



**King County**  
Elections

# Strategic Technology Plan 2014 - 2018




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# Executive Summary

King County Elections is committed to a measured approach to the development and implementation of election technology and will use established technology objectives to help steer our projects and support our Mission Statement.

 *With integrity and a commitment to innovation, we provide all citizens the opportunity to participate in and protect the democratic process.*

Election administration in King County sits at a crossroads. The Department of Elections is committed to sustaining the record of success it has built via the vote-by-mail system. However, the current elections landscape, combined with increased demand for additional election services requires increased emphasis on long-term and strategic planning. We believe the single greatest driver of continuous improvement will be the strategic use of technology to support our goals.

King County Elections must plan and prioritize its investments that support technology projects and ensure the greatest value is achieved for every dollar spent. The intent of this document is to articulate a framework for specific technology investments by aligning each proposed project to one or more of the following departmental goals as noted in the King County Elections 2014-2018 Strategic Plan:

- **Financial Stewardship** – Exercise sound financial management to address our future operational needs. The technology strategic plan aims to achieve the highest value for committed resources and determine a funding strategy for future development.
- **Service Excellence** – Deliver effective services that are responsive to community needs. The technology strategic plan provides the foundation for innovative solutions and process improvements.
- **Public Engagement** – Provide comprehensive public engagement to inform, educate and involve people and communities. The technology strategic plan sets a foundation for accessibility and outreach.

In addition, the Department has established key technology objectives to assist in aligning projects with its vision of the future of elections administration.

Technology Objective	Anticipated Business Benefits
<b>Mobility</b> - enabling voters to participate in elections and access information when and where it is appropriate for them.	<ul style="list-style-type: none"> <li>• Greater transparency to the public and stakeholders</li> <li>• Increased voter access, opportunity and convenience</li> <li>• Increased voter education and public engagement</li> </ul>
<b>Increasing Service Applications</b> - providing accurate, timely, personalized election information and data in a consistent, easy to use format.	<ul style="list-style-type: none"> <li>• Decreased reliance on in person transactions</li> <li>• Increased number of engaged, informed voters</li> <li>• Increased internal information sharing</li> </ul>
<b>Systems Sustainability</b> - modernizing and upgrading our systems/equipment to ensure our continued ability to securely and efficiently conduct elections now and in the future.	<ul style="list-style-type: none"> <li>• Increased cost containment</li> <li>• Increased ability to maintain continuity of operations</li> <li>• Greater trust in the election process</li> </ul>

Technology Objective	Anticipated Business Benefits
<b>Secure Systems</b> – all systems meet and exceed county, state and federal election security requirements.	<ul style="list-style-type: none"> <li>• Increased trust in the elections process</li> </ul>

Major projects in progress as of this writing include the Election Management System (EMS) Replacement and Web Redesign projects. The Department’s goal of Financial Stewardship was the driver of the EMS Replacement project and will result in lower operating costs (\$68k per biennium), reduced need for workarounds and side systems. The Web Redesign project aligns with the department’s Public Engagement goal and Mobility objective by providing a friendlier user interface across all devices. We anticipate lower call volumes as a result of voters finding it easier to locate information via our website. Both of these projects are scheduled for a December 2015 implementation.

Other projects planned during the 2015-2019 lifecycle of this document include the Tabulation System Replacement, Online Ballot Marking Program (OBMP) expansion, and Accessible Voting Solution Replacement projects. The Tabulation System Replacement project aligns with the department’s Financial Stewardship goal and Systems Sustainability objective by responsibly seeking an upgrade to an integral system that has reached the end of its lifespan.

The OBMP Expansion project aligns with the department’s Service Excellence goal and Mobility objective by sustaining opportunities for Military and Overseas voters to access ballot information and cast their votes while abroad. OBMP expansion could also provide a roadmap to the future of voting by increasing online and mobile ballot delivery methods. The Accessible Voting Solution Replacement project aligns with the department’s Public Engagement goal and Systems Sustainability technology objective by providing accessible voting opportunities (as required by law) through the use of new hardware and systems.

This document provides more information, including the anticipated benefits, anticipated costs (both one-time and ongoing, where known) and preliminary timelines pertaining to each proposed project during the lifecycle of this Strategic Technology Plan.

## Introduction

King County Elections administers elections for 1.3 million registered voters and conducts up to four elections each year. In February 2009, the newly established Department of Elections conducted its first all-mail countywide election, making King County the largest jurisdiction in the United States to conduct elections entirely by mail. The Department is staffed by 65 employees who have a strong sense of pride and commitment to the work they do.

