POLICY FRAMEWORK

Section 2.16.07 of the King County Code has established the framework for central information technology functions. Significant changes to this code were transmitted to the County Council in 2011, introducing the Department of Information Technology also called KCIT (King County Information Technology). This organization includes the Office of Information Resource Management, known as central IT, and extends it outward to include department technology functions within the Executive branch, establishing a single provider of technology services for the Executive branch and requesting separately elected organizations.

This code change and resulting organizational changes have a significant foundational impact on how we deliver technology services to our customers. By looking at each service from start to finish, we are able to straighten and shorten our service delivery pipelines, increasing our speed of delivery which leads to operational efficiencies both internally and for our customers.

Included within the technology services provided are:

- *countywide information technology governance and planning functions, including strategic planning, business planning, performance reporting, project advisory board management and administration of county information technology boards and committees*
- *countywide electronic government services;*
- *information technology help services*
- *standard workstation services*
- *enterprise and business application services to include maintenance of existing applications and development of new applications*
- *infrastructure operations that provide enterprise network and voice communication operations utilizing the county data center services*
- *regional services that include radio communication services, geographic information services, institutional network and cable communications*

The impact of this code change and resulting organizational changes is significant, and critical to accomplishing our technology vision.

STRATEGIC TECHNOLOGY VISION, MISSION AND GOALS

KCIT is focused on providing world class governmental technology services to our customers. The technology vision for King County is focused on providing excellent service to make KCIT the top vendor and employer of choice among our peers. A new mission statement has been created for KCIT, which is the result of collaborative efforts of management and staff, over the period of a few months. This new mission is: Knowledge Collaboration Innovation Teamwork: KCIT.

Supporting this vision and mission are the following goals and objectives:

- Implementing a customer service focused organization based on product delivery concepts

    - Utilize product catalogues, Service Level Agreements (SLA's) and related performance reporting and management
    - Measure customer satisfaction with our services and drive improvement efforts and decisions based on that satisfaction
    - Employ continuous service improvement efforts
- Provide collaboration and communication tools that empower significant customer process improvement opportunities regardless of end-user device or location
    - Instant, consistent, and integrated work team availability and access information (also called presence)
    - Unified communications which include e-mail, voice, video and more
    - Document sharing and collaboration through easy document access, update, versioning, and more
- Significant improvement of service delivery models based on end-to-end delivery enabled through a broader KCIT organizational structure and intended to increase visibility, transparency and accountability for the benefits, costs, and options available for each of our services
    - IT Service Center - already underway
    - Workstation delivery and support
    - Technology Infrastructure provisioning along utility concepts using private and public clouds where appropriate
        - Shared data storage, utilization, and analytics
        - Leveraged compute power and server virtualization
        - Robust data center sharing, security, and redundancy
        - Common back-up/restoration tools
        - Consistent Business continuity and failover for critical applications
    - Application Modernization
        - Enterprise Resource Planning (ERP) systems and related business processes (through ABT)
        - Mainframe application migration to modern platforms
        - Many Agency/departmental projects providing added business capabilities (like permit integration, RapidRide, others…)
    - Increased project success through positive support structures, incremental approach, and re-usable components
    - Integrated regional and local networks extending our unified communications strategy
- Empowering all staff to continuously improve the services they deliver
    - Training and on-going support for process improvement, empowerment, and collaboration
    - Architecture framework to clearly identify desired future state technologies as well as to decommission antiquated and byzantine technologies (see diagram below for how architecture relates to the County's reform agenda
    - Architecture framework enabling local decisions that deliver incremental enterprise results

Due to significant progress on opportunities enabled by organizational changes and a countywide focus on product delivery and customer service, KCIT will be updating our Strategic Technology Plan in 2012 to emphasize and better communicate our desired future state.

Current goals, objectives, strategies, and outcomes are all available within the existing Strategic Technology Plan at:

http://www.kingcounty.gov/business/oirm/governance/strategicservices/strategicreports/2009-20012%20Strategic%20Technology%20Plan.aspx

CHANGE DRIVERS

The primary change event that is empowering and driving significant change within technology services, as mentioned above, is our migration to a consolidated KCIT organization. A second, complimentary driver is the county's recent signing of a long-term (6 year) countywide Enterprise Agreement (EA) with Microsoft. This event is significant because it enables standardization across workstations and related support functions where this has not been possible in the past. Additional significant drivers include significant technology opportunities in the areas of cloud computing, consumerization of end-user devices, and the continually increasing desire for workforce mobility. These, combined with the clear strategic direction provided by the King County Strategic Plan, and related efforts on customer service, product focus, and continuous improvement; have led to significant change initiatives included within the 2013 budget.

CHANGE INITIATIVES

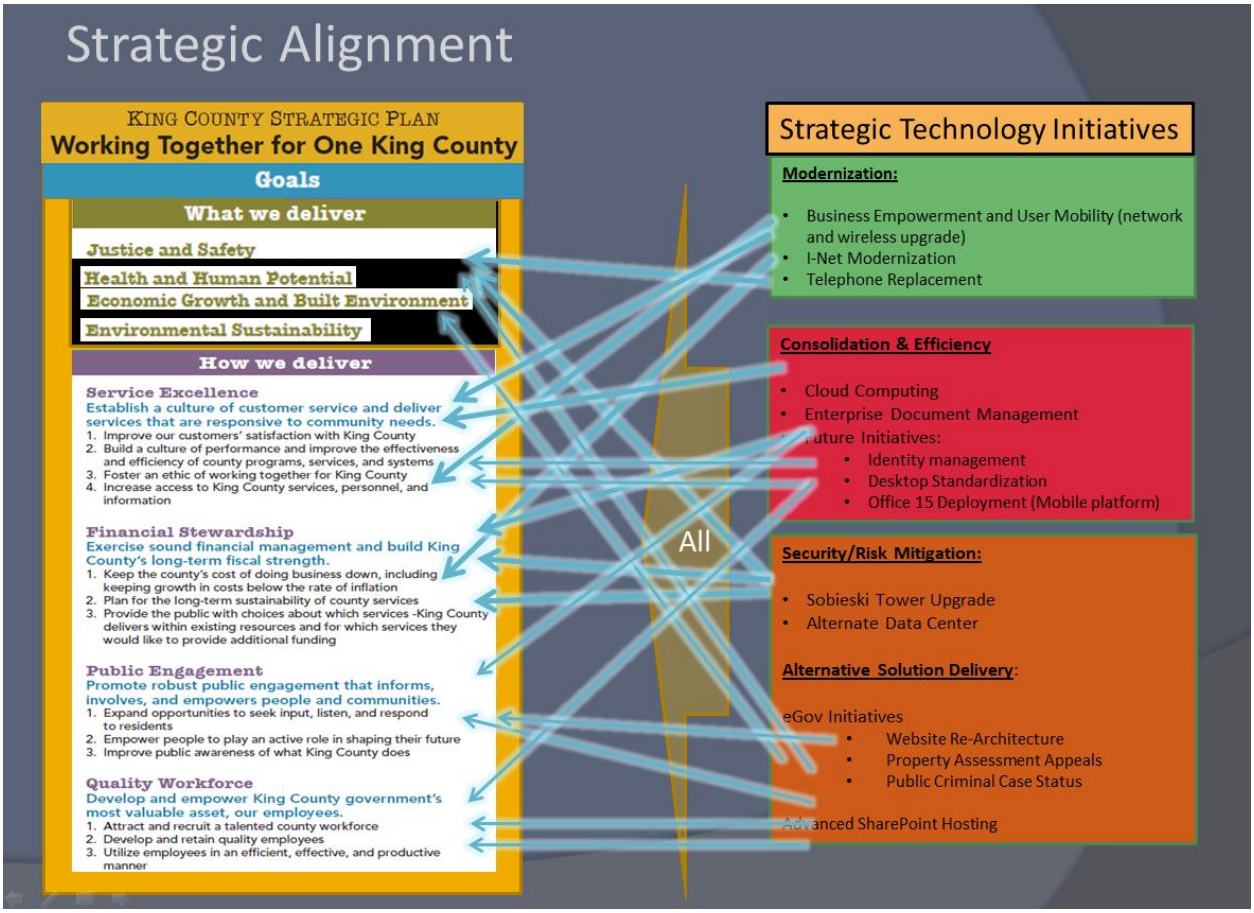
KCIT is committed to increasing the value that technology brings to our internal business partners and to King County's many and diverse external customers. This means ensuring that the accomplishment of our technology strategies positions and empowers our partners to accomplish their goals as stated 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.

