571,796</u>	100%	<p>To increase the percentage of mobile and tablet traffic to a combined 55% within three years of implementation.</p>
Traffic Type	Potential Job Applicant																		
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<p>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</p>	<p>To be determined</p>	<p>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.</p>																	

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.

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 69,813 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 34% people of color and 45 49% 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: <i># of calendar days from final department authorization/approval to recruit for a position to employee start date.</i>	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.

***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 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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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	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.

Carol Shenk, [County Archivist, 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
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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Funding release	12/5/13	Carol Shenk	New, initial draft	3 hours
Annual Report	3/1/16	Carol Shenk	Post Implementation	.5 hours
Annual Report	2/16/17	Carol Shenk, Sean Bouffiou, Deborah Kennedy	BAP Update for a completed project	3.5 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, 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).

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.

- 1) Usage of search site compared to Archives home page: comparing September 2015 to September 2016

Measure	Goal is for	Baseline:	Number of visits	Percentage	Goal vs.
Usage of search site compared to Archives home	search site to double use of Archives Web	Visits to King County Archives site in	after implementation CMS search	achieved toward goal	Actual

page	site prior to existence of search site	2015 (counting landing pages only, not navigation within the Archives site)	sessions 2016 (excluding IP block for Google)		
	200%	41,862	22,118	26%	-74%

2) Requests for archival records that are not recordings through December 2016

Measure	Goal	Baseline:	Change	Actual	Goal vs. Actual
Requests for archival records that are not recordings	Increase count of non-recording requests per year by 10%	2014 non-recorded requests per year	2016 non-recorded requests		
	+10% (110)	100* *This number needs to be verified. The update to this report will include a verified total.	380%	419	+370%* The baseline count will be verified for the next report.

3) Survey will be conducted for a new 3-month sampling in 2017.

4) No data. Survey posted November 1 - November 30 on search site. No responses.

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 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
<i>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.</i>	<i>Processing time, annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

[Another BAP in 2017 will report final numbers.](#)

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.
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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 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

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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 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?)***

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.

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.

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.

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.

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 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	The target is 75% of disposition eligible records dispose of annually.	1 & 2

	set one year after close of project.		
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 migrated from Autonomy to HP Records Manager.	80% of customers responding to usability survey provide a favorable response	All

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.

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 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	Processing Time annual savings, and percentage of purchases	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving

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<i>of ten days to less than one allowing us to take advantage of prompt payment discounts.</i>	<i>receiving prompt payment discounts</i>	<i>discount</i> • <i>\$100,000 savings</i>	<i>prompt payment discounts</i> • <i>\$400,000 savings</i>	<i>prompt payment discounts</i> • <i>\$200,000 savings</i>
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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; number of electronic record searches and exports.	<ul style="list-style-type: none"> • Pre-implementation numbers for physical records numbers • No baseline for electronic records searches 	<ul style="list-style-type: none"> • 0 for physical records • Increase of 10%/year for electronic records 	•
Disposition	# of records—both electronic and physical—that reach the end of their retention period and are disposed of either by destruction or transfer to Archives.	<ul style="list-style-type: none"> • 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)

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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.

A. 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.

B. 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:

- A. Holding focus groups pre-public launch to test user interface design and configuration
- B. 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)

C. 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. 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.

E. 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.
- B. Upon system implementation and go-live.
- C. Upon system implementation and go-live.
- D. TDB as metrics are identified.

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 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 (may not remain pending licensing decisions).
- 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).
- 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).
- 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
- B. Upon System implementation
- C. Upon System implementation (VSID), background checks and driver abstract data (TBD)
- D. Upon Systems implementation
- E. Upon Systems implementation
- F. Upon Systems implementation (if batch processing remains a business need)
- G. Upon Systems 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.**
- 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.

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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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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.

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Example:

Metric Description	Metrics	Baseline	Target	Actual
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<p>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.</p>	<ul style="list-style-type: none"> • Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings 	<ul style="list-style-type: none"> • 10-day processing time • 10% of purchases are receiving discount • \$100,000 savings 	<ul style="list-style-type: none"> • 1-day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2-day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings
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Metric Description	Metrics	Baseline	Target	Actual
Gauging Customer Satisfaction	<ul style="list-style-type: none"> • New customer-facing online portals • New online fee payment options • Reduction in the use of paper-based driver folios 	<ul style="list-style-type: none"> • Zero • Zero • Zero 	<ul style="list-style-type: none"> • Fully functioning portals for all customer types • Ability to process payment transactions online 24/7 for all customer types • Fully electronic application process with no paper-based requirements 	<ul style="list-style-type: none"> •

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	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.

Business Owner Name and Title: 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
Megan Pedersen	Deputy Director, RALS	<u>No longer in RALS</u>
Thea Thach	Supervisor, RO	<u>Subject Matter Expert</u>
Kathleen Baker	Supervisor, RO	<u>Subject Matter Expert</u>
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 Committee Member
<u>Donna Frisk</u>	<u>KCIT/Project Manager</u>	<u>Project Manager</u>

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.
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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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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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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
Budget Gate #2	6/30/14	Syd Phillips	Updates	60 min
Budget Council Review	9/12/14	Sean Bouffiou	Address KCC staff comments/suggestions	3 hrs
Budget Council Review	11/3/14	Sean Bouffiou	Address additional KCC staff comments and suggestions	90 min
2015 Annual Report	4-1-16	Sean Bouffiou	Update for current information	90 min
2015 Annual Report	6-3-16	Jon Scherer	Update for current informaton	1 Hr
2016 Annual Report	2-15-17	Sean Bouffiou	BAP update for an ongoing project	.5 Hr

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).

The existing software solution (Anthem) has been deployed in the Recorder's Office since 2002 (125 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 ~~four~~ 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 launching the new system in Q1, 2017.

Project Update (Feb. 15, 2017). This project was initially intended for implementation in February 2017. The project implementation date has been revised by mutual 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 desirable direction vs. decline in the less desirable direction.

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
- ~~— Staff will have access to better tools for indexing and quality control work~~
- 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
- ~~A. Request documents electronically through a Web-based interface~~
- ~~B. Submit requests electronically through a Web-based interface~~
- ~~C. Receive faster and more accurate service from the county.~~
- ~~D. Access multiple functions and services via self-service online~~
- ~~— Documents will be immediately searchable for the Public (vs. searchable after they fully indexed, which takes additional time), and searches will be more accurate and more intuitive.~~
- ~~E. 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)
- ~~A,B.~~ Percentage of hard-copy document submissions will decrease (v. electronic)
- ~~— Staff time devoted to quality control measures (Image review/data entry verification)~~
- ~~B,C.~~ Number (count) of customer self-service functions available online
- D. Backlog in indexing – days between recording and full indexing.
- ~~C,E.~~ Quantity/percentage of self-service transactions conducted online vs. over the counter
- ~~D,F.~~ System in place and operational to process Excise Tax payments online

3. What is the current baseline for this measure?

- A. ~~100%~~ ~~of~~ document requests received via electronic web portal ~~mail~~ (vs. currently all via mail electronic)

- B. 56% hard-copy document submissions (vs. electronic)
~~— 15 minutes per day of staff time currently devoted to quality control measures~~
- 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. ~~75~~25% of document requests received via web portal
- B. 80% electronic documents submitted (v. hard-copy documents)
~~— 2 hours/day of staff time devoted to quality control measures~~
- 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.

Category 1 Measures	Baseline	Target	Actual
% of document requests received online (vs. mail) will increase	No document requests received via electronic web portal; all via mail	25% of document requests received via web portal	6 to12 months after go live
% of hard-copy (vs. electronic) document submissions will decrease	56% hard-copy (vs. electronic) document submissions	80% electronic (vs. hard-copy) documents submitted	6 to12 months after go live
# (count) of customer self-service functions available online	Only 1 self-service function available online (records searches)	3 or more customer self-service functions available online 1	6 to12 months after go live
Backlog in indexing – days between recording and full indexing.	10 days for documents to be fully searchable and available online	1 days for documents to be fully searchable and available online	6 to12 months after go live
Quantity/% of self-service transactions conducted online vs. over the counter	10 day indexing backlog – No self service transactions available online.	No indexing backlog – Documents fully available to the public via web portal	6 to12 months after go live
System in place and operational to process Excise Tax payments online	Zero (0) excise tax payments received electronically	Ability to process REET affidavits online	6 to12 months after go live

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 staff-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. ~~The BAP will be updated after project planning phase to identify the level of staff resources estimated to be freed up by the project and the specific activities those staff will now be able to~~

~~do. Examples of the use of freed up staff time include, but should not be limited to sStaff time devoted to quality control! 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. ~~CA baseline will be identified as part of the planning process for this project. An example of a baseline is 15 minutes of staff time (per staffer?)~~ 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. ~~currently devoted to quality control measures.~~

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 search field functionality and simultaneous search 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 planning/implementation process for this project. Currently, the goal would be - An example includes,~~ 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)

Category 2 Measures	Baseline	Target	Actual
Amount of time it takes for a document to be searchable and available online	10 day for documents to be fully searchable and available online	1 day for documents to be fully searchable and available online	6 to12 months after go live
Expanded search capability including multiple search fields and simultaneous searching (= greater accuracy)	Limited search functions and single searches at a time	Multiple search field functionality and simultaneous search capability	6 to12 months after go live
Internal reports available for managers and supervisors	Limited reports available without KCIT technical assistance	Standard and ad hoc reporting available to supervisors and managers w/o technical support.	6 to12 months after go live
Size of backlog - Days pending release/return of original document	No indexing backlog	No indexing backlog	6 to12 months after go live

Ability to receive and process excise tax payments electronically, percentage of affidavits processed electronically vs. over the counter/mail.	No ability to process REET affidavits online.	Ability to process REET affidavits online.	6 to12 months after go live
More time available for quality control work	15 min/day/staff member is dedicated to quality control measures focused solely on ensuring that all images are accounted for.	4 hours/day/staff to ensure that all documents are recorded and indexed accurately.	6 to12 months after 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 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 ~~have~~ estimated that the Recorder’s Office could function without an electronic recording system for approximately 4 hours without diminishing services or ~~failure~~ inability 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 to 2 days, not quite reaching the 1 day target. Additionally,*

15048

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
<i>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.</i>	<i>Processing time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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, Office of Risk Management

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	Project sponsor
Chauntelle Hellner	Business and Finance Manager / Office of Risk 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review	5/8/15	Chauntelle Hellner	New, initial draft	
2016 Annual Report	2/6/17	Chauntelle Hellner	Annual Update for PSB	

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 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 cCounty-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 ~~useful~~ 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 cCounty 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. We will have a schedule of automatically generated dashboards and reports on claims data delivered and tailored to each agency. The current system reporting capabilities are limited and take a high level of effort. The benefit will be measured by the ability to 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.
- B. All staff in ORM will have the ability to generate reports and easily access data from the claims system. Managers will be able to pull performance data without assistance from KCIT to help manage their staff; and Tort Claims Investigators will be able to use real time data to manage their workloads. 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.
- C. Enterprise Risk Management Program manager will spend less time on data retrieval and formatting, and more time on high level data analysis to better advise agencies on loss exposures. This will be measured by the difference between the time spent retrieving and manipulating data currently and post implementation.
- D. Agencies feel they have adequate and timely data regarding claims and losses to incorporate in their decision making process. We will ask agencies if the data they receive from ORMS is timely and valuable.

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. ~~A~~When agencies ~~are~~ will be surveyed 1 year after implementation regarding their, they report satisfaction ~~with the timeliness and value of~~ 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 ~~July of 2016~~ January 2018.

Agencies will be surveyed in December of 20168 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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

<u>Metric Description</u>	<u>Metrics</u>	<u>Baseline</u>	<u>Target</u>	<u>Actual</u>
<u>Increased access to claims data. This project will give ORMS staff access to data to better manage work and</u>	<u>Access to view claims data.</u>	<u>No current user access. Requests go through KCIT.</u>	<u>Users have dashboard access with customized information to meet needs.</u>	
<u>Agency Reporting – this project will give ORMS the ability to produce reports and loss information for ORMS and Agency Use</u>	<u>The number of report requests sent to KCIT</u>	<u>5-10 individual report requests per month</u>	<u>Users run their own reports – less than 1 per month requested to KCIT</u>	
<u>Enterprise Risk Management – This</u>	<u>Amount of time spent</u>	<u>35 hours per month spent</u>	<u>5 hours per month.</u>	

15048

project will give the ERM program staff more time to analyze data and deliver services to agencies

retrieving and manipulating data prior to analyzing.

pulling, manipulating and formatting data.

These metrics will be better defined as the solution is implemented.

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.

Business Owner Name and Title: Teresa Bailey, DJA Deputy Director

Business Owner Contact Information: (206) 477-0768; teresa.bailey@kingcounty.gov

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 modern 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.

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.

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).

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.

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 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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

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

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
2015/2016 Budget Process	11/4/14	Jennifer Lehman	New, initial draft	
2015 Annual Benefits Update	2/23/16	Jennifer Lehman	No changes to anticipated benefits.	
2016 Annual Benefits Update	2/15/17	Jennifer Lehman	Ongoing project. No changes to anticipated benefits.	

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 (secondary): Internal service benefits: Improving internal operations, including the quality or quantity of internal services

- Category #3 (secondary): 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.

[Update as of 02/22/2017: The project is ongoing. No updates have been made to Section 6.](#)

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 easy 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 six months after implementation, and to yield survey results indicating 75% of users in favor of the new system one year 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 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).

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?*

Within two years of implementation, 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 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.*

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?
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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

Update as of 02/22/2017:
Perfect Mind, the replacement facility scheduling program, went live January 2017. Online registration and booking will be incrementally rolled out throughout 2017. Benefit achievement progress reporting will begin in next year's report.

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	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 Berry Smith 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	IT SDM / KCIT	BAP edits
Eben Sutton	SWD/Finance and Administration Manager	Project Sponsor
Lloyd Jordan	IT PM 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 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:

Revision History Table

Stage	Date	Revised By	Description	How long did it take?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review	6/4/14	Alejandra Calderon	New, initial draft	2 hours
Project Implementation	2016	Alejandra Calderon	Review	.5 hours
2016 Annual Report	2/15/17	Lloyd Jordan	Review	1.0 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 (Secondary): External service benefits: Improving the quality or quantity of services provided to the public

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- Category #2 (Secondary): Internal service benefits: Improving internal operations, including the quality or quantity of internal services
- Category #3 (Primary): 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.

Update as of 3/2/2017: The project was completed in mid-December 2016. Results will be measured in mid-2017.

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~~6~~.

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 month.

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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

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
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.

Kathy Waymire, 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
Kathy Waymire	Finance & Admin Mgr/WLR	Project Sponsor
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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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

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.	<ul style="list-style-type: none"> Processing time (in days), % of purchases receiving prompt payment discounts, and Annual savings 	<ul style="list-style-type: none"> 10-day processing time 10% of purchases are receiving discount \$100,000 savings 	<ul style="list-style-type: none"> 1-day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2-day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

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	

IT Project Benefits Achievement Plan (Version 2)

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**King County Department/
Agency Name**

DNRP Water and Land Resources Division
(Stormwater Services Section)

Project Title

Cityworks AMS for WLRD Stormwater Services

Project Number

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 Taylor, 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	Engineer III / WLRD SWSS	Mapping program manager
Nick Hetrick	Functional Analyst III/ WLRD SWSS	Data Coordinator/ SWSS Project Lead
Gary Hocking	DNRP IT SDM	Service Delivery Manger

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	5/27/16	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 mintues

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
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- 3) **Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
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Primary project benefit? (Check only one)

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

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.

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 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 10 days to >1 allowing us to take advantage of prompt payment discounts.	<ul style="list-style-type: none"> Processing time (in days), % of purchases receiving prompt payment discounts, and Annual savings 	<ul style="list-style-type: none"> 10-day processing time 10% of purchases are receiving discount \$100,000 savings 	<ul style="list-style-type: none"> 1-day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2-day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

Metric Description	Metrics	Baseline	Target	Actual

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: WTD Finance Manager
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
Tim Aratani	Finance Manager/WTD	Sponsor
Gary Hocking	KCIT	IT Service Delivery Manager
Francesca Ho	PPM2/WTD	Process Owner: Consultation and testing
Eunice Verstegen	PPM4/WTD	Process Owner: Consultation and testing
Farayi Chiro	IT PM2/KCIT	KCIT Project Manager
Molly Gordon	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")

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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.

Update as of 02/22/2017: The project is new. No updates have been made to Section 6.

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.

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?*

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.	<ul style="list-style-type: none"> Processing time (in days), % of purchases receiving prompt payment Annual savings 	<ul style="list-style-type: none"> 10-day processing time 10% of purchases are receiving discount \$100,000 savings 	<ul style="list-style-type: none"> 1-day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2-day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

Metric Description	Metrics	Baseline	Target	Actual
Average time between escrow request and response to customer	Escrow request response time	72 hours	<ul style="list-style-type: none"> • Instantaneous for most requests • Maintain 72 hour limit 	
Average time between sewer connection date and customer creation date	Customer setup delay	None	<ul style="list-style-type: 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	<ul style="list-style-type: none"> • 90% of Single family residents added with 0% error rate 	
Staff overtime on escrow requests	Staff overtime on escrow requests	\$170,000	<ul style="list-style-type: none"> • \$0 	

IT Project Benefits Achievement Plan (Version 5 - updated 2/13/17)

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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 Names	DNRP – WTD, DOT and FBOD (update 6/16/15)
Project Title	IBIS and Business Objects Retirement
EBS Project Number	745408050

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:

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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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.

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
- (Secondary) 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, reducing risk of system failures, or providing regulatory compliance.
- (Secondary) 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. No updates have been made to Section 6.

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:

- Response to escrow request
- Early pay-off (unapplied receipts)
- Early pay-off (escrow request)
- Lien request preparation
- Returned item processing
- 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.
 - *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
 - 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.
 - 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.
 - 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.
 - Lien request preparation – 2 hours
 - Preparation for lien requests takes approximately 2 hours.
 - 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
 - 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
 - Response to escrow request – 5 to 60 minutes depending on the amount of research needed
 - Early pay-off (unapplied receipts) – 15 to 75 minutes
 - Early pay-off (escrow request) - 5 minutes
 - 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.
 - Returned item processing– 10 to 30 minutes to process each item (and the elimination of the backlog)
- Delinquent deficit –
 - 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
 - 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.

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.**
 - 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.
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
<i>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.</i>	<i>Processing Time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • \$100,000 savings 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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.

Phase 3: IBIS and Business Objects Retirement Project (updated 6/21/16)

- 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.

Project update 6/21/16:

- 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.

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

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/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 BAP below:

Name	Title / Agency	Project Role
Kathy Loland	Section Manager/WTD	Sponsor
Robert Waddle	Section Manager/WTD	Sponsor/Customer
Randy Smith	Supervisor/WTD	Customer
Steve Zamperin	Supervisor/WTD	Customer

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Revised per Council Request	10/14/13	Ann Grothe	Revised, changed to new format	2 hours
2015 Annual Report	2/24/16	Ann Grothe	Customer updates	30 minutes
2016 Annual Report	2/7/17	Ann Grothe	Ongoing project. No changes to anticipated benefits.	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, 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.

Update as of 02/22/2017: The project is ongoing. No updates have been made to Section 6.

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 completely replace 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 has been 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	Processing Time annual savings, and percentage of purchases	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are

15048

<i>average of ten days to less than one allowing us to take advantage of prompt payment discounts.</i>	<i>receiving prompt payment discounts</i>	<i>receiving discount</i> <ul style="list-style-type: none">• <i>Savings of \$100,000</i>	<i>receiving prompt payment discounts</i> <ul style="list-style-type: none">• <i>\$400,000 savings</i>	<i>receiving prompt payment discounts</i> <ul style="list-style-type: none">• <i>\$200,000 savings</i>
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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/WLRD/Environmental Laboratory
Project Title	Laboratory Information Management System (LIMS) Replacement
Project Number	1129697

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.

Diane McElhany, Lab 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
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
Gary Hocking	IT Service Delivery Manager, DNRP, KCIT	Project Sponsor
Terry Siebens	Environmental Laboratory Scientist III	LIMS Committee, Scientist User
Susannah Rowles	Environmental Laboratory Scientist II	LIMS Committee, Scientist User
Debbie Osada	Environmental Laboratory Scientist III	LIMS Committee, Scientist User

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Budget Process	6/30/16	Kate Leone Gary Hocking Barb DeLauter	Initial draft	5 hours
Budget Process	8/31/16	Kate Leone Gary Hocking Barb DeLauter	Revision in response to raters’ comments	3 hours
Budget Process	10/11/16	Diane Mcelhany Barb DeLauter	Revision in response to BAP Council Conceptual Review Evaluation	11 hours
2016 Annual Report – no change BAP for project	02/17/2017	Kerry Thrasher	Project is on hold till July 2017	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).
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).
 - A. A new, modern LIMS will contain many useful integrated functions that our current LIMS does not have. We anticipate that a new LIMS may have many of the following functionalities built in:

- 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 tracking of analytical standards which would improve our ability to track expiration dates and demonstrate compliance of EPA methodology for audits.
- Automated data transfer directly between some complex 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.

B. A new, modern LIMS will most likely already contain many useful integrated functions that KCIT staff have built and maintained as ancillary software applications through 20 years of customization. Having this functionality integrated into the new LIMS would negate the need for KCIT to write, test, validate, and maintain these essential applications thereby reducing the lab's costs for software applications and support. These may include:

- A Sample Pre-Log system.
- A Quality Control (QC) module for QC calculations, QC associations and control charting.
- An Executive Information System module which tracks statistics associated with sample throughput and turnaround times.
- A Work Plan System which will allow for tracking of meta-data associated with projects such as client information, Sampling and Analysis Plans and project details.

C. A new, modern LIMS will utilize current industry standard software languages and platforms, allowing a broader group of developers to be available to help support it; as opposed to an ever smaller pool of specialized developers supporting older, undocumented, and outdated technologies.

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

A. We will measure the benefits associated with Q1 (A) above by measuring the increased productivity of staff performing more complex duties such as:

- Analyzing an increased sample workload.
- Improved timeliness in completing quality control tasks such as writing and updating Standard Operating Procedures, reviewing Sampling and Analysis Plans and control charting QC limits.
- Providing data to customers with greater speed and comprehensive meta-data.
- Providing more enhanced customer services such as method development efforts, statistical trend analyses, and comprehensive consulting services.

B. We will measure the benefits associated with Q1 (B) above by measuring the reduction in KCIT annual costs associated with the elimination of KCIT ancillary software modules made redundant by the new LIMS system.

C. We will measure the benefits associated with Q1 (C) above by measuring the reduction in licensing fees due to eliminating the Oracle platform and our ability to utilize a broader pool of KCIT staff to support the new system.

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?)**

Because we have only performed a preliminary investigation into potential LIMS vendor solutions, it is unclear exactly which functions will be integrated into the LIMS and how much work it will require to modify our work processes to fit within the new system. So the following table should be considered rough estimates of what we may achieve. Once the RFP is prepared and executed, these baselines and targets will be able to be updated with greater accuracy.

Measure	Baseline	Target
Q1.A Barcoding: The amount of staff resources devoted to login and sample tracking and disposal duties throughout the sample lifecycle.	Currently 1.5 FTEs are devoted to login and sample tracking and disposal duties.	We anticipate saving approximately 10 to 15 hours a month of staff time if barcoding is implemented throughout the full sample lifecycle. This time would be redirected toward other lab duties.
Q1.A Electronic Bench sheets: Reduce staff and space resources to create and store physical log books. Improve quality, access, and storage of sample preparation documentation.	Currently most sample preparation steps are documented by handwritten notes. Log books are printed and stored for a decade or more.	<ul style="list-style-type: none"> 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.
Q1.A Automated instrument data to LIMS transfer: The goal is to reduce the time to upload and peer review data as well as decrease the error rate of data entry.	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 to 15% of the data review time depending upon the test and how automated the data transfer between the instrument and LIMS is. Staff time saved would be redirected toward other lab activities.
Q1.B Pre-existing integration of current ancillary modules within LIMS: This would reduce the lab's KCIT costs.	Currently the lab spends approximately \$254,000 in KCIT support for 7 ancillary LIMS software modules.	We anticipate saving \$80,000 to \$150,000 of these costs depending upon which ancillary modules are supported by the new LIMS.
Q1.C Industry Standard software and platform: This would allow a greater number of KCIT staff to support the LIMS application and reduce licensing fees.	Currently there are a few staff (nearing retirement) that are familiar with the history of the 20 year old LIMS and its customization, database structure, and Oracle forms.	Shifting from a difficult to support 20 year old product to a product that adheres to industry and KCIT standards is the main driver behind this project. The system has already been rewritten from its original arcane language, moved to a GUI interface, shifted to a web based platform and gone through multiple Oracle upgrades in order to keep it viable. As KCIT shifts away from Oracle platforms, there are fewer resources to maintain this system. The Oracle licensing is also approximately \$43,000 a year. It is anticipated

that we will save 75% of that cost by switching platforms.

5. When is the benefit likely to be achieved?

The target date of going live with the new system is October 1, 2019 and savings will be identified in the fourth quarter of 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 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. Replacing the LIMS legacy 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, a business critical application to manage sample collection, workload throughput, analytical calculations, quality control functions, data results, and reporting of data to customers. LIMS also is the repository of several million bits of associated discrete regional data collected over several decades. This system is used to generate and provide high quality data in support of regulatory compliance and environmental monitoring projects that give support to King County and other publicly-sponsored programs.