Working in collaboration with the County Council, Elections has established a record of secure, accurate and transparent processes, and since 2004 has implemented more than 300 reforms and process improvements resulting in a record of 25 straight elections with zero discrepancies (as of August 2015). While most of Elections' accomplishments can be attributed to the amazing work performed by elections staff, we would be remiss in not calling out the role technology plays in supporting our business.

Our election management system enables the registration of new voters and maintenance of accurate, up-to-date voter rolls. Our data systems and networks provide a secure environment to build, sort, scan and tabulate ballots and report election results. We utilize specialized hardware to provide in-person voting access and our online services provide voters with information and data related to current and past elections. We use technology to track and reconcile the many manual processes required in a paper ballot environment. Because of our reliance on technology, we are constantly assessing the technology landscape to gauge our part in it.

An important component of the current election technology landscape is the relative lack of systems on the market and the framework of legislative and regulatory requirements placed on the solutions that do exist. There are only a handful of companies capable and/or willing to design, manufacture and support elections technology- to the point where Los Angeles County has decided to design, build and support its own comprehensive election system- requiring a large investment of taxpayer money and a high tolerance for risk. The few products or upgrades that do make it to market are subject to strict federal certification and regulatory requirements (administered by the U.S. Election Assistance Commission and the Department of Justice's Federal Voting Assistance Program). These regulations require extended testing and review periods before new equipment and technology can be fully implemented by local election departments.

In response to this national landscape, county election departments across the country, including King County, are looking to invest wisely in technology, share best practices and shape how elections are conducted in the future. Our nationally recognized work in the area of military and overseas voting is an example of one such project. Multnomah County in Oregon has been an early leader in accessible voting systems. Denver County, Colorado, has implemented new Voter Service and Polling Center (VSPC) and electronic petition gathering technology. Miami-Dade County was an early adopter of the ballot sorting system ultimately deployed here in King County. Lastly, Election officials around the world followed Honolulu County's pilot program to offer an online voting system during a 2009 local election.

Changes within King County are also contributing to the Elections landscape. Consequently, we anticipate increased demand for new and enhanced services. Changing demographics in King County are reflected in the voting population as voters grow more ethnically and linguistically diverse. This leads to an increased need for voter outreach and education to engage new and future voters. Lastly, younger voters are increasingly searching for ways to transact with local government through online and mobile applications. These factors, among others, are critical drivers of our technology strategy and our vision of the future of elections.

## The Future of Election Administration in King County

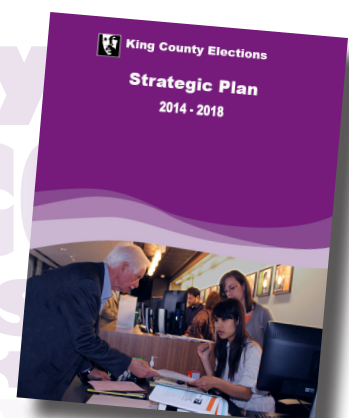
The future of elections in King County will be determined by investments made and objectives established today. Nationally and at the state level, there is a push to standardize and consolidate systems. By 2035, we envision a statewide (if not national) voter registration system to allow for more effective and secure registration management and increased opportunity to engage with the election process. Mobile and self-serve applications will be the norm and if national, political and/or ideological winds begin to change, the use of online voting in the future is probable. Based on this vision of the future state of election administration, we are taking steps to modernize and upgrade our systems and position our application development to provide increased opportunities for all.

## King County Elections Technology Objectives

King County Elections has set goals to accomplish specific business projects in the next five years, as laid out in the 2014-2018 Elections Strategic Plan. These projects align with department and county goals in the areas of Financial Stewardship, Service Excellence and Public Engagement. In addition, we have established technology objectives for the next five years in the areas of Mobility, Increasing Service Applications, Systems Sustainability and Secure Systems. These objectives are meant as a means to connect our technology projects to our strategic goals.

Strategic Plan Project	Technology Objective(s) Realized
Evaluate the feasibility of automated signature verification	Systems Sustainability - upgrading an existing system to realize new efficiency through automation of a current manual process.
Form an electronic voting team/Conduct an electronic voting demonstration	Systems Sustainability / Secure Systems - position our technology, processes and security systems (through research and upgrades) to be compatible with possible future voting methods
Conduct an assessment of barriers to voting for those with disabilities (Accessible voting)	Systems Sustainability/Mobility - ensure our ability to meet legislative mandate for accessibility and increased opportunities to participate in elections via mobile services.
Obtain a CRM	Increase Service Applications – increased quality communications with voters.
Increase self-service and subscription options on the website.	Increase Service Applications/Mobility – increased access to timely and personalized election information available when and where the voter is ready to receive it.
Form a technology governance team	Systems Sustainability, Mobility Increase Service Applications and Security.