Change initiatives have been identified within the context strategic technology themes. Within each of them, context is provided around our current project requests. This context enables better understand of strategic progress and the enablement of business value opportunities related to each request.

STRATEGIC TECHNOLOGY THEMES

Each 2012/13 project proposed by KCIT is aligned with a strategic technology theme. These themes align efforts with business goals and objectives as identified in the following diagram.



The benefits expected from each strategic technology theme area include:

Technology Modernization

- Enables increased Mobility options and consumerization (choice) of end-user devices
- Supports office space consolidation
- Empowers home and remote work using current collaboration (Lync, SharePoint), productivity (office suite), and Line-of-business specific tools as needed

Security and Risk avoidance

- Avoid broad failure of radio network
- Improved redundancy and support of critical applications reducing failure rates

Consolidation and Efficiency

- **Cloud Computing/Hosted Environment**
    - Increased utilization of existing, unused infrastructure capacity
    - Scalability of technology infrastructure to match business need reducing overall costs and improving performance
    - Faster speed to provision new solutions and expand existing solutions
    - Better failover for critical business applications/functions
    - Re-usable imaging and Storage function
- **Expected future consolidation and efficiency requests**
    - Reducing multiple user sign-on towards the ultimate goal of only one sign-on improving user efficiency and overall security of our systems
    - define a standard image for the desktop and establish practices in deploying new applications for desktops
    - Future productivity tool upgrades available through current contracts, such as upgrading our office productivity tools when available

Alternative Service Delivery

- Existing Projects
    - Improve awareness of county services and resources and enhanced opportunities for the citizen to engage more with the County
    - Increase services available to citizens including property tax assessment appeals and public criminal case information
    - Improve internal collaboration tools by standardizing the Enterprise SharePoint, optimize on the system's capability, and eliminate currently older platforms

Evolution to a Service focused IT organization

- Increased consumer choice and alignment with business needs
- Improved customer satisfaction with technology services
- Transparency into and better understanding of the technology services utilized

The projects addressing each of these themes, their current status, funding, and future plans are included in the following tables. In addition, our enterprise technology strategic roadmap is included as attachments A & B. Attachment A provides an updated (current) version of the roadmap first published in the 2011 STP update and 2012 Technology Business Plan. Attachment B highlights how the planned 2012 and 2013 projects fit within that roadmap.

STRATEGIC THEME – MIGRATION TO SERVICE FOCUSED OPERATIONS

In 2004, KC embarked on a study to look at re-organizing the IT services provided within the executive branch departments. Significant Investments were made in the IT reorganization project to plan and implement this effort. In 2011, the Information Technology Department, also called King County Information Technology (KCIT) was adopted in county code. Having this department now in place is a critical first step and key enabler towards the service vision that has evolved both as a result of the re-organization and as a response to our customers' needs and executive direction for the county.

Current State/progress	Planned			Benefits
	2012	2013	2014/15	

• Implemented SLA's with all departments for 2012 IT Services
• Completed 2013 IT Services Catalog
• Implemented initial Enterprise Architecture Framework
• Evolving Project Management Methodology and Center of Excellence
	Service Catalog Development
	• Conduct SLA performance reviews with all departments
	  ○ Further Define, measure, report, and adjust to service performance metrics
	• Complete 2013 IT service rates and options
	  ○ Base rates on actual costs
	  ○ Rates will drive behavior to lower cost/standardized services over time
	  ○ Standardized services reduce costs and can drive further efficiencies through repeatable best practices across KCIT department
	  ○ Master contracts and consistency in purchasing within/across services also reduces rates
	• Accept 2013 IT service orders as part of 2013 budget process
	• Participate in LOB business planning pilot
	
	Service operation improvements
	• Develop initial frameworks and roadmaps
	  ○ Cloud strategy and roadmap
		• Deliver services according to customer needs
		• Institute strategic technology Planning process to evolve services
		• Work on appropriate roadmap components.
		• Spawn projects as needed to achieve milestones on roadmaps ($TBD)
		• Identify additional needed
			Continue to evolve IT services and operations based on customer need/strategy, technology innovations, and process maturity	Transparency and clarity
				
				Improved customer engagement in service choice
				
				Costs aligned with services provided - Pay more for options such as customization, extended features, etc…
				
				Frameworks
				
				add structure and consistency while Increasing repeatability,

Current State/progress	Planned			Benefits
	2012	2013	2014/15	
	○ Solution Delivery Life Cycle (SDLC) Framework ○ Identity Management Framework and Roadmap ○ Systems Management Framework and roadmap ○ SOA (services oriented architecture) Framework and roadmap • Continue to evolve existing frameworks and roadmaps ○ Enterprise Architecture Framework – continue to build-out ○ Change management process	frameworks and roadmaps		re-use, and connectedness of efforts Roadmaps provide direction by defining and sequencing deliverables/activities; Clarify priorities; Improve utilization of resources; and decrease waste/re-work

STRATEGIC THEME - CONSOLIDATION AND EFFICIENCY

Project	Current State/progress	$ Request	Planned			Benefits
			2012	2013	2014/15	
Cloud Computing	• Consolidation of servers to Sabey - $20M • Standard Virtual Environment Planning - $835K	$4M over 3 years. Will Use Equipment Replacement	SVE design and initial build; Migration planning per proviso; Contract with third party cloud provider	Server migrations to private cloud (SVE and third party) per proviso plan. All mainframe applications and data will migrate to a hosted environment.	Server migrations to private cloud (SVE and third party) per proviso plan	• Compute utility aligning costs directly to usage/need – reducing costs • Improved failover / resiliency
Enterprise Document Mgmt	Assessing existing tools and status	$438K in 2012	Transition the EDM to KCIT, upgrade to Oracle 11.g, assist agencies in implement the system, establish central rates, transition support to KCIT	Continue to add customers to the new solution and scale infrastructure as necessary		• Re-use of asset enabling business savings
Identity Management	Proliferation of identify information across departments and agencies		Create Conceptual framework for Identity management, architecture, and initial roadmap. Determine Active Directory Strategy.	Implement needed identity policies and standards. Begin to address active directory strategy. Begin 2-factor authentication project	Complete Active directory strategy & 2 factor authentication. Propose identity management system and/or data consolidation efforts	Frameworks lead to consistency and standards - increasing efficiency & lowering costs Enables consumerization while protecting data Reduced risk of improper

Project	Current State/progress	$ Request	Planned			Benefits
			2012	2013	2014/15	
						access
Desktop Standardization	Defining Workstation service. Identifying areas for process improvement.		Implementing consistent remote desktop management tool (SCCM) by end of 2012 in all executive departments. Consistent equipment replacement plans. Policies and standards around consumerization	Create Gold image as common starting point. Align practices with use of remote mgmt. tools. Expand knowledge of end user devices and their management. Determine Device management direction based on pilot. Implement first improved change management practice.	Continue alignment to minimize need for touching workstations. Implement device management recommendations. Share common patching scripts broadly.	Quicker and lower cost fixes and total cost of ownership for end-user devices. Increased availability/uptime of workstations resulting in improved productivity Faster response to change and implementation of new business solutions
Office 15	KCIT is evaluating Office 15 which web enables the office suite to operate in the Office 365 public cloud		Evaluate and track Microsoft launch plans; Determine how Microsoft's product strategy may align to KC's strategies and KCIT business architectural principles that could align MS Office to public cloud services, desktop standardization, and comsumerization; Test Beta release	Assess impact of Q1 launch and plan for enterprise deployment		Enables anytime/anywhere access to documents (assuming internet connectivity) regardless of end-user device or location Improved end user