This system which is now over 20 years old has reached the end of its lifecycle and is no longer viable for the following reasons;

- 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, making KCIT staff solely responsible for the system's customization, support and maintenance.
- Due to the now arcane nature of the original vendor software, King County IT developers continue to have to rewrite major portions of the software to keep it current with industry and King County IT standards.
- It has been necessary for KCIT staff to migrate this system from several outdated operating systems so that it conforms to current industry and KCIT standards.
- The current LIMS front-end interface is based on Oracle Forms technology, software that will soon no longer be supported by Oracle. It is anticipated that several key IT staff members

supporting LIMS are likely to retire in the next few years. At that time it will be difficult or at a minimum challenging to maintain the current level of support for this application, as the industry and professional developers have moved away from developing in Oracle Forms.

- King County IT has advised us that, as part of their strategic plan, they no longer will support this application on this or any updated Oracle platform due to licensing costs.
- The original LIMS system did not contain a number of mission critical software functions such as quality control calculations and project management tools. Over the last 20 years, King County developers have had to create, test, validate, maintain and support these ancillary functions as separate software modules. A new LIMS system will likely have many of the features that have been written and maintained by KC developers already integrated into the system negating the need and costs associated to write and maintain customized software modules.

Without a new LIMS system to replace the legacy LIMS software the environmental lab would not be able to maintain and continue building an environmental database for King County and other publically-sponsored programs. It is anticipated that a new LIMS system 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 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.*

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, we explore new software to replace the front end of LIMS. In all likelihood, given the overall age of LIMS, we will need to replace both the front end and back end of the software.

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 three drivers that will contribute to the cost reductions of the proposed IT investment;

- a. New LIMS software will need less expertise from KCIT resources to support it.

- b. There will be fewer ancillary software module costs since many of these software modules will already be integrated in the new LIMS application.
- c. There will be less associated licensing fees as we most likely will be moving away from Oracle and toward a Microsoft based platform.

2. How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)

We would measure and compare the cost savings gained by eliminating the need for Oracle licensing and KCIT support. We would track the new LIMS system annual costs, starting Q4 2019 and then for the next 5 years, and compare them to the 2016 annual costs.

3. What is the current baseline?

The Environmental Lab currently spends \$979K annually to support the current LIMS system and its many ancillary applications. This cost includes the hardware, licenses, and software support for LIMS and its ancillary software modules from KCIT staff.

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

It is estimated that a new LIMS system would cost approximately \$715,487 annually, thus saving approximately \$198,000 (rounded) annually. This estimated cost savings includes the anticipated hardware, licenses, and software support from KCIT staff for the new system. 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?

Because it is anticipated that the project won't go live until the end of Q3 2019 the cost savings will begin to be achieved in Q4 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 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	Processing Time annual savings,	• 10 days processing time	• 1 day processing time	• 2 day processing time

15048

	<i>reduced processing time from the current average of ten days to less than one allowing us to take advantage of prompt payment discounts.</i>	<i>and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • <i>10% of purchases are receiving discount</i> • <i>\$100,000 savings</i> 	<ul style="list-style-type: none"> • <i>30% of purchases are receiving prompt payment discounts</i> • <i>\$400,000 savings</i> 	<ul style="list-style-type: none"> • <i>20% of purchases are receiving prompt payment discounts</i> • <i>\$200,000 savings</i>

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	<u>1127457</u>

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 Manager/WTD/DNRP	DNRP Capital Data Integration Coordinator - Budgeting and Quarterly Reporting
Sid Bender <u>Tricia Davis</u>	Capital Manager <u>Budget Supervisor</u> /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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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.

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 because the accuracy 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 training and technical assistance.

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 the architecture of the Green Building/Sustainability Tab in the Project Information Center will free up approximately hundreds of hours in staff time that could be better used toward project implementation, management, green building training and technical assistance.

Once system is available, the following will be implemented:

- 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.
- 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 because the accuracy of the data will be improved. Better reporting will provide more transparency and better information for all users.

- Percentage of Green Building Ordinance applicable projects entering green building information
- Number of projects providing data for all reporting criteria

Benefit #2: Freeing up hundreds of hours in staff time that could be better used toward project

implementation, management, green building training and technical assistance.

- Number of hours reduced by staff

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

Benefit #1:

- Percentage of Green Building Ordinance applicable projects entering green building information: 0%
- Number of projects providing data for all reporting criteria: 0

Benefit #2

- Number of hours by staff: Approximately ~~3,560~~ 5,200 hours [\(Update of 02/2017\)](#)

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

Benefit #1:

- 1st year – 75%. Eventually 100%.
- 1st year – ~~5300~~ projects. Eventually all projects. [\(Update of 02/2017\)](#)

Benefit #2

- Reduce time on reporting by 1700 hours

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

When project is completed, starting in 201~~87~~ for the 201~~76~~ reporting cycle. [\(Update of 02/2017\)](#)

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?

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. Many hours are involved in collecting reporting forms, matching multiple forms to the same project, determining which projects have reported, and coordination with staff.

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 annual reports to Council. Information will be more accurate and consistent.

2. How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)

Amount of time project managers, division leads and Green Building Team Program Manager spend on reporting after new system is put in place.

3. What is the current baseline?

- 5-10 hours per project for project managers X 300-425 projects a year = 1500-2125-4250-3000

hours [\(update of 02/2017\)](#)

- 405 hours per year X 8 Division Leads = 36020 hours [\(update of 02/2017\)](#)
- 390240 hours per year X 1 Green Building Team Program Manager = 390240 hours [\(update of 02/2017\)](#)
- 200 hours per year X 1 Green Building Intern = 200 hours [\(update of 02/2017\)](#)

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

2945% saving in staff time spent on reporting process. [\(update of 02/2017\)](#)

5. When is the cost reduction likely to be achieved?

After one reporting cycle is complete after new system is available.

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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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	Assessments
Project Title	KCIT DOA Electronic Val Notice
EBS Project Number	1121494

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.

Richard Watson: Interim Chief Deputy Assessor /Administrative Services Division Director
richard.watson@kingcounty.gov; 206-263-2356

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 Watson	Administrative Services Division Director	Project Support
Al Dams	Chief Deputy Assessor	Business Owner
Brendan Camarda	Business & Finance Officer II	Project Support
Hoang Nguyen	IT Division Director	IT Project Management and Support
Jonathan Larson	Project/Program Manger IV	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 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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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review	10/21/13	Rich Watson, Al Dams, Brendan Camarda	New, initial draft	30 min.
2013 Annual Report – Update	3/19/14	Rich Watson, Al Dams, Brendan Camarda	Provided updates based upon PSB comments	15 min
2015 Annual Report – Update	2/17/16	Rich Watson, Al Dams, Brendan Camarda	Annual update	45 min
2016 Annual Report – Update	1/12/17	Rich Watson, Al Dams, Brendan Camarda, Hoang Nguyen	Final BAP for a completed project	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, 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).

Because taxpayers will have the option of choosing between regular and electronically mailed valuation notices. Some taxpayers would prefer to have their valuation notice in electronic format instead of the current paper format. We have received suggestions from taxpayers to move to electronic notices and this will satisfy those requests. These requests for electronic notices were based on several factors, including convenience for the taxpayers, cost savings for taxpayers, and environmental considerations (reduced use of paper and reduced transportation for mail delivery). Taxpayers that wish to continue to receive paper notices can do so. This investment will increase taxpayer options.

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

Number of taxpayers who opt in for the electronic notice program, and the percentage increase in taxpayers who opt-in year-over-year.

3. What is the current baseline for this measure?

Zero for residential valuation notices. (Pilot program in place for small number of commercial taxpayers and government agencies)

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

10% in first full year of implementation.

5. When is the benefit likely to be achieved?

Upon implementation. **Delayed until March 2016 by technical issues arising from the Mainframe re-host 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 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.

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

Over time, there will be a reduction in printing and mailing costs as taxpayers opt into the electronic valuation notice program, and we print and mail fewer paper valuation notice post cards. Our projection is for 10 percent of taxpayers to opt into the electronic notices in year one – this would save about \$22,500 in postage and paper/printing costs (we currently spend \$225,000 annually on postage and paper stock). We project to increase that to 20 percent in year two for a savings of \$46,200 in postage and paper/printing costs that year. There will also be a small reduction in the staff time needed to print and handle the paper postcards.

2. How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)

The number of taxpayers that opt into the electronic notice program. Track postage and printing costs for revaluation notices and compare to baseline.

3. What is the current baseline?

Number of post cards printed and mailed annually. Total postage and printing costs for revaluation notices (\$225,000 in 2013).

The Department of Assessments is required to send property valuation notices to every property owner in King County annually – totaling nearly 740,000 notices sent by regular mail every year, incurring a large annual printing, postage and paper supply expense. The state legislature has authorized electronic notification of property valuation notices, with King County as a lead lobbyist, effective in Fall 2013.

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

10 percent of taxpayers opt into the program (of 740,000 total) for a commensurate 10 percent cost savings (\$22,500) in first full year of implementation. We believe this target is reasonable based on experiences of a local vendor that provides electronic valuation notice services to Assessors, and the reception our eAppeals program has received (30 percent of appeals being filed electronically as of this submission). Over the longer-term (four to five years), our target for taxpayers in the electronic valuation notice program would be in the 40 percent range, for a savings of about \$90,000 per year (in 2013 dollars). This estimate is based upon a review of vendor discussions concerning Yakima and other counties and their projection of similar type counties with King County type demographics.

5. *When is the cost reduction likely to be achieved?*

Upon implementation. **Delayed until March 2016 by technical issues arising from the Mainframe re-host project.**

Section 7. Benefit Achievement Summary

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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
<i>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.</i>	<i>Processing Time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

Update as of December 2016:

The project was closed in 2016.

The last report of active parcels registered in the EVN system was 5,895. These parcels belong to 2,272 taxpayers. Approximately 1% of total parcels. The project went live in April 2016. In less than 1 year of active operation, the project registered 5,895 parcels into the EVN system. This resulted in:

- Postage Savings of \$1,608
- Card Stock Savings of \$145
- Printing Savings of \$204
- Total Savings of \$1,957

Current outreach processes include EVN advertising on valuation post cards and Assessments' website. Additional non-paid outreach project will start in 2017 to determine causes of slow adoption rate (rate is below the target measure) and develop low/no-cost options for increasing EVN registrations.

IT Project Benefits Achievement Plan (Version 2)

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King County Department/Agency Name	Council, Board of Appeals/Equalization
Project Title	Property Tax Assessment Appeal Project
Project Number	1111665

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.

Neal Cook (Project Sponsor & Business Owner for Board of Appeals/Equalization)

Dennis Pulsipher (Project Co-Sponsor, Business Owner for Assessor Office)

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
Neal Cook	Manager/Clerk of Board of Appeals/Equalization	Business Owner, Project Sponsor
Dennis Pulsipher	Chief Appraiser, Assessor Office	Business Owner, Project Co-Sponsor
Amy Calderwood	Ombudsman, King County Council	Steering Committee member
Rebecha Cusack	Director of Strategic Policy Initiatives, King County Council	Steering Committee member
Bill Kehoe	CIO, KCIT	Steering Committee member
Kevin Dickie	Developer, Assessor Office	Project team member, technical
Hoang Nguyen	IT Director, Assessor Office	Project team member, technical
Barb DeLauter	Business Analyst, KCIT	Gather business requirements
Juliette Peze	Project Manager, KCIT	Manage project
Cindy Hunter	Staff, Board of Appeals/Equalization	Project team member, Business SME
Millie Hagedorn	Staff, Board of Appeals/Equalization	Project team member, Business SME
Barbara Sbis	Staff ,Tax Advisor	Project team member, Business SME
Vanthida Keovernkhone	Staff ,Tax Advisor	Project team member, Business SME
Richard Watson	Director, Administration	Support for Annual Reporting

Michelle Geiger

Manager/Clerk of Board of Appeals/Equalization

Business Owner, 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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BAP Update	3/7/14	Neal Cook & Dennis Pulsipher	Updating BPA using new template	3 hours
BAP Update	3/19/15	Neal Cook & Dennis Pulsipher	Updating BPA	3 hours
2016 Annual BAP Report	1/9/17	Richard Watson	Annual/Final 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 2 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 major goal of the project was to enable King County constituents to file their property tax assessment appeal online rather than on paper. The project will measure adoption and usage of the new online tool/process by the public. This will confirm that the project met this goal.

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

Benefit is being measured regularly by Neal Cook, as the business owner. Neal compiled and published statistics on number of appeals received and processed.

3. What is the current baseline for this measure?

The project expected that 10% of the total appeals being filed online upon introduction of the new eAppeals web application.

eAppeals version 1.1 was made available to the public in June 2013 on kingcounty.gov and by October 2013, the team reported that 30% of the total appeals filed were being done on-line. This figure has been staying pretty constant over time (no decrease).

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

The team is now expecting to increase this figure with newer eAppeals releases (version 2.x). These releases will add new features that will make it easier for online filers to submit their appeals. The team is hoping to bring the percentage of online appeals to 50% of the total submitted by end of 2015.

5. When is the benefit likely to be achieved?

The new target for eAppeals version 2.x is expected to be met by end of 2015.

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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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: 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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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 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	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

This project successfully released eAppeals version 1.3 (latest update) and measured adoption/usage rate of 31.59% as of January 2014.

Update as of March 2015:

The first release of eAppeals version 2 was completed in August 2014 on kingcounty.gov. The overall usage of eAppeals increased from 30% (in 2013) to 54% (in 2014), with the majority of increase being for non-residential type of appeals.

This figure is expected to increase over 2015 as the business owner, Neal Cook, is conducting great outreach work with the non-residential community and new features are being added to the eAppeals web application for making online filing more convenient for filers.

Update as of December 2015:

The last deploy of eAppeals was moved to production 12/15/2015 and the project was closed out. The level of usage of eAppeals was 54% for the 2015 Assessment appeals.

Update as of December 2016:

In 2016 there were three minor releases move to production to address two technical bugs and for restrictions on petitioner supporting documentation uploads. The overall usage of eAppeals increased to 68% (in 2016) for the 2016 Assessment appeals.

Michelle Geiger, the County's new Manager/Clerk of Board of Appeals/Equalization who replaced Neal Cook, will also be the new Business Owner, Project Sponsor.

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	DOA
Project Title	King County Interagency Property Tax Accounting System (PTAS) RFI and RFP
EBS Project Number	1123944

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: Al Dams: Chief Deputy Assessor

Business Owner Contact Information: 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

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Budget Process	6/16/16	Rich Watson, Al Dams, Brendan Camarda, Jonathan Larson	New, initial draft	1.5 hrs.
Budget Process	6/17/16	Rich Watson, Brendan Camarda,	New, initial draft	2.0 hrs.
Budget Process	8/25/16	Rich Watson, Brendan Camarda, Al Dams	New, Initial draft	2.0 hr.
2016 Annual Reporting	1/26/2017	Andrew Cronholm	BAP update for new project; RFP/RFI status	.5 hr

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.

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).

**** This BAP will be updated with the full benefits of the PTAS project after the RFI/RFP phase and after DOA, PSB and Council staff have agreed on the BAP content, sometime in early 2017.**

The RFI will allow for the analysis of the industry market conditions for this technology space,

creating a more-focused RFP that will have a better chance of producing a vendor that understands our needs, and can therefore respond to them. The investment in the technical and functional analysis in the RFI phase will reduce the overall risk of the project and create a more efficient and effective vendor evaluation process for both King County and the vendors.

The RFP will produce a forum for King County to fully evaluate and rate the vendor options available and produce competition that will lead to a better purchase price of the necessary products and services. It will also produce a fair forum for the vendors to compete for King County's business.

Update as of January 2017:

Interdepartmental planning meetings for the RFI/RFP began in January 2017 and are currently underway. A vendor to assist with the RFI/RFP development, analysis, and review has been selected and the vendor contract is now being finalized. DOA expects the vendor to begin work by February 9th, 2017. DOA's initial project schedule contemplates issuing the RFI alert to prospective vendors in early February and the actual RFI in mid-to-late February.

Overall, the process is still on schedule for PTAS vendor selection by the end of Q1 2018, dependent on Executive support for, and Council approval of, funding for the full PTAS upgrade.

Update as of February 2017:

Interdepartmental planning meetings for the RFI/RFP began in January 2017 and are currently underway. A project team is being assembled, including a business analyst, a project manager, and an IT industry consultant. The initial project schedule contemplates issuing the RFI alert to prospective vendors in late February and the actual RFI in March.

Overall, the process is still on schedule for PTAS vendor selection by the end of Q1 2018, dependent on Executive support for, and Council approval of, funding for the full PTAS upgrade.

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

The benefits will be measured against the project milestones that include:

- Did the RFI produce information about the market conditions so a more focused RFP can be developed.
- Did the RFP produce a contract award to a vendor for a new PTAS.
- Have intra-agency requirements been addressed to the satisfaction of stakeholders, to include:
 - DOA,
 - Treasury,
 - KCIT, and
 - Others.
- Timely delivery of RFI and RFP

3. What is the current baseline for this measure?

- None

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

- Qualified PTAS Vendor selected by the end of first quarter 2018.

Metric Description	Metrics	Baseline	Target	Actual
This project will help to ensure that the County receives the highest-quality vendor to assist in the development of a new PTAS system	Information disseminated, contract awarded, inter-agency requirements produced, timely RFI/RFP delivery	none	Qualified PTAS Vendor selected by the end of first quarter 2018	

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

- ~~9–12 months~~ [By the end of first quarter 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.

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.

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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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, Airport Director

Section 3. Who is involved in developing the BAP?

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Name	Title / Agency	Project Role
Michael Colmant	Deputy Director	Project Manager Project Sponsor
Joel Abanes <u>Tamara Davis</u>	Info Systems Specialist <u>KCIT IT Services Manager</u>	Provide technical assistance on Maximo - <u>Cityworks</u>
Kent Sherburne Vacant <u>Morlene Mitchell</u>	Fin & Admin Svcs Mgr	Provide assistance to Project Manager
Cheryl Boudreau	KCIT Project Manager	Assist KCIA with project management activities

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

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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
<u>Update: Annual Report</u>	<u>Feb 15, 2017</u>	<u>Mike Colmant, Cheryl Boudreau</u>	<u>2016 - BAP update for an ongoing project</u> <u>Updating Finance Administrative Service Manager, Morlene Mitchell</u> <u>Updating KCIT technical services manager, Tamara Davis</u> <u>Added update to Section 7- Benefit Achievement Summary</u>	<u>.5 hour</u>

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.

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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).

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?

- (1) Time spent in extracting data and producing a report from current level to a new system. Producing a report can take several hours instead of minutes.
- (2) Improve data accuracy by comparing report results of the old method and the new system's standard reports.
- (3) Improve the amount and variety of custom data that can be extracted and integrated into a single report.

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

Spend 50% less time inputting data into the system and extracting reports.

5. When is the benefit likely to be achieved?

Within 3 months after installation and training in 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.*

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.*

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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 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

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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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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	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

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

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 DOT/Airport
Project Title	Perimeter Intrusion Detection System (PIDS)
Project Number	<u>11273231129960</u>

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, 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

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.

- 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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:

- External service benefits:** Improving the quality or quantity of services provided to the public
- Internal service benefits:** Improving internal operations, including the quality or quantity of internal services
- Maintaining service levels** by replacing or upgrading older technology or reducing risk of system failures
- 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).

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 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

5. When is the benefit likely to be achieved?

Upon project implementation end of 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 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*Care 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*Care 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.	<ul style="list-style-type: none"> • Processing time (in days), • % of purchases receiving prompt payment discounts, and • Annual savings 	<ul style="list-style-type: none"> • 10-day processing time • 10% of purchases are receiving discount • \$100,000 savings 	<ul style="list-style-type: none"> • 1-day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2-day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

IT Project Benefits Achievement Plan (Version 2)

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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

Department of Transportation / Fleet Administration 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 Administration 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
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

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

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1. To support initial project request during "gate two" phase of conceptual review.

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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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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	1/30/17	Nora Jagielo	No changes, BAP for a project that starts in 2017	.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 2 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).

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. Vehicle odometer readings

- 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 (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.
- b. **After implementation:** AVL will provide real-time access to accurate non-revenue vehicle odometer readings and will feed directly into FASTER. This will allow Fleet to schedule preventative maintenance (oil changes and safety inspections) more proactively and increase the reliability of vehicle replacement projections.

B. Vehicle frequency of use information

- a. **Status quo:** 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 frequency of use information in a centralized and easily accessible location. Agencies can use this information to rotate, pool, or downsize vehicles to distribute usage evenly across their fleet.

C. 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.

D. 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.

E. Data accessibility and reporting

- a. **Status quo:** Sharing vehicle information between Fleet and its customer agencies is labor intensive and requires manual querying, data cleaning, and many handoffs. For example, agencies often request to view mileage data for their vehicles. In order to satisfy this request, Fleet must run a customized report from FASTER, export the data into a spreadsheet, “clean” the data, and then e-mail it to the agency. Reports can be scheduled to run automatically, but there is often data clean-up that needs to occur before the information is ready for the agency. Additionally, the report provides a static snapshot of the agency’s vehicle mileage and it is often weeks old upon delivery. Furthermore, agencies currently do not know how long their vehicles are idling nor do they know the quantity of fuel that is consumed as a result.
- b. **After implementation:** The nature of a cloud-based AVL system will allow agencies to access vehicle information in a customized web portal without any intervention by Fleet. Providing readily available information will allow agencies to proactively manage their vehicle use and make management decisions regarding fuel use and current business practices. Agencies that embrace AVL technology can reduce fuel consumption through reduced idling, route planning, and vehicle dispatching. Benefits related to fuel costs savings and reduced greenhouse gas emissions will be maximized if agencies adapt their business practices. Fleet is committed to providing leadership to encourage eco-driving behaviors and best practices for all customers.

F. 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. **Vehicle odometer readings:** This benefit will be achieved when real-time vehicle odometer readings feed directly into FASTER.
- B. **Vehicle frequency of use:** This benefit will be achieved when vehicle use information is readily available (for vehicles that have AVL installed) and is no longer tracked manually by assigned agencies.

- C. **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.
- D. **Vehicle idling:** This benefit will be achieved when vehicle idling information is readily available (for vehicles that have AVL installed) in a centralized location.
- E. **Data accessibility and reporting:** This benefit will be achieved when agencies have access to view and track vehicle use without any manual intervention by Fleet.
 - a. **User Satisfaction:** Users will be surveyed before and after implementation to gauge the impact the new system has (and the data it provides) on operational decision-making. We will also gather qualitative feedback through regular meetings with customers.
- F. **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. **Vehicle odometer readings:** The current baseline for odometer readings is approximately two weeks after the last fueling or when the vehicle was last serviced.
- B. **Vehicle frequency of use:** The current baseline is for agencies to capture vehicle frequency of use manually and report aggregate information as part of the Vehicle Utilization Review.
- C. **Remote vehicle diagnostics:** The current baseline is zero because we do not have the ability to capture remote vehicle diagnostic information.
- D. **Vehicle idling:** The current baseline is zero because we do not have the ability to capture idle hours unless the vehicle is in the shop for service.
- E. **Data accessibility and reporting:** The current baseline is for Fleet to provide data to customers within 1-2 weeks.
 - a. **User satisfaction:** Users will be surveyed before the project is implemented to establish a baseline.
- F. **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. **Vehicle odometer readings:** The target is to have access to odometer readings in real-time instead of weeks.
- B. **Vehicle frequency of use:** The target is to have access to year-to-date frequency of use information in real-time instead of annually. Fleet will also include frequency of use information for each agency as part of the quarterly performance measures.
- C. **Remote vehicle diagnostics:** The target is to have immediate access to remote vehicle diagnostics information and schedule appointments for vehicles transmitting error codes within three business days.
- D. **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. Target is to see a reduction in idling over time.
- E. **Data accessibility and reporting:** The target is for agencies to have access to view their assigned vehicles at any time in a customized portal. If agencies request assistance from Fleet, the target is to provide data within 1-2 days.
 - a. **User satisfaction:** Users will be surveyed 6-12 months after implementation. We expect agencies that chose to integrate AVL into their business practices will have a higher degree of satisfaction compared to agencies with general users. However, we expect to see at least a 10 percent overall increase in customer satisfaction compared to the baseline.

F. Determining asset location: The target is to have the precise location of a lost or stolen asset.

AVL Measure Summary with Expected Outcomes

Metric	Status Quo	After Implementation	Outcomes
Odometer readings	Odometer readings are updated approximately two weeks after the last fueling and when the vehicle is in the shop for service.	Odometer readings are updated in real-time.	Real-time access to accurate odometer readings will allow Fleet to proactively schedule preventative maintenance and improve projections for vehicle replacement.
Frequency of use	Vehicle use data is captured manually by customers and is reviewed annually as part of the Vehicle Utilization Review.	Running totals of vehicle "days of use" are captured and updated in real-time.	Eliminates manual data collection and allows agencies to monitor vehicle utilization more frequently with ease. This would allow agencies to actively rotate, pool, or downsize vehicles to distribute usage across their fleet.
Remote vehicle diagnostics	We do not have the ability to capture diagnostic information unless the vehicle is in the shop for service.	Error codes from the vehicle are captured in real-time. Vehicles transmitting error codes are scheduled for service within 3 business days.	Facilitates prompt repair scheduling, reduces diagnostic time in the shop, and promotes early resolution of problems before more costly issues arise.
Vehicle idling	We do not have the ability to capture the cumulative hours vehicles are idling unless the vehicle is in the shop for service and some vehicles do not track this.	Running totals of vehicle idle hours are captured and updated in real-time. Notifications can be programmed to alert managers when vehicles are idling for long periods of time.	We anticipate to see a decrease in vehicle idling and fuel consumption when agencies have access to this information. Fleet will work with agencies to develop and implement tailored idle reduction measures and encourage eco-driving best practices.
Data accessibility and reporting	Fleet must manually extract, format, and clean the data to prepare for the agency. Fleet aims to complete new requests for data within 1-2 weeks and the data provided is often many weeks old.	Agencies can view real-time data for their assigned vehicles at any time in a customized portal.	Real-time monitoring will provide customers accurate data that is easily accessible and can be used to make informed decisions to improve efficiency and reduce emissions. Fleet will work with agencies to develop fuel reduction targets that are tailored to meet business needs and contribute to the County's SCAP fuel reduction targets.
Asset location	We do not have the ability to determine the location of an asset remotely.	Vehicles precise location and route history will be available.	This feature will allow us to locate and potentially recover lost or stolen assets saving the County the funds that would be required to replace them. Creating geo-fences will allow agencies to track how

		long vehicles are spending in pre-defined areas and establish performance metrics.
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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.