Teamwork Integrity  
 Transparency Accuracy  
 Resolute Excellence  
 Fairness  
 Teamwork  
 Respect Accuracy





# How Technology Projects Support KCE's Goals



## Financial Stewardship

At King County Elections, Financial Stewardship is the exercising of sound financial management to address our current and future operational needs. To that end, we are actively planning for projects to replace and/or upgrade the systems that allow us to successfully administer elections.

Technology Project	Anticipated Business Benefits	Anticipated Cost	Schedule/Target date
Election Management System Replacement	Lower operating cost; reduced need for workarounds and side systems; alignment with other WA counties for increase in efficiencies.	Implementation cost: \$285,000 - covered in 2015-2016 budget. Term-limited IT Project Manager covered by existing operating budget. Ongoing operating cost: net decrease of \$68,000 per biennium.	New system "go live" date: 12/7/15. Final acceptance: 5/31/16.
Tabulation System Replacement	End of lifespan; responsible planning for replacement system; increasing bandwidth	\$3.0 - 3.5 million acquisition cost. Ongoing operating cost: no anticipated incremental cost.	Initial research (including an RFI) in 2016 with a potential 2017-18 budget request.
Hardware/Software/ Systems replacement, upgrades, maintenance	Faster processing and decreased issues with maintenance and performance	\$450,000 - 500,000 in acquisition cost. Ongoing support costs absorbed in normal operating budget.	Phased approach; planned replacement starting in 2017.
Automated Signature Verification (ASV)	Increased processing speed; increased election night results; lower costs by reducing dependence on use of short-term temporary workers	Anticipated cost unknown at this point	Dependent on legislative changes; next opportunity for research in 2017



Staff working on implementation of new Election Management System

## Election Management System Replacement

The application at the heart of election administration work is the Election Management System (EMS). The EMS is the database housing all voter, jurisdiction and contest records. It is the official repository of voter registration data. This database also contains an integrated Geographic Information System (GIS) component that maintains the relationship between each voter and their precinct. The EMS also captures and stores electronic images of voter signatures and is used to confirm voter identity during petition verification and ballot processing.

The current EMS used by King County Elections is, as of 2015, over eleven years old and requires the use of extensive work-a rounds and side systems to fully integrate its data into current business processes. A project was initiated in 2014 to evaluate replacing this system and the result of this effort has been the procurement of a new EMS. Work to configure and implement this new system, called EIMS (Election Information Management System) will extend into the second quarter of 2016. The new system provides value by fully integrating many current business processes into the application and reduces the number of side systems, thereby freeing up existing FTE Application Developers to work on additional business projects. The annual maintenance and leasing fee is also lower than the current EMS (\$68,000 less per biennium). The result of this project is a system that provides more value for less cost.

## Tabulation System Replacement

The system currently used to scan ballots, record voter selections and calculate election results - together called the “tabulation system” – is made up of sixteen specialized high-speed document scanners, corresponding tabulation software and dedicated servers. The system runs on a Windows XP platform that is no longer supported by Microsoft. The scanning hardware is currently in year eight of a planned ten-year life cycle. The system has reached its maximum bandwidth and cannot be configured to grow as our need for processing capacity increases. We are evaluating systems that are currently in the process of becoming federally and state certified that meet our needs. This includes hardware and software associated with the tabulation process (for background on accessible voting solutions, a component of most tabulation systems, see the section below titled “Accessible Voting”). Cost estimates for this project and a sustainable funding strategy are in the developmental stage.



*Election worker scanning ballots*

## Regular Hardware/Software/Systems Replacement

Like most modern business organizations, the Elections department depends on basic technology products and services to deliver services and accomplish everyday tasks. Periodic replacement and/or upgrades to personal computers, printers, tablets, monitors and enterprise business software is needed to remain effective and efficient. King County Elections has established a regular six year cycle of replacement for basic products and services. Based on this schedule, we will move forward with a replacement and upgrade project starting in 2016.



*Election workers verifying signatures*

## Automated Signature Verification

King County Elections strives to maintain an environment of continuous improvement and has instituted process improvements that save time and contain costs. One potential improvement is automating the signature verification function during the processing of ballots. To that end, the department has initiated a project to evaluate the feasibility of Automated Signature Verification systems, a tool that could substantially reduce the time taken to process incoming ballots, reduce the number of election workers needed to process ballots and consequently reduce costs.