Project	Current State/progress	$ Request	Planned			Benefits
			2012	2013	2014/15	
						productivity and collaboration

STRATEGIC THEME – TECHNOLOGY MODERNIZATION

Project	Current State/progress	$ Request	Planned			Benefits
			2012	2013	2014/15	
Wireless	* seeing drastically higher demand for wireless access by the public and KC agencies * Many county buildings do not have wireless today $ 42,471 Equipment replacement funding	$148,000 for public wireless connectivity upgrades	Providing increased bandwidth and redundant paths for resiliency and reliability. Develop a plan for bringing wireless to all county buildings/facilities as needed.	Installed infrastructure for wireless stability. Complete equipment replacement to address EOL and Superior Courts existing wireless AP's.	Deploy wireless throughout King County facilities for both public and business wireless. (request budget in 2013, after planning is complete)	Enables increased Mobility options and consumerization (choice) of end-user devices Supports office space consolidation
Remote Access	* There is a proliferation of "Bring Your Own Device" and county owned mobile devices requiring network access and therefore management. * Added dependency on remote access for day to day work, and in situations such as inclement weather, disasters, pandemic crisis's * The current systems/applications are not sufficient to meet these developing needs.	$437,000 to enhance, upgrade, or replace current remote access systems with a solution to meet current and future business needs.	Consumerization and Technical Remote Access groups complete business needs assessments and technical assessments to define vision, scope, and solutions for the County	Procure & Implement solutions	Complete implementation, optimize, enhance, and grow service offerings as business requires	Expand & Improve access from Home
Site	* Over 150 remote sites are connected by low bandwidth (DSL,	$338,000 non-recurring cost,	Upgrade Phase 1 sites to a higher bandwidth	Migrate phase 2 sites to a higher	Migrate remaining sites to a higher	Empowers remote work

Project	Current State/progress	$ Request	Planned			Benefits
			2012	2013	2014/15	
Bandwidth Upgrades and Admin Building Wiring Upgrade	T1, or Frame Relay) connections * Remote sites will be unable to utilize new technologies such as Unified Communications, Video conferencing, and desktop collaboration tools $70,000 for non-recurring Phase 1 sites (up to 100 sites) Replace cabling in the Administration Building	+$20,000 increase to recurring costs $1.4M	solution (MOE)	bandwidth solution Replace cabling to avoid down time in the Admin building and provide reliable network connection to the building	bandwidth solution	sites to use current collaboration (Lync, SharePoint), productivity (office suite), and Line-of-business specific tools as needed Reliable connection to the users in the Administration building
Network Access Control (NAC):	* Today we are unable to Provide: * secure and seamless connectivity for customers * appropriate permission and policy & standards are enforced * support for converged networks * full protection to KC WAN from viruses and unauthorized access * full support KC-OEM for regional network connectivity during disaster events	$438,000 to purchase and deploy equipment	If approved - Network Access Controls (NAC) will be implemented for KC-OEM and reviewed as part of the larger strategic offering related to remote access, Identity management, and disaster recovery support	Procure & Implement Enterprise NAC per 2012 work plan and in accordance with the KCIT Network Roadmap	Complete Implementation, Optimize, enhance, and grow service offerings as business requires	Identify Users & Devices Prior to Entry Ensure conformance with minimum standards

Project	Current State/progress	$ Request	Planned			Benefits
			2012	2013	2014/15	
Cisco Network Optimizatio n Services (NOS):	IP Addressing is not currently being utilized efficiently causing lost time by engineers as they perform their duties. $350,000 for 2011Q4 -2012Q3 NOS work as part of multi-year maintenance renewal	$488K (Cisco Network Optimization Services (NOS) for 1 Year). This included partial TLT to support this effort	Complete KCIT Network Roadmap items: Core Network Bandwidth upgrades, Equipment Replacement on Network Intrusion Prevention/Detection systems, and standardization of KC WAN Network devices. Complete planning and final design for Out of Band management implementation, document best practices for KCWAN to implement.	Assist with KCIT Network Roadmap initiatives for Redundant connectivity to the State of Washington, Deployment of the enterprise NAC, Plan the MPLS and IP Address projects (see below), increasing security, and supporting the network needs for items such as Cloud computing. A budget Request to support MPLS is expected to support 2014 implementation.	Continue with NOS to complete MPLS and IP readdressing, develop 2015 -2018 KCIT Roadmap	Utilize best practices as we grow our service and capabilities
Out of Band Network (OOB):	* Existing monitoring & remote management of KC WAN Network devices is being performed over the production network. This does not comply with best practices and puts our ability to respond to system issues at risk. * Extended response times in the event of high bandwidth utilization & network incidents	$490,000 for the purchase and deployment of an Out of Band network.	This project builds off earlier efforts by utilizing NOS and will plan the deployment of the Out of Band network.	Procurement & deployment of KCWAN out of band network per KCIT Network Roadmap	Complete implementation, evaluate and expand out of band network as needed	The project will improve response time and deploy industry best practices as outlined in KCIT Network Roadmap by procuring backhaul and network access devices. •

Project	Current State/progress	$ Request	Planned			Benefits
			2012	2013	2014/15	
Internet addressing (IPV6)	* External agencies & service providers are moving to IPV6 due to the depletion of IPV4 addresses. Our network cannot interact as effectively without also upgrading to IPV6. * KCWAN provides I-Net with IP Addressing, I-Net customers are asking for IPv6. * The industry is running out of addresses in IPv4.	$207,000 to purchase IP addressing and train staff.	The project builds off earlier efforts by utilizing existing NOS engagement to plan IPv6 implementation as part of the KCIT Network Roadmap	Implement IPV6		Supplies needed compatibility for current I-net customers The project will ensure smooth transition and continued communication with Federal and State government agencies.

