King County Information TECHNOLOGY

King County, Washington
Strategic Information Technology Plan 2016 – 2019

2017 Update

April 2017

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2017 Strategic Information Technology Plan Update

In 2015/16, the Department of Information Technology, also known as KCIT, developed and published the Strategic Technology Plan 2016 – 2018 which provides strategic direction regarding King County's information technology (IT). The plan identifies the most appropriate technology objectives needed to focus IT on delivering business value to our customers. The Strategic Information Technology Plan (SITP) is publicly available on the King County website at: http://www.kingcounty.gov/business/oirm/governance/strategicservices/strategicreports.aspx.

Creation of the 2016-2019 Strategic Information Technology plan utilized a full strategic planning process to align our technology strategy with the County's current and future business needs. This has included input and guidance from our Strategic Advisory Council, which includes elected officials from all branches of King County government as well as external industry expert advisors. In addition, business and information technology leaders throughout county government participated in formulating future direction. Performing an environmental scan that includes King County's strategic and line of business plans as well as information technology industry trends has also helped to set the stage for the technology strategies needed to carry us effectively forward through 2019. The plan was adopted by the King County Council in September 2016 contingent upon an amendment to the plan that clarifies and updates the performance measures that are used to assess strategic progress. A separate but concurrent code revision also extends the SITP to cover the years from 2016 through 2019, to align with the new four-year timeframe described in King County Code 2A.380.200(B).

King County Code 2A.380.200(B) also requires the submittal of an annual update to the SITP. This report provides an update on progress made since the inception of the plan.

King County's Strategic Information Technology Plan

KCIT is committed to increasing the value that information technology brings to our internal business partners and to King County's many and diverse external customers. This means ensuring that the accomplishment of our information technology strategies positions and empowers our partners to accomplish their goals as stated in the King County Strategic Plan as well as in tactical and operational line of business and agency plans. It also means that we can respond quickly with our partners to changing business needs and new technology opportunities that can add value to business operations leading to service improvements for our customers.

We believe this is best accomplished through open, transparent, efficient, effective, and service-focused planning and operational activities. This summary illustrates how KCIT services align with customers as well as technology domains. It also shares strategic initiatives across several years in all of our service areas. This provides context for how our efforts fit together to help meet our technology and business strategic goals and objectives.

Measuring Progress

Measuring strategic progress is based on looking at movement towards mid- and long-term goals that have been identified for strategic technology objectives. Several metric changes have been introduced with this update to respond to the amendment request by Council and to clarify appropriate measures. Now included are five additional IT operational performance metrics that have been added to Appendix B of the Strategic Information Technology Plan 2016-2019. Other metrics have either been clarified or added to improve their alignment with customer results and outcomes. Details related to these metrics are included within Appendix A - Strategic Technology Indicators by Objective.

Overall Results

As is the case with any long-range plan, changes that occur over time will influence the value, priority, and feasibility of different components of the plan. Several metric changes have been introduced with this update to respond to the amendment request by Council and also to clarify appropriate measures.

There are now 21 metrics overall. Sixteen of the metrics apply to the strategic information technology objectives with the remaining 5 relating to enterprise IT operational performance. Overall 15 metrics made positive progress while three are still being defined. Of those still to being defined, one depends on a more mature analytics environment to measure, and the other two will be implemented in Q2 2017.

Strategic Objective	#	Metric Status
Digital Civic Engagement	5	
Workforce Empowerment	3	
Data Driven	2	
IT Mobility	4	
Effective Digital Systems	2	
IT Operational Performance	5	

Results by Technology Objective

The following sections of this report describe overall progress related to each technology objective and highlight significant areas of progress and/or areas of increased focus.

Digital Civic Engagement

There are five metrics defined for the digital civic engagement objective.

All five are making expected progress.

King County's ongoing growth of our social media program has made King County the second largest local government social media network in the nation. There were 340,382 subscriptions at the end of 2016. Residents who signed up received information on county services. With likes, reposts, and other ways of sharing through social media – this translates to a calculated reach of almost 42 million views. With a broad following in place, we are now turning focus towards interaction rather than just publishing. KCIT has started the process of engaging departments in digital civic engagement with the acquisition of our digital town hall product. An initial pilot with the Vashon-Maury Island community plan has shown the ease and speed with which new issues or content for discussion can be brought to a targeted community audience for feedback and dialogue.

The percentage of households in King County with broadband access to the Internet is also high when compared nationally; however, there are many parts of our county where access is limited. We are looking to improve access in underserved areas and have started by embarking on a digital equity program. An initial pilot within the program is to partner with the Renton School District to ensure all of the students in their laptop program who qualify for free or reduced lunch also qualify for broadband Internet access at their home utilizing our I-Net service. We have also made great strides in standardizing and increasing electronic payment opportunities with King County. King County's Electronic Payment Expansion Project plays a key role in helping King County residents realize the benefits of more electronic and online payment options. In 2017, the project's primary focus is to successfully migrate all 17 of the County's existing e-payment applications to the County's new standard (Point & Pay LLC). Beginning in 2018 the project's focus will expand to implement new and expanded e-payment services with a goal being that 80 percent of all services/products that residents are able to purchase from King County can be conducted with some form of electroinc payment.

Workforce Empowerment

There are three metrics defined for the workforce empowerment objective.

All three are making expected progress.

When creating this strategic plan, customers spoke loud and clear about their need to better utilize and leverage the existing technology at their fingertips. In response, KCIT has invested in a more in-depth training program that provides hands-on training based on meaningful case studies and allows King County employees to fully leverage key enterprise tools. KCIT has set a goal of providing collaboration training on our document sharing tool, SharePoint, for 3,000 King County employees by early 2018. Better understanding and utilizing this tool enables users to improve business workflows, collaborate on content more effectively and with less waste and communicate information more effectively with targeted and broader audiences. Our roadmap also includes training for robust call center capabilities and data analytics tools. Taking advantage of the advanced call center capabilities now available can have a significant impact on our ability to respond to customers more quickly and effectively. Data analytics offer the ability to more easily turn data into information, leading to understanding/insight and, consequently, better decision making. SharePoint training is already well underway at both the basic and intermiate levels with excellent response from attendees so far. Courses for call center and data analytics tools are planned to start in April and June 2017, respectively.

Data Driven

King County's maturity level related to data management is rising as we make progress in implementing our new data analytics service. After initially starting at a maturity level of 1.1 out of 5 at the start of 2016, we have moved to 1.3 with a goal by 2019 to be at or above 2.1. Key progress since our baseline assessment includes:

There are two metrics for the data driven objective.

One is making expected progress while the other will be defined once our data service is more mature.

- Hiring King County's inaugural Chief Data Officer
- Procuring a new enterprise-level, cloud-based tool for data integration and data quality improvements
- Hiring two Data Architects who are working closely with business units throughout King County on new Business Intelligence solutions and in preparation for large data warehouse projects
- Approving two data warehousing projecs as part of the 2017/18 budget to support transit and health organizations, respectively

IT Mobility

We have seen steady and expected progress in three targeted areas related to IT mobility:

There are four metrics defined for the IT mobility objective.

All four are making expected progress.

- Enhanced wireless capacity
- End-point device migration to laptops
- Utilization of our unified communication capabilities through Skype for Business

In March 2017, KCIT completed an upgrade of all wireless access points at the King County Court House. In addition, when our county business partners move to new facilities, we work to promote wireless sites, which are more cost effective and take less time to deploy. The County's first all wireless facility is the Department of Public Defense's Dexter Horton location. Laptops now compose almost 40 percent of all end-user devices with quarterly increases meeting planned volumes. Skype for Business volume continues to grow as user skills increase around collaboration. Three conference room configurations have been created as service offerings to best take advantage of our video, audio, and desktop sharing capabilities from conference rooms.

Effective Digital Systems

Significant progress has been made prior to the start of this strategic plan related to the infrastructure that supports all systems. This plan has turned the focus away from infrastructure and onto overall systems in order to leverage the value of improved platforms as well as to increase the overall value to our customers.

There are two metrics defined for the effective digital systems objective.

Both are making expected progress.