The projects technical benefits will be 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.

Benefits related to reduced idling and decreased fuel consumption will vary by agency, but we expect to start realizing these benefits as early as Q1 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 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	<ul style="list-style-type: none"> • 10-day processing time • 10% of purchases are receiving discount • \$100,000 savings 	<ul style="list-style-type: none"> • 1-day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2-day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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	Transportation/Transit
Project Title	Transit Business Intelligence Resource Data (TBIRD)
Project Number	<u>1129801 [Updated 2/17/17]</u>

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.

Christine O’Claire, Manager, Strategy and Performance

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	Transit Systems Development and Operations Manager	Stakeholder
Kathleen McMurray	Transit Systems Development and Operations Supervisor	Subject Matter Expert
Jill Krecklow	Transit Finance Manager	Stakeholder
Chris O’Claire	Manager, Strategy and Performance	Sponsor
Jon Bez	Supervisor, Transit Scheduling	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 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review	07/06/16	Kathleen McMurray	New, initial draft	2 hours
Budget process	10/05/16	Dan Overgaard	Revisions in response to Council staff questions	8 hours
2017-18 Budget Process	10/06/16	Andrew Brick	Revisions in response to Council staff questions	3 hours
2017-18 Budget Process	10/16/16	Jill Krecklow	Revisions in response to Council staff questions	1 hour
2016 Annual Update	2/17/17	Kathleen McMurray	Review only. This project was just funded and has not yet started.	.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 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).

If approved, the Transit Business Intelligence Resource Data (TBIRD) project will implement a new, enterprise-class reporting platform that not only replaces several limited-function legacy reporting tools but significantly advances Transit's analysis capabilities to include data mining, data discovery, business intelligence and data visualization tools, and geo-spatial analysis and presentation.

As described in more detail below, the 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 combine 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.

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.
 - 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:
- a. An analysis of passenger by street segment with geographical display.
 - b. An analysis of fare and ridership profile on a trip.
 - c. 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 a year of system implementation, which allows time for training, building experience with the new tools, and delivering production reports and analyses.
- b. **Comply more fully with 2009 Transit Performance Audit.** Within 1 year of system implementation, which allows time for training, building experience with the new tools, and delivering production reports and analyses.

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.***

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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 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.*

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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.*

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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.	<ul style="list-style-type: none"> Processing time (in days), % of purchases receiving prompt payment discounts, and Annual savings 	<ul style="list-style-type: none"> 10-day processing time 10% of purchases are receiving discount \$100,000 savings 	<ul style="list-style-type: none"> 1-day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2-day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

Metrics	Baseline	Target	Actual
Category 2: Timely access to better data (e.g., ridership and on-time performance) to facilitate more complex analyses in support of data-based decision making and service planning.	To be determined through a 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.	Data available to KC Transit’s users 24 hours after the data is available in the collecting systems. A target for user satisfaction will be determined as part of the planning phase of this project	Benefit to be achieved within a year of system implementation
Category 2: Increased compliance with the 2009 Transit Performance Audit	Some ridership and performance data is currently collected, but not in one database.	Ridership and performance data is collected in new database; the audit finding is fully addressed.	Benefit to be achieved within one year of system implementation.

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)?

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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	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.

Business Owner Name and Title: ~~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
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

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 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).

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 system 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.
- 2. Process efficiencies.** The benefit will likely be achieved within 1 year following implementation.
- 3. Accurate and timely reporting.** The benefit will likely be achieved within 2 years following implementation.
- 4. Capital project delivery rates.** The benefit will likely be achieved within 3 years following 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.
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 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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

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:

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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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).

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 XXX, 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 XXX, 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
Trip Planner Q4 2018
SMS Q4 2018
- 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. ~~X-date~~

For the Wi-Fi access project, we expect wi-fi service to meet performance standard of XXX, a common industry standard starting at implementation. ~~by X-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 three years without adding more staff.

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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.

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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.**
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
 - Replaced desktop Online Trip Planner in 2013
 - Added mobile web Online Trip Planner in 2014
 - Added iOS/Android Online Trip Planner apps in 2015
2. Tracker – originally implemented in 2005
 - Replaced Tracker in 2013
3. Customer Relations Management system (including Lost and Found) called MCS – originally implemented in 2005
 - Replacement ~~expected~~ to be completed in [Q1 of 2016/2017](#)
4. IVR (BusTime) – originally implemented in 1991
 - Replaced IVR in 2014
5. SMS Departure Information (text messaging)
 - New tool targeted for ~~2016~~[Q3 of 2017](#). ~~Unforeseen~~[Unforeseen procurement and contract details have resulted in this schedule change.](#)
6. Downtown Seattle Transit Tunnel Wifi Access Points
 - Added in 2016

Next Refresh of Implemented Systems for the 2017/2018 timeframe

7. Online Trip Planner
 - Refresh planned 2017-2018
 8. Tracker
 - Refresh planned 2017-2018
 9. Customer Relations Management system (including Lost and Found)
 - Refresh planned 2018-2019
 10. SMS Departure Information
 - 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	Processing time, annual savings, and % of purchases receiving prompt	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts

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	<i>advantage of prompt payment discounts.</i>	<i>payment discounts</i>	• <i>\$100,000 savings</i>	• <i>\$400,000 savings</i>	• <i>\$200,000 savings</i>	
<p>See next page</p>						

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 43)

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	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

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 (**secondary**): Internal service benefits: Improving internal operations, including the quality or quantity of internal services

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 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 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	<ul style="list-style-type: none"> 10 days processing time 10 percent of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30 percent of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20 percent of purchases are receiving prompt payment discounts \$200,000 savings

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.
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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	Department of Transportation, Transit
Project Title	HASTUS Planning Module
Project Number	[New 7/20/16] 1124415

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, General Manager~~ Rob Gannon, ~~Interim~~ General Manager [updated 2/17/17]

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

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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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review	6/5/2014	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
2016 Annual Update	2/17/17	Diane Sutherland	Review only. This project has not started due to dependence upon HASTUS Upgrade project completion.	.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 three 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).**
 - 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).

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
<i>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.</i>	<i>Processing Time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • \$100,000 savings 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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.

Business Owner Name and Title: ~~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	Manager Transit Operations/ Transit	Sponsor
Victor Obeso	Manager Service Development/ Transit	Sponsor
Ralph Keyport	Supervisor of Planning Technical Support Services/ Transit	Subject Matter Expert
Jon Bez	Supervisor of Route Planning/ Transit	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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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

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- 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.

- 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.

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.

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

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Metric Description	Metrics	Baseline	Target	Actual

Metric Description	Metrics	Baseline	Target	Actual

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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?

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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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:

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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

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).

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.

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 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) Fort Worth Transportation Authority Denton County Transportation Authority	Unwire (Denmark)
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 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
<i>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.</i>	<i>Processing Time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

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 Transportation, Transit
Project Title	Next Generation Wireless (NGW) (Replacement of 4.9 Network and Mobile Access Routers)
Project Number	1124429

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
Dan Overgaard	Manager, Transit Systems Development and Operations	Steering Committee Member
Jill Krecklow	Finance Manager, Transit	Finance Manager; Chair Transit Technology Oversight
Pamela Wrenn	IT Project Manager II, Transit Systems Development and Operations	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, 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 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review	6/4/2014	Yan Zhang	New, initial draft	.5 hours
Conceptual review	7/1/2014	Kathleen McMurray	Update	.5 hours
Conceptual review	10/02/2014	Dan Overgaard	Updated in response to questions	2 hours
Annual Report	2/11/2015	Dan Overgaard	Minor update in Section 6	.25 hours
Funding Release	6/22/2015	Pamela Wrenn	Updated per planning phase. Added Project Manager. Changed from Categories 1 & 3 to Category 3 only.	.5 hours
Annual Report	2/9/2016	Pamela Wrenn	Updated project title and added project number.	.25 hours
Annual Report	4/1/2016	Kathleen McMurray	Updated Business Owner and Primary Project Benefit	.25 hours
2017-2018 Budget	5/20/2016	Pamela Wrenn	Review only	.25 hours
2017-2018 Budget	6/13/2016	Kathleen McMurray	Updated in response to questions	.25 hours
2017-2018 Budget	10/6/2016	Pamela Wrenn	Updated in response to Council staff questions	1 hour
2017-2018 Budget incorporate council staff feedback	10/13/2016	Jill Krecklow	Updated in response to council staff discussions	.5 hours
2016 Annual Report	2/17/2017	Pamela Wrenn	Updated dates related to project completion	.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 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).

BENEFIT (secondary): This project is primarily a lifecycle replacement project. As a result of newer technology and opportunities, it is expected that the replacement infrastructure will provide the ability for other projects (e.g., ORCA Next Generation, Video Camera Management System and Transit Signal Priority System Replacement) to successfully be implemented.

The proposed investment will both change and add methods of transmitting transit data wirelessly:

- The WiFi capability will change from 4.9 GHz to 802.11ac. The new standard is commercially ubiquitous and very stable. Adherence to this standard will result in a larger selection of equipment with better performance, and may also result in price advantage.
- Commercial cell capability will be added. This will enable real-time wireless transactions without the deployment of Access Points. It will make wireless roaming available throughout the transit service area, enabling applications such as Next Generation ORCA and decreasing the per-intersection cost of applications such as transit signal priority as described below:

- ✓ **ORCA Next Generation.** The ORCA strategic planning process 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). In order to implement an open payment system, the ORCA partners would need to implement a secure, always on connection to every bus, such as a cellular 4G/LTE connection. This is a candidate technology for the 4.9 replacement network, so if it is selected, it would enable the ORCA replacement project to deploy those new features and benefit customers by improving fare payment options, speed and access.
- ✓ **Expansion of TSP and RTIS.** The current 4.9 GHz wireless network is constrained from expansion due to scheduled approaching system obsolescence. KCIT and Transit have limited spares which must be saved to maintain existing services. No more mobile access routers are available for purchase, which limits Metro's ability to deploy TSP on additional corridors. Although several jurisdictions are interested in deploying more TSP (Seattle, Bellevue, Redmond and others), those plans are on hold pending Metro's deployment of a replacement network that can support TSP. Assuming unlimited access to new equipment, the new network will allow continued expansion of TSP and RTIS on new corridors, which will directly benefit the public through improved speed and reliability, and greater access to bus arrival information along those corridors.

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

Measure 1: the footprint of wireless capability overlaid on the Metro service area.

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

The current baseline for the wireless capability footprint will be determined during design.

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

Measure 1 – Target is 80% increase of geographical coverage.

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

Measure 1 - The measure is likely to be achieved gradually over the life of the project, with full benefits occurring at the conclusion of component installation currently scheduled for ~~the end of 2019~~ mid-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.**

Transit's 4.9 GHz wireless network was installed starting in 2009, as part of the installation of the On-Board System/Communication Center System (OBS/CCS). There is no industry standard life cycle for this type of equipment, but it generally falls in the IT commodity category, which generally means an expected life of five to seven years. However, equipment obsolescence can be affected by multiple factors, such as lack of market availability of processing chips and other hardware components; updates to operating system software or other software that runs on the hardware, making it obsolete; and other strategic business decisions. In this case, there are increasing failures of equipment for the 4.9 GHz wireless network equipment that Transit uses to upload and download data from the bus fleet at the bases and on RapidRide lines. This network also provides network connectivity for ORCA readers and Real-Time Information Signs (RTIS) on the RapidRide corridors, and enables Transit Signal Priority communications on RapidRide and other routes.

Not doing this project will increase the risk of service interruptions and the eventual failure of data communications for the systems that use the 4.9 network. Such failures will impair Metro's fare collection, operations management, service analysis, transit signal priority and customer information services. Transit and KCIT need to deploy a replacement system before the existing system is no longer working.

The system has already passed the "last buy" milestone for some types of spare parts. This project is a necessary life cycle replacement to maintain a state of good repair, and ensure business continuity. The lack of spare parts and the loss of software support mean that it is not cost-effective to try to

isolate this specialized network with additional firewalls or other network modifications. There is no other option to keep these services running, than to replace this obsolete equipment. This project needs to replace the following devices, and ensure integration and provide continuous operation for the systems connected them:

- 1,450 mobile routers installed on the transit fleet, and 140 on RapidRide corridors;
- 44 access points installed at transit bases; and
- 241 access points and along RapidRide and other Intelligent Transportation System corridors.

To maintain business continuity during the transition, Transit and KCIT will need to build and implement the new system as a parallel network at the bases and along the corridors. They must then migrate the fleet by installing or modifying mobile routers in a coordinated, phased process.

WiFi capability will change from 4.9 GHz to 802.11ac. The new standard is commercially ubiquitous and very stable. Adherence to this standard will result in a larger selection of equipment with better performance, and may also result in price advantage.

Commercial cell capability will also be added. This will enable real-time wireless transactions without the deployment of Access Points. It will make wireless roaming available throughout the transit service area, enabling applications such as Next Generation ORCA and decreasing the per-intersection cost of applications such as transit signal priority.

Implementation is currently planned to be completed ~~Q4-2019~~ 2021.

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.*

If this wireless network is not replaced, the probability of incremental network failure, and increasing business impacts, is not just high but certain. There will be partial communication gaps failures when individual hardware units fail and no replacement parts are available.

At the seven operating bases, this network provides wireless communications to connect the revenue fleet with back office systems to upload and download daily on-time performance data, passenger counts, fare transactions, ORCA card reloads, fare tables, daily on-board bus schedules, stop announcements and other on-board configuration data. It is critical to Transit operations that these data transmissions continue to occur in a timely manner. Over 60% of Transit's fare revenue is processed over this wireless network.

- The ORCA readers are updated daily with customer card reloads and card hotlists. ORCA transactions are offloaded at every pull-in. ORCA transaction data expires if it is not downloaded from the vehicle after seven days. Intermittent communication failures in the network may result in fares being lost due to expired data.
- On-board systems are generally loaded with about 30 days of operational data. If this data is not updated before expiration, on-board data will expire and present operational issues, such as limiting the operators' ability to use the radio system (a critical life/safety requirement) and collect correct passenger fares (a critical financial requirement).
- The network provides connectivity to collect fares from ORCA readers at major stations, display bus arrivals on real-time information signs, and enables transit signal priority operation

along the corridor, for improved speed and reliability.

King County is already experiencing maintenance and operations issues, due to the lack of spare parts. It is expected that these kinds of issues will increase as the system ages, and this will put transit operations at a significant risk of more frequent and longer lasting outages. Incremental failures may require prioritization of certain functions, and moving limited spares around the system to fill in gaps. Some less critical functions such as Real-Time Information Signs and off-board ORCA readers could be temporarily decommissioned in order to keep the core ORCA system functional.

The risks of not proceeding with the project are that 1) the existing network will not support upcoming applications such as Next Generation ORCA, and that 2) the costs to operate and maintain the network will continue to increase as equipment ages and becomes more unstable.

BENEFIT (primary): Not doing this project will increase the risk of service interruptions and the eventual failure of data communications for the systems that use the 4.9 network. Such failures will impair Metro's fare collection, operations management, service analysis, transit signal priority and customer information services. Transit and KCIT need to deploy a replacement system before the existing system is no longer working.

Success of the project will be measured in the following ways:

Measure 1 (same as in Category 2): Footprint of wireless capability overlaid on the Metro service area, with a target of 80% increase of geographical coverage.

Measure 2: Annual cost to operate and maintain the wireless network, inclusive of materials and labor, with a target of 0% increase when compared on a comparable basis to current system costs and impacts. The target will be achieved 2 years after the NGW network is fully operational.

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
<i>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.</i>	<i>Processing time, annual savings, and % of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

See next page

Summary – NGW Replacement 4.9 Network IT Project

Benefit	Metrics	Baseline	Target	Actual
<p>Category 2: The project will make wireless roaming available throughout the transit service area, enabling successful implementation of projects such as ORCA Next Generation, Video Camera Management System and Transit Signal Priority System Replacement.</p> <p>Category 3: If the current wireless network is not replaced, the probability of incremental network failure, and increasing business impacts, is certain. The new system will prevent the risk of increased costs to operate and maintain the network (due to aging equipment becoming more unstable and lack of replacement parts).</p>	<p>The footprint of wireless capability overlaid on the Metro service area</p>	<p>To be determined</p>	<p>80% increase of geographical coverage</p>	<p>At the conclusion of component installation (late mid-2021 2019)</p>
	<p>The annual cost to operate and maintain the wireless network, inclusive of materials and labor</p>	<p>To be determined</p>	<p>0% increase in cost to operate and maintain when all factors are considered</p>	<p>2 years after the NGW network is fully operational</p>

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 2/17/17]

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.

Business Owner Name and Title: Rob Gannon, ~~Interim~~ General Manager [\[Updated 2/17/17\]](#)

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

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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.**
- 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 are the result of each bus being equipped with a camera system. **The benefit of this project is the ability to cost effectively access and manage the camera images and maintain system reliability.**

This project supports Metro's business driver of *Keeping the System Safe and Making it Safer*. In response to operator and customer comments, the Executive has asked Metro to install on-board camera systems on 100% of the 1,500 bus fleet. Currently, about 50% of the fleet has on-board camera systems installed – these systems operate independently on each bus. In order to retrieve images, individual buses must be manually boarded and existing digital recorders removed and replaced with a new one. The digital recorder then must be taken to a separate location and the specific image identified, copied and provided to the individual making the request. Fully equipping the fleet with independent camera systems on each bus provides an increase in perceived security on the system while providing a video record of what occurs on the bus as well as reduced litigation and risk expense when claims can be resolved by reviewing camera images

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.

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.

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.

5. When is the cost reduction likely to be achieved?

2019 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 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	<ul style="list-style-type: none"> 10-day processing time 10% of purchases are receiving discount \$100,000 savings 	<ul style="list-style-type: none"> 1-day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2-day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

See next page

Summary – Onboard Camera Management System IT Project

Benefit	Metrics	Baseline	Target	Actual
<p>Category 4: Ability to cost effectively access and manage the camera images and maintain system reliability.</p>	<p>Staffing resources required to retrieve and manage video images and to maintain system reliability</p>	<p>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.</p>	<p>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</p>	<p>2019 or when the system is fully operational</p>

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	On-Board Systems/Communication Center System (OBS/CCS)
EBS Project Number	1027519 and 1028626

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, ~~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
Randy Boshart	IT Project Manager II, DOT Transit Division	Project Manager
Dan Overgaard	Systems Development and Operations Supervisor, DOT Transit Division	Steering Committee Member

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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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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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
2013 Annual Report	12/02/13	Randy Boshart	Converted plan from Benefit Realization Plan into Benefit Achievement Plan format	2 hours
2013 Annual Report	3/20/14	Randy Boshart	Revised per feedback	1 hour
2014 Annual Report	3/13/15	Randy Boshart	Review Only	.25 hours
2015 Annual Report	1/31/16	Randy Boshart	Review Only – no changes	.5 hours
2015 Annual Report	6/13/16	Randy Boshart	Revised per council staff feedback	.5 hours
2016 Annual Report	2/17/17	Randy Boshart	Updated to indicate this is the final report	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)

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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.

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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%. 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 On-Board Systems/Communication Center System (OBS/CCS) Project combines upgrades to two separate, interrelated systems into one project. The OBS/CCS Project provides the user interfaces and controls required to implement the new Transit Radio System (TRS) on Transit's fixed route fleet, at the transit bases and in the Communication Center. Without OBS/CCS, the new radio system could not have been fully utilized as the legacy systems were incompatible with the TRS. The On-Board Systems portion of the project also replaces an obsolete vehicle tracking system with a modern GPS based system. The Communications Center System Project updates the Computer Aided Dispatch/Automatic Vehicle Location (CAD/AVL) system to one that provides more efficient call processing to an essential life-safety system.

Interface to Transit Radio System (TRS)

The TRS Project (a separate project from OBS/CCS) replaced Metro's obsolete 450MHz land mobile radio system with a 700MHz radio system mandated by the FCC. The existing radio spectrum was no longer available for use by King County at the end of 2013. This new radio system required the upgrade of both on-board equipment and at the Communication Center. Existing systems were not compatible with the new radio system.

Update February 2017: Benefit has been achieved. The interface to the transit radio system has been completed and is fully operational.

On-Board Systems (OBS) Project

The On-Board Systems portion of the OBS/CCS project integrated with the new TRS to handle call processing between the vehicle and the Communications Center. The OBS Project also replaced the existing signpost based vehicle location system with a new GPS vehicle location system which provides more accurate and timely vehicle location updates thereby enhancing public and driver safety. Additional capabilities now available include: integrated automated passenger counting, automated stop announcements, automated destination sign changes, schedule adherence monitoring for Transit Signal Priority, and a new level of collected performance data not possible with the legacy signpost based system. Vehicle installations concluded in December of 2012. ~~Tasks remaining include the resolution of significant functionality, documentation and training issues.~~

Update June 2016: The Project is currently in the final stages of negotiations to issue Full System Acceptance to the vendor. Any remaining functionality issues will be handled during system operations. All training has been completed. There are some documents that are in the final stages of review and acceptance, and are expected to be finalized in 3rd quarter 2016. Upon acceptance and delivery of documentation the project will enter the close-out phase with completion expected in 4th quarter 2016.

Update February 2017: The Project is complete. The On-Board Systems have been fully replaced and implement. System is fully functional. All documentation has been reviewed and approved.

Communication Center System (CCS) Project

At the Communication Center, the CCS Project replaces Transit's Computer Aided Dispatch/Automatic Vehicle Location (CAD/AVL) system, which manages radio communications between Transit operators and Communication Center staff. This essential life-safety, security and service management system provides staff with the tools to manage transit service and respond to accidents, incidents, service disruptions, emergencies, customer service requires and employee requests for assistance. A key function of the CCS is efficient, prioritized radio call processing and the CCS system improves these capabilities. Physical installation of the CCS equipment is complete. ~~Tasks remaining include the resolution of significant functionality, documentation and training issues.~~

Update June 2016: The Project is currently in the final stages of negotiations to issue Full System Acceptance to the vendor. Any remaining functionality issues will be handled during system operations. All training has been completed. There are some documents that are in the final stages of review and acceptance, and are expected to be finalized in 3rd quarter 2016. Upon acceptance and delivery of documentation the project will enter the close-out phase with completion expected in 4th quarter 2016.

Update February 2017: The Project is complete. The Communications Center System has been fully implemented and is in daily operation. All documentation has been reviewed and approved.

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 recurrence for the risk that initiated this project is most likely in the medium to high range. The FCC regulatory change that mandated a phase-out of wide-band UHF licensing, and mandated a forced obsolescence of the hardware for wide-band operation, was driven by increased

demand for more efficient use of radio spectrum, and the development of new technology that could provide more efficient operation. These two trends are likely to continue.

It is difficult to predict when these continuing trends will affect the new 700 MHz spectrum that is being used by the new Transit Radio System. The new system is already compliant with a similar spectrum efficiency regulation for 700 MHz, which will take effect in 2017. The level of spectrum efficiency in the new system is four times more efficient than that provided by the wide-band operation of the legacy radio system. The technology developments required to reach a higher level of spectrum efficiency will most likely require at least a decade of industry research, testing and regulatory development, before a new regulatory target is issued. Issuance of a new regulatory target is then followed by vendor product development, before agencies such as King County can issue specifications and proceed with the procurement and deployment of a replacement system.

Update February 2017: Benefit has been achieved. System is compliant with current regulations.

NEW February 2017: This is the final report for the project. All benefits have been achieved.

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	<ul style="list-style-type: none"> 10 days processing time 10 percent of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30 percent of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20 percent of purchases are receiving prompt payment discounts \$200,000 savings

<u>Metric Description</u>	<u>Metrics</u>	<u>Baseline</u>	<u>Target</u>	<u>Actual</u>
<u>Interface to Transit Radio System (TRS)</u>	<u>New OBS/CCS system integrates with new 700 MHz radio system</u>	<u>No interface</u>	<u>Full interface</u>	<u>OBS/CCS system is fully integrated with TRS system and is fully operational</u>
<u>On-Board Systems replaced</u>	<u>On-Board systems operational on all coaches</u>	<u>0</u>	<u>All vehicles operating on new OBS system</u>	<u>All vehicles operating using new On-Board systems as of Dec 2012</u>
<u>Communications Center System (CCS) Replacement</u>	<u>CCS operational</u>	<u>0</u>	<u>All communications with fleet and Computer Aided Dispatch / Automatic Vehicle Location using new CCS</u>	<u>CCS is fully operational and all communications and CAD/AVL functions are in use.</u>

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, 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
Dan Overgaard	Supervisor, DOT Transit Division	Stakeholder
Kathleen McMurray	Supervisor, DOT Transit Division	Stakeholder
Jill Krecklow	Finance Manager, DOT Transit Division	Finance Manager
Randy Boshart	IT Project Manager II, DOT Transit Division	King County 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.
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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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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
2016 Annual Report	2/17/2017	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 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).