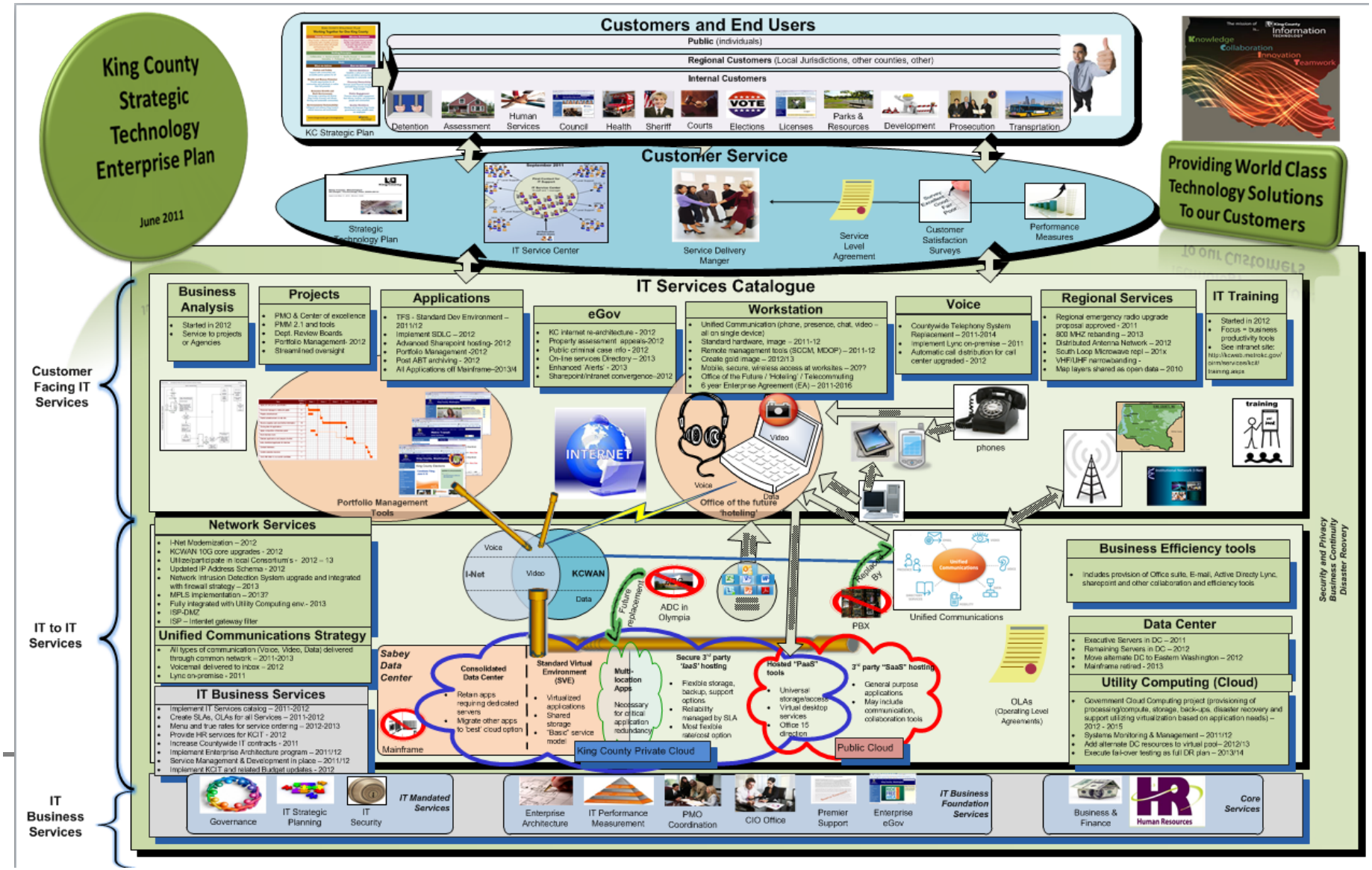
STRATEGIC THEME – SECURITY & RISK AVOIDANCE

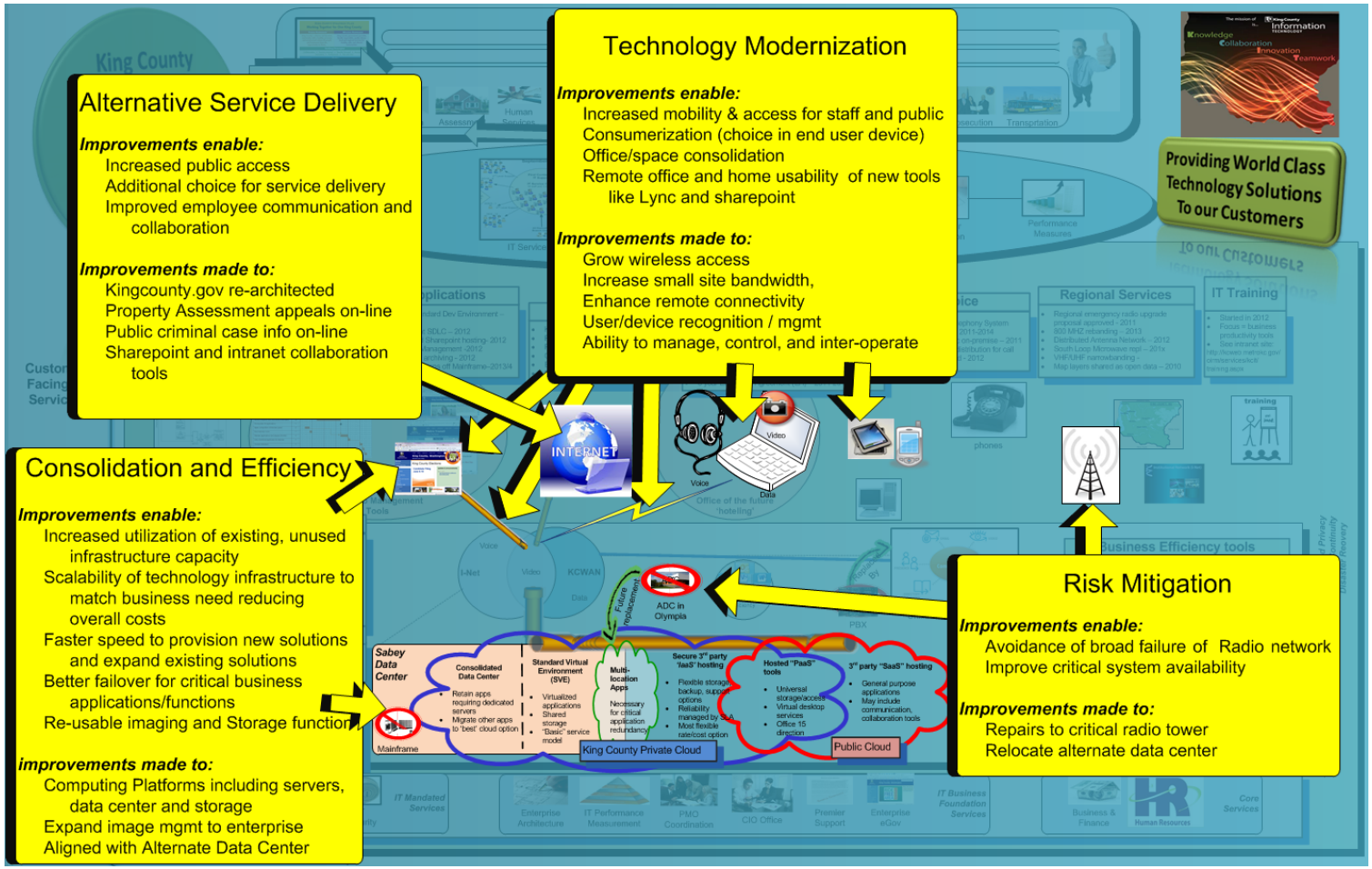
Project	Current State/progress	$ Request	Planned			Benefits
			2012	2013	2014/15	
Alternate Data Center	King county is on notice to move out of its current Alternate Data Center – used primarily as a back-up for critical applications in a disaster scenario. Must move to new location by deadline in 2013 or discontinue existing service.		Working with all departments and agencies, KCIT is re-evaluating our long term IT business continuity model. This plan for IT service migration will take into account new environments and platforms in conjunction with cloud strategy, design and plans, and will then identify the need for geographic redundancy for critical applications.	Implement a replacement for the current alternate data center per business continuity requirements by leveraging the new environment and platform as much as possible to achieve full business continuity for King County based on agencies requirements.	Establish a secondary data center only IF required	Provide for continuity of critical county processes across disaster scenarios Improve system resiliency Improve the utilize of expensive, dormant assets to improve on-going operations
Sobieski Tower Repair	The King County 800 MHz Emergency Radio System communications tower located on Sobieski Mountain is in poor overall condition. There is a "high" risk of the tower falling over.	$121K	Perform maintenance on the Sobieski communications tower that would maintain its viability for the next five years		The tower will be replaced as part of the project to replace the current 800 MHz Emergency Radio System.	Avoid significant service disruption caused by tower failure