In 2016, application portfolio information for all of King County was collected and is now being used to better determine how to rationalize our applications most effectively. Two metrics have been defined with baselines set in order to best determine if we are accomplishing this objective: Cloud adoption and Service Oriented Architecture (SOA) adoption. Cloud adoption measures how quickly our applications are taking advantage of the major infrastructure investment. SOA adoption measures how well we are able to re-use rather than re-build various components of our systems – a major tenent of modern application architecture. In 2017, roadmaps will be created that identify the plans for how each department and agency will modernized over the next four years.

A major focus for modernization has been the Puget Sound Emergency Radio Network (PSERN), which is looking to implement a regional upgrade to the critical but aging emergency radio system. The PSERN project continued to work on the system design with the system vendor, Motorola Solutions, Inc., and has accepted half the overall system design deliverables. The PSERN project has also been working to gain formal rights to locations to be used for construction of radio sites and installation of the electronic equipment needed for the upgrade. Lastly, construction and/or improvements to several radio sites began late in 2016.

Operational Outcome Measures

Enterprise IT operational outcome measures have been added to the strategic plan as requested by Council. Five areas have been identified and are included in the table below. Three of these measure are existing metrics tracked within KCIT and two are new measures that will also be tracked by KCIT:

- Security Scorecard
- Response to Incidents
- Response to Service Requests
- Customer Satisfaction
- Service Level Agreement Dashboard

The first three measures are tracked on a monthly basis and are trending towards targeted performance goals. The fourth metric will be launched in the second quarter with surveys conducted quarterly after that. The fifth metric is a real-time dashboard that is currently under development and will be available to all IT customers to review and drill down into various performance metrics that are contained within their customer SLAs. The dashboard is currently being piloted and has been demonstrated to the Technology Management Board and Business Management Council governance committees. It is planned for full launch in second quarter and will be continuously improved throughout the year.

Project Benefit Achievement Results

Project benefit reporting is performed by all capital projects involving IT. This reporting is done annually with projects that may have one of four status': Approved but not started, Active, Complete but still expecting increased benefits, or Final. The following table from the Benefits Achievement Plan (BAP) report indicates how many projects of each status are included in the 2016 report.

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**

Table A: Breakdown of BAPs by Type

Of the 14 projects that submitted final BAPs, 71 percent met or exceeded their initial benefit goals. The remaining 29 percent did not meet or only partially met their initial planned benefit goals.

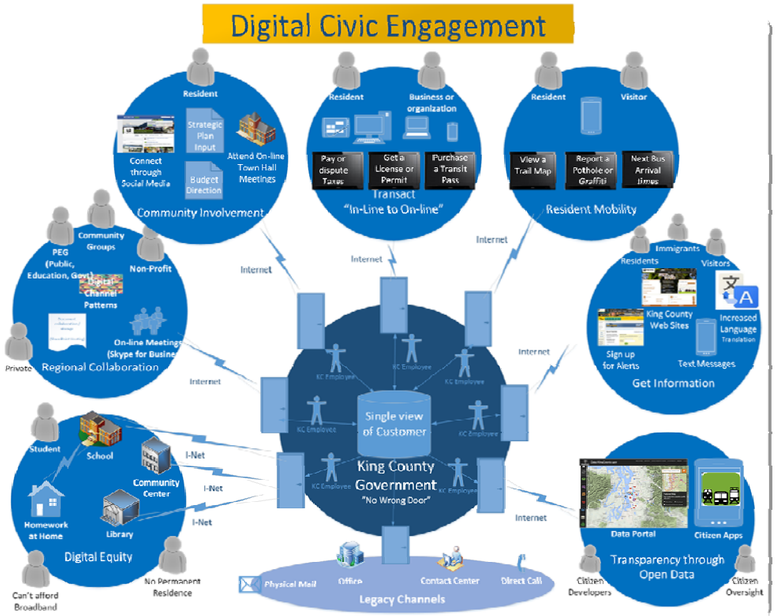
Projects are also categorized by the primary benefit they expect to achieve which is displayed in Table B below.

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%**

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

Further information on each project and their reported benefit plans and results can be seen in the IT Benefits Report for Year Ending 2016 created by the Office of Performance, Strategy, and Budget and transmitted to Council in April 2016.

Appendix A – Strategic Technology Indicators by Objective



Information Technology Objective: DIGITAL CIVIC ENGAGEMENT

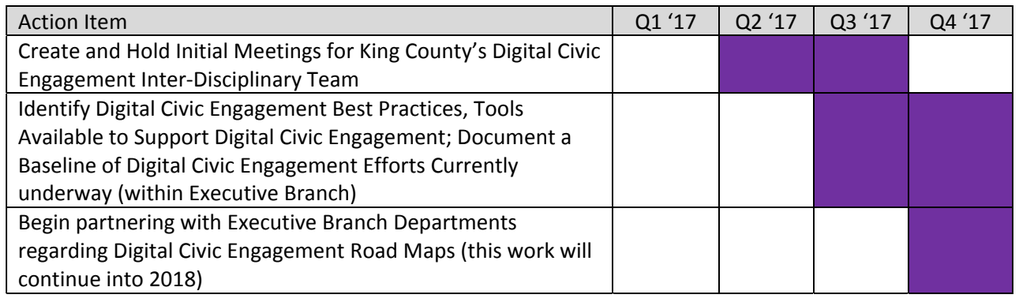
Leverage IT platforms and tools as a channel to increase the opportunities, convenience and audience engaging with government

Accomplishing this objective is expected to provide the following benefits:

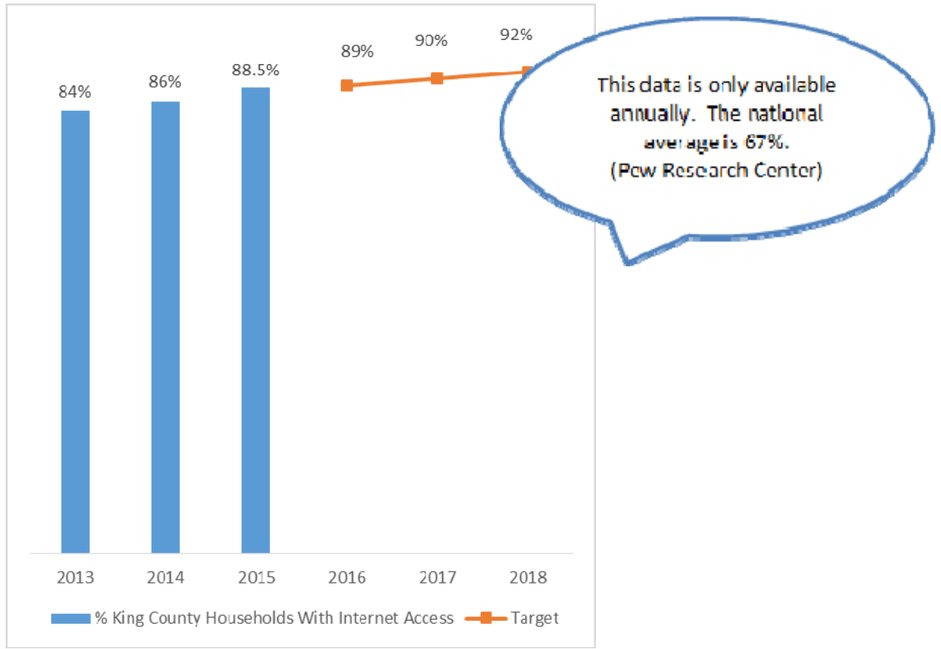
- Increased citizen participation in government.
- Deeper, more impactful government presence in our communities.
- Faster, more convenient delivery of services to the public.
- Improved customer understanding and satisfaction with King County.
- Greater transparency of government operations.
- Increased equity of participation.
- Increased collaboration with regional partners.
- Reduced unit costs for government services.

Increased access to and participation in government leads to improved government services and value from those services.