## Service Excellence

The Department goal of Service Excellence is represented by our commitment to deliver effective services that are responsive to community needs. King County Elections is investing in specific service enhancements and additions to help sustain and grow public trust in the democratic process and the effectiveness and credibility of King County government in general.

Technology Project	Anticipated Business Benefits	Anticipated Cost	Schedule/Target date
Ballot reconciliation: <ul style="list-style-type: none"> <li>Quality Assurance Application</li> <li>Batch Tracker</li> </ul>	Sustain and grow our ability to prevent ballot discrepancies.	No incremental cost; No incremental ongoing costs anticipated.	Application development work will go live with new EMS on 12/7/15; maintenance is ongoing
Geographic Information Systems (GIS)	Improved accuracy and efficiency while improving voter access through new applications.	Centrally budgeted	GIS maintenance of operations and development of new applications is ongoing
Online Service Enhancements: <ul style="list-style-type: none"> <li>Candidate Filing/ Voters' Pamphlet submissions</li> <li>Provisional ballots</li> <li>Ballot Return Statistics</li> <li>Election Results Resource Center</li> <li>My Voter Profile (MVP)</li> </ul>	Increase voter access to available elections data streamlining elections web applications to central points of contact and accessibility. Updating aging web applications with newly developed applications or modified and advanced updates.	No anticipated incremental cost; No incremental ongoing operating costs anticipated; existing FTE Application Developers	Application development work is ongoing from 2015 through 2017; maintenance is ongoing.
Enterprise Solutions: <ul style="list-style-type: none"> <li>SharePoint</li> <li>Lync (Call Center Solution)</li> <li>CRM</li> </ul>	Leverage existing enterprise solutions for internal collaboration and Call Center management	Centrally budgeted	SharePoint development is ongoing; Lync is dependent on KCIT service solution. Limited rollout of CRM scheduled by year end 2015.
Online Ballot Marking Program	Sustaining opportunities for Military and Overseas voters; possible expansion of online ballot delivery to all voters	Current operating costs are funded by federal grant (set to expire 12/31/2018). Ongoing operating cost is \$25,000/yr.	Current system development/ maintenance is ongoing.

## Ballot Reconciliation Upgrades

Accuracy is a fundamental department value and a cornerstone of the election process. Substantial time and resources have been and will continue to be devoted to ballot reconciliation. The ability to track the status of each returned ballot (at both the batch and ballot level) ensures our ability to discover and correct potential discrepancies and to conduct root cause analyses to prevent future potential discrepancies. Internal developers will ensure the new EIMS is compatible with the existing Quality Assurance process and Batch Tracker application (also developed in-house). As business processes evolve, we will continue to develop new points to track, and as the new EIMS matures, staff will discover new opportunities to innovate in this area. Existing staff at all levels of the organization are responsible for accuracy and these efforts and associated costs are incorporated into our regular operating budget.



*Ballot sort staff*

## Geographic Information Systems

Maintenance of an accurate voter/precinct/district database is the cornerstone of an election management system. To support this business need, Elections Technical Services and GIS staff will work to ensure the compatibility of the new EMS with our current GIS processes and develop applications to support other business projects and goals. Among the new applications is increased demographic data analysis and mapping to support our voter education and outreach efforts and refinement of the public review process for precinct alterations to improve efficiency and access. The budget for dedicated GIS and related software is covered by the county's Enterprise License Agreement (ELA) with ESRI and is provided by the KCGIS Center for the department. The department's share is based on pooled ESRI software usage costs and dedicated ELA-based GIS software rates.

## Online Enhancements

Providing accurate, timely and personalized election information online plays a major role in responding to demand for effective services as evidenced by the high level of traffic to the KCE website during election cycles. Elections plans on making investments to develop additional online self-serve options and increased access to real time data via new web-based applications. We will work with KCIT to evaluate resource needs to accomplish this work and the current project to redesign our website (scheduled for completion in December, 2015) has already revealed opportunities for enhancements.



*Phone bank staff*

## Leveraging Existing Enterprise Solutions

In order to provide excellent service, the Elections team must stay informed, engaged and connected and a system to share this information with the public must be in place. During the 2015-2019 timeframe, Elections will continue to leverage SharePoint, developing new internal applications for collaboration and information sharing. Elections will also continue to work with KCIT to implement a Call Center application compatible with the Skype for Business solution to manage the thousands of phone calls we receive during each election cycle. Finally, we plan to partner with

KCIT on a limited department roll out of the enterprise Customer Relations Management (CRM) system. Internal services provided by KCIT are charged centrally and costs for these projects are part of the ongoing operating budget.