STRATEGIC THEME – ALTERNATIVE SERVICE DELIVERY

Project	Current State/progress	Planned			Benefits
		2012	2013	2014/15	
eGov - Web site Re-architecture	Project underway and working on requirement $1,069,500 funded for 2012.	Develop plan, update site design and master template development, develop online directory tool, obtain unified communication tool	Migrate and launch full content, develop and launch citizen communication campaign. Project close out		This important public facing service will provide many excellent benefits for the public, improve awareness of county services and resources; and enhanced opportunities for the citizen to engage more with the County. Includes enhanced public alert capabilities and online services directory
eGov - Property Assessment Appeals	$828,000 funded for 2012. Currently is in planning phase	Conduct business process analysis, develop technical alternative and design	Develop service implementation, launch citizen communication. Project close out		This project will replace manual paper based property appeals process with an on-line process that will support citizen-to-government communication and provide opportunities to automate back-office operations. The project will identify opportunities to both improve services to citizen and streamline operations
eGov - Public Criminal Case Status	$345,000 funded for 2012. Activities to start June 2012	Initiate the project to develop an online inquiry capability for citizens to look up public information about both active and recently completed criminal cases.	Complete project, and assess any additional criminal justice information sources that may be warranted for expanding the online services. Project close out.		This project will provide an on-line inquiry capability of public information for citizens on both active and recent completed criminal cases. This will expedite compliance since information such as upcoming calendar of cases, location, agency, and judgment/fine amounts will be easily accessible.
Advance SharePoint Hosting	$1,087,310 funded for 2012. Activities scheduled to start	Conduct requirements validation and	Complete infrastructure and migrate intranet.		Enterprise SharePoint is focusing on sharing documents and provides a single site available to county staff for employee communications, collaborations, and resources. This project will standardize the Enterprise SharePoint, optimize on the system's capability, and

Project	Current State/progress	Planned			Benefits
		2012	2013	2014/15	
	July 2012	develop integrated design	Project close out		eliminate currently older platforms


King County Strategic Technology Enterprise Plan
June 2011
Customers and End Users
Public (individuals)
Regional Customers (Local Jurisdictions, other counties, other)
Internal Customers
KC Strategic Plan
Detention
Assessment
Human Services
Council
Health
Sheriff
Courts
Elections
Licenses
Parks & Resources
Development
Prosecution
Transpriation
Customer Service
Strategic Technology Plan
IT Service Center
Service Delivery Manger
Service Level Agreement
Customer Satisfaction Surveys
Performance Measures
Providing World Class Technology Solutions To our Customers
Customer Facing IT Services
IT Services Catalogue
Business Analysis
Projects
Applications
eGov
Workstation
Voice
Regional Services
IT Training
Portfolio Management Tools
INTERNET
Office of the future 'hoteling'
phones
IT to IT Services
Network Services
Unified Communications Strategy
IT Business Services
Sabey Data Center
Mainframe
Consolidated Data Center
Standard Virtual Environment (SVE)
Multi-location Apps
Secure 3rd party 'IaaS' hosting
Hosted "PaaS" tools
3rd party "SaaS" hosting
King County Private Cloud
Public Cloud
ADC in Olympia
PBX
Unified Communications
OLAs (Operating Level Agreements)
Business Efficiency tools
Data Center
Utility Computing (Cloud)
Security and Privacy
Business Continuity
Disaster Recovery
IT Business Services
Governance
IT Strategic Planning
IT Security
IT Mandated Services
Enterprise Architecture
IT Performance Measurement
PMO Coordination
CIO Office
Premier Support
Enterprise eGov
IT Business Foundation Services
Business & Finance
Human Resources
Core Services


Alternative Service Delivery
Improvements enable:
Increased public access
Additional choice for service delivery
Improved employee communication and collaboration
Improvements made to:
Kingcounty.gov re-architected
Property Assessment appeals on-line
Public criminal case info on-line
Sharepoint and intranet collaboration tools
Technology Modernization
Improvements enable:
Increased mobility & access for staff and public
Consumerization (choice in end user device)
Office/space consolidation
Remote office and home usability of new tools like Lync and sharepoint
Improvements made to:
Grow wireless access
Increase small site bandwidth,
Enhance remote connectivity
User/device recognition / mgmt
Ability to manage, control, and inter-operate
Providing World Class Technology Solutions To our Customers
Consolidation and Efficiency
Improvements enable:
Increased utilization of existing, unused infrastructure capacity
Scalability of technology infrastructure to match business need reducing overall costs
Faster speed to provision new solutions and expand existing solutions
Better failover for critical business applications/functions
Re-usable imaging and Storage function
improvements made to:
Computing Platforms including servers, data center and storage
Expand image mgmt to enterprise
Aligned with Alternate Data Center
Risk Mitigation
Improvements enable:
Avoidance of broad failure of Radio network
Improve critical system availability
Improvements made to:
Repairs to critical radio tower
Relocate alternate data center
INTERNET
Sabey Data Center
King County Private Cloud
Public Cloud
ADC in Olympia

CHANGE INITIATIVES- LINE OF BUSINESS PLANNING

In 2012, KCIT was selected as a pilot organization to help develop a line of business planning which is expected to replace the current business plan process. Because KCIT has performed significant work in maturing our product catalogue and related services, we select one of our primary lines of business for use in the pilot; Workstation services. Many of the themed items discussed in the prior section align with this service, either directly or indirectly because of their impact on internal (sometimes called IT to IT) service providers. However, because that pilot process is still in progress, we don't have significant results to include at this time.

Significant value from LOB pilot implementation is expected over the longer time horizon and product focus it introduces to the planning process, by looking more directly at the demand associated with each of these services and the environmental factors expected to affect them. In particular, the following significant change drivers will impact future demand for and cost to produce these services:

- Cloud infrastructure – Will impact how we architect and deploy applications in the future
- Consumerization – will affect the type of equipment connected to our IT environment and how it is empowered to connect.
- Mobility – will change the types of devices that connect, creating a menu roughly related to screen size and job function. It will also increase the utilization of wireless access both directly to our own network and indirectly through the internet.
- Standardization – Creation of the KCIT organization enables broader and more effective standardization of process, components, and staff where it makes sense. This will have a significant impact on the cost to deliver both workstation and application services.

Alignment of Rate methodology

The 2013/2014 KCIT proposed budget was developed to support the line of business concept. KCIT developed a new rate methodology to closely reflect the cost of each IT service (workstation, application, eGovernment, regional services, voice, project management, business analysis, and users training). Cost to cover IT Strategic, Performance, Security, and business foundation functions are built in as added percentage to the IT services to allow alignment with IT service consumptions.

This new rate model is proposed to replace the previous method that heavily relied on cost recovery based on agencies FTE count that not always associated with the consumptions of IT services.

KCIT developed the 2013 budget and rates based on agencies demand information collected through customers order forms. The preliminary order forms were collected in January 2012, and were updated in May 2012 as part of the budget development process.

TIME ESTIMATE

This report took approximately 60 hours to produce.

PRODUCT CATALOG

Follow this link to view the 2013 KCIT product catalog in its entirety: http://www.kingcounty.gov/operations/it/it-services.aspx. The table of contents has been copied below for your convenience.

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MAY 2012

GIS BUSINESS PLAN

GIS has historically created its own business plan in order to ensure appropriate budget handling and funding. In order to ensure effective communication and continuity across organizational changes, a GIS business plan has also been created for 2013 and is attached below. As we evolve our business planning by Line of Business, GIS planning will fit and adhere to that model. ’

APPENDIX A – GIS BUSINESS PLAN

GIS has historically created its own business plan in order to ensure appropriate budget handling and funding. In order to ensure effective communication and continuity across organizational changes, a GIS business plan has also been created for 2013 and is attached below. As we evolve our business planning by Line of Business, GIS planning will fit and adhere to that model.

KING COUNTY GIS CENTER
2013 / 2014 BUSINESS PLAN

POLICY FRAMEWORK

Ordinance 14270, approved December 10, 2001 and codified in K.C.C. 4.08.275, created the geographic information systems fund; "for the purpose of accounting for financial resources for the full costing of operating, maintaining and enhancing automated geographic information systems that serve both county agencies and external customers." In 2011 ordinance 17142 modified the code to transfer fund management from the Department of Natural Resources and Parks (DNRP) to the Director of the Department of Information Technology (KCIT). The fund manager is granted authority to establish charges to recover costs for GIS fund services and operations. Agencies and funds either benefiting from the centralized GIS or receiving services from staff budgeted in the GIS fund are to have annual appropriations of revenues transferred to the GIS fund.