Indicators	Chart or Metric	Highlights/progress	Hurdles
Outcome 1A: Online Public Outreach **<u>Social Media Program Growth</u>**	 **Individual Subscriptions to King County's Social Media Program**	King County strives to engage and inform residents in ways that are technologically convenient, including the KingCounty.gov website and various countywide social media, email, and text message communications. Successful online public outreach allows residents to access and learn about King County services freely and easily, and to participate in local government through the innovative use of online tools. King County is measuring Online Public Outreach in two key areas. The first looks at the effectiveness and ongoing growth of our social media program which has made King County the second largest local government social media network in the nation. King County saw a significant increase in individual social media subscriptions from 252,668 in 2015 to 340,382 in 2016. We expect flatter increases in future years as we near market saturation. Social media subscriptions cover a wide range of social media activities, including, but not limited to, Facebook friends, followers on Twitter, and the number of individuals who are subscribed to a wide range of electronic newsletters and electronic alert programs. This is a 35 percent increase in one year.	

Indicators	Chart or Metric	Highlights/progress	Hurdles
Outcome 1B: Online Public Outreach **<u>Social Media Reach</u>**	 **King County's Total Social Media Reach**	Our social media program emphasizes the importance of identifying the "right" audience for each of our individual social media efforts. A social media program might have an extraordinary number of subscribers, but if those subscribers aren't engaged with the content that is being sent out, what is the value of having a large subscription base? We estimate that our engaged social media base results in a 120-fold increase in the number of indivudals who actually see and engage with our content. This engagement is calculated based on the number of subscribers who like, comment, and repost our original content. This creates waves of additional likes, comments, and reposts. The estimated reach of our message that includes viewing beyond our subscribers is estimated at almost 42 million in 2016.	
Outcome 1C: Online Public Outreach **<u>Collaboratively Promoting Digital Civic Engagment for Underserved Communities</u>**	 **Key Milestones Associated with Promoting Digital Civic Engagement throughout the Executive Branch of King County Government**	KCIT has started the process of engaging departments in digital civic engagement with the acquisition of our digital town hall product. An initial pilot with Vashon-Maury Island community plan has shown the ease and speed with which new issues or content for discussion can be brought to a targeted community audience for feedback and dialogue. Expansion of this type of engagement is expected throughout all of King County.	Demand from agencies and departments needs to grow by reaching out and exploring various use cases and business needs jointly with IT. Effective adoption may require dedicated staffing to support conversations, questions and timeliness of response/dialogue.

<table>
<tr><th>Indicators</th><th>Chart or Metric</th><th>Highlights/progress</th><th>Hurdles</th></tr>
<tr>
<td>Outcome 2: Broadband Access

<u>Households with internet access</u></td>
<td> 

% King County Households Reporting Internet Access</td>
<td>King County saw a steady increases in broadband Internet access from homes throughout the county, increasing from 83.3 percent in 2013 to 85.8 percent in 2014 to 88.5 percent in 2015. This is well ahead of the 2015 target of 87 percent and almost achieves the 2016 target of 89percent.

King County has only just started to focus on digital equity and is embarking upon its digital equity program as identified in the Equity and Social Justice Strategic Plan. Initial actions have established and posted a community performance measure as well as including higher level goals within the ESJ Strategic Plan.

In addition to tracking the percentage of King County households with Internet access as our community performance measure, KCIT and King County’s I-Net service are partnering with a number of underserved communities in King County. Our goal is to partner with at least four separate underserved communities to promote and increase Internet access within King County.

One of the partnerships that we finalized in 2016 is with Dimitt Middle School in the Renton School District. Dimmitt Middle School has a one-to-one laptop program where all students are issued a laptop for use throughout sixth, seventh, and eighth grade. KCIT and King County’s I-Net service have partnered with the C3 Consortium to ensure that all Dimitt students issued a laptop have broadband access to the Internet, even when they are not at school. The technology that will be used leverages existing wireless LTE infrastructure.</td>
<td>Getting current information is difficult. Without capturing our own data, we have settled on using annual survey information from the US Census American Communities survey. 2016 survey data is projected to be released in September.</td>
</tr>
<tr>
<td>Outcome 3: Electronic Payments

<u>In-line to Online</u></td>
<td>
<table>
<tr><th>Wave/Projects
(all 17 items listed are scheduled to be complete in 2017; some adjustments as to when each is completed may occur)</th><th>Status</th></tr>
<tr><td>Wave 1 – DNRP Solid waste - Paradigm Point of Sale; DJA - Journal Technologies; DES Treasury - Property Taxes; DES RALS - Pet Licenses/Pet Donations</td><td>In Progress – on track</td></tr>
<tr><td>Wave 2 – DPER - Permits Point of Sale; KCDC Journal Technologies; DNRP Wastewater – Wastewater Capacity Charges; PH Environmental Health – eCompliance</td><td>In Progress – on track</td></tr>
<tr><td>Wave 3 – PH Community Health – Point of Sale; DES RALS – Pioneer Technology, Archives Point of Sale, and For Hire Point of Sale; Elections – Candidate Filing</td><td>Pending</td></tr>
<tr><td>Wave 4 – DOT Fleet – Point of Sale; Superior Court – Point of Sale; DES – Employee Giving Program; DNRP – Parks PerfectMind</td><td>Pending</td></tr>
</table>
Migrate seventeen e-payment applications to King County’s new e-payment standard.</td>
<td>King County’s Electronic Payment Expansion Project plays a key role in helping King County residents realize the benefits of more electronic and online payment options.

In 2017, the project’s primary focus is to successfully migrate all 17 of the County’s existing e-payment applications to the County’s new standard (Point & Pay LLC). Beginning in 2018, the project’s focus will expand to implement new and expanded e-payment services with a goal being that 80 percent of all services/products that residents are able to purchase from King County can be conducted with some form of electroinc payment.</td>
<td>Need to identify additional payment opportunities that can improve customer experience and service delivery beyond those that are currently done online.</td>
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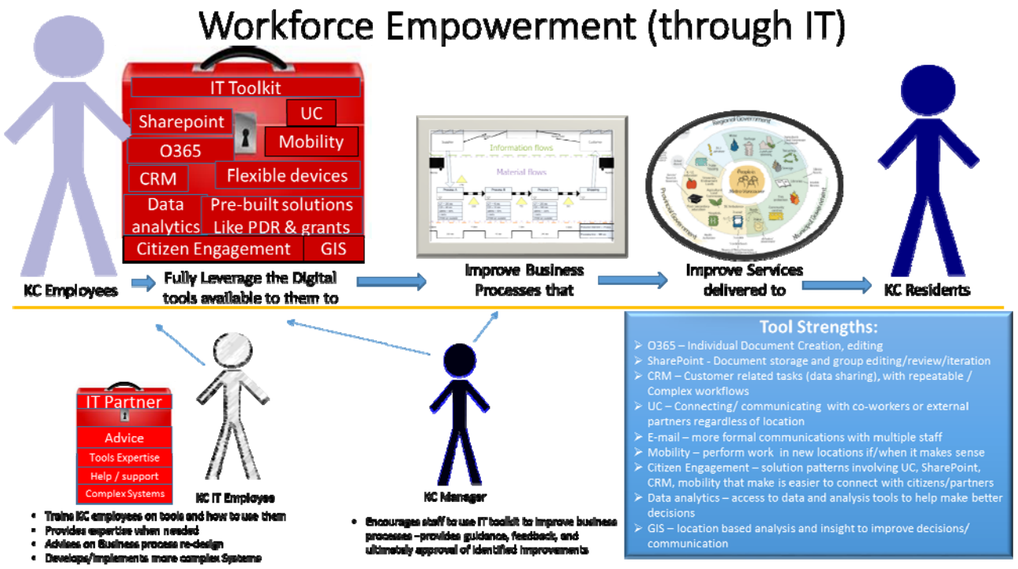
</table>