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 autoloading process. Currently system design of the autoloading 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. ~~with a ten year agreement for vendor operation and maintenance. The current system is proprietary and individual components are already reaching the end of their useful life and replacements are not available from the vendor without incurring high development costs.~~

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.

~~This project is to fund King County's participation in the replacement of the existing regional ORCA smart card fare collection system. The ORCA system was deployed in 2009 to implement regional fare and transfer policies adopted by each of the ORCA agency's boards, and is now used for nearly 65% of all fares collected on King County Metro service. Current projections for 2022 ridership estimates that King County will represent 57.8% of all regional system riders. This is reduction from the current 66% primarily due to expansion by Sound Transit. The system includes field devices (ORCA readers and other devices) that are operated by the 7 participating ORCA agencies (Community Transit, Everett Transit, Kitsap Transit, Pierce Transit, Sound Transit, Washington State Ferries and King County Metro). In addition, there is a central clearinghouse that stores ORCA data and distributes fare revenue based upon a complex set of business rules established by the ORCA agencies. This clearinghouse is hosted and operated by the ORCA contractor under an operating and maintenance agreement. This agreement ends in 2021.~~

~~King County and its partner agencies are developing the next generation of fare collection in the Puget Sound region. King County is the largest transit system in the region, today and into the future and unless King County wants to develop its own, separate fare collection system, it is imperative that King County be able to fully participate in the development of the replacement system.~~

~~In the current ORCA system all equipment is repaired and upgraded (software only) by the vendor. The vendor is required to continue to repair all equipment through the life of the contract. The system is not at risk of failure at this time. King County has a sufficient quantity of spare equipment based on predicted failure rates and fleet size until the end of the contract.~~

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 is not primarily a risk reduction project, but~~ 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/expand use of ORCA for fare collection by~~ 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.

- ~~— Making ORCA easily usable on all modes of transport~~
- ~~— Making ORCA available through as many venues as possible in addition to the current retail network and ticket machines~~

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 increased ORCA market share. This will indicate that more customers are continuing to use ORCA to pay for public transit.

Benefit 4: Customer satisfaction is measured annually in the survey of riders. choosing to use ORCA to pay for public transit.

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.

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

The target is increased ORCA market share of 5%—10%. Target is no loss of market share and no loss of customer satisfaction. .

When is the benefit likely to be achieved?

Benefit will be fully realized 3-5 years following project completion. Benefits will be achieved one year following system 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 \$15,000,000 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	Processing time, annual savings, and % of purchases receiving prompt	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving payment discounts • \$100,000 savings 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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	<i>advantage of prompt payment discounts.</i>	<i>payment discounts</i>		• <i>\$400,000 savings</i>	
	See next page				

Summary – ORCA IT Project

Benefit	Measure	Baseline	Target	Actual
PRIMARY (Category 3): Maintain/expand use of ORCA for fare collection	Increased ORCA market share	Baseline ORCA King County market share is ~65% at King County Metro.	Increase of 5%–10% <u>No loss in market share</u>	3-5 years following project completion <u>1 year following implementation</u>
PRIMARY (Category 3) <u>Continued satisfaction with Fare collection</u>	<u>Customer Satisfaction with Fare Collection</u>	<u>Baseline is currently 77% very satisfied</u>	<u>No loss of satisfaction</u>	<u>1 year following implementation</u>
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 2)

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King County Department/Agency Name	Department of Transportation, Transit
Project Title	P&F Timekeeping via EAM
Project Number	TBD 1128790 [updated 2/17/17]

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~~Kevin Desmond~~ Rob Gannon, General Manager [updated 2/17/17]

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Name	Title / Agency	Project Role
<u>Jerry Rutledge</u> <u>Alina Tanzer</u>	Manager, Transit Power & Facilities	Project Sponsor [updated 2/17/17]
Jill Krecklow	Finance Manager, Transit	Stakeholder
<u>Kathleen McMurray</u>	<u>Supervisor, Systems Development & Operations</u>	<u>Stakeholder</u>
<u>Tim Reutebuch</u>	<u>FA III, Systems Development & Operations</u>	<u>Project Manager</u>

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	6/5/2014	Yan Zhang	New, initial draft	.5 hours
Conceptual review	9/25/2014	J. Krecklow	Revised to address questions	1 hour
2014 Annual Report	2/11/15	Kathleen McMurray	Review only	.25 hours
2015 Annual Report	2/9/16	Kathleen McMurray	Added missing text in Category 3.	.25 hours
2016 Annual Report	2/17/17	Kathleen McMurray	Final update closing the 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

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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
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?

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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).**

Transit's Power & Facilities section (280 employees) currently uses a timekeeping system called ETTS which is an independent system that interfaces with our Asset Management system (EAM) and with PeopleSoft to provide time entry for payroll and reporting purposes. ETTS has been in use since 2001, was developed using Delphi, runs on the 32 bit platform, is no longer supported by the vendor, and is running with outdated operating systems.

Improvements to the existing ETTS system are not viewed to be cost effective given the current status of the system. Preliminary estimates are that it would also cost more to upgrade the ETTS system than it does to implement time & labor reporting in EAM (\$250k versus \$217k). The EAM system is a current generation system that provides work order functionality as well as the ability to collect and pass time records to Peoplesoft as EAM has the capability to capture employee time accurately within the EAM system itself. Using EAM and its work order data to generate time and labor entries would eliminate the need for the ETTS system, allowing it to be retired. This would result in one less system to maintain and would provide for increased return on the investment paid in the EAM system.

Generating time and labor entries directly from EAM would still require an interface to Peoplesoft. Such an interface would be similar to the one currently in place with ETTS or that used by the Vehicle Maintenance group which captures time and labor information in a vehicle work order system (M5) which interfaces directly to Peoplesoft.

Directly capturing time from the work order system eliminated redundant data entry and reduces the possibility for error. Employees will enter time once into EAM and the time and labor records for Peoplesoft will be generated by the system. Management and administrative time is currently spent reviewing the ETTS data (as well as the work order data in EAM) and resolving errors/issues. Having the time collected in one system would allow manager to approve the work order data once.

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

We will track the number of time and labor corrections required as the data is approved in Peoplesoft.

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

We currently have not quantified the amount of time associated with redundant time entry and error correction. If each employee spends 30 minutes a week doing redundant data entry there would be about 6,500 hours spent on this activity each year. $((250 \text{ hourly employees} \times 30 \text{ mins} \times 52 \text{ weeks}) / 60 = 6,500 \text{ hours})$. Employees work 24/7 shifts. This is roughly equivalent to 3-4 FTEs worth of time each year. In addition management will no longer be required to review for and reconcile errors.

[New 2/17/17]

The benefit will not be achieved through this project. Benefits as stated assumed transition of all hourly employees to electronic time entry, however providing technology access to all employees was beyond the approved scope. See Section 7 for details.

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

The target for this measure ~~will be~~ zero redundant data entry as well as zero time spent by management reconciling errors as there will be reconciliation required.

5. When is the benefit likely to be achieved?

[New 2/17/17]

The benefit will not be achieved through this project. The project is now closed. See Section 7 for details.

~~This benefit should be achieved as soon as the system goes 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.

P&F currently uses a timekeeping system called ETTS which is an independent system that interfaces with our Asset Management system EAM and with PeopleSoft. ETTS has been in use since 2001, was [New 2/9/2016: developed using Delphi, runs on the 32 bit platform, is no longer supported, and is outdated. It is not in P&F's best interest to add or improve system features and upgrading at some point in the near future is not feasible.]

[New 2/17/17]

The original project concept was that P&F could begin using EAM for timekeeping and then retire ETTS. This concept was determined to be invalid and the project was closed. As a result, the existing technology was not replaced. See Section 7 for details.

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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts

15048

<i>prompt payment discounts.</i>	<i>discounts</i>	<i>\$100,000</i>		• <i>\$200,000 savings</i>
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[New 2/17/17]

This is the final Benefits Achievement Plan submittal for this project. This project is now closed and the benefits have not been achieved.

The original project concept assumed that the P&F asset management system (EAM) contained features that could be activated or added to allow direct time and labor entry and allow retirement of the legacy timekeeping system (ETTS). During the project planning and preliminary design phases, this underlying assumption was determined to be invalid. There is no directly available module or feature to allow this functionality in EAM. In addition, there are business functions beyond timekeeping that are dependent upon the ETTS system for continued business operations (for example, training scheduling, union pick management and employee data management). These functions would also need to be performed elsewhere to allow retirement of ETTS.

The scope and resources required to complete the project and retire ETTS were well beyond the originally approved project concept and budget. As a result, the project team was directed to finalize requirements for a full ETTS and training scheduler replacement. That work was completed and the project has now been closed. The documented requirements may be used for a future project proposal.

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	Real-Time Improvements Project
Project Number	1124413

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
Dan Overgaard	Manager, Transit Systems Development & Operations	Project Management Oversight
Jill Krecklow	Finance Manager, Transit	Chair, Transit Technology Oversight
Kayleen Norris	Supervisor, Transit Customer Communications & Services (CCS)	Stakeholder
Matt Hansen	Manager, CCS	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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review	06/05/2014	Yan Zhang	New, initial draft	0.5 hours
Conceptual review	09/26/2014	Dan Overgaard	Address questions; clarify project scope and benefits	3 hours
Conceptual review	10/15/2014	Dan Overgaard	Address embedded comments	2 hours
Conceptual review	11/05/2014	Jill Krecklow	Finalize BAP for budget	30 minutes
2014 Annual Report	02/11/2015	Kathleen McMurray	Review only	.25 hours
2015 Annual Report	02/09/2016	Kathleen McMurray	Provided clarifying updates	.75 hours
2017-18 Budget	07/20/2016	Kathleen McMurray	Updated Business Owner, Added Project Number	.25 hours
2017-18 Budget	10/06/2016	Dan Overgaard	Addressed Council staff questions from BAP review	3 hours
2017-18 Budget	10/16/2016	Jill Krecklow	Addressed council staff feedback	1 hour
2016 Annual Report	02/17/2017	Alex Rampley	Update Business Owner title This project is currently in the initiation phase.	.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).

Metro 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, and third party applications such as OneBusAway. 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 is 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 OneBusAway and Tracker cannot be updated manually, and Metro 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 system and modified business processes to create, manage and automatically distribute updates about reroutes, stop closures and service cancellations. Customer-facing systems will be modified to receive and display this new

information. **As a result, the primary external benefit is that customers will receive more timely, consistent and accurate information about reroutes, stop closures and service cancellations.**

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

The benefits will be achieved when Transit is able to efficiently generate and manage electronic notifications from a centralized system, and these updates are automatically distributed to Transit's multiple customer-facing systems.

At present, the Automated Trip Planner, Tracker and OneBusAway do not display any information at all about reroutes, stop closures and service cancellations. They simply refer customers to the "Alerts and Updates" page in Metro Online, which is very cumbersome to use. After the project is implemented, these systems will be able to receive the updates and display them automatically. The number of reroutes, stop closures, and service cancellations where automated information is available to customers will provide a measure of intended project benefits. Post implementation Transit will measure the percentage of all reroutes, service cancellations and stop closures that are provided in an automated manner through OneBusAway, the Automated Trip Planner and Tracker.

Additionally, the project will use customer research, such as a focus group, in order to measure customers' satisfaction with the newly added information to ensure it is displayed in a way that it is easy for customers to understand. 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 baseline measure is that none of these updates (zero) are provided to OneBusAway or to Metro's Automated Trip Planner and Tracker in an automated manner. Although in 2015 Transit Customer Communications and Services implemented a feature to announce trip cancellations in the Next Departures section of Metro Online's Trip Planner, this is a manual effort that only provides updates in one location and not consistently across all real time systems. The Real Time Improvements project will address this with a more comprehensive solution.

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

The target for this measure is to provide 80% of all reroutes, stop closures and service cancellations to OneBusAway, the Automated Trip Planner and Tracker, in an automated manner, up from the current level of 0% provided, except for a change in the Automated Trip Planner, implemented in 2015, that allowed staff to send cancellation notices to that application and its modules (such as the Puget Sound Trip Planner app. While useful, this change still requires manual data entry within a single system, and does not include OneBusAway, and other Metro applications such as Tracker and Metro Online, so not the comprehensive solution that is intended to be achieved through this project.

Most reroutes and stop closures are planned events with some lead time, anywhere from a day to a week or more. In contrast to planned changes, many unplanned changes have virtually no lead time and are managed by a separate workflow process within the Transit Control Center. Although the project intends to include these changes in the comprehensive solution, there are additional technical and business process complications with the unplanned changes. The project will be aiming for more than 80%, but this target is a conservative, consensus estimate on what can be achieved with high confidence, based on preliminary scoping discussions. We expect the target will be adjusted as the project moves through requirements analysis and solution design.

Prior to implementation, as part of our customer outreach and research, we will target a high level of customer satisfaction with information display.

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

Once the primary system is in place, benefits will be achieved incrementally as the data is brought into the new system. Full benefits of all elements will be achieved by 1Q 2021 when the project is scheduled to be complete (assuming a start date of January 2017)

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 system improvements will result in process efficiencies as information will be produced centrally and then automatically distributed to other receiving systems in a machine readable format that is appropriate for the consumption by the receiving system. Currently, manual effort is required to create and manage the information.

More specifically, in the current environment, information about reroutes and stop closures is entered and re-entered into multiple computer systems. Initially, Transit Control Center staff produces and distributes this information via PDF files, and then customer services staff has to load the files to Metro Online, as well as manually re-enter an edited version of the information into other systems, which is very time-consuming. As an example, the detailed street-by-street information in a reroute is generally too long and too detailed for a quick email alert, and will not fit into a tweet. So each of these kinds of updates are customized into new text appropriate for each type of delivery system. There are too many reroutes and stop closures to distribute all of them to all of the customer-facing systems.

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

The process improvements that will occur with this project will be measured in reduced staff time and data accuracy to produce the same or more data for receiving systems.

More specifically: The internal service benefits will be achieved when customer services and other staff can create and manage service alerts in a central system, eliminating the redundant data entry

and manual data editing steps that are required today to update multiple systems. These manual steps limit Transit's ability to send consistent notifications across multiple systems. Staff time that today is used in redundant data entry and editing can be used more productively to provide more consistent notifications about more events, thereby improving the overall quality of services.

3. What is the current baseline for this measure?

The project will conduct an assessment of the existing workflow during the requirements gathering phase, and baseline time and effort measurements will be developed during this process. Target measures for improvements will be proposed during the requirements phase and further refined during the design phase, when more information about the proposed solution is available.

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

As part of the workflow development process during the requirements phase, targets for reduced time and effort will be developed. A pre-and post time and effort review can then be used to assess the results.

5. When is the benefit likely to be achieved?

Internal process efficiencies will be realized incrementally as new data is brought into the system. Full system benefits will be achieved by 1Q 2021 at full system implementation (assuming a January 2017 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.**
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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.

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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.

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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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

See next page

Summary – Real Time Improvements IT Project

Benefit	Metrics	Baseline	Target	Actual
<p>Category 1 (primary): Updates are automatically distributed to Transit's multiple customer-facing systems</p>	<ul style="list-style-type: none"> • % of all reroutes, service cancellations and stop closures that are provided in an automated manner through OneBusAway, the Automated Trip Planner and Tracker. • Customers' satisfaction with the newly added information 	<ul style="list-style-type: none"> • No updates (zero) are provided to OneBusAway or to Metro's Automated Trip Planner and Tracker in an automated manner. • To be determined in Year 1 of the project. 	<ul style="list-style-type: none"> • 80% of all reroutes, and stop closures to OneBusAway, the Automated Trip Planner and Tracker, in an automated manner • To be determined 	<p>Full benefits will be achieved by 1Q 2021 when the project is scheduled to be complete (assuming a start date of January 2017)</p>
<p>Category 2 (secondary): Ability to efficiently generate and manage electronic notifications from a centralized system</p>	<p>Reduced time and effort to produce the same or better/more accurate data for receiving systems</p>	<p>To be determined</p>	<p>To be determined</p>	<p>Full benefits will be achieved by 1Q 2021 when the project is scheduled to be complete (assuming a start date of January 2017)</p>

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	

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, 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
Rebecca Switaj	Project Program Manager/DOT Transit Division	Budget 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.
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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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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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.

Background: There are ~~7~~ 6 Elements (or sub-projects) within the RFCS Enhancements Project. Four 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 easily 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.

[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?)**
- 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
 - Data Access Element.** Target for this element is having a database for BOC transaction data.
5. **When is the benefit likely to be achieved?**
- 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.
 - 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.

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	<ul style="list-style-type: none"> 10 days processing time 10 percent of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30 percent of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20 percent 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
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)

15048

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)
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
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)
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%
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 2/17/27: 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)?

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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
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King County Department/Agency Name	Department of Transportation (DOT)/Transit Division
Project Title	Rider Information Systems (RIS) – TABS
EBS Project Number	1028651

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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.

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
Jill Krecklow	Finance Manager-Enterprise Operations, DOT Transit Division	Finance Manager – Overall Capital Program Development
Bob Virkelyst	Customer Communications & Services, Service Information, DOT Transit Division	Sponsor
Liviu Prisecaru	Systems Development & Operations, DOT Transit Division	Project Manager

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

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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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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 was awaiting additional funds. Funding has been approved and new project manager assigned.	0.25 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 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 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 scheduled 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.

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	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

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	Safety and Security System
Project Number	1129800TBD [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.

Business Owner Name and Title: Rob Gannon, ~~Interim~~ General Manager [\[Updated 2/17/17\]](#)

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

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 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

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

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.

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 process that makes answering additional questions about the data difficult or impossible and that precludes proactive safety management.

The expected benefits of the implementing the Safety and Security Data and Reporting System include:

Identification of and use of leading indicators and trends – 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. We will know that this benefit has been achieved when data and reports that identify the frequency and severity of injury and/or accident information are routinely available, so we are able to identify opportunities for improving safe operations. We will report on the new data sets we are able to achieve with this tool and how we are using the data sets in NEW ways for data driven decision making.-. We will report on the types of decisions/actions that are actually informed by this tool.

An example could be 'near misses' where data is currently manually developed and collated. With the new system, data will be entered into the system and a report can be generated that shows where such incidents are occurring so that they can be investigated and addressed before becoming accidents. We would also be able to identify that operators driving a certain bus have more on the job injuries than other groups and appropriate remedies can be identified and put into place. Another 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.

~~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.

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.

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

~~Identification of leading indicators and trends~~— This benefit will be fully achieved within 2 years of system implementation (Q4 2021).

~~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 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.

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.

In order to meet the new regulatory requirements, Metro needs a comprehensive Safety and Security Data and Reporting System.

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 (anticipated to be adopted in late 2016). The current data systems do not allow for such compliance.

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 (Q4 2021).

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.

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	<ul style="list-style-type: none"> 10-day processing time 10% of purchases are receiving discount \$100,000 savings 	<ul style="list-style-type: none"> 1-day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2-day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

See next page

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 <u>and use</u> 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. <u>Many decisions are made on anecdotal evidence and may not adequately and appropriately address the situation</u>	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	Department of Transportation, Transit
Project Title	Transit Signal Priority
Project Number	1124427

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.

Victor Obeso, Transit Deputy 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
Victor Obeso <u>Bill Bryant</u>	Transit Deputy General <u>Transit Service Development</u> Manager	Project Sponsor
Jill Krecklow	Finance Manager, Transit	Finance Manager; Chair Transit Technology Oversight
Pamela Wrenn	ITPMII, Transit Systems Development and Operations	Project Manager
Kathleen McMurray	Supervisor, Transit Systems Development and Operations	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, 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 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review	06/04/2014	Yan Zhang	New, initial draft	.5 hours
Conceptual review	07/02/2014	Kathleen McMurray	Update	.5 hours
Conceptual review	09/28/2014	Dan Overgaard	Update in response to questions	1 hour
Conceptual review	10/05/2014	Jill Krecklow	Final Changes with Budget	15 minutes
Annual Report	02/12/2015	Kathleen McMurray	Minor updates	.5 hours
Funding Release	11/04/2015	Pamela Wrenn	Updated to reflect planning and preliminary design phases	1 hour
Annual Report	02/09/2016	Pamela Wrenn	Project Title corrected; project number added	.25 hours
Annual Report	04/04/2016	Kathleen McMurray	Minor update	.10 hours
2017-2018 Budget	05/20/2016	Pamela Wrenn	Updated to reflect full implementation of project	1 hour
2017-2018 Budget	08/24/2016	Kathleen McMurray	Added language in each relevant Category to explain project moving from Planning to Implementation.	.25 hours
2017-2018 Budget	10/06/2016	Pamela Wrenn	Updated in response to Council staff feedback	1 hour
2017-2018 Budget	10/14/2016	Jill Krecklow	Updated to reflect council staff feedback	.5 hours
2016 Annual Report	2/17/2017	Pamela Wrenn	Minor updates	.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 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 scope of this project is to implement a replacement Transit Signal Priority (TSP) system. Replacing the current system will provide benefits associated with newer technologies and will allow the system to be expanded beyond what is currently available. Expanding the transit priority network is an integral part of the METRO CONNECTS long range plan. Expanding the network will result in improved travel times for buses reducing the number of hours required to serve the same corridor. Corridors all have unique characteristics and a pre and post evaluation of the transit travel time is part of each expansion decision. The benefits discussed below are ones directly associated with the new technology.

BENEFIT (secondary): This new system will reduce the time and expense required for signal priority design, installation, operations and maintenance. The replacement system is intended to prepare Metro for advanced traffic management techniques, matching the regional evolution of traffic signal system management.

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

- a) Increased % of transit priority requests/calls successfully received
- b) Increased % of transit priority requests/calls received in the physical target area (accuracy)
- c) Reduced cost of physical equipment installation, operation, and maintenance per intersection

3. What is the current baseline for this measure?

Baseline data will be obtained prior to implementation, in order to serve as a comparison and demonstrate project effectiveness. A performance measurement plan will guide these efforts throughout the life of the project.

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

- a. % of transit priority requests/calls successfully received by the TSP system.

This is a measure of point reliability (number of requests received compared to the number expected based on scheduled trips).

The target for this measure is a 10-20% increase over the baseline measure. Given the current state of concept formation it is not possible to accurately predict the amount of improvement that available systems can achieve. Thus, this is an estimated target at this time. Additional insight into targets will be available upon completion of the Concept of Operations in early 2017.

b. % of transit priority requests/calls received in the physical target area

This is a measure of geo-locational accuracy, which is required in order to enable calls to the signal in the correct timeframe to obtain service. It is a function both of the INIT on-board system, and possibly the back-office TSP functions depending on the back-office system selected.

The target for this measure is a 10-20% increase over the baseline measure. Given the current state of concept formation it is not possible to accurately predict the amount of improvement that available systems can achieve. Thus, this is an estimated target at this time. Additional insight into targets will be available upon completion of the Concept of Operations in early 2017.

c. Cost of physical equipment installation, operation, and maintenance per intersection.

This is a measure of system expandability as the costs per intersection to install, operate and maintain constrain expansion of the TSP system. The target for this measure is a 10-20% decrease over the baseline measures.

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

The improved reliability and cost of the system which are measured through these benefits will be achieved as the system is upgraded (2017-2020). The larger benefit to the program of more corridors with transit priority will be achieved as the new system is available for installation on new corridors. This is likely to occur coincidentally with upgrading existing corridors. The internal service benefits for this project are expected be achieved after a new TSP system is deployed and the existing system has been decommissioned. The currently proposed phase of the project (2017-~~2020~~ 2021) will demonstrate benefits gradually as the system is implemented. Full operational benefits will be realized after implementation and measured 1 year following 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.***

Transit signal priority (TSP) is one of several branded elements of the King County Rapid Ride program. At the end of 2014, there were 180 operating transit signal priority installations with more than 20 in development. The system is designed to improve transit speed and reliability by

requesting special treatment for buses at signal on TSP equipped corridors – either by holding a green light to allow a bus to pass, or by shortening its wait at a red light.

The TSP system was procured in the mid-1990s. Historically, the traffic control industry has tended to keep using its installed technology much longer than other technology-dependent markets, and has been extremely conservative (some might say reluctant) to adopt new technologies as they became available. So although the TSP equipment platform was updated within the past two years, the overall system design is based on 20-year-old technologies and practices. The recent updates did not change the overall architecture or functionality within the system. The system has been difficult to deploy and has a history of reliability issues in large part due to the original design. The system has also been difficult to integrate with local traffic controllers because of their varied use of different controllers and traffic management strategies.

Several factors create the need to pursue a future replacement for the existing TSP system, including:

- Unavailability of wireless equipment to expand or maintain the current network,
- Age of the current TSP system platform and architecture,
- Insufficient vehicle location accuracy from the on-board systems.

BENEFIT (primary): Upgrade the 20-year-old system to the newest technology to increase reliability and more easily integrate with traffic controllers. This will support expansion of the Transit Speed and Reliability program to more corridors and is integral to any expansion of Rapid Ride.

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 the project.

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
<i>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.</i>	<i>Processing time, annual savings, and % of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

See next page

Summary – Signal Priority IT Project

Benefit	Metrics	Baseline	Target	Actual
<p>Category 2 (secondary): Improved travel times for buses, reducing the number of hours required to serve the same corridor. The new system will prepare Metro for advanced traffic management techniques, matching the regional evolution of traffic signal system management.</p>	1. Increased % of transit priority requests/calls successfully received	To be determined prior to system implementation	10-20% increase	1 year after project completion
	2. Increased % of transit priority requests/calls received in the physical target area (accuracy)	To be determined prior to system implementation	10-20% increase	1 year after project completion
<p>Category 3 (primary): Increased reliability of the transit priority system and easier integration with traffic controllers. This will support expansion of the Transit Speed and Reliability program to more corridors and any expansion of Rapid Ride.</p>	3. Reduced cost of physical equipment installation, operation, and maintenance per intersection	To be determined prior to system implementation	10-20% decrease	1 year after 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

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.