Enactment of the 2001 ordinance resulted in creation of the King County GIS Center, tasked to provide GIS resources and services to support the business needs of King County and the region. To fully meet the intent of the legislation, governance committees were put in place to oversee and direct the KCGIS Center, and the following guiding principles for the GIS program were adopted:

- Increase the efficiencies of creation, storage, and retrieval of spatial data.
- Enhance access to and increase the effectiveness of GIS applications and tools.

- Provide a valued regional resource of spatial information and GIS expertise.
- Increase the ability of county agencies to achieve their business objectives through the use of GIS technology.
- Increase the ability of citizens and businesses to access useful information about King County.

VISION, MISSION, GOALS, AND OBJECTIVES

Vision – The King County GIS Center's vision is to be the premier provider of spatial information and GIS services in the region.

Mission – The King County GIS Center's mission is to work in partnership with county agencies to provide accurate, consistent, accessible, affordable, and comprehensive GIS data, GIS infrastructure, and GIS services to support the business needs of King County and the communities we serve.

Goals and Objectives – The KCGIS Center develops an annual work plan in coordination with its governance committees. Each year a set of priority initiatives are defined for the work plan (see www.kingcounty.gov/operations/GIS/About/O_M.aspx), and these in combination with the KCGIS Center's ongoing responsibilities for the enterprise GIS program, become the supporting strategies for the KCGIS Center's major goals and objectives.

Objective A: Improve the quality of King County's GIS data.

This objective is linked to the KCGIS Center's guiding principle to increase the efficiencies of creation, storage, and retrieval of spatial data. Improving the quality of the county's GIS data is aligned with the countywide strategic plan service excellence goal and its supporting strategy to improve local service delivery.

Strategies:

i. Work with the Department of Assessments to coordinate improvements to the positional accuracy of the county's parcel layer.

ii. Assist the Transit Division with data enhancements to TRANSNET, the county's authoritative transportation network layer.

iii. Integrate the wetland data acquired by field staff at the Department of Development and Environmental Services into the county's enterprise wetland layer.

iv. Develop a boundary layer with a complete history of all municipal annexations in the county to facilitate spatial analysis.

Objective B: Increase the ability of King County staff to access and use GIS technology.

This objective is linked to the KCGIS Center's guiding principle to increase the ability of county agencies to achieve their business objectives through the use of GIS technology. The objective aligns to the countywide strategic plan service excellence goal and its supporting strategy to adopt new technologies and processes that allow county agencies to work more effectively and efficiently.

Strategies:

i. Continue the GIS training credits reserve program as a means to fund GIS training opportunities for staff in county agencies. This is in addition to our program of low-cost and free GIS training.

ii. Use the Enterprise License Agreement (ELA) with Esri to control costs, while ensuring all county staff and programs have access to GIS software licenses when and where they are needed.

iii. Replace legacy GIS Web applications using the latest technologies to improve users' abilities to easily navigate the entire content of the enterprise spatial data warehouse.

Objective C: Facilitate regional coordination for acquisition of data and provision of GIS services.

This objective is linked to the KCGIS Center's guiding principle to be a valued regional resource of spatial information and GIS expertise. The objective aligns to the countywide strategic plan financial stewardship goal and its supporting strategy to work with cities to identify opportunities to provide services more efficiently.

Supporting Strategies:

i. Continue to build on the KCGIS Center's successful leadership of the 2012 Regional Aerial Mapping Project in preparation for a similar project in 2014.

ii. Continue the GIS Services Express program to provide bundled GIS services to local public and private agencies.

iii. Develop a core set of regional GIS layers that have consistent coding and attribution across jurisdictional boundaries.

iv. Publish the county's GIS base map layers and key Web mapping services to ArcGIS Online for easy access by local jurisdictions and citizens.

Objective D: Improve citizen access to mapping information on the King County website.

This objective is linked to the KCGIS Center's guiding principle to increase the ability of citizens to access useful information about King County. The objective aligns with the countywide strategic plan public engagement goal and its supporting strategy to increase and improve the use of new technology for citizen involvement.

Supporting Strategies:

i. Continue to build out the GIS data portal to increase public's free access to high value data generated by the King County GIS community.

ii. Complete implementation of new Web mapping services as determined by our matrix staffing services and client services customers.

CHANGE DRIVERS

The KCGIS Center has identified several key change drivers affecting the provision of GIS services and the 2013 / 2014 budget. The change drivers are outlined in this section, and the initiatives to address the drivers are discussed in the Change Initiatives section.

Renewing Esri Enterprise License Agreement (ELA) – Beginning in 2008 the KCGIS Center initiated a process to pool GIS desktop licensing into a single license manager. This scheme created a method to share access to software licensing across agencies to maximize use of existing licenses. In 2011 the county entered into an Enterprise License Agreement (ELA) with Esri to fully realize all the advantages of enterprise license management and to mitigate the cost to acquire additional licenses. The ELA fixes the county's annual cost for GIS licensing at $250,000, and allows the cost-free addition of licenses as needed during the three-year life of the agreement. At the price negotiated the agreement also provides a savings of about 12 percent over the 'retail' cost the county would normally pay for software maintenance. The ELA will expire in August 2014 and the county will need to negotiate a new agreement. Based on analysis of long-term trends it appears the county's GIS software usage increases by about three percent per year. Therefore we need to plan for and assume a cost increase when the ELA is renegotiated in 2014.

See discussion of renewing the Esri ELA in the Change Initiatives section.

Transition of GIS servers at Olympia alternate data center to standard virtual server environment at the King County alternate data center – In 2014 the KCGIS Center is scheduled to retire server hardware currently housed at the Olympia alternate data center. The physical servers will not be replaced. Instead the KCGIS Center will take advantage of the alternate data center the county is planning to establish at a yet to be determined location by leasing space in the server farm provided by KCIT. This move will reduce system administration overhead for the KCGIS Center and align with the

county's strategy to standardize the server environment. It will also eliminate the upfront hardware purchase cost previously identified in the equipment replacement plan.

Mitigating the high cost to acquire aerial imagery – In 2012 the KCGIS Center led a consortium of over 50 agencies in a four county region to acquire high-resolution aerial imagery. The effort met its stated goal to encourage cost sharing with cities and other public entities interested in acquiring imagery. As a result of the cost sharing the county was able to increase the quality of the imagery obtained, while realizing cost savings of over 57 percent versus the go it alone approach. The KCGIS Center anticipates leading a similar project in 2014 and, as was necessary in 2012, will need to significantly increase its expenditure authority to act as fiscal agent for the project.

See discussion of regional imagery acquisition in the Change Initiatives section.

Completion of client services TLT work for Wastewater Treatment Division and need for ongoing matrix staffing support – Since 2009 the KCGIS Center has retained a TLT to provide production level GIS client services to the Wastewater Treatment Division (WTD). This service was scheduled to terminate in April 2012, but was extended at the request of WTD until April 2014. The extension was granted and the KCGIS Center submitted a supplemental budget request to cover the additional expenditure for the remainder of 2012. When the TLT expires in 2014 it will not be renewed. However, as a result of the completion of the body of work by the TLT, WTD anticipates an increased need for ongoing GIS support and is requesting additional matrix staffing services from the KCGIS Center. To accommodate this need the KCGIS Center will request appropriation authority for a journey level GIS specialist FTE after the TLT expires in 2014. The position will be matrixed to and fully revenue backed by WTD.

See discussion of Wastewater Treatment Division need for ongoing matrix support in the Change Initiatives section.