Technology Objective: WORKFORCE EMPOWERMENT

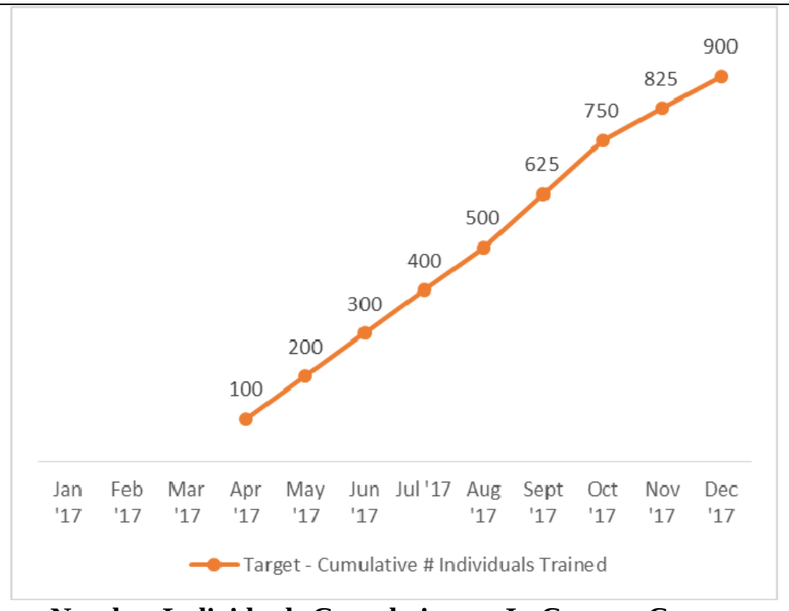
Employees effectively using IT platforms and tools to drive business process improvements

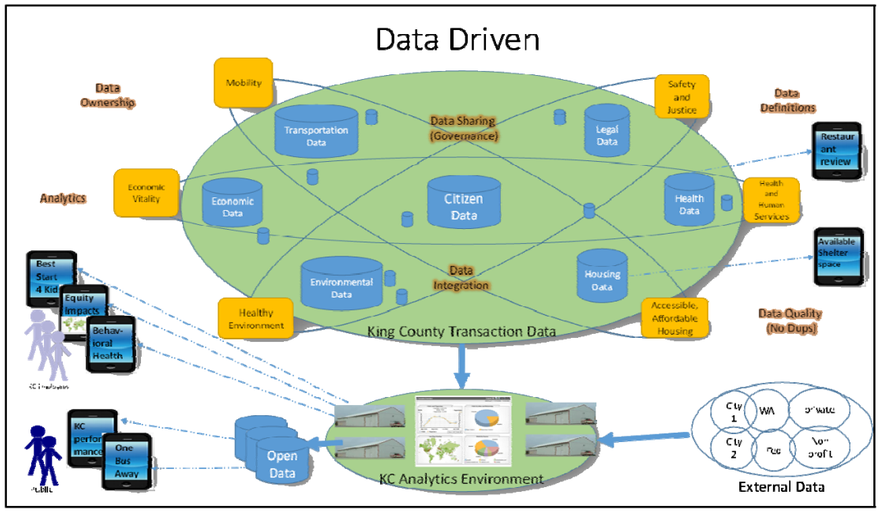
Accomplishing this objective is expected to provide the following benefits:

- Significant and continuous business process improvements.
- Better employee engagement and collaboration.
- More positive work environment and increased ability to respond to and conquer change fatigue.
- Improved citizen value through higher levels of service and engagement.

Improved communication, collaboration and continual process improvement impact everything we do.

Indicators	Chart or Metric	Highlights/progress	Hurdles
Outcome 1A: Implement our Workforce Empowerment Roadmap - Building Business Process Efficiencies **<u>SharePoint</u>**	 **Number of King County Employees Participating in a KCIT Sponsored SharePoint Training**	A key message that KCIT heard from our King County business partners when we were sought input for the King County Information Technology Strategic Plan, 2016 – 2019, was the need to provide more hands-on training for staff in key technology areas, especially collaboration tools such as SharePoint. Because documents are so widely used throughout all organizations, there is a significant opportunity for process improvement by more effectively understanding and using this tool to improved document creation, editing, sharing, workflow, storage, and communications. In response to this need, KCIT has invested in a more in-depth training program that provides hands-on training based on meaningful case studies and allows King County employees to fully leverage key enterprise tools. KCIT has set a goal of providing SharePoint training for 3,000 King County employees by early 2018. In 2017, KCIT plans to provide Introductory SharePoint training to 2,800 King County employees. The graph shows our progress to date, which is off to an excellent start. Classes are filling well in advance, and training delivery has been well received.	Course attendandance should shift from beginning to intermediate and even advanced courses over time. Utilizing this tool effectively in departments requires up-front learning and initial time investment to customize solutions to specific business needs.

Outcome 1B: Implement our Workforce Empowerment Roadmap - Building Business Process Efficiencies **<u>BI (Business Intelligence)</u>**	 **Number individuals completing an introductory Power BI (Business Intelligence) Course Offered by KCIT**	Being able to display data visually is becoming an ever more important skill for departments to be able to communicate important stories, identify trends, drive improvement, and help make key decisions. KCIT is planning on conducting multiple trainings on a stamdard data visualization tool (PowerBI) available to all staff in 2017.	Course attendendance should shift from beginning to intermediate and even advanced courses over time. Utilizing this tool effectively in departments requires up-front learning and initial time investment to customize solutions to specific business needs.
Outcome 1C: Implement our Workforce Empowerment Roadmap - Building Business Process Efficiencies **<u>In Contact</u>**	 **Number Individuals Completing an In Contact Course Offered by KCIT**	Another key area of focus for training offerings is with the County's Unified Communications/Skype for Business tools. KCIT has developed a series of trainings that provide attendees with more indepth knowledge on how to leverage the many features of these powerful collaboration tools. We plan to offer training on our standard call center software (In Contact) for up to 900 employees this year.	Course attendendance should shift from beginning to intermediate and even advanced courses over time. Utilizing this tool effectively in departments requires up-front learning and initial time investment to customize solutions to specific business needs.



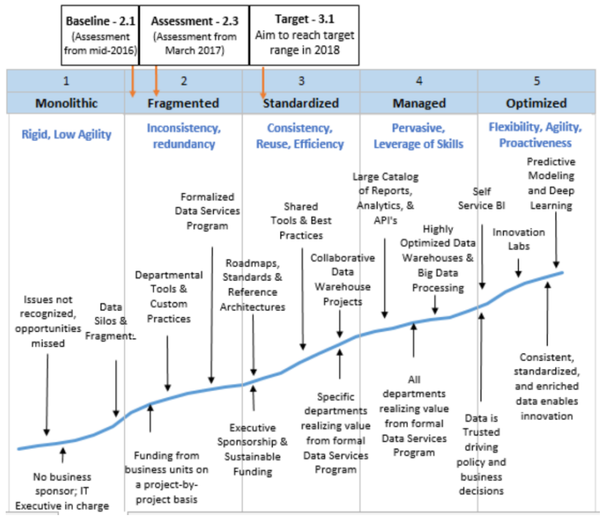
Technology Objective: DATA DRIVEN

Increased utilization of data to understand the current situation, analyze opportunities, measure results and make more informed initial and corrective decisions.

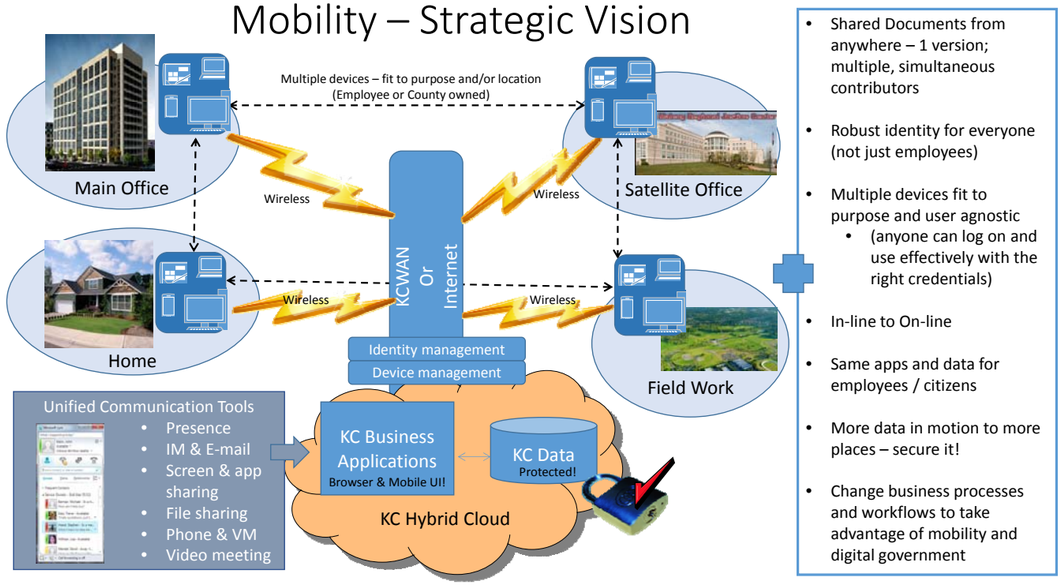
Accomplishing this objective is expected to provide the following benefits:

- Better decisions in all aspects of government leads to a better run government.
- Reduced reliance on 'gut instinct' decisions which can carry un-intentioned biases.
- Reduced total cost of ownership for King County's information assets.
- Reduced risks related to information management.
- Better response to rapidly changing business needs, within and across agencies.
- Better enables ability to partner with external collaborators.
- Allow people to engage with King County where and when is best for them.
- Improved constituent access to data.
- Improved workplace efficiency through better performing business applications and reporting.
- Improved transparency and usability through increased integration and sharing of data.