Business Owner Name and Title: ~~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
Karen Martin	Transit Rideshare Operations Chief/DOT	Project Business Lead

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

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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

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
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- 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.

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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 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.

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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.

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.*

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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.

***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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

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	M5 Yard Manager – Dispatch Replacement
Project Number	<u>1125054</u>

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 <u>Chris Parrott</u>	Vehicle Maintenance Manager, Transit Vehicle Maintenance	Project Sponsor
Jill Krecklow	Finance Manager, Transit	Finance 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review	6/4/2014	Yan Zhang	New, initial draft	.5 hours
Conceptual review	7/1/2014	Kathleen McMurray	Update	.5 hours
Conceptual Review	10/2/2014	J. Krecklow	Update	2 hours
2014 Annual Report	2/18/2015	Catherine Boon	Update	.5 hour
2015 Annual Report	1/29/2016	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

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 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 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 evaluated.~~
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.

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	<ul style="list-style-type: none"> 10 days processing time 10 percent of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30 percent of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20 percent of purchases are receiving prompt payment discounts \$200,000 savings

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	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)

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.

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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:

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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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).

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. Increased accuracy of vehicle mileage and fuel consumption data – 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 as 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. Percentage of coaches that missed scheduled maintenance that is based on mileage – 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. Percentage of pump lockout occurrences during coach fueling – 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. Time (hours) spent on troubleshooting of mechanical and system operations - 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. Increased accuracy of vehicle mileage and fuel consumption data – 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. Percentage of coaches that missed scheduled maintenance that is based on mileage – 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. Percentage of pump lockout occurrences during coach fueling – 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. Time (hours) spent on troubleshooting of mechanical and system operations – 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. Increased accuracy of vehicle mileage and fuel consumption data – 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. Percentage of coaches that missed scheduled maintenance that is based on mileage – 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. Percentage of pump lockouts (occurrences) during coach fueling – 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. Time (hours) spent on troubleshooting of mechanical and system operations – 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. Increased accuracy of vehicle mileage and fuel consumption data – 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. Reduced percentage of coaches that missed scheduled maintenance that is based on mileage – 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. Reduced occurrences of pump lockouts during coach fueling – 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. Time (hours) spent on troubleshooting of mechanical and system operations – 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?*
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 allowing us to take advantage of prompt payment discounts.	Processing Time annual savings, and percentage of purchases receiving prompt payment discounts	<ul style="list-style-type: none"> • 10-day processing time • 10% of purchases are receiving discount • \$100,000 savings 	<ul style="list-style-type: none"> • 1-day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2-day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

See next page

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)?

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 Permitting and Environmental Review
Project Title	Permit Integration
Project Number	377210

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, DPER 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	DPER 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

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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 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?**

By 12/31/2017, 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: 57%

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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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 by 2017.

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 Elections
Project Title	Election Management System (EMS) Replacement
Project Number	1039315

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.

Julie Wise, 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
Sonja Rowland	IT PM III	Project Manager
Colleen Kwan	Quality Assurance	Quality Assurance SME
Chris Raver	IT Systems Specialist	IT Systems SME
Jacob Lodge	Voter Services Supervisor	Voter Services SME
Kortney Kinzer	Election Operations Lead	Election Operations SME
Jerelyn Hampton	Ballot Processing Supervisor	Ballot Processing SME
Joe McCleve	Ballot Processing Lead	Ballot Processing SME
Gael Gilchrist	GIS Specialist	GIS SME
Kim Streeter	Voter Services Lead	Voter Services 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 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.

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Business Case Submittal	7/3/2014	Sonja Rowland	New, initial draft	1.5 hours
Revision	10/16/14	Sonja Rowland	Revision	0.75 hour
Revision	2/16/16	Sonja Rowland	Revision	2 hours
Revision – Project Completion	2/2/17	Sonja Rowland	Final Benefit Achievement Summary	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

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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?)
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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).***
Documented, streamlined processes that eliminate the need for internal process development and support due to gaps in product.
2. ***How will you measure the benefit(s)? (How will you know if the benefit has been achieved?)***
In the elimination of internally built and supported work around applications and queries currently used in day to day operations. These items will be listed in an Excel database and as we are able to sunset them, we will have a good understanding of how many we were able to do away with. This, coupled with staff ability to do other work that has been on the backburner for some time, will be our basis for measuring success.
3. ***What is the current baseline for this measure?***
There are currently approximately 35 applications that have been built and are supported by KCE Technical Services as a means to fill gaps in the current Election Management System. In addition to these applications, there are over 100 different queries that have been developed by KCE Technical Services that staff use on a regular basis to extract useful information out of the current system.
4. ***What is the target for this measure? (How much improvement will this project achieve?)***
75% of the work around processes that have been developed will be sunset. This will allow KCE IT staff to focus on the many projects and/or initiatives that have either been delayed or are included in the King County Elections Strategic Plan 2014-2018. These include, but are not limited to:
 - a. Development of a Staffing Application for KCE Human Resources
 - b. Development of a formal intake process for the Alternative Format ballots received from Military and Overseas voters.
 - c. Development of a process for electronic records retention from our OPEX scanner system to the Electronic Records Management System.
 - d. Development of 2D barcodes for Challenge Letters
 - e. Development of a five-year capital improvement plan for technology
 - f. Increased voter outreach via website improvements/enhancements
 - g. Research and develop online voting capabilities
 - h. Broaden access and opportunities to vote for all eligible citizens (ADA outreach and voting opportunities)
 - i. Implementation of a Customer Relations Management system (CRM) to guide and track voter contacts through a consistent solution/process.
 - j. Develop a five-year technology plan
 - k. Implementation of Lync technology for all King County Elections Staff – to include a Call Center application (according to KCIT this will be Zeacom).
 - l. Evaluation of upgrade of current tabulation system.
5. ***When is the benefit likely to be achieved?***
Within the first year following implementation 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.

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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

Metric Description	Metrics	Baseline	Target	Actual
Cost savings. Price for EIMS (new system) is \$19,506 less the first year and \$119,177 over the five year contract period	Contracted price verses quoted DIMS (legacy system) price.	<ul style="list-style-type: none"> • \$224,106 – DIMS Quote 2016 • \$230,830 – DIMS Quote 2017 • \$237,754 – DIMS Quote 2018 • \$244,887 – DIMS Quote 2019 	<ul style="list-style-type: none"> • \$204,600 – EIMS Contract Rate – Years 1-5 	<ul style="list-style-type: none"> • \$204,600 a \$19,506 savings in 2016 • \$204,000 a \$26,830 savings in 2017 (note: DFM (the vendor) made a change in their software that made it no longer necessary for the 3rd party postal software saving an additional \$600 annually)
Eliminate need for home built	List of home built applications to support legacy	Home Built applications include:	<ul style="list-style-type: none"> • KCE would like to keep their home 	<ul style="list-style-type: none"> • As of this writing, the vendor has

<p>applications to fill system gaps.</p>	<p>EMS (DIMS) compared to post EIMS deployment.</p>	<ul style="list-style-type: none"> • Candidate Filing • Alternate format ballot processing • mvAttachment • Handsfree • Phone Bank • Phone Bank Reviewer • Challenge Tracker • Provisional Ballot Tracker • PCO Filing • avMultiBatchUpload • avChallengeLetters 	<p>grown candidate filing application (which includes PCO filing). The vendor has agreed and has built an interface between it and their system.</p> <ul style="list-style-type: none"> • Aside from the above, all other functionality is now a part of the EIMS and not built by KCE IT staff. 	<p>integrated into their system all of the items we have asked to be built into it.</p>
<p>Eliminate need for internally built queries to fill system gaps.</p>	<p>The legacy system lacked several reports and look up features that resulted in our need to develop approximately 100 queries over the years. We would like to do away with our dependency on those queries.</p>	<p>Approximately 100 queries were used with the legacy system.</p>	<p>Zero queries</p>	<p>We implemented with zero queries.</p> <p>If we cannot find a report or job, we use the help menu or contact the vendor. They either point us to the correct report or job (if it exists) or they build it for us (if it doesn't current exist).</p>

In addition to the above, we have found the Early Voting Module has significantly streamlined the Accessible Voting Unit ballot issuing process. Our staff now only have to find the voter and hit one button as opposed to having to first suspend and then reissue a ballot selecting a number of options.

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
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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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
Annual Report	2/2/2017	Sonja Rowland	Review Only	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 (**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 (**Primary**): 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).**
Decrease number of days post-election to complete 95% of scanning.
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?*
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.*

15048

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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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.	
Eliminated risk of operating the tabulation system on an unsupported platform.	No longer running on Windows XP.	Windows XP	Windows 2008 or newer	

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 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
Molly Cherkin	Business Analyst, KCIT	KCIT Lead
Hien Dung	RES Manager, FMD	Provide expertise and staff for SME input
Gail Houser	Former RES Manager, FMD	SME – RES
Michael Kulish	Permits & Acquisitions Supervisor, FMD	SME - RES
Bryan Hague	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
Dave Preugschat	Operations Section Manager, FMD	Provide expertise and staff for SME input
Kamma Kure	Operations Section PPM, FMD	SME – Space & move management
Leo Griffin	Assistant Operations Section Manager – FMD	SME – Operations and internal service issues
Hanh Mai	Financial Unit Manager, FMD	SME – Operating costs
Ameer Faquir / Terri Hansen	Building Services Section Manager, FMD	Provide expertise and staff for SME input Building operations & maintenance, security
Denise Gregory Wyatt	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

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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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).

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. Improve Operational Efficiency – 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. Reduce Costs on Leases – The ability to quickly search for lease information along with robust reporting capabilities will reduce late payment penalties on leases.
- C. Increase Revenue on Leaseholds – 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. Establish Data-driven Decision Capabilities – 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.

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

- A. Improve Operational Efficiency – 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.
- 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 – 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.

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 – 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.
- 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 – 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.

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

- A. Improve Operational Efficiency – During the planning process, RES will quantify goal for reduction of backlogs (i.e. # of transactions, # of leases, etc.).
- B. Reduce Costs on Leases – Reduce the number of leases paying late penalties by 5% every 2 years, until reaching 0% over 6 years.
- C. Increase Revenue on Leaseholds – Reduce the number of leaseholds not paying market rate rent by 5% every 2 years, until reaching 0% over 6 years.

- D. Establish Data-driven Decision Capabilities – 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.

5. When is the benefit likely to be achieved?

- A. Improve Operational Efficiency – During the planning process, RES will identify target date of when benefit will be achieved.
- B. Reduce Costs on Leases – Beginning Q1 2019, with full implementation by 2024.
- C. Increase Revenue on Leaseholds – Beginning Q1 2019, with full implementation by 2024.
- D. Establish Data-driven Decision Capabilities – During the planning process, RES will identify target date of when benefit will be achieved.

Summary Table:

Benefits & Measures	Baseline	Target	Actual as of 12/2016
Benefit A: Improved Operational Efficiency			
TBD (# of transactions, # of leases, etc.)	TBD	TBD	n/a
Benefit B: Reduced Costs on Leases			
Reduced % of leases where County is paying late penalties	Approx. 15% of leases are paying late penalties (the baseline is to be refined)	5% reduction every 2 years until reaching 0% over 6 years	n/a
Benefit C: Increased Revenue on Leaseholds			
Reduced % 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)	5% reduction every 2 years until reaching 0% over 6 years	n/a
Benefit D: Established Data-driven Decision Capabilities			
TBD types of information and analytical questions that can be used to help decision makers better manage the County's real property assets	TBD	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
<i>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.</i>	<i>Processing time, annual savings, and % of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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

<u>Jessica Brown</u>	<u>Training Coordinator</u>	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
<u>Kanani Johnson</u>	<u>Program Manager</u>	<u>Project Management</u>

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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.

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

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

¹ "Maximizing Recovery Rates in Consumer Debt." Timetric (2012): n. pag. Timetric, Apr. 2012. Web. 23 May 2014.

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.
- 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, 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 the first year in which it is implemented.
- D. **Same Day Access to Court Information** - We expect this benefit to be fully realized by the end of 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.

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.

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:

- **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.
- **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.
- **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.

- **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.

- 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.

- 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	Year 1	Year 2	Year 3	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

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.

B.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, 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.

C.D. Maximize System Uptime – This benefit is likely to be achieved within 1 year of implementation 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 of implementation will almost fully recover the project costs. By the end of the eighth year, 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, 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 go live with the new Case Management System in 2017. 7.5 years after 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 implementation. 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	Year 1	Year 2	Year 3	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

- C. **Savings through Elimination of High Volume Scanners** – Cost reduction should be achieved by the end of year one. 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
<i>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.</i>	<i>Processing Time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

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
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Project Title	Budget System Project Information Center 2014 Modifications
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EBS Project Number	1121753
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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.

Jonathan Swift, Deputy 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

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 (**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.

***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 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 year. 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
- To measure user satisfaction **and time saved with the new system**, we will sample users using the zgroup 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)**

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)**

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	<ul style="list-style-type: none"> • 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

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 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

~~These 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~~d all of the components included in the system to a platform that the county can continue to support. In addition, it ~~will improved~~d 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 elimination of alled~~ 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 existsexisted~~. The ~~current previous~~ application ~~is was~~ not user-friendly and lack~~ed~~ basic features that ~~will would have~~ improved~~d~~ 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)
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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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	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.

Jonathan Swift, 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.
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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 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	Not measured at this time	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 within six months of the start of the budget process. Measurement, however, would occur in August / September 2018.

Benefits for Financial Monitoring would be achieved within a year of the project Go Live. 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.

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 the on-premise solution, we would anticipate performing an upgrade or cloud migration in 2021. With the PBCS solution, large upgrades 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 hard savings for the County. 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.

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 2022.

5. When is the cost reduction likely to be achieved?

In the year 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 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 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	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount \$100,000 savings 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

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	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: Bill Kehoe, 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 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>Amount of time to complete/update the form</i>
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

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. **It is expected that the project will be completed end of Q2 2017**
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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 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.

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 / King County GIS Center
Project Title	2015 Regional Aerials Project
Project Number	1124187 (Award 115936)

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, 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
Gary Hocking	ITSDM / KCIT-DNRP	Process guidance
George Horning	KCGIS Center Manager / KCIT-Regional Services	Project sponsor
Scott Lackey Michael Fisher David Curtiss	Project Manager / KCIT-PMO	Project management
Mike Leathers	KCGIS Center Data Coordinator / KCIT-Regional Services	Technical guidance

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review	3/12/14	George Horning	Initial draft	7 hours
Budget process	6/27/14	George Horning	Changed primary project benefit to Category 3, updated and added benefit descriptions	1 hour
Budget process	7/29/14	George Horning, Mike Leathers	Updated based on feedback from Council staff.	1.5 hour
Standard BAP periodic updates	3/6/15	Scott Lackey	Standard regular updates as requested by Karl Nygard	1 hour
Annual BAP Review	5/24/16	David Curtiss	Changed PM assignment & added clarity in cost reduction section.	3 hours
Business Owner Review	11/15/16	George Horning	No changes at this time. Expecting update at project close-out.	.25 hour
2016 Annual Report	1/27/17	George Horning	Final BAP for a completed project	.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 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.***

There is a vital need to replace the county's 2012 aerial imagery (vertical photos taken from aircraft which are geometrically corrected to create an accurate representation of the earth's surface). These photos have aged beyond the desired two year replacement cycle established by the King County Geographic Information System Technical and Oversight committees. It will be a full three year interval when the proposed 2015 aerial imagery is finally captured. There has been significant development activity in King County since 2012 and the new imagery will provide a detailed view of up-to-date ground conditions enabling county agencies to make better informed decisions to serve the public. Aerial imagery is a key data component for agencies in performing mapping, query, analysis and decision-making in support of their business functions such as facilities management, natural resource conservation, property assessment, building permit and land development review, and situational awareness during emergency operations. For example, King County Assessments depends heavily on aerial imagery to determine changes to real property, and the Road Services Division uses the imagery to map maintained infrastructure increasing the accuracy of their asset inventory and reducing the need for field visits.

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 risk in not obtaining new aerial imagery is a continuing degradation in the county's ability to understand conditions on the ground. As the accuracy of the 2012 imagery diminishes, land use decision making will suffer, emergency situational awareness will decline, needless site visits will be scheduled, asset management will suffer, property appraisal will become more difficult, etc. The degradation is currently already impacting some groups due to rapid urban development changes impacting various infrastructure areas include utilities (due to asset relocation, impacting their maintenance and disaster response costs); planning and permitting; tax assessments; storm water runoff calculations; etc.

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. *Updated 2016-05-24*

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

Reduced Costs to the County: The project will reduce cost for the County to acquire aerial imagery through leveraging volume discounts and sharing costs with around 100 partner agencies (mainly cities and utility districts). The 2012 Regional Aerials Project, with over 50 participants, generated cost reduction of 57% for the County. **The team is working toward better results for the 2015-16 project, having almost twice the number of participants than in 2012. In addition to volume and sharing cost savings, all the participants are able to acquire imagery of higher resolution and quality, than in 2012. Higher resolution imagery equates to better detail, thereby satisfying a wider range of business needs and increasing the return on investment.**

2. *Updated 2016-05-24*

How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)

The cost reduction measures will be calculated as the sum of volume discounts received, plus the additional savings the county realizes by sharing with participants the costs of 'imagery of joint interest', divided by the total costs if without discounts and sharing.

3. *Updated 2016-05-24*

What is the current baseline?

The baseline is the total costs of ordered imagery, priced as if unshared.

4. *Updated 2016-05-24*

What is the target for this measure? (How much savings will this project achieve)

The target for the 2015-16 project is to save 60% of total unshared unit costs through volume discounts based on the size of the project, plus additional costs KC realized by sharing the cost of common interest imagery with participants.

5. *Updated 2016-05-24*

When is the cost reduction likely to be achieved?

As deliverables are accepted and invoices paid for, following the completion of each vendor implementation milestone.

As contributions to the project occur funding the work for the stated deliverables and the invoices the deliverables are paid. The County’s contribution to this project is lower than the 2012 Regional Aerial project.

There are also possible time and cost savings to be realized for the next project (due to re-usability of RFP data, specification clarity, project management disciplines, and Quality Assurance documentation) shortening project initiation, speeding RFP development, and other soft but important benefits.

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	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

Updated February 2017:

Category #3: Project to maintain high level of service by either replacing or upgrading older technology (aerial imagery & related data)...

- Through regional collaboration, this project successfully replaced outdated KC GIS & Participant GIS Imagery and Data with current and higher quality imagery and data, and achieved ‘substantially complete’ implementation in December of 2016.
- KC GIS and Participant agencies involved in this project, have received and are now using the updated imagery and data performing more up-to-date and accurate mapping, query, analysis and decision-making in support of their business functions... to include facilities management, natural resource conservation, property assessment, building permit and land development review, and situational awareness during emergency operations.

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

- By taking a regional collaboration approach, both King County and the Participants received deeper pricing discounts than would be realized individually or through smaller volume projects.
- This collaborative approach allowed product Quality Assurance, Project Management & Oversight, and Project Close-out costs to be shared by all the involved agencies.
- Lower unit costs allowed KC and Participants to maximize their budgets and avoid having to exclude highly desired deliverables, or on the other hand using savings to order 'nice to have' deliverables in addition to those needed.
- The total cost of the project was \$1,506,386. King County's cost share came to \$582,533 or 39% of the total. The target goal of a 60% cost reduction was met.

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	Business Empowerment & User Mobility (BEUM)
Project Number	1117291

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, CIO~~ 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
Jayne Pendergast	DCIO	Project Sponsor
Bob Micielli	IT Enterprise Manager III	Steering Committee Member
John Storch	Enterprise Manager III	Steering Committee Member
Ralph Johnson	Chief Information Security/Privacy Officer	Steering Committee Member
Lori Dickneite	Engineering Supervisor Network Services Manager	Steering Committee Member

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Funding Release	08-30-13	Lloyd Jordan	New, initial draft	.5 hrs
Project Implementation	02-12-14	Lloyd Jordan	Review Only	.5 hrs
Project Implementation	03-20-15	Lori Dickneite	Update	1 hr
Project Close	02-10-16	Lori Dickneite	Update	1 hr
Project Completed	01-17-17	Lori Dickneite	Final BAP	1 hr

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 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.**

Update 02/10/2016:

The projects are to expand the existing network capacities in response to many business needs. The latest major network equipment upgrade was in 2006. Average life cycle is normally five years but it depends on the speed of technology changes and the adoption level of new technology in the County to support the County strategy. The BEUM project has replaced technology in the following areas of King County Technology Strategies:

Mobility:

To support the growth area in the use of mobile devices, network capacity had to increase in order to allow users of mobile devices in County building. The wireless backbone and remote access was not built to respond to current level of mobility use. Wireless could only connect 750 access points without redundancy, whereas after the upgrade it can accommodate 4000 access points with redundancy. The Remote access system limit was 500 concurrent users without redundancy and now after the upgrade can carry 5000 concurrent users with redundancy, and is scalable if needed.

The project was completed and the infrastructure and met the target above.

EGovernment:

To expand Internet IP addresses. With the exhaustion of IPv4 addresses, the industry has moved to IPv6 which provides an unlimited number of addressing and has been adopted worldwide on the Internet. King County will be able to support IPv6 connections to the internet, and enable communication to agencies and partners that are using IPv6 to ensure there is no lapse in communication. IPv6 also has advanced security features and enables more efficient routing and improved data transmissions speeds. **The project is completed and now King County will be able to support IPv6.**

Service Maturity:

To increase site bandwidth. The Frame Relay/T1 network transport, provided by CenturyLink, connects 103 remote sites to the King County Network and reached end of support in 2014. In

addition to replacing the network transport technology, these sites required bandwidth upgrades to move them from 1.54mb connection to 20Mb connection, enabling the sites to use today's tools and technologies such as remote imaging and unified communications, which require higher bandwidth. An example is a 1.54mb connection would take approximately 9 minutes to download a 100Mb video. After the upgrades, users would see an improvement and are able to download a 100Mb video in less than 1 minute. **The project was completed and the infrastructure met the target above.**

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 the upgrades, King County would not be able to support the growth in mobility or provide adequate bandwidth to sites. Remote access will be limited and unable to support the demand, and support staff will need to go to remote sites to perform work locally due to slow network connections. Without IPv6, King County is in a risk of not being able to communicate with other agencies and partners using the new IP addresses.

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 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	<ul style="list-style-type: none"> 10 days processing time 10 percent of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30 percent of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20 percent of purchases are receiving prompt payment discounts \$200,000 savings

Updated 1/17/2017

Metric Description	Metrics	Baseline	Target	Actual
Mobility	Access Points	750	4000	1017
Mobility	Users Access	500	5000	13747 13700 Total - average a month. Public Wireless average a month= 12,700 Private Wireless average a month= 1,000
Mobility – Bandwidth	Bandwidth usage	N/A	N/A - Not an initial target. Available due to wireless project	*Public Wireless usage average a month = 19 Terabyte Private Wireless usage average a month = 1.7 Terabyte
Service maturity	Bandwith	1.54MB	20MB	20MB

*This performance is similar to a wired connection

The project was completed and closed in May 2015. The infrastructure is in place. The metrics ~~below~~ above represented the infrastructure capability. ~~if the wireless system at the site is capable to further carry the capacity. The access points were tied to the enhanced wireless project. The number of access points will increase when the wireless project expands the scope.~~ Update 1/17/2017 – Mobility users & bandwidth are based on 2016 data. The wireless system provided the mobility bandwith that previously did not exist or available with minimum bandwith.

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 Information Technology Department
Project Title	Enterprise Customer Relations Management (CRM) Constituent Engagement Services (CES) Expansion
EBS Project Number	1121493

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.

Natasha Jones, Customer Service Director, and Bill Kehoe, 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
Natasha Jones	Customer Service Director, King County Executive	Project Sponsor
Bill Kehoe	Chief Information Officer, KCIT	Project Sponsor
Dale Hartman	SDM, Elections	Pending customer
Steve Larsen	Chief Administrator, DAJD	Pending customer
John Bodoia	Chief Financial Officer, DNRP	Customer
Phillip Sit	Communications/Outreach Coordinator, DOA	Pending customer

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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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
2014 Budget Process	8/12/13	Natasha Jones	New, initial draft	4 hours
2014 Supplemental	12/11/13	KCIT/Customer Service CRM Development team	Updated to provide more detail based on 2013 post-budget decisions.	2 hours
Review of 2014 proviso	1/27/15	Jennifer Giambattista	Updated external service benefits section	30 minutes
2015 Supplemental appropriation	4/3/2015	KCIT Business Analyst	Reviewed and approved, in alignment with anticipated benefits of continued CRM Expansion. Note: Title and project number updated	1 hour
2015 Supplemental appropriation	4/24/15	Natasha Jones	Natasha Jones	30 minutes
Review of 2014 annual report	6/16/15	Council and Exec staff	Updated external service benefits to add a sentence from Exec staff	1 hour
2015 Update	2/10/16	Natasha Jones	Reviewed and approved	30 minutes
2015 Update - Revised	06/16/16	Natasha Jones	Revised	
2015 Annual Review	6/16/16	Jenny Giambattista	Revisions to clarify what will be measured and tracked	30 minutes
2016 Annual Review	2/3/2017	Natasha Jones	BAP Update	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, 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.