Transfer of system administrator function to KCIT – IT consolidation provides the opportunity for the KCGIS Center to receive its system administration support directly from KCIT. Therefore the LAN administrator master position in the KCGIS Center will be transferred to KCIT for the 2013 / 2014 budget. The KCGIS Center will contract with KCIT for workstation services and server administration, and standard KCIT rates for these services will be applied to the KCGIS Center budget, but at significant savings relative to the cost to retain the master level LAN administrator FTE.

See discussion of the transfer of the LAN administrator function in the Change Initiatives section.

Redistribution of office manager functions as shared resource – The transfer of the KCGIS Center fund from DNRP to KCIT provided the opportunity to reorganize the duties of the office manager to take advantage of IT consolidation. Various functions such as payroll and purchasing were expanded to include support to all IT staff assigned to DNRP. The number of staff supported by the office manager in this capacity increased from 29 to over 75. To accommodate this other areas of administrative support provided directly to the KCGIS Center by the office manager were either curtailed or absorbed by other management staff. It is also assumed that administrative efficiencies from use of Oracle EBS financial and human resource tools will minimize the impact of this change on the KCGIS Center. As a result of the redistribution of duties 50 percent of the office manager's time is now allocated to non-KCGIS Center tasks. KCIT has agreed to reimburse the KCGIS Center for this portion of the office manager's time. The

shift in duties was implemented in mid-2012 and a payment schedule to receive revenues from KCIT established. The 2013 / 2014 budget request retains the full office manager FTE within the KCGIS Center, but includes a client services expense budget for KCIT.

See discussion of office manager shared resource in the Change Initiatives section.

Adjustments to GIS Operations and Maintenance (O&M) costing model – The GIS O&M costing model framework was changed for the 2012 budget to more equitably allocate costs to agencies. As with the prior model it includes GIS usage metrics that are updated during budget preparation in order to determine cost shares for each agency. At the direction of the Budget Office metrics collected in 2011 are being used to calculate rates for the 2013 / 2014 budget. Agency usages always change relative to each other and this will be reflected in the adjustments applied to each agency's rates. Also, distributions of staffing resources are examined via time tracking and minor adjustments are made to improve how staffing is allocated in the model across the various O&M service categories. These staffing adjustments will also influence rates charged to individual agencies. Both types of adjustments are expected and serve to re-align agency rates to current demand for service.

Fluctuations in demand for GIS matrix staffing services – As use of GIS becomes ever more integral to the county's operations, the need for agencies to have access to exceptionally skilled, professional GIS staff grows in importance. However, it is not always in an agency's best interest to add new hires to meet this need. This may be because an agency's GIS staffing need requires a variety of unique technical skills not normally found in a single individual, is driven by tight deadlines, or is of short duration. KCGIS Center matrix staffing services provides a flexible mechanism for departments to meet their GIS needs under these or other circumstances. Currently seven agencies are planning to use matrix staffing in the 2013 / 2014 biennium. Elections, which contracted for GIS matrix staffing in 2012 to meet peak workload demands associated with redistricting following the 2010 census is dropping the service. Road Services is decreasing their matrix staffing allocation from 1.0 FTE to 0.45 FTE due to budget constraints. All other agencies receiving matrix services in 2012 are maintaining their status quo staffing levels. Therefore the net effect is a decrease in demand for matrix staffing services. To adjust the KCGIS Center will make use of its pooled staffing model and allocate resources to its client services line of business.

Transfer of the GIS internal service fund from DNRP to KCIT – The KCGIS Center fund was formally transferred to KCIT in October 2011. The 2013 / 2014 biennial budget is the first budget developed in coordination with KCIT and an outcome of that process is the elimination of DNRP central rates and the application of new KCIT rates to the KCGIS Center overhead budget. These overhead rate changes for IT, HR and department overhead costs will result in a $112,000 increase in KCGIS Center costs for 2013 (as detailed in our 2013 technical adjustments decision package). Note that this increase includes our 2013 desktop LAN services and system administration services.

Counterbalancing these rate changes, as part of KCIT, the KCGIS Center will transfer one (1.0) LAN Admin/System Admin FTE to KCIT, reducing our labor costs by $132,178 (as detailed in decision package). In addition, KCGIS will provide payroll processing and purchasing support to KCIT-DNRP beginning in 2013, generating an estimated $78,136 in new revenue.

The net effect of increased KCIT overhead costs, reduced KCGIS LAN labor costs, and increased revenue is a reduction of $97,927 (1.4955% of proposed 2013 budget).

However, in addition, KCIT mandated and business foundation costs, which are calculated at 5.46 percent, will be added to all KCGIS Center charges. The rates for these KCIT mandated and business foundation costs are not part of the KCGIS Center budget, but they will be based on KCGIS Center rates and will have the net effect of an additional increase in costs to KCGIS Center customers. This KCIT add-on will result in an average net increase of 3.3982% in the gross 2013 budget rates charged to our customers.

This change for 2013 represents a full phasing in of KCIT rates to be charged by the KCGIS Center. For 2014 and beyond the impact of KCIT rates obligated in this way by the KCGIS Center will already be absorbed and adjustments to future budgets will be minimal, subject only to the marginal fluctuations seen in other central rates. The KCGIS Center's 2012 business plan called out the need for flexibility to allow for potentially significant rate adjustments once the financial implications of transfer of the GIS fund to KCIT were better understood.

CHANGE INITIATIVES AND PRIORITIZATION CRITERIA

The King County GIS Center has developed strategies to address the change drivers identified in the previous section. These strategies provide solutions and seek financial and process efficiencies, while striving to keep the GIS program moving forward to achieve its goals and objectives.

While the change initiatives presented in this section do not directly address the county's Equity and Social Justice Initiative, it is nevertheless important to note the data and tools provided by the KCGIS Center are key and indispensable elements in the county's efforts to measure the determinants of social and economic equity. Many indicators of equity have a geospatial component and GIS is the perfect tool to apply to activities such as site selection for county facilities, delivery of social services to communities of need, and optimizing access to parks and transit. Aside from the GIS technology provided to county agencies, recent and ongoing initiatives of the KCGIS Center directly address issues of equity and social justice for the general public. The GIS data download portal (www5.kingcounty.gov/gisdataportal/) eliminates the cost barrier for individuals or community groups to acquire and use the county's GIS data, and the KCGIS Center's popular Internet mapping applications, such as iMap and Parcel Viewer, provide unprecedented access to a rich data environment and allow citizens to become highly informed about factors in King County that may affect their home, job, or community.

Renew Esri Enterprise License Agreement (ELA) in 2014 – The current Esri ELA will expire on August 17, 2014 and the KCGIS Center will need to negotiate a new agreement. It is anticipated there will be an increase in the annual cost of the ELA. Predicting the actual rise in cost is difficult but can be based on historical trends in usage of GIS software. These trends show a gradual increase of about three percent per year. Extrapolating over the three year period of the ELA, and figuring in compounding, the negotiated price for a new ELA may rise to approximately $273,182, an annual increase of $23,182 to take effect with the 2014 payment. Therefore this anticipated cost increase plus sales tax ($25,385 total) is included in the KCGIS Center's budget request for 2014. We would anticipate that a newly negotiated three-year ELA would provide the county with savings over 'retail' cost similar to the 2011-2014 Esri ELA. Without the current ELA the county would be paying $281,600 per year for software maintenance. With

the ELA the county is paying $250,000, a savings of $31,600 ($34,602 with tax included). This savings provides a 0.67 percent efficiency gain for 2013 and a 0.54 percent gain for 2014.