Better decisions mean better outcomes.

Indicators	Chart or Metric	Highlights/progress	Hurdles
Outcome 1: Data maturity model	 **KCIT's Data Service's' Road Map Objectives**	Because of the many components of data management, KCIT has utilized a data maturity model based on a customized version of the Gartner Data Management Maturity Assessment. This model has helped us identify where we started in 2016 and identifies areas of focus for improving in the 2017 and 2018 timeframe. 2016 saw significant progress in establishing the need and infrastructure needed to to support data driven decision making. Key progress since our baseline assessment occurred includes: • Approved two major capital projects in Transit and Health as part of the 2017/18 budget. • Hired King County's inaugural Chief Data Officer in early 2017. • Procured a new enterprise-level, cloud-based tool for data integration and data quality improvements. • Hired two data architects who are working closely with business units throughout King County on new Business Intelligence solutions and in preparation for both large warehouse projects.	Building out the infrastructure to separate transaction data from reporting data will require significant, sustained effort as part of and following the warehouse projects. A significant opportunity to utilize predictive analytics and artificial intelligence can take advantage of the reporting data once it is available.

Indicators	Chart or Metric	Highlights/progress	Hurdles
Future Outcome 2: BI inquiries/ visualizations	Still being defined	The Key Performance Indicators of a mature Data Services Program will be centered on quantifying the "value" of data assets and their associated analytics. Value ratings will look at overall usage and quality, as well as the timeliness, in preparing data and building analytics. A Data Services Program provides project support to build out new analytical solutions in addition to providing ongoing services in support of shared tools and infrastructure. Examples of the types of metrics the Data Services Program will establish are: • Growth rate of number of dashboards, scorecards, reports, etc. • Data load processing rates • The number of redundant databases and reports • The classification of data to improve its protection and availability • The increase in security and privacy gained • The level and amount of data modeled, and metadata recorded, about data assets • The number of "open" data sets that are published	



- Shared Documents from anywhere – 1 version; multiple, simultaneous contributors
- Robust identity for everyone (not just employees)
- Multiple devices fit to purpose and user agnostic
  - (anyone can log on and use effectively with the right credentials)
- In-line to On-line
- Same apps and data for employees / citizens
- More data in motion to more places – secure it!
- Change business processes and workflows to take advantage of mobility and digital government

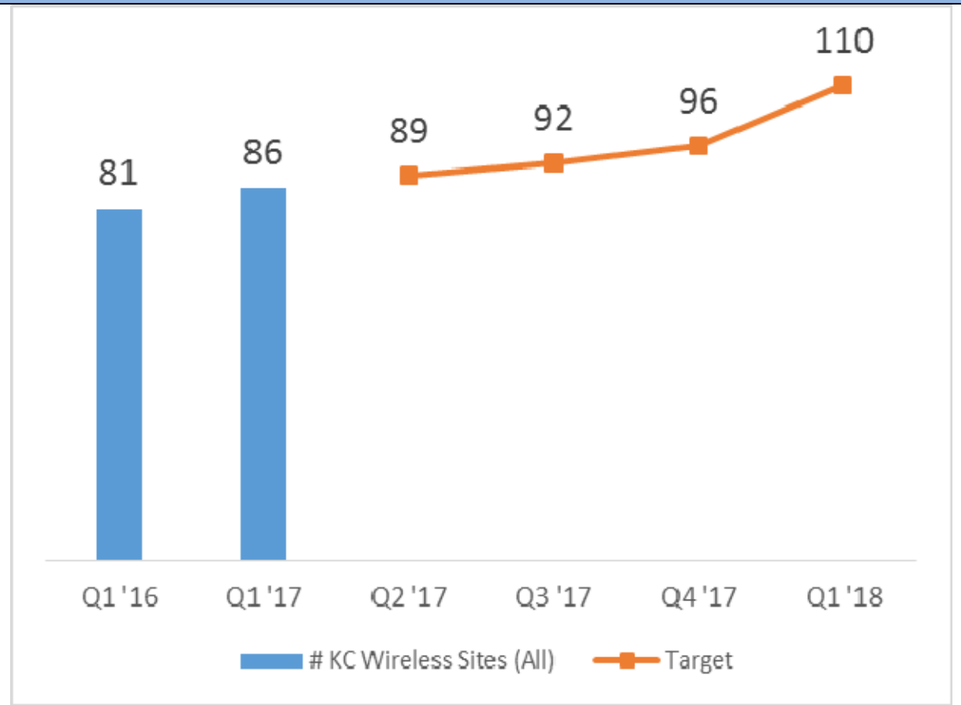
Technology Objective: IT MOBILITY

Free residents and employees to interact and transact business when and where most appropriate and convenient

Accomplishing this objective is expected to provide the following benefits:

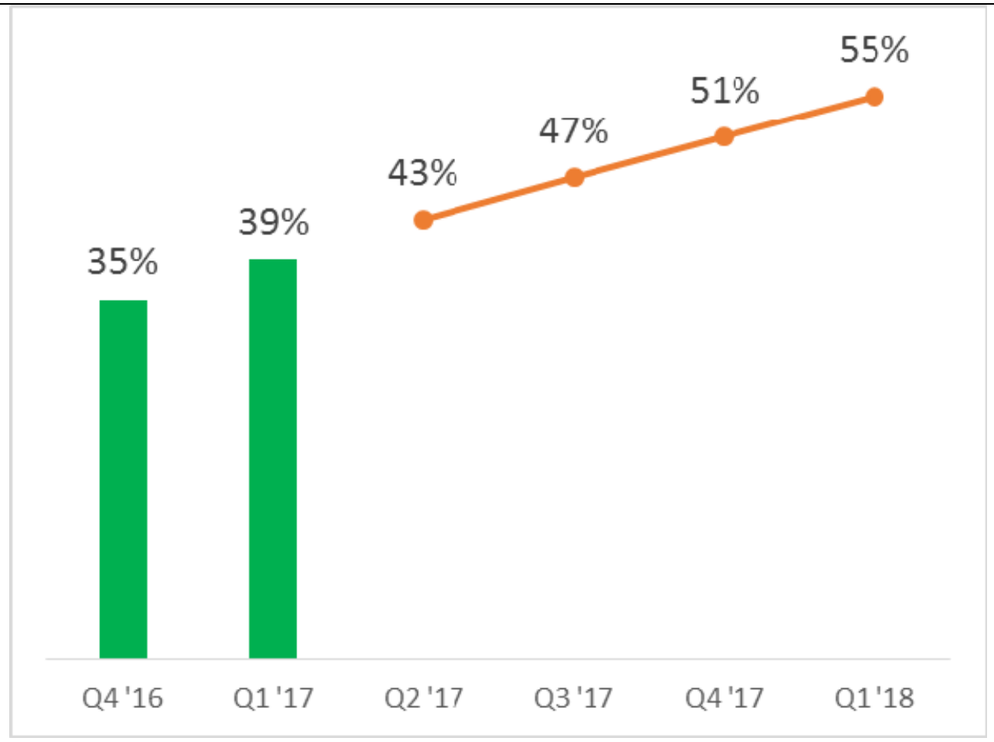
- Redesigned business processes geared towards customer service and overall efficiency.
- Increased resident convenience when accessing services.
- Reduced costs related to staff moves from reduced/eliminated re-wiring and space consolidation related to open concept.
- More collaborative, open, dynamic office space and working environments.
- Increased business and IT productivity.