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).

Expanding CES to other Executive departments and Separately Elected offices will reduce turn-around time on customer responses, improve King County's ability to provide a seamless, coordinated customer experience when customer inquiries involve multiple departments, and reduce staff time tracking responses to inquiries and providing consistent responses to resident or customer requests.

Updated 9/23/16: Expanding CES to other Executive departments and Separately Elected offices will reduce turn-around time on customer responses, improve King County's ability to provide a seamless, coordinated customer experience when customer inquiries involve multiple departments, and reduce staff time tracking responses to inquiries and providing consistent responses to resident or customer requests.

Updated 4/24/16: A coordinated system with shared information will improve residents' ability to reach the right staff more quickly to get services, information and referrals, rather than being turned away by technological and bureaucratic barriers. Furthermore, enterprise deployment of CES will set the stage for eventually implementation of a county-wide 311 information center, similar to what Baltimore and other jurisdictions are using.

This will improve the customer and employee experience overall and possibly free up employee time for more value-added work, such as helping customers whose issues are more complex or who have language or other barriers that may make it difficult to access County services. Benefits will also likely vary due to the flexibility of the system, which will be used differently by some departments, based on business needs. But in most cases, benefits will relate to tracking customer inquiries for follow up or closure.

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

We will use data from the CES system to better track ~~complaints, responses~~, time required to enter complaints/inquiries, and time to closure of new requests or incidents, as well as identifying trends such as reduced complaints or increased compliments over time.

Most departments have no current baseline set due to a lack of a robust tracking tool for customer contacts. If no current baseline data for customer contacts exist, each new CES implementation group will work to gather such data during the first month of deployment to help set baselines and goals for improvement in subsequent months. With each rollout of a CES application tracking customer inquiries, the project will establish a baseline, target, and expected benefit achievement dates for at minimum, response time and time to closure of new request.

We can use the bi-annual resident survey for some measure of baseline on resident perceptions of county customer service in a general sense

3. What is the current baseline for this measure?

There is no current baseline because departments are currently siloed and using disparate systems for customer tracking. We can use the bi-annual resident survey for some measure of baseline on resident perceptions of county customer service in a general sense. In the last survey, residents ranked our service level at 2-3 on a 5-point scale. Post-CES implementation, we expect to see this increase.

Most departments have no current baseline set due to a lack of a robust tracking tool for customer contacts. If no current baseline data for customer contacts exist, each new CES implementation group will work to gather such data during the first month of deployment to help set baselines and goals for improvement in subsequent months. Additionally, with each rollout of a CES application tracking customer inquiries, the project will establish a baseline, target, and expected benefit achievement dates for at minimum, response time and time to closure of new request.

If baseline data does not exist, the project may establish the initial implementation period as the baseline and target improvements from that baseline. [Updated 6/14/16: Please see attached report for baseline](#)

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

Target result of Customer service survey post CES implementation is 4-5 on a 5-point scale. This will vary by department and will need to be quantified by increased efficiencies in work groups using CES. Each department will take a baseline of response time, complaints, etc. before implementation of CES.

We are working on setting countywide standards or baselines for customer response times. We expect to see the bi-annual resident survey customer satisfaction results increase.

Most departments have no current baseline set due to a lack of a robust tracking tool for customer contacts. If no current baseline data for customer contacts exist, each new CES implementation group will work to gather such data during the first month of deployment to help set baselines and goals for improvement in subsequent months. With each rollout of a CES application tracking customer inquiries, the project will establish a baseline, target, and expected benefit achievement dates for at minimum, response time and time to closure of new request.

[Updated 6/14/16: Please see attached report for measurement target](#)

5. When is the benefit likely to be achieved?

Benefits such as improved customer experience are likely to be achieved to start within three to six months of CES implementation, assuming that business processes are aligned with the system, rather than current, possibly inefficient processes being simply dropped into CES for implementation in a new tool. [Countywide benefit will be achieved when CES expansion project is completed and the business processes are aligned with the system. For the Executive branch department, the target would be the end of 2016. Update 2/2017 – All Exec departments are currently on the CRM's Constituent Tracking and Inquiries Management with at least one user each department having a license.](#)

Most departments have no current baseline set due to a lack of a robust tracking tool for customer contacts. If no current baseline data for customer contacts exist, each new CES implementation group will work to gather such data during the first month of deployment to help set baselines and goals for improvement in subsequent months. With each rollout of a CES application tracking customer inquiries,

the project will establish a baseline, target, and expected benefit achievement dates for at minimum, response time and time to closure of new request.

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.

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).

Wider deployment of Microsoft Dynamics CRM will improve customer service by creating a central hub to serve as a clearinghouse for constituent requests – making sure we get back to people in a timely manner, get them the correct information from the first contact, and create more efficient workflow so we handle requests effectively.

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

We should measure the benefits on the turn-around time for responding, and comparison of before and after implementation staff time to handle the average inquiry.

3. What is the current baseline for this measure?

In most cases, there is currently is no baseline and one will need to be set prior to implementation.

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

It is expected to save several hours per week per staff member currently assigned to respond and track customer issues. This total will vary by department or division implementing CRM.

5. When is the benefit likely to be achieved?

This is likely to be achieved within six month of implementation and training.

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.

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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 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

See below

15048

Attachment				
CUSTOMER ENGAGEMENT SERVICES BENEFITS MEASUREMENTS				
Executive Customer Service - Started deployment: 2013				
Functionality: Constituent's Tracking and Inquiries Management				
			Status	
Measurement	BASELINE	GOAL	2014	2015
Response Time	Not Tracked	24 hours	24 hours or less	24 hours or less
Median Time to Close	Not Tracked	5 days	5 days or less	3.8 days or less
Entry Time per case	4 - 10 Minutes	2 - 4 minutes	30 sec to 1 min	30 sec to 1 min
Department of Assessments - Start deployment: March 2015				
Functionality: Customer Tracking				
			Status	
Measurement	BASELINE	GOAL	Not yet measured	
Response Time	48- 96 hours	24 hours	N/A	
Median Time to Close	48 - 192 hours	5 days	N/A	
Entry Time per case	4 - 10 Minutes	2 - 4 minutes	N/A	
Executive Services - Office of Civil Right - Start Deployment January 2015				
Functionality: Public Record Request				
			Status	
Measurement	BASELINE	GOAL	2016	
Time to prepare report	5 days	3 days	3 days	
Additional Benefits Provided by CES				
Provides system generated remainder to send a five day response to ensure compliance with Public Record Act				
Ability to view the status of all public records requests				
Ability to link emails and electronic files to each request to keep communications				
Ability to generate reports to measure public records activities				
Easier to coordinate interdepartmental requests as all users can view all requests in the application				
DNRP Solid Waste - June 2016 - replacing current system that will need upgrade				
Expectations and baseline				
			Status	
Measurement	BASELINE	GOAL	2016	
Cost to upgrade customer serv	\$ 47,000	\$ 6,000	Not yet implemented	
Gaining Additional features	None	Ability to combine customers contact		
		Ability to run management reports		

15048

Updated Attachment 2/3/2017

CUSTOMER ENGAGEMENT SERVICES BENEFITS MEASUREMENTS					
Executive Customer Service - Started deployment: 2013					
Functionality: Constituent's Tracking and Inquiries Management					
				Status	
Measurement	BASELINE	GOAL	2014	2015	2016
Response Time	Not Tracked	24 hours	24 hours or less	24 hours or less	24 hours or less
Median Time to Close	Not Tracked	5 days	5 days or less	3.8 days or less	Will be updated in Feb
Entry Time per case	4 - 10 Minutes	2 - 4 minutes	30 sec to 1 min	30 sec to 1 min	Automatic through CRM connected portal (web)
Department of Assessments - Start deployment: March 2015, Restarted in 2016 with Revised Format					
Functionality: Customer Tracking					
				Status	
Measurement	BASELINE	GOAL	2016		
Response Time - Calls (Non-Peak Period)	Same day service	same day	same day		
Response Time - Calls (Peak Period)	Return calls within 48 hours	within 24 hours	24 to 48 hours		
Response Time - Emails (Non-Peak Period)	Same day service	same day	6 to 12 hours		
Response Time - Emails (Peak Period)	Reply email within 48 hours	within 24 hours	6 to 48 hours		
Executive Services - Office of Civil Right - Start Deployment January 2015					
Functionality: Public Record Request					
				Status	
Measurement	BASELINE	GOAL	2016		
Time to prepare report	5 days	3 days	3 days		
Additional Benefits Provided by CES					
Provides system generated remainder to send a five day response to ensure compliance with Public Record Act					
Ability to view the status of all public records requests					
Ability to link emails and electronic files to each request to keep communications organized					
Ability to generate reports to measure public records activities					
Easier to coordinate interdepartmental requests as all users can view all requests in the application					
DNRP Solid Waste - June 2016 - replacing current system that will need upgrade					
Expectations and baseline					
				Status	
Measurement	BASELINE	GOAL	2016		
Cost to upgrade customer service system	\$ 47,000	\$ 6,000	\$6,000		
		Ability to combine customers contact	Completed		
Gaining Additional features	None	Ability to run management reports	Completed		

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 Information Technology Department
Project Title	Enhance Wireless Connectivity
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 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	Chief Information Officer, KCIT	
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 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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Stage	Date	Revised By	Description	How long did it take?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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
2016 Annual Report	2/6/17	Lloyd Jordan	BAP Update	.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 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)

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/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 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.*

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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.

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Example:

Metric Description	Metrics	Baseline	Target	Actual
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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 Information Technology
Project Title	Hosted Environment – Phase III Cloud Implementation
EBS Project Number	1111953

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, Chief Information Officer, KCIT

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
Trever Esko	IT Project Director / KCIT	Oversight
Christine Chou	Chief Financial Officer / KCIT	Document review and input
Cheryl Boudreau	IT PM III / KCIT	Project Manager
Mike Fisher	IT PM II / KCIT	Project Manager
Collin Pedersen	Sr System Engineer	Operations - Engineering
Mike Dunphy	Sr System Engineer	Operations – Production 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:

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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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Budget Process	10/18/13	Mike Fisher	New, initial draft	4 hours
1Q 2014 Supplemental	12/04/2013	Mike Fisher	Updated for Q1 2014 supplemental	8 hours
Post review updates	12/12/2013	Mike Fisher	Q1 2014 supplemental	1 hour
Include 2012 appropriation in project cost/benefit calculations	12/16/2013	Mike Fisher	Q1 2014 supplemental	2 hours
Pre-submittal final updates	01/02/2014	Mike Fisher	Q1 2014 supplemental	1 hour
Post-submittal updates	02/10/2014	Mike Fisher	Q1 2014 supplemental	2 hours
Incorporate management feedback	02/11/2014	Mike Fisher	Q1 2014 supplemental	1 hour
2015 yearly review	03/02/2015	Mike Fisher	2015 yearly review updates	1 hour
2016 yearly review	02/10/2016	Collin Pedersen	2016 yearly review updates	2 hours
Project Completed	01/01/2017	Mike Dunphy	Final BAP	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.

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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).

This project will improve internal services by streamlining delivery and improving the timeline for providing hosting services. This is accomplished by replacing the outdated IT infrastructure delivery model in the county. In the past IT groups procured, deployed, configured, maintained, and eventually replaced physical hardware for individual business applications. That model is inefficient and doesn't maximize county IT infrastructure, facility, or personnel investments.

By leveraging the power of server virtualization and automation the hosted environment allows for greater business agility by greatly reducing server deployment times. In addition, hardware is utilized in an efficient manner leading to better return on investment in IT resources.

With departmental and agency IT teams unencumbered by the procurement and deployment cycle they are free to focus on more strategic and higher business value functions.

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

We will know benefits are being achieved when average deployment time for servers goes down. This can be measured by reviewing helpdesk ticket closure times associated with the time expended to deploy a server in the cloud or SVE against physical server deployment times.

3. What is the current baseline for this measure?

Physical servers typically take 10 to 12 weeks to deploy into the King County data center.

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

Standard Virtual Environment server requests take 48 hours.

5. When is the benefit likely to be achieved?

The benefit is currently being achieved for the Standard Virtual Environment and the Virtual Private Cloud will begin showing benefits in 2014.

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.

Both the Standard Virtual Environment and the Virtual Private Cloud environments leverage the latest virtualization technology. Overall the industry is moving quickly to a virtual server strategy rather than the outdated one logical server to one physical server model.

By leveraging virtualization in these environments King County will see decreased time to deployment, reduced management complications, improved troubleshooting, and increased disaster recovery capabilities.

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.

Server virtualization also reduces risks to mission critical applications. Since the application and logical server are no longer tied to an individual physical server, if there are problems the application is simply moved to a functional host server.

In the Virtual Private Cloud these risks can be even further reduced by leveraging the massive scale and redundancy of the physical environment. By employing best practices in architectural design, an application can withstand not only the loss of a physical host machine, but of an entire data center.

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

This project will avoid costs for data center hosting and purchasing of physical servers by replacing them with virtual servers. The total hosting cost reductions are \$5,608,303 from 2012 to 2015 and the total server purchase cost reduction is \$2,170,960 over the same period. Below is a breakout of the savings and how they were estimated and derived.

Server Hosting Cost Avoidance

Server Hosting Cost Avoidance	Number of VMs	Cost Avoidance	VM Cost	Benefit
Hosted Environment VMs 2012	47	\$ 316,216	\$ 141,047	\$ 175,169

Hosted Environment VMs 2013	123	\$ 860,631	\$ 383,883	\$ 476,748
Hosted Environment VMs 2014	363	\$ 2,641,551	\$ 1,177,935	\$ 1,463,616
Hosted Environment VMs 2015	833	\$ 6,304,144	\$ 2,811,375	\$ 3,492,769

**Note: Hosting cost avoidance happens each year, so the cumulative total number of servers expected in the Standard Virtual Environment is calculated each year.*

Server Procurement/Hardware Purchase Cost Avoidance (cost included in the rates to calculate the cost above)

Server Procurement Cost Avoidance	Number of VMs	Cost Avoidance	Per VM Project Cost	Benefit
Virtual rather than physical replacements 2012	47	\$ 376,000	\$ 260,051	\$ 115,949
Virtual rather than physical replacements 2013	123 76	\$ 984,000 -\$6 08,000	\$ 680,559 -\$42 0,508	\$ 303,441 \$187,492
Virtual rather than physical replacements 2014	240	\$ 1,920,000	\$ 1,327,920	\$ 592,080
Virtual rather than physical replacements 2015	470	\$ 3,760,000	\$ 2,600,510	\$1,159,490

**Note: Procurement costs are only calculated in the year they are projected to happen, so the number of servers expected to move to the Standard Virtual environment each year are calculated.*

The cost avoidance calculations above do not include potential savings from the Virtual Private Cloud which will be an option in situations where it is cheaper to utilize compared to a virtual machine in the Standard Virtual Environment. This will be reviewed on a case by case basis since not all applications are suitable for, or cost effective to host in, the Virtual Private Cloud environment.

Updated 2/11/2016: Moving the backup infrastructure to the Cloud environment is another use case that is cost effective.

Cost avoidance as the result of moving backup Tape Infrastructure to the Cloud:

It is projected that moving Backup infrastructure from Physical Tapes to the Cloud for offsite storage will result in a cost savings/avoidance of over \$150,000 per year starting in 2016. The savings/cost avoidance is due primarily to the reduction in vendor costs and labor associated with managing tapes and tape infrastructure.

Below is estimated cost comparison based on yearly backup volume of 1,254.48 TB

Cost Components	Tapes	AWS Cloud
Labor	\$ 241,239	\$ 132,747
Hardware Maintenance	\$ 52,027	
Software	\$ 50,400	\$ 85,400
Offsite Storage and backup tapes	\$ 138,217	
AWS Cost		\$ 155,000
Platform (SSD)	\$ 39,138	\$ 75,876
Hosting	\$ 65,624	\$ 6,815
Equipment Replacement	\$ 217,143	\$ 197,813
Average Annual Cost	\$ 803,788	\$ 653,651
Average annual savings		\$ 150,138

A secondary benefit is that there is less complexity with the new solution since backup data is stored both onsite and offsite automatically compared with the old solution of using clone jobs which need to be setup and monitored manually in order to keep data both onsite and offsite.

A third benefit is that the geographic location of backups being stored in the cloud allows us to use this solution to fulfill the 50 mile requirement by Records Management/business continuity/disaster recovery

2. *When is the cost reduction likely to be achieved?*

Benefits should be realized in each year of the project – 2013 to 2016.

For 2013 the actual number of servers in the Standard Virtual Environment was 211 as of this writing. This led to the following realized benefits:

Update – 3/2/2015

For 2014 the actual number of servers in the Standard Virtual environment was 545, this led to the following realized benefits:

Update – 2/10/2016

For 2015 the actual number of servers in the Standard Virtual environment was 697, this led to the following realized benefits:

Update - 1/1/2017

For 2016 the actual number of servers in the Standard Virtual environment was 855, included additional 158 VMs.

Server Hosting Cost Avoidance

Server Hosting Operating Cost Avoidance	Number of VMs	Cost Avoidance	VM Cost	Benefit
Updated – 2/10/2016	152	\$1,168,424	\$	\$
Actual Hosted Environment VMs 2015	697	\$5,357,839	444,144 \$2,036,634	572,280 \$3,321,205
Updated – 3/2/2015	334	\$2,430,518	\$1,083,830	\$1,346,688
Actual Hosted Environment VMs 2014	545	3,965,965	\$1,768,525	\$2,197,440
Actual Hosted Environment VMs 2013	211	\$1,476,367	\$ 658,531	\$ 817,836
Total Operating Cost Avoidance		\$5,075,309	\$2,186,505	\$2,736,804
		\$10,800,171	\$4,463,690	\$6,336,481

Server Procurement/Hardware Cost Avoidance (included in the rates used to calculate the numbers above)

Server Procurement Cost Avoidance	Number of VMs	Cost Avoidance	Per VM Project Cost	Benefit
Updated – 2/10/2016	152	\$1,216,000	\$ 841,016	\$ 374,984
Actual Hosted Environment VMs 2015				

Updated – 3/2/2015	334	\$2,672,000	\$1,848,022	\$823,978
Actual Hosted Environment VMs 2014				
Actual Hosted Environment VMs 2013	211	\$1,688,000	\$1,167,463	\$520,537
Totals	697	\$5,576,000	\$3,856,501	\$1,719,499

Cost Avoidance as the result of moving backup infrastructure to the cloud (updated 1/20/17):

Cost Components	Tapes	AWS	
Labor	\$ 241,239	\$ 132,747	\$ (108,493)
Hardware Maintenance	\$ 52,027		\$ (52,027)
Software	\$ 50,400	\$ 85,400	\$ 35,000
Offsite Storage and backup tapes	\$ 138,217		\$ (138,217)
AWS Cost		\$ 126,450	\$ 126,450
Platform (SSD)	\$ 39,138	\$ 75,876	\$ 36,738
Hosting	\$ 65,624	\$ 6,815	\$ (58,809)
Equipment Replacement	\$ 217,143	\$ 206,383	\$ (10,760)
Average Annual Cost	\$ 803,788	\$ 633,671	\$ (170,118)
Average annual savings		\$ 170,118	

3. How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)

Server Hosting Cost Avoidance:

As a result of leveraging virtual servers in the hosted environment rather than physical servers, departments and agencies will realize the on-going cost avoidance listed above. These calculations include reduction in rack unit charges and in operating system licenses as those are included with a hosted environment virtual machine. The migration planning project will track conversion efforts over the planned time period listed in question 4 below. The cost of hosting physical servers will be calculated against the cost of the virtual servers used in their place and the difference is the benefit.

Server Procurement/Purchase Cost Avoidance:

As a result of replacing end of life physical server hardware with virtual servers in the hosted environment the difference between the cost of physical server replacements and the total project cost is the benefit. Overall server hardware costs will be reduced by deploying virtual servers in the Standard Virtual Environment or Virtual Private Cloud rather than physical servers. The cost to have individual physical server and storage devices at the Sabey Data Center will be compared to the cost of virtual servers in the Standard Virtual Environment and Virtual Private Cloud.

Moving backup to the Cloud Cost Avoidance:

We will track the actual cost of backup in the Cloud and compare it to the previous tape infrastructure.

4. What is the current baseline?

Server Hosting Cost Avoidance:

- 2012 cost to host a fully managed physical server = \$6,728
- 2013 cost to host a fully managed physical server = \$6,997

- 2014 cost to host a fully managed physical server = \$7,277
- 2015 cost to host a fully managed physical server = \$7,687
- 2016 cost to host a fully managed physical server = \$7,687

- 2012 cost of a fully managed virtual server = \$3,001
- 2013 cost of a fully managed virtual server = \$3,121
- 2014 cost of a fully managed virtual server = \$3,245
- 2015 cost of a fully managed virtual server = \$2,922
- 2016 cost of a fully managed virtual server = \$2,922

Per the King County Cloud Computing Services Development Report (Ordinance 17232, Section 115, Proviso P3) the following quantity of servers should be hosted in the Standard Virtual Environment:

- 2012 expected virtual machines in the Standard Virtual Environment = 47
- 2013 expected virtual machines in the Standard Virtual Environment = 123
- 2014 expected virtual machines in the Standard Virtual Environment = 363
- 2015 expected virtual machines in the Standard Virtual Environment = 833

Server Procurement/Purchase Cost Avoidance (this cost was included in the cost to manage the server):

- Physical Server: Based on a typical physical server currently at the Sabey Data Center, CDW, a server hardware retailer, suggests a typical physical server currently costs ~ \$8,000.

(http://www.cdw.com/shop/products/HP-SB-DL560-GEN8-E5-4617-US-SVR/2807086.aspx?RecommendedForEDC=2806515&RecoType=RP&cm_sp=Product-_-Session&ProgramIdentifier=3)

- Hosted environment cost per server = \$5,533
(total project cost before contingency (\$4,609,243)/# of VMs expected at end of 2015 (833))

Tape Infrastructure Cost Avoidance:

The current baseline would be the annual operating cost of managing the infrastructure and cost of replacement

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

The hosted environment strategy helps to solidify and strengthen one of our foundational components of becoming a service focused organization. The King County Hosted Environment, which will leverage both internal and external virtual server and storage infrastructures, will give county business and IT customers:

- Inexpensive, flexible, scalable, and standardized computing solutions to complex IT requirements;
- Enhanced productivity and increased efficiency by enabling agile response to changing business requirements;
- Secure and reliable infrastructure that adheres to the most rigorous industry certifications and principles;
- Centrally managed, high performance, services based environments that support an enterprise IT model.

Cloud service providers utilize a pay-as-you-go, or metered, charge-back model. This allows limited and specific usage environments, like development and test, to be deployed quickly, fully leveraged while required, and then turned off when not in use. This model removes the county from the cycle of purchasing hardware based on peak usage projections, only to see that hardware sit idle during usage valleys.

It is estimated that servers in a physical server to application model are less than 20% utilized, where physical server hosts in a virtualized model are utilized at rates well over 60%. The increase in server utilization leads to hardware cost savings as well as maintenance, power, HVAC, and licensing cost savings.

The Hosted Environment – Phase III Cloud Implementation project will leverage the planning that has been started in the Enterprise Server Optimization Project (ESOP). The Migration Planning sub-project will leverage KCIT maintained server inventory lists and department maintained servers inventory lists as a basis for outreach to King County Executive and Separately Elected agencies. A proviso response report was submitted to Council that identified a 3 year plan for migrating county servers to the hosted environment.

As of ~~this writing~~ **the end of 2016**, the Standard Virtual Environment contains ~~211 545 697~~ **855** virtual servers, due to these migrations King County has saved not only on physical hardware, but on power and cooling costs as well. In addition, the free space created in the Sabey Data Center has allowed King County to begin sub-leasing rack space to other entities further reducing overall server infrastructure costs.

The hosted environment is inherently more secure than stand-alone environments as best practices can be implemented and adherence to security principles can be guaranteed. Security and reliability are further enhanced by placing the underlying infrastructure in either the state-of-the-art Sabey Data Center in Tukwila, or in the Amazon Web Services data centers that have been certified to abide by the most stringent industry standards.

In addition, this project is aligned with the King County Strategic Plan goals and priorities including setting "standards and expectation for the immediate improvement of customer service and excellence," for "empowering our workforce and our work together as One King County," and improving "financial stewardship."

The Virtual Private Cloud will allow for agencies and departments to leverage a pay-as-you-go cost model. Under this model you are only charged for the time you use the service, for example, if you create a virtual machine in the VPC and use it for two days and then turn the virtual machine off you will only be charged for those two days of usage. This allows for development and testing environments to be created for only the times they will be used, eliminating the cost of purchasing hardware to sit idle just in case it is needed.

Moving the backup infrastructure from physical tapes to the Cloud is one of the great examples of using the cloud to reduce cost and achieve many other benefits beyond cost savings that are not available in physical tapes (as described in previous section)

As it is stated in the 2013 Technology Business Plan: "Cloud computing is viewed as the next wave of information technology for individuals, companies, and governments. This project will develop an IT

infrastructure model to increase dependability and reliability of application platforms; increase agility and responsiveness in IT service delivery, reduce costs and increase efficiency, positioning the county for the IT of the future. In addition to reducing operational costs, cloud technologies have become the basis for business innovation and new business models and for significant improvements in the effectiveness of anyone using information technology."