Regional aerial imagery acquisition in 2014 – The KCGIS Center formed a consortium with cities and other entities in the region to acquire aerial imagery in 2012. The county managed the acquisition program and operated as fiscal agent for vendor payments for all members of the consortium. At the time of submittal of the 2012 budget the project cost was estimated at $650,000, with the county's obligation estimated at $300,000. The actual project cost at the time of this writing is $971,906. The increase is due to the consortium attracting far more participation than expected with 54 entities joining. As a result the area of imagery collection was greatly expanded and the project costs increased accordingly. To continue to function as the fiscal agent for the project the KCGIS Center requested additional expenditure authority in a mid-2012 supplemental. In spite of the overall cost increase for the project the county's share actually decreased to $263,259 because the additional consortium members reduced each entities cost shares further than originally expected. For its cost share the county will acquire products valued at $621,678, a savings of 57.6 percent.

The KCGIS Center will lead a similar aerial imagery acquisition project in 2014 and is estimating the project cost at $1.2 million, of which the county's portion will be approximately $300,000. As with all recent aerial imagery projects the county's portion will be covered by the KCGIS Center's imagery reserve fund. Each year a $200,000 rate is charged to county agencies and added to the fund. For the 2014 project the county will again function as fiscal agent. Therefore the KCGIS Center is requesting additional expenditure authority for 2014 of $1.2 million, to be partially offset by $900,000 of expected payments from consortium members. Using the 57 percent savings generated from the 2012 project as a basis the efficiency gain from the regional imagery project in 2014 is projected to be 5.61 percent.

Wastewater Treatment Division need for ongoing GIS matrix staffing support – The body of work for the TLT supporting the Wastewater Treatment Division (WTD) will be completed by April 2014. This work involves initial collection, creation, and development of datasets of local agency sewer pipe connectivity in support of the Decennial Flow Monitoring Project and Conveyance System Improvement Program. Once the work is complete there will be an ongoing need for maintenance of the data, as well as development of tools for analysis and reporting of the data to meet WTD business requirements. As a consequence WTD has requested a full FTE of GIS matrix staffing support to begin in April 2014. Since this is a significant request for long-term support, and is fully revenue backed by WTD, the KCGIS Center is requesting appropriation authority for 1.0 FTE to begin in April 2014. This request will have negligible fiscal impact on the KCGIS Center budget request for 2014 because the ongoing FTE position will be opened in the same job classification (GIS Specialist – Journey) as the TLT position it is replacing. For rate setting purposes the TLT position has been considered a part of the KCGIS Center's client services line of business. Client services rates will continue to apply through 2013 but beginning in 2014 will transition to matrix staffing services for both the expiring TLT and for the proposed FTE, with rate setting based on the matrix staffing services line of business.

Transfer of LAN Administrator function to KCIT – Since its inception in 2002 the KCGIS Center has retained a LAN Administrator – Master position. The incumbent LAN administrator fulfills the important role of technical support for the KCGIS Center's servers and desktops. Beginning in 2013 the KCGIS Center will take advantage of IT consolidation and the new KCIT service delivery methodology to receive the same level of technical support and expertise but at significant cost savings. The 2013 / 2014 KCGIS

Center budget request transfers the 1.0 FTE LAN Administrator – Master position to the KCIT LAN administrator group assigned to DNRP. Labor costs associated with the LAN administrator position are estimated at $135,000 for 2013 and $139,000 for 2014. KCIT rates to receive work station and server support are $49,712 for each year, generating savings of $85,288 in 2013 and $89,288 in 2014. These translate to efficiency cost savings of 1.65 percent in 2013 and 1.40 percent in 2014.

Sharing office administrator resource – Due to IT consolidation the office administrator function in the KCGIS Center has been significantly reorganized. Duties have been expanded for the incumbent administrator to include support for all KCIT staff assigned to DNRP. For these non-KCGIS Center tasks KCIT has agree to reimburse the KCGIS Center for 50 percent of the office administrator's labor costs. These costs are estimated at $114,000 for 2013 and $119,000 for 2014, correlating to savings of $57,000 and $59,500 respectively. These savings represent efficiency costs savings of 1.10 percent in 2013 and 0.93 percent in 2014.

TIME ESTIMATE

It took approximately 45 hours to develop and complete the business plan.

PRODUCT CATALOG AND MEASURES

Please see Attachment 1: King County Strategic Plan Alignment and Measurement – King County GIS Center.

Attachment 1: King County Strategic Plan Alignment and Measurement – King County GIS Center

Product Family *(Brief description of your family of products)*	**Product** *(Identify each product associated with this product family)*	**Customer** *(Primary customer served by this product)*	**KCSP Alignment** *(This product significantly advances the following KCSP strategies)*	**Performance Measures**			
				Quantity *(historical actuals & 2012 targets as available)*	*Quality* *(historical actuals)*	*Timeliness* *(historical actuals)*	*Cost per Unit* *(historical actuals)*
GIS Data	GIS data stored and available in the enterprise spatial data warehouse (SDW)	County staff	SE.1.c. Improve local service delivery	Count of data layers available in SDW (2009 – 452) (2010 – 527) (2011 – 542)	Percent of data layers maintained to data content specifications	Percent of data layers maintained per update frequency guidelines	Per layer cost to maintain SDW
GIS Data	GIS data available on the GIS data portal	Citizens, businesses, and public agencies	SE.1.c. Improve local service delivery	Count of data layers available on GIS data portal (11/2010 – 90) (05/2011 – 204)	Percent of data layers maintained to data content specifications	Percent of data layers maintained per update frequency guidelines	Per layer cost to maintain GIS data portal
GIS Applications	Custom GIS applications provided to county users	County staff	SE.2.b. Adopt new technologies and processes that allow county	Count of custom GIS application installations			Cost to develop and maintain custom GIS application

Product Family *(Brief description of your family of products)*	**Product** *(Identify each product associated with this product family)*	**Customer** *(Primary customer served by this product)*	**KCSP Alignment** *(This product significantly advances the following KCSP strategies)*	**Performance Measures**			
				Quantity *(historical actuals & 2012 targets as available)*	*Quality* *(historical actuals)*	*Timeliness* *(historical actuals)*	*Cost per Unit* *(historical actuals)*
			agencies to work more effectively and efficiently				s
GIS Applications	GIS mapping services hosted on the KCGIS Center web servers	County staff, citizens, businesses, and public agencies	PE 1.b. Increase and improve the use of new technology for citizen involvement	Count of unique visits to KCGIS Center web servers	Results from usability studies	Number and duration of incidents preventing instantaneous access to web mapping services	Cost to county agencies per 1,000 hits (2009 - $52.53) (2010 - $50.31) (2011 - $49.41)
GIS Client Services	GIS projects for client services customers	County staff, citizens, businesses, and public agencies	J SE.2.d. Provide cost effective, accountable, and responsive internal services	Total billable labor hours for client services projects	Percent of projects requiring more revision steps than originally planned	Percent of projects completed by requested deadline	Average hourly labor rate (2009 - $98.75) (2010 - $102.50) (2011 - $103.00)

Product Family *(Brief description of your family of products)*	**Product** *(Identify each product associated with this product family)*	**Customer** *(Primary customer served by this product)*	**KCSP Alignment** *(This product significantly advances the following KCSP strategies)*	**Performance Measures**			
				Quantity *(historical actuals & 2012 targets as available)*	*Quality* *(historical actuals)*	*Timeliness* *(historical actuals)*	*Cost per Unit* *(historical actuals)*
GIS Matrix Services	GIS projects for matrix services customers	County agencies	SE.2.d. Provide cost effective, accountable, and responsive internal services	Total FTE requests for matrix services			Average cost per FTE (2009 - $145,017) (2010 - $150,136) (2011 – $158,395)
GIS Training Services	GIS course instruction and materials	Trainees	QW.3.d. Promote the use of technology to maximize productivity and efficiency	Number of trainees	Percent of trainees satisfied or very satisfied with training		Cost for one day of KCGIS Center instruction
GIS Services Express	Bundled GIS services	Cities and businesses	FS.1.b. Work with cities to identify opportunities to provide services more efficiently	Total labor hours for GIS Services Express clients			Cost for 100 hours of bundled services