Reducing the need to travel speeds the delivery, convenience and relevance of our services.

Indicators	Chart or Metric	Highlights/progress	Hurdles
Outcome 1A: Mobile Workforce **<u>Increasing the County's Wireless Capacity</u>**	 **Number of King County Facilities Supporting Wireless**	Increasing the number of King County buildings that support wireless - for the general public who come into the building and for our employees who take devices to conference room meetings, etc. - is a top strategic infrastructure priority for KCIT. In March 2017, KCIT completed an upgrade of all wireless access points in the King County Court House. In addition, when our county business partners move to new facilities, we are working to promote wireless sites, which are more cost effective and take less time to deploy. The County's first all wireless facility is the Department of Public Defense's Dexter Horton location.	Funding to deliver enhanced wireless capacity to all locations

Outcome 1B: Mobile Workforce

Transitioning to Laptops as the County's Workstation Standard



% of King County Workstations that are Laptops (rather than Desktops), based on devices maintained and supported by KCIT

King County employees who require a computer to conduct their work receive a laptop as our preferred standard device, or another device based on their specific needs. Laptops offer the following benefits to the County as a whole:

- Laptop devices use up to a quarter the power consumption of a typical desktop personal computer. This 75 percent reduction in power consumption adds up to significant power reduction needs and county utility spending.
- The batteries in laptops allow users to continue working during power outages.
- Laptops allow employees to work from anywhere (conference rooms, collaboration settings, offsite events).
- Because of the increased mobility that laptops offer, they also support business continuity/disaster recover needs by enabling employees to work off-site while responding to a disaster.

Recognizing that not all work situations are adaptable to a standard laptop, KCIT has set its target for workstations that are standard laptops at 60 percent of the total workstation/desktop inventory.

Updated Outcome 2: Online Services/ Mobile application usage

IT Mobility Program.

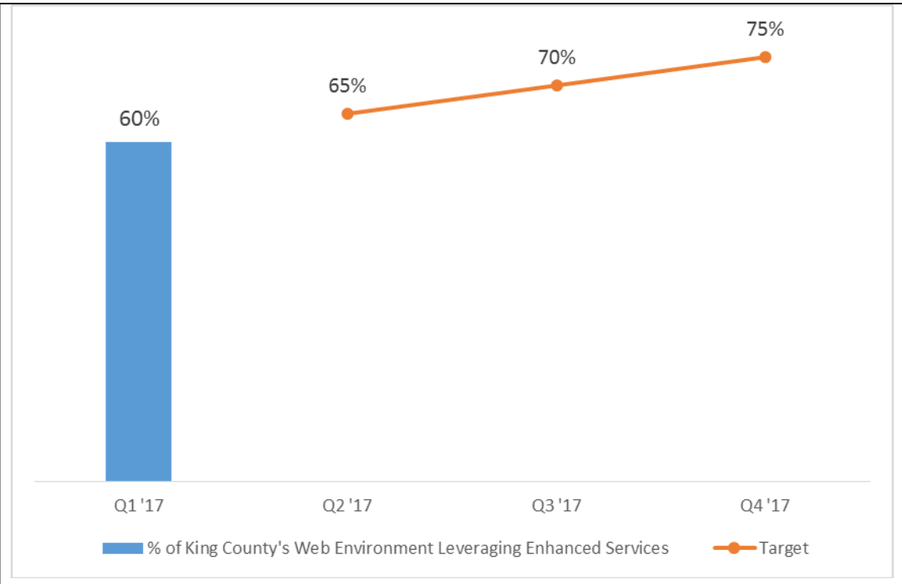
Action Item	Q1 '17	Q2 '17	Q3 '17	Q4 '17
Formulate Strategy and Approach				
Kick off project (as defined through the Strategy and Approach)				
On-going Management of Program (into 2018)				

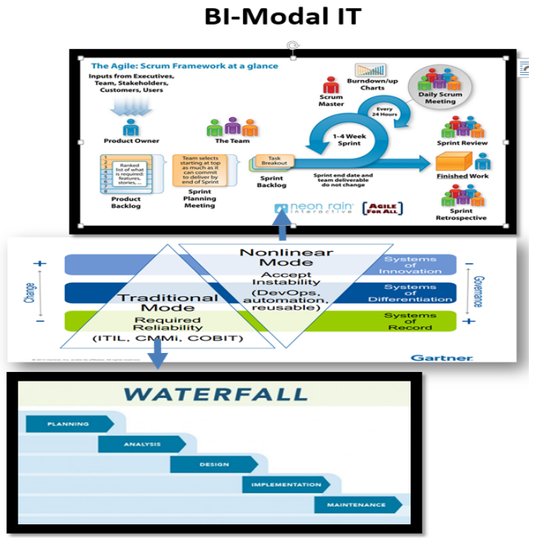
Figure Ten: KCIT's IT Mobility Program Road Map with Key Milestones

As part of the King County Strategic Information Technology Strategic Plan, 2016 2019, a second IT Mobility measurement was proposed that would track the number of mobile applications that are available for use by visitors to the www.kingcounty.gov web environment. As part of the 2017 Update, KCIT has replaced this measurement with a roadmap and key milestones associated with the department's IT Mobility Program.

We are making this change after conducting a readiness assessment regarding our capacity/ability to meet the originally proposed measurement of increasing our mobile applications to 50 within the next five years. The readiness assessment highlighted a number of issues that needed to be addressed in order to meet this goal.

This particular measurement focuses specifically on applications that are developed from a web accessibility point of view. Separate from how applications are developed, KCIT is ensuring that as many of our webpages as possible are supported by a centralized webpage management tool that promotes easy readability on mobile devices (such as cell phones).

New Outcome 3: Improving the Visitor Experience to King County's Web Environment	 **Percentage of King County's Web Environment that is Leveraging Enhanced Services**	As part of the 2017, KCIT is adding a third IT Mobility outcome. This outcome is related to the percentage of King County's web environment that benefits from a centralized, automated service that also improves visitors' experiences when visiting a King County webpage. This measurement is included in the IT Mobility section of our report because one of the improved experiences that our centralized web management service provides is a significantly improved experience when visiting a site on a mobile device.	This is a new metric that is focused on improving usability and increasing the common experience when visiting our websites



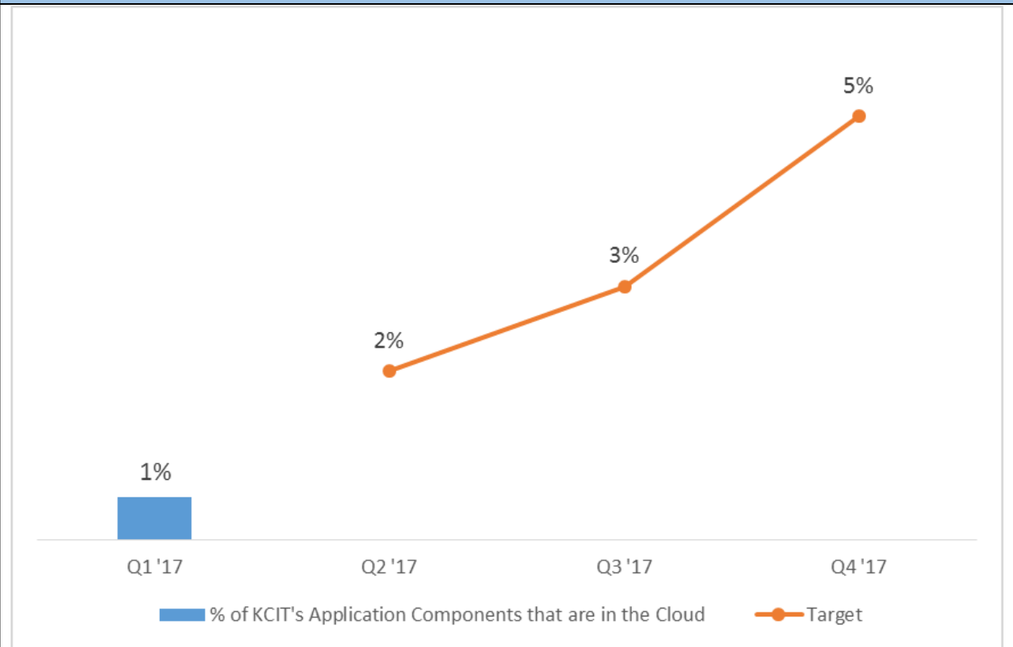
Technology Objective: EFFECTIVE DIGITAL SYSTEMS

Increase the value to customers by providing high quality digital systems to better meet their needs using standard components and continuous process improvement

Accomplishing this objective is expected to provide the following benefits:

- Capturing continuous improvement in the form of systems with higher quality, lower risk and better fit to customer needs.
- Maintained systems are less likely to fail and have a lower TCO (Total Cost of Ownership) through efficiencies, standardization, re-use and the ability to meter and rapidly scale resources up or down as needed.
- More agile and faster speed to implement business process changes.
- Increased service quality due to increased standardization and reduced downtime.
- Reduced risk due to increased redundancy, geographic diversity, and commoditized, on-demand scaling of needed assets.