## Online Ballot Marking Program

Military and overseas voters have the option to receive an email informing them that their ballot is available. They can then go to the OBMP (an external website) to access their ballot, mark their selections, then print and deliver their ballot to the King County Elections office via mail, email, or fax. Elections will undertake a research project to evaluate the feasibility of using our current OBMP as our first foray into providing alternative methods of voting for all. Operating costs for the existing system are covered by a federal grant, scheduled to expire on 12/31/2018.



### Public Engagement

Engaging voters and the community at large is an emerging topic in the elections industry as voter demographics change, communication methods evolve and new questions about civic engagement are posed. Our office identified Public Engagement as a priority and it makes up a major component of the King County Elections Strategic Plan. Therefore, we are planning on investments to assist with business in this area. Specifically, these projects will assist in distribution of election related information and voting opportunities to wider audiences and traditionally underserved communities.

Technology Project	Anticipated Business Benefits	Anticipated Cost	Schedule/Target date
Online Enhancements – Voter Education & Outreach	Better support for voter education and outreach efforts	Cost absorbed in project below. No incremental operating cost anticipated	Scheduled for completion Dec., 2015; maintenance and continuing development is ongoing.
Website Redesign	Increased mobility, more user friendly user interface. Easier to find information leading to less need for voters to call KCE.	Project to date: \$143,000 plus contract web developer (cost TBD). No anticipated ongoing operating cost.	Scheduled for completion Dec., 2015; maintenance and continuing development is ongoing.
Accessible Voting Solution Replacement	Sustained accessible voting opportunities as required by law; Improved and updated user and administrator interface.	Component of tabulation system replacement project (\$3-3.5M). Ongoing operating cost unknown at this time.	Potential 2017-18 budget request

### Online Enhancements

The Voter Education & Outreach page of the King County Elections website contains resources, toolkits, an events calendar and links to downloadable election information materials intended to support community organizations, advocacy groups, educators and communities of Limited English Speakers (LES). As the redesigned website is rolled out in December, 2015, existing internal resources will focus on additional content and application development for the page will proceed. Included in this effort will be: a minority language translation element and the publishing of interactive election-related demographic maps.

## Website Redesign

King County Elections will complete a website redesign in December 2015. The purpose of the redesign is to update the architecture of the current website to conform to new County website design standards. The redesign utilizes user-centered and responsive design techniques to ensure the new website is optimized for viewing on a range of devices and can support additional online personalized election applications.



*Outreach event to assist voters with disabilities*

## Accessible Voting Solutions

Accessibility is a department value and a part of our mission statement to “provide all citizens the opportunity to participate in and protect the democratic process.” Access to the voting process, including casting an independent ballot, is a right that all registered voters possess. The current solution for Accessible Voting in King County is the Accessible Voting Unit (AVU). AVU’s are touchscreen voting machines that allow voters to independently access and cast their ballot. AVU’s have accessibility features such as high contrast screens and an audio component for visually impaired voters.

AVU’s are deployed at Accessible Voting Centers (AVC’s) and are available to all voters who need or want an in-person voting option. The current accessible voting system hardware is approaching its useful life cycle and the software’s operating system is over ten years old. Replacement of the system as a whole is needed. The software used to operate the accessible voting solution must be compatible with the tabulation and election management systems and any new solution

is subject to the same federal certification requirements and timelines. Based on these conditions, this project would replace the existing software and hardware to provide the community with an up to date system that is more user friendly and accessible.

## A Framework for Technology Project Decision Making

The projects reported on in this plan were developed by the Election Leadership team in consultation with KCIT, PSB and Council over the course of the preceding four years. During the term of this plan, we are expanding the project decision making process to include a newly formed Technology Governance team comprised of department operational and Technical Services staff. The Elections Technology Governance team will be tasked with the evaluation of potential projects and development of recommendations.

Project evaluation criteria include; a needs assessment, security assessment, cost/benefit analysis along with an assessment of a project’s alignment to the established technology objectives outlined in this plan. Project analysis will then be presented to the Elections Leadership team for further development and stakeholder/partner input (Council/PSB/KCIT/CISPO). Based on consultation with these stakeholders, possible funding strategies and timelines are explored. Through this process, we will continue to develop technology projects and solutions that assist us in achieving our goals and sustaining the standards of excellence we promise to voters.