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 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	<ul style="list-style-type: none"> 10 days processing time 10 percent of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30 percent of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20 percent of purchases are receiving prompt payment discounts \$200,000 savings

SUMMARY OF BENEFITS – 1/1/2017

Period 2012 – 2015:

Metric Description	Metrics	Baseline	Target Benefit	Actual Benefit
Server Hosting Operating Cost Avoidance	Accumulated operating cost avoidance - 2012 to 2015	\$0 - No savings	\$ 5,608,302	\$ 6,336,481

This project to streamline delivery and improve the timeline for providing hosting services, has been successfully completed. Leveraging server virtualization and automation, the hosted environment allows for greater business agility by greatly reducing server deployment times and hardware is utilized in an efficient manner leading to better return on investment in IT resources. The SLA for

the Standard Virtual Environment (SVE) deployment time is currently two days, compared to an average physical server deployment time of 5-10 weeks.

The project has achieved \$6.3M in server hosting operating cost avoidance exceeded the target of \$5.6M for for period 2012 – 2015. In 2016, we added 158 VMs bringing the total number to 855 VMs which saving was not reflected on the table above. In addition to the SVE benefits, we also moved our entire backup infrastructure to the Amazon Cloud (AWS) environment, resulting in cost savings/avoidance of over \$170,000 per year, starting in 2016. We will continue to utilize Cloud services in our Hybrid Computing model, to increase dependability and reliability of application platforms, reduce costs and increase efficiencies, increase responsiveness and agility, and position ourselves for the IT of the future.

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	Exchange to Office 365 Adoption Phase I
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.

Bill Kehoe, King County Chief Information Office

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	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 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual Review/ Business Case	4/1/2015	Molly Gordon	New, initial draft	1 hour
Conceptual Review/ Business Case	4/9/2015	Molly Gordon	Revision: 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
2015 Annual Reporting	2/12/2016	Temujin Baker	Annual update	
Council staff review of annual BAP	6/20/2016	Jenny Giambattista	Annual update	30 minutes
2015 Annual Report	6/22/2016	Temujin Baker	Adding category 2 and metrics per Council staff review	
2016 Annual Report	2/7/2017	Temujin Baker, Bob Johnson	BAP 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).
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.

Update 6/20/16 and 2/7/17: 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~~

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.
- 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.~~

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 50 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. **There was zero hours of unplanned downtime for cloud email in 2016. 2017-02-07.**

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 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 is approaching end of life on 10/1/2016. 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 \$15,000,000 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 % of purchases receiving prompt payment discounts	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

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	KCIT-IT Operations and Business Solutions
Project Title	IP Fax Service Project
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

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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

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- 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.

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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.**

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 eFiling, 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. **Update Feb 2017 -- Current list shows 804 fax lines with 11% converted. Many of the departments are still determining next steps from the business perspective.**

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.

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: 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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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
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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.

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 Information Technology
Project Title	Mainframe Application Migration
Project Number	1113997

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, KCIT

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
Ken Wyatt	IT Manager/ Department of Information Technology	AnT Phase Lead
Glenn Evans	IT Manager/ Department of Information Technology	LSJ Subject Matter Expert
Lilia Wong	IT Project Manager/ Department of Executive Services	AnT Subject Matter Expert
Jim Keller	IT Project Manager/ Department of Information Technology	LSJ Phase Lead
Christine Chou	CFO/KCIT	Financial Analysis

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

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Project Implementation	3/5/14	Andy Hill	New, initial draft	2 hours
Project Implementation	3/9/15	Andy Hill	Update	1 hours
2015 Supplemental	4/28/15	Andy Hill	Update	
Project Completion	01/10/16	Christine Chou	Annual and Final BAP	1 hour
Post project completion	02/03/17	Christine Chou	Final BAP	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

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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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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 mainframe project is to move all applications and data currently residing on the mainframe (MF) to the County's Windows Server based Standard Virtual Environment (SVE). The environment will be C#.net and SQL Server, current and prevalent technologies in place in the market used for applications and databases.

The current mainframe was purchased as a replacement for \$89,634 to facilitate an easy transition into the Sabey Data Center in December of 2009. The new Mainframe allowed a simplified transition of all hosted applications to be copied over from the old Mainframe. It was acquired from the IBM Reseller Division to bridge the gap until the county could modernize all of their applications into a virtual server environment. The total operational costs for this burning platform are 3.3 million dollars a year. By porting over the applications onto a virtual server environment the operational costs will be a fraction of existing mainframe operational expenses.

The Mainframe is an aging technology inhibiting business process reengineering and costing the County millions of dollars each year to operate. The code is written in archaic programming languages and the skillset needed to manage the code is no longer readily available in the workforce. By upgrading the hardware and software to virtual servers, modern relational database and new era programming language, the hardware and support costs will be drastically reduced. Having the applications hosted in a modern computing environment will allow for greater access to data and programming enhancements.

The data was originally stored in formats that required custom reports to be written by Analysts at KCIT. With the data modernized, this data can be made accessible to end users by building data warehouses, ad hoc report generators and pivot tables allowing users to do real time analysis of data without custom development for each request for data. The code generated will be in C#, a standard

programming language that is the de facto standard at King County and across many organizations in the area. This will allow for a broader pool of resources available to be able to make code changes and ensure stability with the current systems and reengineering in the future as seen fit by evolving business demands.

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.

There are 3 main risks to not doing this project:

- First the cost of operating this archaic technology will continue to go up as fewer and fewer resources are available to support this. The hardware required to run the mainframe is increasingly becoming scarce and therefore harder to find and more expensive. The price tag for operating the Mainframe is fixed and does not scale up or down based on business/technical needs unlike the virtual server environment the project will move to.
- Support for this technology, both in vendor and King County FTEs are rare. Vendor support is scarce and expensive because of the dwindling number of mainframes being used in organizations. This will jeopardize key County functions like property assessments, property tax collection and the management of inmates at King County detention facilities. There is less and less workforce that is readily available to maintain, operate or program on the Mainframe environment with the exception of current staff providing on the job training.
- Finally, businesses have been severely constrained in their ability to reengineer their business process and reacting to legislative changes to their operations. Not doing this project will not allow business to adopt a more dynamic approach to delivering on their mission, and reduce their effectiveness to the citizens of King County.

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?

By moving the application to the more modern platform, the ongoing platform cost will be at least 2/3rd less than the current mainframe operating cost (\$3.3M vs. \$1M)

2. How will you measure the cost reduction or cost avoidance? (How will you know if the benefit has been achieved)

Starting in 2015-2016 budget, the new platform cost charge would be \$1M to replace the prior year mainframe on going cost of \$3.3M. This will be validated after year end 2015-2016

In 2015 budget, customers already enjoyed the savings. The annual charge is \$1M instead of \$3.3M, created \$2.3M annual savings. However, the extended project timeline in 2015 will cost and additional \$0.5M to mainframe operations that will reduce the savings for 2015. The mainframe operation cost is no longer applied in 2016 after the mainframe was decommissioned in December 2015.

3. What is the current baseline?

\$3.3M

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

Savings will be \$2.3M

5. When is the cost reduction likely to be achieved?

2015-2016 for full annual benefits. Vendor contracts were discontinued and support staff retired or took over the new platform.

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	Processing Time annual savings, and percentage of purchases receiving	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment 	<ul style="list-style-type: none"> 2 day processing time 20% of purchases are receiving prompt payment

<i>less than one allowing us to take advantage of prompt payment discounts.</i>	<i>prompt payment discounts</i>	<i>• \$100,000 savings</i>	<i>discounts</i> <i>• \$400,000 savings</i>	<i>discounts</i> <i>• \$200,000 savings</i>
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Description:

The mainframe project is to move all applications and data currently residing on the mainframe (MF) to the County’s Windows Server based Standard Virtual Environment (SVE). The environment will be C#.net and SQL Server, current and prevalent technologies in place in the market used for applications and databases.

Metrics	Baseline	Target	Actual (Feb 2017)
Annual savings/cost avoidance upon completion of the project	\$3.3M infrastructure operating cost	\$1M ongoing infrastructure operating cost starting in 2015	<u>\$1.4M</u> ongoing infrastructure operating cost starting in 2016.

Update Feb 2017:

~~\$1M~~ \$1.4M ongoing infrastructure operating cost starting in 2016. Ongoing cost is higher than the target due to two factors: (a) batch processing that was expected to be discontinued is still needed and (b) platform cost is a bit higher than originally estimated.

Getting off the mainframe has mitigated the risk, the primary reason for this project.

In addition, we are already able to facilitate business enhancements in the new .NET environment and access to data is much easier with SQL versus the legacy, proprietary mainframe databases. For example, we redeveloped key interfaces such as the Washington State Patrol using modern tools that do not need to be redeveloped when a new jail management system is purchased that will save the county at least \$500k and potentially more. Manual cut and paste processes on the mainframe were converted to automated reports that will save hundreds of hours in the records section of the jail.

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, 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
2015 Annual Reporting	2/12/16	Hai Phung	New, initial	N/A
2016 Annual Reporting	1/23/17	Hai Phung	BAP Update – No changes	

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.

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 these coverage holes are much smaller.

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.

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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

Update of Feb 2017:

The project is on track. In mid-2016, the PSERN project completed Phase II (RFP design and procurement) and transitioned to Phase III (final system design). The County signed a \$112 million contract with Motorola Solutions, Inc., and procured architecture and engineering services for preliminary site development, final construction planning, and site acquisition. Preliminary site development activities and construction are underway. Construction is substantially complete at 5 radio sites. The project team and Motorola are developing design documents with the target completion in July 2017.

After July 2017, the project expects to move into Implementation activities and begin deployment of the radio system equipment. Implementation will occur until very early 2020, when system acceptance testing will occur and the project will be substantially completed. The project expects to finish and begin close out activities in September 2020.

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 Customer Support Services Manager / KCIT	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:

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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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Revision History Table

Stage	Date	Revised By	Description	How long did it take?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 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 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:

- Reduced number of technology outages resulting in major service interruptions
- ~~3. Reduced number of major incidents causing technology outages,~~
- 4. Reduced time to restore service during a major incident
- 5. Reduced number of Customer calls during major incidents
- 6. 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) Reduce the amount of time to communicate Major Incident to IT Support staff and the business
- 5) Improved communication during Major Incidents
- 6) Reduced number of Customer calls during major incidents

7) Tracked and reduced number of major incidents related to scheduled changes

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 and priority based upon impact and urgency, 95% of the time:

<u>Incident Management Targets</u>	<u>Request Management Targets</u>
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 under 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 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	<ul style="list-style-type: none"> 10 days processing time 10 percent of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30 percent of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 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.

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 3/9/15: 29 major incidents per year	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 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).

<p>1/17/17:Reduced time to restore service during a major incident</p> <p>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</p> <p>Reduced time to restore service during a major incident</p>	<p>Meantime to resolve (MTR) a major incident</p> <p>Reduce the amount of time to communicate Major Incident to IT Support staff and the business</p>	<p>4 hours 3.4 hours</p>	<p>< 1 hour 2.4 hours</p>	<p>Clarified roles and improved communication resulted in meeting the communication target of < 1 hour 90% of the time</p> <p>Clarified roles and improved communication resulted in meeting the 2.4 hour target improvement.</p>
<p>Reduce number of customer calls during major incidents</p>	<p>Number of calls during major incidents per year</p>	<p>5,013 calls per year</p>	<p>3,509 calls per year</p>	<p>Still working to validate the number of calls during major incidents.</p>
<p>Ability to track issues related to planned changes</p>	<p>Availability of metrics Major Incidents caused by scheduled change</p>	<p>N/A 88 MIs – 34 associated with scheduled change – 38%</p>	<p>Reporting metrics one year after project implementation Reduce the Major Incidents caused by scheduled changes by 30%?</p>	<p>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.</p>

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	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

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 Eske	KCIT	Project Director
Bill Kehoe	KCIT	CIO
Zita Pryor	KCIT	Service 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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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 Pyor	Update BAP - 2016 survey information	

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.***
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 Unified Communications / 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?

Tangible savings of ~~\$3M~~ \$2.5M will start in ~~2016~~ 2017 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.

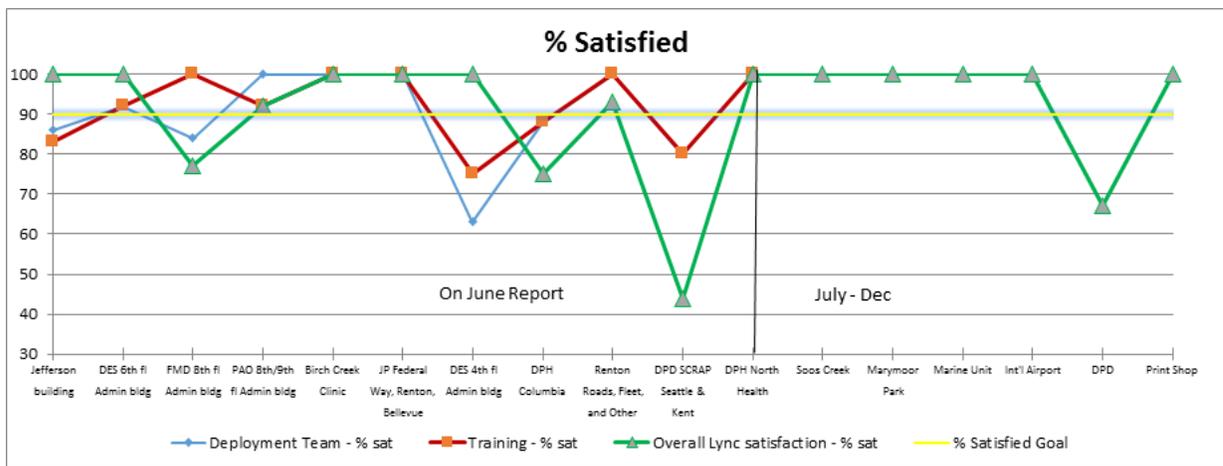
Example: This project to automate accounts payable software was implemented and did improve the processing time average. The average time was reduced from 10 to 2 days, not quite reaching the 1 day target. Additionally, only 20% of purchases received a prompt payment discount resulting in less cost swings 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	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 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/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 Unified Communications/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.



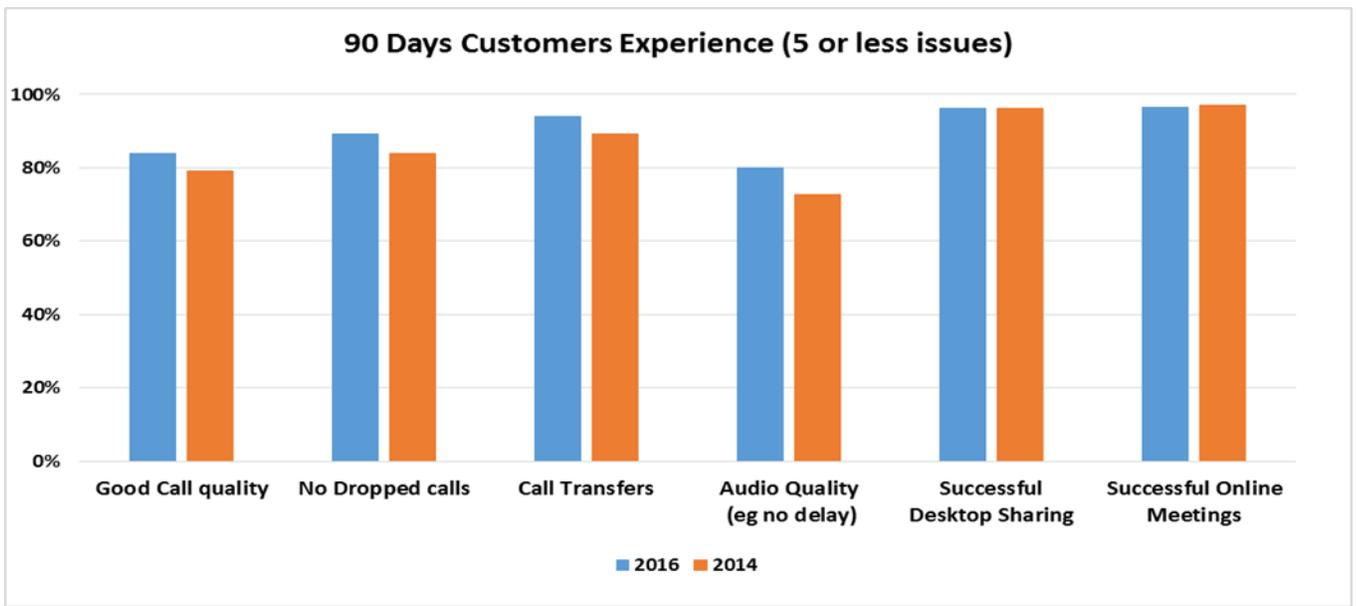
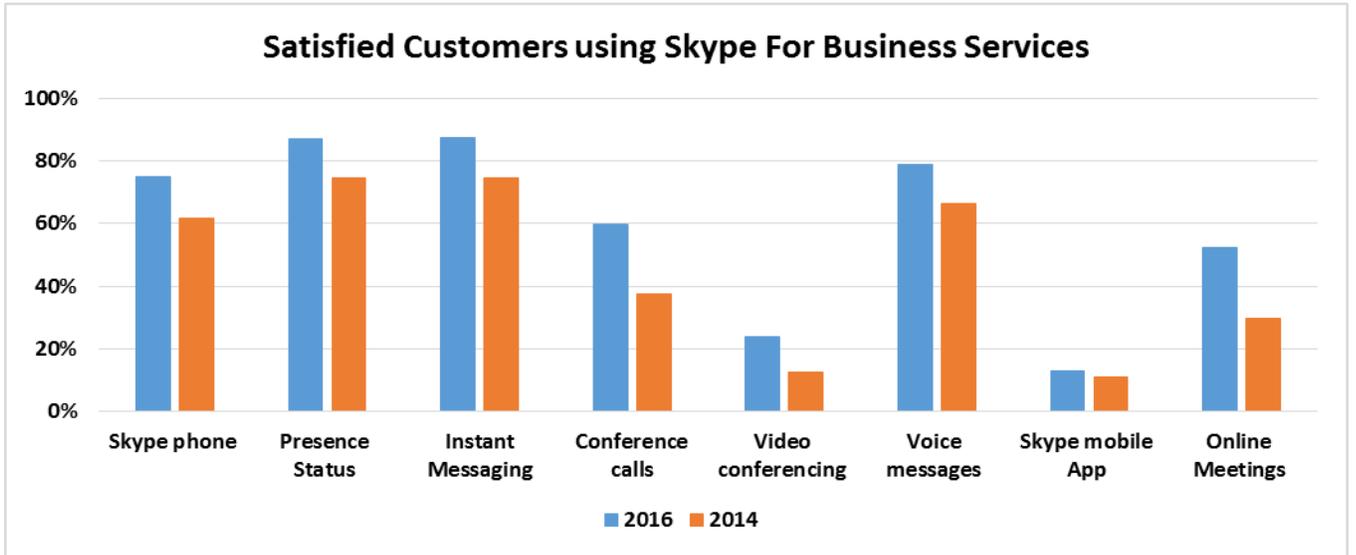
1/23/2017 update

2016 Survey Results

The Unified Communications /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. 82.07% 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.



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 Information Technology Department (KCIT)
Project Title	Westin Network Connection Upgrade
Project Number	1124191

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 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	Chief Information Officer, KCIT	
Jayne Pendergast	Deputy Chief Information Officer, KCIT	No longer with King County
John Storch	Regional Services Manager, KCIT	No longer with King County
Lori Dickneite	Network Services Manager, KCIT	
Behzad Shirinzadeh	Network Services Manager, KCIT	No longer with King County

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
Conceptual review and Business Case	5/29/2014	John Storch, Lori Dickneite	New, initial draft	1 hour
Conceptual review and Business Case	6/28/2014	Lori Dickneite	Updated final document	1.5 hours
Annual BAP Reporting	3/20/2015	Lori Dickneite	No Changes	
Annual BAP Reporting	2/2/2016	Scott Peterson	Slight update	
2016 Annual Report (final BAP; completed project)	2/7/2017	Scott Niskanen	Final update	20 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 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 will allow the County full immediate access to its critical telecommunications hub and have full control to fix and upgrade equipment without having to obtain a third party review and permission. Equipment upgrade must occur more frequently due to the County's expansion in technology (mobility and modernization); thus the County's immediate access to its communication hub and equipment is critical. In addition to space consolidation, this project will also allow equipment upgrade to handle a rapid volume increase in internet routes. This project benefits will prevent long outages due to waiting period for site access and upgraded equipment

Currently, the County must request and wait for a third party to review and grant access to the site and to obtain approval for any equipment changes; increasing the County's risk of equipment failure. As an example, in October 2012, MCI/Verizon denied schedule work to upgrade power for the County to be able to make necessary design changes, including an Uninterruptable Power Supply (UPS) equipment installation. King County spent several weeks trying to work with MCI/Verizon to get the work approved and they required us to modify/create another contract before they would authorize.

Updated 2/7/17

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

- Immediate access to the County's communications hub preventing delays in troubleshooting and maintenance of county's equipment; supporting the continuation of 99.99% of network uptime target
- County will have full control of its communication hub design and equipment upgrade and there will be no waiting period for third party approval; reducing deployment time
- ~~The project will include equipment upgrade to speed up internet connections which currently experience frequent slowness due increase traffic~~
- Reduce total number of entry points for fiber at the Westin Data Center, thus reducing complexity
- Provide increased capacity for customers connecting to the internet through King County

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

- County currently has the secondary priority access; increasing the risk of network outages due to troubleshooting delays. This risk is growing with the expansion of network needs (mobility, cloud, modernization, e-government, social media). If continues, the 99.9% network uptime may no longer be maintained.
- County currently must have third party approval for telecommunications hub design and equipment deployment.
- ~~Users frequently experience slowness in internet traffic. From Jan 2013 to Oct 2014, there were 237 service tickets related to overall network slowness. In 2015, there were 368 tickets. Although, the service tickets did not indicate specific causes of network slowness; the current hub state and arrangement could have be the drivers of some of them.~~
- There are currently 6 points of entry on 6 different floors at Westin. KCIT Network technicians must wait for Verizon to unlock King County's space. Verizon can take 4 hours to provide access on each ticket.
- County currently cannot continue to grow with demand and is servicing 57,000 internal and external users

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

- Immediate access to the communication hub and maintain 99.99% network performance
- Full control of equipment design and deployment.
- ~~Reduce service tickets related to internet slowness by 30%~~
- Reduce entry points to 1 on the 20th floor of Westin with access controlled by KCIT eliminating 4 hours wait time on every ticket
- Ability to grow with service demand with capacity for at least 250,000 users without degrading the quality

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

End of project, ~~June, 2016~~ December, 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.**

The Westin Building Exchange is the premier telecommunications hub and primary connection point (POP) for telecommunications and specifically high speed Internet for the Pacific Northwest. Currently, King County site is co-located with Frontier Communications (commercial communication company) and has critical fiber cable connections to several disparate floors in the Westin facility. King County access, expansion, changes, and outage notification must be authorized by Frontier. This arrangement has been in place for more than 12 years. This project will:

- Consolidate all of our fiber cable termination points (also known as demarcation point - dmark) to a single floor and allow for standardization and expansion. These fiber connections are critical to the County as they provide network connections to multiple Internet peers, such as Software as a Service (SaaS) providers that host applications like those used by the King County Prosecutors Office, King County Council, and Public Health applications. The function of the demarcation points become more and more crucial as technology is advancing to support County's strategy in mobility, modernization, and moving more toward cloud utilization that is depending on the Internet connectivity provided by this facility
- Allow King County to have direct controlled access 24x7, which will ensure we are meeting the new and future requirements for Criminal Justice Information System (CJIS) data requiring a separate area for this connection point.
- Provide direct contact with the building regarding security changes and outage notifications and eliminate dependency from external organization to ensure King County is aware of planned work, and unplanned incidents in the facility, and have control over decision of type of equipment to reside in the building.

- Upgrade our network equipment to next-generation Internet class equipment that can support the increase in the demand for Internet access to support SaaS applications and the cloud strategy, which rely heavily on the network equipment and connections to our Internet peers.

Overall, this project gives us the ability to respond to growing rates in internet connections demanded by the needs of future technologies, such as the cloud, mobility, and application modernization which performance are depending on network quality. We have to have ability to grow the network presence and capacity to meet the business needs. The project will reduce the probability of network outages, provide faster response time during outages, and improve connection time; which is crucial with the growing business needs in mobility and cloud utilization.

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.*

King County has not experienced extended downtime to date, however, with the advancement of technology, expansion of mobility, and implementation cloud strategy, the role of this demarcation system become very significant for network performance as the infrastructure of IT. Without the upgrade, quality of IT will eventually deteriorate as cloud services and SaaS applications expand, and access to application will slow down. This project will also avoid an important audit risk by complying with the new and future physical security requirements of Health Insurance Portability and Accountability Act (HIPPA) and Criminal Justice Information System (CJIS) network security that call for a specific King County secured space.

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
<i>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.</i>	<i>Processing Time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

The project is completed in December 2016 and no further benefits are expected

Metric Description	Metrics	Baseline	Target	Actual
Access to the County's communications hub preventing delays in troubleshooting and maintenance of county's equipment;	Waiting period per ticket	County currently has the secondary priority access; increasing the risk of network outages due to troubleshooting delays. This risk is growing with the expansion of network needs (mobility, cloud, modernization,	No waiting for access – 0 hours	No waiting for access – 0 hours

supporting the continuation of 99.99% of network uptime target		egovernment, social media). If continues, the 99.9% network uptime may no longer be maintained. Waiting period for access: 4 hours		
Users connections to the internet through King County	Number of users connections cto the internet through King County at one time	57,000	250,000	250,000
Speed up internet connection	Number of tickets related to internet slowness	368	30% less	No longer valid measurement since internet slowness could be caused by too many factors

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	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
Diana Landry	IT Supervisor II, Public Safety	Sr. Project Manager Technical Consultant (no longer with King County)
Janielee Amina Osborne	IT Project Manager	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:

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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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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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
2014 Annual Report	Feb 5, 2015	Janielee Amina Osborne	Reviewed to ensure continued accuracy.	½ hour
2015 Annual Report (ongoing project)	May 26, 2016	Janielee Amina Osborne	Reviewed and edited to ensure continued accuracy.	½ hour
2016 Annual Report (ongoing project)	Jan 23, 2017	Janielee Amina Osborne	Reviewed and edited Section 7 to ensure continued accuracy.	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, 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 2 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.