"Timely, standard processes & components, value-added, equitable, planned & architected."

Indicators	Chart or Metric	Highlights/progress	Hurdles
Outcome 1: Cloud Adoption		One of the most significant areas of growth within the information technology field as a whole has been in the area of cloud services. Cloud technology has allowed businesses to transition away from purchasing expensive physical servers to run applications (including test and development sites) and store data. Cloud services provide customers the opportunity to run applications and store data off-site, on servers that are maintained by a third-party customer (Amazon Web Services is an example). While this technology is not appropriate for every application and hosting situation, it is an important and viable service for quite a few types of applications and data that KCIT is responsible for managing and storing for our customers. Some of the many benefits of using cloud technologies include: • Increased flexibility in how the application/data is supported: Cloud services allow KCIT to purchase enough storage and bandwidth for the application/data usage and allows KCIT to increase/decrease that storage/bandwidth as appropriate for the customer's needs (in the past, we would purchase for the peak scenario, even if the peak scenario only occurs twice a year). • Reducing risk: By having the application/data stored off-site, we are less at risk of certain types of failures. During 2016, KCIT focused on building out the necessary tools to track our application components in order to begin the process of identifying the most appropriate way to evolve and transition our own use of Cloud Services. Based on our work in 2016, we estimate that KCIT is responsible for approximately 3,000	Staff skilling to fully leverage the cloud environment

Percent of KCIT's Application Components in the Cloud

<table>
<tr>
<td></td>
<td></td>
<td>application components, this includes servers, datatbases, service objects, etc.

At the beginning of 2017, less than 1 percent of these components are currently in the cloud. By the end of 2017, we plan to have 5 percent of our application components in the cloud. By the end of 2018, we are planning to have 15 percent of our application components in the cloud.</td>
<td></td>
</tr>
<tr>
<td>Outcome 2:
SOA Adoption</td>
<td>
<table>
<tr><th>Action Item</th><th>Q1 ‘17</th><th>Q2 ‘17</th><th>Q3 ‘17</th><th>Q4 ‘17</th></tr>
<tr><td>Produce/validate preliminary project plan</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Define SOA consultant scope of work, hire consultant, finalize project plan</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Outline of Service Repository</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Identify and document SOA use cases</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Determine and validate SOA vision components</td><td></td><td></td><td></td><td></td></tr>
</table>
KCIT’s Service Oriented Architecture Road Map and Key Milestones
</td>
<td>Establishing a strong Service-Oriented Architecture (SOA) approach to our computer software design is a key long-term strategic initiative for King County and KCIT. Application development is one of the largest (both from a staff and a budget perspective) services that KCIT offers to our customers.

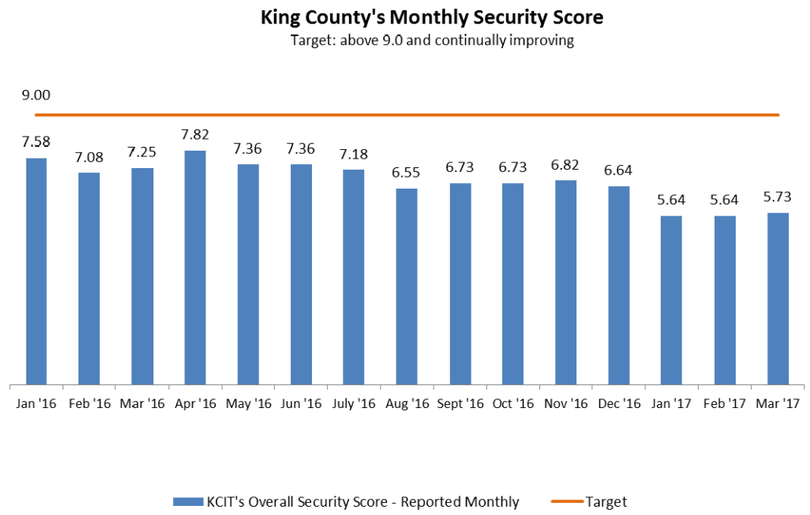
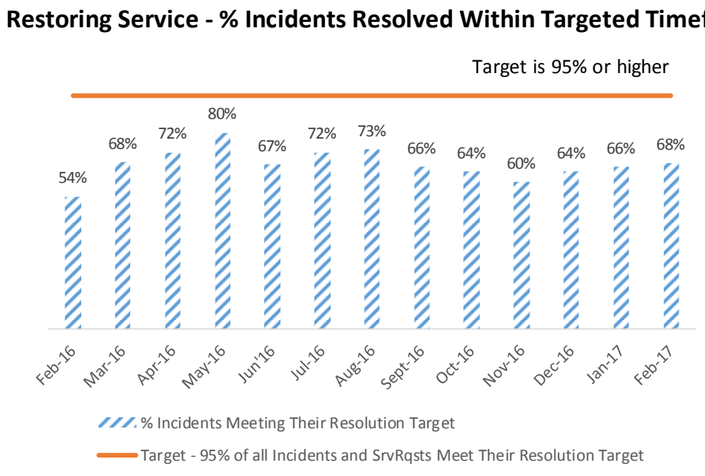
Application development organizations that use a Service-Oriented Architecure approach to their application development are able to leverage a single application element (such as code or a database structure) across multiple application development solutions. This approach allows SOA-based organizations to 1) establish more common standards to their application development; 2) provide more responsive development solutions; and 3) reduce their long-term support costs.

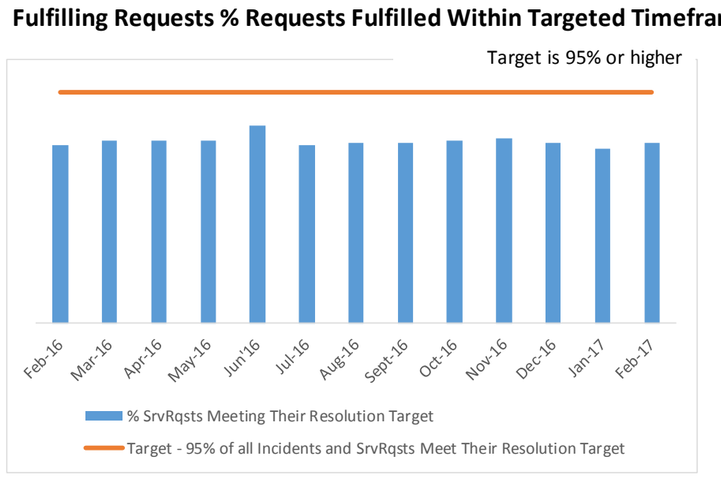
One of the first things that KCIT did to promote SOA in 2016 was to assess how prepared we are as a department to offer Service-Oriented Archtecture. Our efforts lead to the development of the following roadmap for 2017.

We are in the process of engaging a vendor with SOA expertise to create our SOA strategy and roadmap. Once the strategy and roadmap have been created, we will be able to better identify a longer term metric to gauge progress towards accomplishing the strategy.</td>
<td>Incorporating Service Oriented Architecture into our application strategy is a shift for our staff that will require significant cultural adoption, but should speed future delivery of new applications including mobile applications.</td>
</tr>
</table>

IT Operational Performance Measures

Continuing to improve the performance of our IT organization will not only speed the time to accomplishment of strategic objectives but will also help to maximize the counties overall value from IT. The following key IT performance metrics have been identified and will be tracked over the life of the IT strategic plan.