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 (scheduling portion completed as of Oct 2016). 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. (Complete as of Oct 2016– management reports available in ATLAS). 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- first half 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.**
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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.

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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 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 day allowing us to take advantage of prompt payment discounts.	Processing time, annual savings, and percentage of purchases receiving prompt payment discounts	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

Update of 01/25/2017:

Metric Description	Baseline	Target	Actual – to date Jan 2017
1. Eliminate paper absence slips, paper attendance reports, and paper overtime slips.	Paper absence slips created and processed for 1110 people, semi-monthly absence reports submitted by every supervisor, and thousands of overtime slips created annually.	Automate all absence slips, overtime slips, and eliminate bi monthly supervisor attendance reports.	Complete. All employees submit absence and overtime requests via ATLAS. KCSO Payroll processes directly from ATLAS, eliminating attendance reports. Only Holiday reports remain in use.
2. Eliminate various scheduling tools in multiple units (Excel Spreadsheets, Big Board, etc.)	Each unit (30+) has different tools for scheduling.	Eliminate the need for each unit to create specific scheduling tools and methods.	The original Big Board has been retired. Most units have stopped using Excel spreadsheets – although some still prefer the ‘old’ ways. A consistent scheduling tool is available to all units.
3. ATLAS user base	0	1,116	100% of KCSO Employees are using ATLAS.
4. New Management	Did not exist or were	Develop a package of	Now available:

15048

reports and tools for budget monitoring and overtime monitoring.	manually created via spreadsheets and data extracts from IRIS.	meaningful reports available to Supervisors/Managers.	18 HR Reports 1 Leave Report 9 Overtime Reports 3 Year End Reports Multiple Payroll Reports On demand, customized reports for Auditing and Public Disclosure requests.
5. ATLAS Auto Feed data to PeopleSoft (manually typed in prior to ATLAS)	Manual data entry: 84 hours per pay period 168 hours per month	Reduce manual data entry by 168 hours per month.	Due to bi weekly vs bi monthly processing cadences, manual data entry was reduced by about 50-75% per month (84-126 hours per month).
6. Reduced processing time for Sergeants to fill overtime shifts (post implementation using Auto Communication tool)	Not available, Unit/Sergeant specific.	TBD	Pending, in progress.

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
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Project Title	RMS Replacement
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Project Number	377214
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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

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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
2015 Annual Report	6/8/16	Judy McDermott	Update Benefit Summary	2 hours
2016 Annual Report	1/12/17	Judy McDermott	Update BAP with new project information	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)

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

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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.

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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.

Updated January 2017:

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 it’s 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. 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, attaching media files or pictures, and address validation) 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).
- 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 3.** Ability to report NIBRS (hence, compliance with Federal Government requirement)
- Benefit 4.** Reduced amount of officers’ time spent on writing reports
- Benefit 5.** Reduced amount of time it takes the Comm. Center call takers to write a 911 call report

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	Number of years of historical data available to officers when doing pre-incident investigations for calls	1 year of data currently available	from 2008 and on
2. Improved ability to research and identify problem causes through full date/time stamp audit logs	Percentage of problems for which causes were identified thanks to the audit log (through a 1-week long monitoring)	Currently, 0% since no audit log exists	90% of cases
3. Ability to report NIBRS (hence, compliance with Federal Government requirement)	Error rate (%) when reporting NIBRS	Currently, not able to report NIBRS	4% error rate
4. 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	<20 min/report

<p>5. Reduced amount of time for the 911 Comm. Center call takers to write a 911 call report</p>	<p>Amount of time it takes the Comm. Center call takers to write a 911 call report</p>	<p>by officers Average 30 min/report 81,939 reports written in 2016, 30% or 24,581 by 911 Comm. Center</p>	<p><20 min /report</p>
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5. When is the benefit likely to be achieved?

One year after full implementation of Mark 43’s Cobalt is complete in 2017 (i.e., 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.

Updated January 2017:

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.

- o TESS (Property / Evidence Management System) – decommissioned in 2014
- o IRIS (Incident Reporting and Investigation System) – For criminal activity
- o 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. Cobalt’s Property Module is scheduled to be available to KCSO by second quarter of 2017. Once the property and historical data is transferred from the current TE system to Cobalt, TE will be decommissioned 30-60 days after go-live (by end of year 2017).

Since this is the same RMS replacement project with a different solution, the remaining \$1,187,631 of the projects \$5,832,209 funding will be spent on Training Overtime, IT Project Manager, and Functional Analyst, with \$60,000 in contingency.

This project will also introduce several other key benefits listed below:

New	Increased information access for officer safety and operational efficiency <ul style="list-style-type: none"> ○ Currently the officers only have one year of data available in the car. With the new system they can access the entire database from 2008. When they receive a call, with the new system they will be able to perform pre-incident investigation on all calls and get the entire history. They will know the suspect was arrested two years ago for attacking police officers when they were called to a domestic disturbance. The officer will know that he should request back up for this call.
New	Ability to attach media files to case files (not currently available)
New	Interfaces to local, state and regional data systems <ul style="list-style-type: none"> ○ Ability to query local, state and regional systems from within the application (Department of Licensing, NCIC/ACCESS, SeaKing, LinX, etc.), eliminating multiple logons and improving efficiency.
New	Full audit logs for case and evidence management showing date/time stamps, logged on user’s name, and “before” “after” values if data was changed. <ul style="list-style-type: none"> ○ The current IRIS system does not have any audit logs of what is done on

	the system.
New	Encoded and validated addressing (using KCSO's King County GIS maps)
Improvement of the Existing Functionality	Streamlined B138 process <ul style="list-style-type: none"> ○ Automates a process to request status and disposition on evidence being held at the Property Management Unit (PMU).
Improvement of the Existing Functionality	Federal crime stat reporting <ul style="list-style-type: none"> ○ Compliant with National Incident Based Reporting (NIBRS) for the Federal Government.

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.***

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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	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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	Wireless CAD <u>Upgrade Project</u>
Project Number	377196 <u>(original) 1116728 (new)</u>

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

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
<u>Jessica Sullivan</u> <u>Fenton, Robin</u>	<u>Captain / KCSO</u> <u>Chief/King County Sheriff</u>	<u>Project Manager</u> <u>Business Owner</u>
<u>Ken Rhodes</u> <u>Butschli, Patrick</u>	<u>Tech Serv Manager / KCSO</u> <u>Captain/King County Sheriff</u>	<u>Technical input</u> <u>Project Oversight</u>
<u>Sue Gordon</u> <u>Rhodes, Ken</u>	<u>CAD Administrator / KCSO</u> <u>PPM3/King County Sheriff</u>	<u>Technical expert</u> <u>Project Manager</u>
<u>Mike Dunne</u>	<u>Sr. LAN Admin / KCSO</u>	<u>User interface, testing</u>
<u>Lynda Kamrath</u>	<u>CRU Manager / KCSO</u>	<u>Resource Coordinator</u>
<u>Gary Tripp</u>	<u>KCIT</u>	

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
2014 Annual Report	2/9/15	Pat Butschli	Project Update	1 hours
2015 Annual Report	5/18/16	Pat Butschli	Project Update	30 min
2016 Annual Report	2/17/17	Jessica Sullivan	Project Update	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 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: **(primary)** 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.

[Update 3/23/2017: The project is currently on hold due to interface issues between the GPS devices and CAD. The project's requirements are being merged with the Fleet AVL project \(1129703\), and the two projects will proceed in tandem.](#)

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 inquiries 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~~ 2017.

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?)**
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.*
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:

15048

Metric Description	Metrics	Baseline	Target	Actual
<i>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.</i>	<i>Processing Time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

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.

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
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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 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.

Business Owner Name and Title: 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 <u>Finance Manager</u>
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:

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.

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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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<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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	1/30/14	M. Buening	Initial draft	2 hours
	1/30/14	K. Tadsen	Added additional supporting information	2 hours
	3/14/14	K. Tadsen	Rev 2	2 hours
	3/18/14	K. Tadsen	Rev 2	1 hour
2014 Annual report and benefits measurement	3/18/15	K. Tadsen, A. Summers, D. Clark, E. Ehlert	Rev 3	4 hours
2015 Annual Report	3/09/16	M. Fisher	Rev 1	1 hour
2016 Annual Report	02.03.17	M. Fisher	Rev 1	1 hour
2016 Annual Report	02.10.17	M.Fisher	Rev 1.1	1 hour
2016 Annual Report – additional requests	03.09.17	M.Fisher	Rev 1.2	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 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 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).

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?*

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
<i>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.</i>	<i>Processing Time annual savings, and percentage of purchases receiving prompt payment discounts</i>	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are receiving prompt payment discounts • \$200,000 savings

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.

[02.17] District Court survey results are below.

<u>Metric Description</u>	<u>Metrics</u>	<u>Baseline</u>	<u>Target</u>	<u>Actual</u> <u>(reported 02/2017)</u>
<u>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.</u>	<u>Satisfaction rating by users of the system:</u> <u>1. More information to perform duties</u> <u>2. More information about criminal cases.</u> <u>3. More information about defendants.</u> <u>4. More information about witnesses.</u> <u>5. More ability to organize information.</u> <u>6. Access to information more quickly</u>		<u>1. 70% agreement</u> <u>2. 70% agreement</u> <u>3. 70% agreement</u> <u>4. 70% agreement</u> <u>5. 70% agreement</u> <u>6. 70% agreement</u>	<u>Strongly agree or agree:</u> <u>1. 94.4%</u> <u>2. 94.4%</u> <u>3. 94.4%</u> <u>4. 94.7%</u> <u>5. 94.7%</u> <u>6. 89.4%</u>

2015 Annual Report data:

<u>Metric Description</u>	<u>Metrics</u>	<u>Baseline</u>	<u>Target</u>	<u>Actual</u> <u>(reported 03/2016)</u>
<u>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.</u>	<u>Satisfaction rating by users of the system:</u> <u>1. More information to perform duties</u> <u>2. More information about criminal cases.</u> <u>3. More information about defendants.</u> <u>4. More information about witnesses.</u> <u>5. More ability to organize information.</u> <u>6. Access to information more quickly</u>		<u>1. 70% agreement</u> <u>2. 70% agreement</u> <u>3. 70% agreement</u> <u>4. 70% agreement</u> <u>5. 70% agreement</u> <u>6. 70% agreement</u>	<u>Strongly agree or agree:</u> <u>1. 89%</u> <u>2. 91%</u> <u>3. 93%</u> <u>4. 89%</u> <u>5. 73%</u> <u>6. 83%</u>

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	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:

Name	Title / Agency	Project Role
Daniel Clark	Assistant Chief – Criminal Division - PAO	Sponsor
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?

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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
Annual report	3/13/15	Latasha Battle	Review, no changes	1 hour
Annual report	3.9.16	Mike Fisher	Review and minor updates	1 hour
Annual report updates	3.29.16	Mike Fisher	Updates requested by Elly Slakie	1 hour
2016 annual report – BAP update for an ongoing project	02.03.17	Mike Fisher	Review and minor updates	1 hour
2016 Annual report – additional requests	03.09.17	Mike Fisher	Additional updates	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 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 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 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 after 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:

- 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 satisfied 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.

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 filing decisions.~~

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%

~~D.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.

~~E.G.~~ This number should drop to 2 once IDX allows for police to upload and submit this information electronically.

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 above 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

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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:

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IT Project Benefits Achievement Plan (Version 2)

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King County Department/Agency Name	Public Health – Seattle and King County Emergency Medical Services Division
Project Title	eCBD/CAD Interface at NORCOM
Project Number	377240

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Business Owner Name and Title: ~~Jim Fogarty~~, Michele Plorde, Division Director

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Name	Title / Agency	Project Role
Linda Culley	Manager, Community Programs, EMS Division, PHSKC	Project Manager - <u>Retired 12/2016</u>
Cleo Subido	EMD Program Administrator, EMS Division, PHSKC	Assist Project Manager, <u>and</u> manage content, user interface, testing and communication with com center.
Dan Anderson	IT Project Manager, PH IT	IT Project Manager
Julie Buckingham (Revised 3/19/15)	EMD QI Program Manager, EMS Division, PHSKC	QI Manager, 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

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Conceptual review	2/14/14	Linda Culley	New, initial draft	45 minutes
2014 Annual BAP	3/19/15	Linda Culley	One name correction in Section 3; one date correction in Section 6, Category 3 (1).	15 minutes
2015 Annual BAP	2/12/16	Linda Culley	Update provided in Section 6, Category 3.	10 minutes
2015 Annual Benefits review	6/16/16	Linda Culley	Updated Director name and a few minor updates to Category 3, Item 1.	5 minutes
2016 Annual and Final Benefits Review	2/7/17	Cleo Subido	Updated information for project manager and reviewed documentation along with the IT Project Close-out report.	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
- 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).
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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.

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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.**
 NORCOM ~~was~~ ~~is currently~~ using an eCBD/Tri Tech interface developed in 2006. In 2008, NORCOM decided to purchase a new CAD from vendor New World Systems. The original project proposal was to develop an eCBD application for New World CAD. In 2013, NORCOM abandoned their efforts to procure a New World CAD and currently continue using the Tri Tech CAD, Version 4.5, which was released in 2006.

NORCOM has upgraded to Version 5.5 of Tri Tech CAD. Due to the advancement of technology from 2006 to 2014, this required updates to the current eCBD product and interface in order to be compatible with NORCOM's CAD. These updates to eCBD Software were completed in 2014.

This proposal ~~is now~~ ~~included an~~ ~~to~~ update ~~to~~ the current eCBD/Tri Tech interface due to changes in technology. Average life cycle replacement of CAD is 6-8 years. The TriTech interface was ~~developed, tested and implemented in February 2016.~~ ~~It was updated in 2015 and is currently undergoing final testing.~~ The project is ~~now~~ closed. ~~in close-out phase and should be closed out by the end of February, 2016.~~

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 is not a risk reduction project. The primary reason is to ensure compatibility with the new version of Tri Tech CAD at a major communications center in King County.

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.*

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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

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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

Summary of Expected Benefits:

The primary benefit to this project is to ensure that NORCOM Call Receivers have a quality of eCBD product that interfaces seamlessly with the new version of Tri Tech CAD at a major communications (911) center in King County. No further BAP is expected to be delivered. The project has reached mature benefit and has met expectations.

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

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 Fogarty~~, 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 Retired 12/16	Manager, Community Programs, EMS Division, PHSKC	Project Manager
<u>Michele Plorde</u>	<u>Division Manager, EMS Division,</u> <u>PHSKC</u>	<u>Project Sponsor</u>
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 <u>subject matter expert</u> , product testing
<u>Lindsey Hergert</u>	<u>EMD TCPR QI Program Manager,</u> <u>EMS Division, PHSKC</u>	<u>QI subject matter expert, product testing</u>

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

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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

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
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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 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)

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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 review.

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%
- 2) Appropriate Level of Response (LOR) Chosen: 78%
- 3) Pre-Arrivals Given When Needed: 83%
- 4) Assigned Correct IDC: 74%

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
 - a) Year 1: 75%
 - b) Year 2: 80%
 - c) Year 3: 85%
- 2) Appropriate Level of Response (LOR) Chosen
 - a) Year 1: 75%
 - b) Year 2: 80%
 - c) Year 3: 85%
- 3) Pre-Arrival Instructions Given When Needed
 - a) Year 1: 75%
 - b) Year 2: 80%
 - c) Year 3: 85%
- 4) Assigned Correct IDC
 - a) Year 1: 75%
 - b) Year 2: 80%
 - c) Year 3: 85%

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.

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.

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.

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:

Metric Description	Metrics	Baseline	Target	Actual
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IT Project Benefits Achievement Plan (Version 2)

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King County 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.

~~Jim Fogarty~~ 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
Jim Fogarty <u>Michele Plorde</u>	Director, EMS Division	Project Sponsor
Linda Culley <u>Retired 12/16</u>	Community Programs Section Manager, EMS Division	Program Manager/Project Contact
Cleo Subido	EMD Program Administrator	EMD Training and QI Oversight Project Manager, Project Contact
Julie Buckingham- Lofink	Emergency Medical Dispatch (EMD) Quality Improvement (QI) Program/ Project Manager, EMS Division	EMD QI Manager subject matter expert, product testing
<u>Lindsey Hergert</u>	<u>Emergency Medical Dispatch (EMD) Telephone CPR Quality Improvement Program Manager</u>	<u>EMD QI subject matter expert, product testing</u>
Tracie Jacinto <u>TBD – Not yet assigned</u>	IT Business Analyst, King County Information Technology Department	IT Business Analyst
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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form?</i>
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
Checkpoint #2: PRB/KCIT 2015-2016 budget process	5/30/14	Julie Buckingham-Lofink/ Tracie Jacinto	New, initial draft	4 hours
2014 Annual Report	2/10/15	Linda Culley/ Dan Anderson	Draft update	30 min
2015 Annual Report	2/11/16	Linda Culley	Significant draft rewrite due to changes in scope after cancellation of RFP	90 minutes
2015 Benefits Review	6/17/16	Linda Culley	Changed Business Owner, otherwise review only.	10 min
2016 Annual Report	2/15/17	Cleo Subido	Review documentation, update with changes in timeline and	30 min.

			personnel. Adjusted date of expected benefit achievement.	

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 first quarter of 2018 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 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 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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings

IT Project Benefits Achievement Plan (Version 2) 02/17/2017

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~~1M in revenue over the next ~~6~~4 years. 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>. ~~http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Meaningful_Use.html~~.

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 by which 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?

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Name	Title / Agency	Project Role
Kristi Korolak	HSA II	Project Manager
Michael Gedeon	Chief Administrative Officer	Project Sponsor
Lisa Hillman <u>Diep Nguyen</u>	IT Service Delivery Manager	Steering Committee Member
David Bibus <u>Donna Allis</u>	Deputy Division Mgr <u>Director, PrevPREV</u>	Steering Committee Member
Moffett Burgess	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

<u>Bill Kehoe</u>	<u>Chief Information Officer</u>	<u>Steering Committee Member</u>
<u>Judy MacCully</u>	<u>Regional Health Admin, JHS</u>	<u>Steering Committee Member</u>
TJ Cosgrove	Deputy Division Director, CHS	Steering Committee Member
<u>Ben Sanders</u> <u>Bette Pine</u>	<u>Medical Division</u> -Director, <u>JHS</u>	Steering Committee Member
<u>Cristin Burris</u> <u>Jason Ortiz</u>	PPM IV	HIT Project

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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

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- 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 or lab orders will have:

- At least one medication on their medication list Medications and labs 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.

* 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.

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 and/or access to their patient portal.

Patient specific education resources are provided to patients.

3. What is the current baseline for this measure?

0%

4. What is the target for this measure?

For patients seen by a medical health care* provider, 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.

* 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.

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 that leads to better outcomes for patient care 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 [King County site](#)-location [or with other providers](#).
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.

B-6 Benefit: Assurance of adequate privacy and security protections and accountability of access to safeguarded Protected Healthcare Information as required by Federal Law.

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.

B-7 Benefit: Meet Federal Meaningful Use Criteria which will also allow for Public Health to receive Medicaid Incentive Dollars.

1. **Describe why you expect the proposed IT investment to reduce costs?**
Public Health will be eligible to receive approximately 4.~~3~~1 million over 6 years if additional funds by implementing a Certified Electronic Health Record and using the system in a meaningful way as outlined 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~~1 million over 6 years.

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	<ul style="list-style-type: none"> 10 days processing time 10% of purchases are receiving discount Savings of \$100,000 	<ul style="list-style-type: none"> 1 day processing time 30% of purchases are receiving prompt payment discounts \$400,000 savings 	<ul style="list-style-type: none"> 2 day processing time 20% of purchases are receiving prompt payment discounts \$200,000 savings

Metric Description	Metrics	Baseline	Target	Actual
Category 1 Benefits (Primary)				
B-1 Better	1. At least one problem or	Unknown	80% of provider	For visits at live

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information to provider care for the patient through integrated health information	<p>no known problem on problem list</p> <p>2. At least one medication allergy or no know allergies on allergy list</p> <p>3. Vitals: Height, weight and BP recorded</p> <p>4. Smoking status recorded</p>		clinic visits	<p>clinics in 4th Quarter 2014:</p> <p>1. Problem list = 83%</p> <p>2. Med Allergy = 98%</p> <p>3. Vitals = 83%</p>
<i>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.</i>				
	<p>5. Medication and lab orders through CPOE</p> <p>6. Electronic prescribing (E-Rx)</p>	0%		<p>For visits at live clinics in 4th Quarter 20156:</p> <p>1. CPOE = 9910099%</p> <p>2. E-Rx = 929486%</p>
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	<p>1. Provide electronic access to patient portal</p> <p>2. Patient specific educational resources</p>	0%	80% or above	<p>For visits at live clinics in 4th Quarter 2015:2016:</p> <p>1. Patient Portal = 6647%</p> <p>2. Ed resources = 7174%</p>
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 protections and accountability of access to safeguarded Protected Healthcare Information as	n/a	n/a	n/a	

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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 <u>1</u> million over 6 years	\$2,006,000.00 1,147,500 has been received_ as of Feb 10, 2016. Another \$42,500 is pending approval.

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 – 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?

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
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:

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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

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 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 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.

Update 2/16/16: 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.

Update 2/2/17: Implementation planning is underway, including discussions with Harborview Medical Center for an image storage solution.

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	Processing time, annual savings, and percentage of purchases	<ul style="list-style-type: none"> • 10 days processing time • 10% of purchases are receiving 	<ul style="list-style-type: none"> • 1 day processing time • 30% of purchases are receiving 	<ul style="list-style-type: none"> • 2 day processing time • 20% of purchases are

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<i>of ten days to less than one allowing us to take advantage of prompt payment discounts.</i>	<i>receiving prompt payment discounts</i>	<i>discount</i> <ul style="list-style-type: none">• <i>Savings of \$100,000</i>	<i>prompt payment discounts</i> <ul style="list-style-type: none">• <i>\$400,000 savings</i>	<i>receiving prompt payment discounts</i> <ul style="list-style-type: none">• <i>\$200,000 savings</i>
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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 (PH) / Jail Health Services (JHS)
Project Title	JHS Electronic Medication Administration (eMAR) 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.

[Judy MacCully, Public Health Regional Administrator, Jail Health Services](#)
[Michael Gedeon, Chief Administrative Officer, Public Health](#)

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
Harjinder Sandhu	Pharmacist / JHS	Process Owner
Payshan Lee	Pharmacist / JHS	Process Owner
Sean Dumas;	Nursing Supervisor/JHS	Process Owner
Kerry Maccini	Nursing Supervisor/JHS	Process Owner
Shawna Harris	FA - II	Project Manager



**Kaizen Event Team: Pharmacy, Nursing, Medical and Psych
JHS Staff and Lean facilitators**

Back row: Mike Zdravecky; Harjinder Sandhu; Aisha Whittaker; Sandy Macdonald; Jennifer Jones-Vanderleest; Cynthia Ta (behind Melissa) Dean Webb; Sean Dumas; Patrick Kuritz; Greg Burnworth; Jeremy Valenta

Front row: Mike Schroeder; Ghia Coloma; Glenn Lirman; Sharon Rederford; Payshan Lee; Becky Berry; Kathy Woodruff; Danotra McBride

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?
<i>Please use conceptual review, budget process, funding release, annual report, project implementation, or project completion.</i>	<i>Date this document was updated</i>	<i>Who did the document updates?</i>	<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>	<i>How long did it take to complete or revise the form at this stage?</i>
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
Project put on hold	6/1/2015	Casey Cassidy	Vendor failed to meet contractual terms, contract cancelled. JHS has been focused on successfully implementing HIT OCHIN/EPIC.	15 minutes
2015 Annual update	3/15/16	Tom Thompson	Status update	10 minutes
2016 annual report – BAP update for an ongoing project	2/2/17	Brandi DeFazio	Status 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 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).

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 [Kaizen-Kaizen](#) Event which served as a way of creating a foundation for an improved future state for medication management and the integration of the [eMar-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 in April 2014

Update 3/15/16: This project has been put on hold pending implementation of the Epic electronic health record, currently scheduled for May of 2016. Implementation planning for Electronic Medication Administration Project will begin again as resources become available starting in Q1 of 2017.

Update 2/2/17: Discussions are underway with OCHIN, Public Health's electronic health record (EHR) vendor, to determine whether they can assist JHS with procurement of an eMAR solution that will be integrated with the EHR. A major upgrade to the EHR is scheduled for May, 2017. Therefore, planning for this project will not be able to start until that is completed.

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 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	<ul style="list-style-type: none"> • 10 days processing time • 10 percent of purchases are receiving discount • Savings of \$100,000 	<ul style="list-style-type: none"> • 1 day processing time • 30 percent of purchases are receiving prompt payment discounts • \$400,000 savings 	<ul style="list-style-type: none"> • 2 day processing time • 20 percent of purchases are receiving prompt payment discounts • \$200,000 savings