Indicators	Chart or progress	Highlights/progress	Hurdles
Security Scorecard	 **King County's Monthly Security Score**	Protecting the vast array of information and data that King County collects and maintains is a responsibility that KCIT takes very seriously. On a monthly basis, our Chief Information Security and Privacy Officer creates a detailed assessment of more than a dozen potential vulnerabilities to our information and data environment. Some of the vulnerabilities include what operating system servers and desktops are using; what version of our anti-virus software is running on servers and desktops; ensuring updates to malware occur in a timely manner; tracking encryption utilization on laptops; and reporting on the accuracy of our laptop and workstation inventory. The graphic on the left shows the County's overall security score that is a compilation of the many vulnerability assessments that are conducted each month. We have seen two drops in monthly scores over the past year. The first, in August 2016, occurred as a result of a change in one of the security tools that is used on a wide range of components (moving to ENS 10.0) and the fact that a higher than usual number of DAT files reported being out of compliance. The second, in January 2017, occurred as a result of significantly more components in our environment needing to be upgraded to ENS 10.0.	We cannot control the actual threats that enter into King County's environment. Therefore, we must manage our vulnerabilities as proactively as possible. While our security scores are currently quite a ways below our target of 9.0, this is in large part due to the fact that we maintain rigorous standards across a complex environment.
Response to Incidents		Incidents are defined as one of the following: an unplanned interruption to an IT service; a reduction in the quality of an IT service; or the failure of a piece of equipment that has not yet impacted an IT service but has the potential to impact an IT service. Being able to detect and resolve incidents quickly is an essential aspect of our service as it results in lower downtime to the business and higher availability of services. The graphic on the left shows the percentage of incidents resolved each month that meet our current targeted resolution timeframes. Incident resolution time frames vary based on impact and urgency and range from two hours to five business days. As KCIT's reporting capabilities continue to mature, we will expand the measurements in this section to include a measurement that relates to KCIT's timeliness in regards to acknowledging and beginning to work on incidents.	Maturing KCIT's ability to utilize and follow standard processes continues to improve, but still needs additional maturing and takes time.

Indicators	Chart or progress	Highlights/progress	Hurdles
Response to Requests		A Service Request is a generic description for many different types of demands that are placed upon the IT organization by users. Many are typically requests for small changes that are low risk, performed frequently, and at a low cost. Examples include: changing a password; installing additional software on a particular workstation; relocating desktop equipment; and asking for information about a particular IT service. Being able to provide quick and effective access to standard IT services improves staff productivity and business service quality. Service Request resolution time frames vary based on impact and urgency and range from one to ten business days. As KCIT's reporting capabilities continue to mature, we will expand the measurements in this section to include a measurement that relates to KCIT's timeliness in regards to acknowledging and beginning to work on requests.	Maturing KCIT's ability to utilize and follow standard processes continues to improve, but still needs additional maturing and takes time.

Indicators	Chart or progress	Highlights/progress	Hurdles
Customer Satisfaction	Still being defined	From an over-arching perspective, the King County Strategic Information Technology Strategic Plan is intended to provide a roadmap for how information technology is used and provides value to the many different departments and agencies throughout King County government who use and rely on the technology provided and delivered. A key aspect of determining the level to which value is provided is by really focusing on the customer. Understanding who our customers are and how a customer interacts with King County over multiple channels is crucial to KCIT being able to successfully deliver necessary products and services in such a way that they add true value to our customers' service delivery. The way we engage, empower and serve a customer is key. KCIT is the technology enabler and strategic advisor for the departments and separately-elected agencies respectively. To determine the business value realization for King County departments and agencies, KCIT is using a recently established Voice of Customer (VOC) customer survey to discover defects, service delivery issues and the experiences of our internal and external customers. The VOC is intended to gather information from our customers on a quarterly basis and will result in business intelligence that is both relevant and actionable for KCIT to provide King County customers with best in class service and great product quality. By taking a proactive approach, the VOC addresses the delivery of services, from real and perceived value of King County technology products and services offerings, solutions delivery and technical support. With this actionable data, KCIT can implement counter measures to strengthen areas where gaps arise. Conversely, continuous improvements and innovation can happen in areas of strength and will allow KCIT to celebrate successes. This process is for KCIT to be proactive and continuously innovative to capture the changing requirements of King County internal and customers. KCIT believes by giving the departments and agencies a stronger voice that it will empower KCIT to create more value, which leads to better service experiences. This data will show on the Performance Management Dashboard so that KCIT is transparent and can show trends over time. Survey methodology is quarterly.	Launching the survey. Targeting the right audience, and maintaining consitstancy across periods as we learn how to better measure satisfaction.
Customer Focused Performance Management Dashboard	Still being defined	As part of KCIT's commitment to continuous improvement and transparency, we are in the process of develoing a Customer-Focused Performance Management Dashboard that is a real-time, or near real-time, performance management system for King County departments and agencies. While the dashboards are still in development, we expect to be able to make them available to customers in Q2 or Q3 2017.	Alignment of expectations through the use of data will take time and effort.

Indicators	Chart or progress	Highlights/progress	Hurdles
		The Customer Focused Performance Management Dashboards inform on KCIT's performance in areas of service delivery and are relevant to business value realization for King County government. The dashboards will aid significantly in the facilitation of communication between KCIT and the departments and agencies to 1) increase transparency of operations; 2) monitor KCIT performance according to service levels; and 3) demonstrate innovation and performance on to internal customers. The areas covered include: delivering value and understanding financial and demand management; incident, service and problem management; application portfolio management; and other components as it becomes available. Metrics are provided continuously so as refresh occurs, the Service Delivery Managers and department/agency contacts will have up-to-date information to have informed discussions and make informed decisions. We are looking forward to the increased transparency that the dashboards will provide for all of our internal customers.	

Appendix B – Table of Acronyms

Acronym	Full Spelling
AWS	Amazon Web Services
BAP	Benefit Achievement Plan
BEUM	Business Empowerment and User Mobility
BMC	Business Management Council
BSS	Business Solutions Service
BYOD	Bring Your Own Device
CFO	Chief Financial Officer
CI	Continuous Improvement
CIO	Chief Information Officer
CIP	Capital Improvement Project
CJIS	Criminal Justice Information System
COTS	Commercial-Off-the-Shelf
CRM	Constituent Relationship Management
CSS	Customer Support Service (formerly workstation service)
EA	Enterprise Architecture
EHR	Electronic Health Record
ESB	Enterprise Service Bus
ESJ	Equity and Social Justice
GIS	Geographical Information System
HIPAA	Health Insurance Portability and Accountability Act
HIT	Health Information Technology
HR	Human Resources
IA	Information Assurance
IAM	Identify and Access Management
IAAS	Infrastructure-as-a-Service
IM	Instant Messaging
I-Net	Institutional Network
IP	Intellectual Property
ITIL	Information Technology Infrastructure Library
IT	Information Technology
KCIT	Department of Information Technology, also known as King County Information Technology
KCSP	King County Strategic Plan
KCWAN	King County Wide Area Network
LOB	Line of Business
MDM	Mobile Device Management
NG 911	Next Generation 911
O365	Office 365 – Microsoft's cloud offering for SharePoint service
OS	Operating System
OWA	Outlook Web Access

Acronym	Full Spelling
PAAS	Platform-as-a-Service
PAO	Prosecuting Attorney's Office
PCI	Payment Card Industry
PH	Public Health
PII	Personally Identifiable Information
PMO	Project Management Office
PSB	Performance, Strategy and Budget
SAAS	Software-as-a-Service
SAC	Strategic Advisory Council
SCOC	Strengths, Constraints, Opportunities, and Challenges
SDLC	Solution Delivery Lifecycle
SME	Subject Matter Expert
SOA	Service Oriented Architecture
SVE	Standard Virtual Environment – King County's 'Private Cloud'
SSD	Server, Storage and Database
SSL/VPN	Secure Sockets Layer/ Virtual Private Network
SSO	Single Sign-On
STP	Strategic Technology Plan
TCO	Total Cost of Ownership
TMB	Technology Management Board
UC	Unified Communications
VM	Voice Mail
VPC	Virtual Private Cloud
WAP	Wireless Access Point