DEPARTMENT OF INFORMATION TECHNOLOGY STRATEGIC PLAN

FY2014 - 2015

Prepared by the Cowlitz County IT Staff

DEPARTMENT OF INFORMATION TECHNOLOGY
STRATEGIC PLAN

Mission

To provide information systems and related technologies that enable County departments to efficiently serve the public; to partner with departments in identifying and developing proactive technology solutions; and to maintain exceptional quality, productivity, and rapid response to requests for service and emerging challenges. To these ends, the IT Department provides: 1) network systems design, development, and technical support; 2) intermediary support for communications networks including voice, data, applications, audio and video; 3) a centralized online help center for computing and communications issues; 4) 24/7 support for computer hardware, system security, and operating systems; 5) end-user support and training; 6) document imaging, storage and retrieval; 8) system data backup and disaster recovery; 9) business and workflow analysis from an IT perspective; and 10) custom application and programming development and support.

Vision

Over the next several years, the department foresees rapidly advancing technologies, higher user expectations, limited resources and increased emphasis on operating efficiency and direct user access. These and other challenges will be met through plans, processes and technology-based services that provide the central platform for cost-effective, efficient, productive, accessible and exceptional County government. The IT team is dedicated to user access to any unrestricted data, anytime, anywhere (subject to various outside network availabilities, including cellular networks) on any device (appropriate for the application), while maintaining and/or monitoring the technical environments that reasonably ensure the protection, security and integrity of County data.

Operating Philosophy

The IT department is a skilled, knowledgeable professional team that promotes a proactive, inter-dependent, service-oriented workplace that is caring, ethical, innovative and dependable. Staff members are self-motivated and collaborative problem solvers devoted to responsive, accountable and appropriate information technology services for all County departments. Above all, the Information Technology team is dedicated to *solutions* that improve the County's operating efficiency, effectiveness, and quality, which in turn enhance the County's livability and long-term economic vitality.

Major Challenge Areas/Issues

The IT Department has identified several pressing issues and challenges that inhibit County efficiency, effectiveness, productivity and quality. Furthermore, through the prudent use of technology, the County has a resource that can improve its cost equation across most departments by introducing various cost and time saving options. The following are not in priority order; however, the Department invites vested parties, senior managers and the BOCC to assist with prioritizing and allocating resources that derive the greatest benefit across County departments.

Audio/Visual for the Courts

As technology has strengthened the capabilities of most courts and courthouse operations, audio/video has become more essential, including fully leveraging current 'For the Record' (FTR) software and hardware that provide a record of court proceedings. Cowlitz County has fallen behind other jurisdictions in the deployment of its audio/video options and leveraging FTR's capabilities, which has introduced inefficiency, slower response times, greater backlog, and growing retrieval issues to daily operations.

Goals

· To reduce response times for the retrieval of any requested court document and/or data.

· To reduce backlog of court proceeding filings.

· To increase overall Hall of Justice operating efficiency.

· To increase A/V options and quality in the courtrooms.

Strategies/Actions

· Maintain current FTR court recording system through:
  o Weekly investigation of computer event logs, including FTR server;
  o Monthly FTR hardware check for FTR server;
  o Manual six-month hardware checks of courtroom FTR computers (including removal of old local recordings);
  o Weekly racked audio/visual equipment checks;
  o Monthly random access check of recordings for overall quality;
  o Manual six-month FTR server database review for data accessibility and integrity.

· Review daily tasks (i.e. Monday morning courtroom computer reboots) and automate tasks that can be scripted or programmed.

· Finalize agreement/contract with an accessible and competent vendor to provide as-needed extended courtroom A/V support, as well as project-based A/V design, planning, and implementation.

· Provide training on new technology implementations within 30 days of final install for all HOJ (Hall of Justice) staff that will be using/accessing these resources.

- Assist with the implementation/integration of AOC/State-provided software/hardware solutions as needed.

- Cross-train at least one additional IT staff member on FTR and other courtroom technologies so we have depth of knowledge and backup service options.

Voice Communication

There are currently two parallel and incompatible telecommunication systems (Siemens System and Avaya VOIP System) that do not effectively mesh to provide County departments with reliable, seamless voice communication. This has added unnecessary cost, reduced operating efficiency, created disgruntled users, extended and delayed times for work request responses, and negatively impacted employees from accomplishing assigned tasks. It has also introduced access issues for citizens who find it more difficult to contact County agencies, which in turn has created public discontent and image issues for the County.

Goals

- To increase voice communication quality and reliability for all departments.

- To increase countywide efficiency, effectiveness and productivity.

- To reduce the number of citizen issues related to phone access and responsiveness.

- To reduce IT's response times to telecommunications items/issues.

- To increase IT's options for solutions to telecommunication items/issues.

- To reduce reliance on outside vendors and outdated telecommunications hardware.

- To increase the reliability and flexibility of the voice communication network.

- To reduce overall long-term telecommunications costs.

Strategies/Actions

- Work with OAS (Office of Administrative Services) to create a document detailing the current phone footprint and infrastructure for review.

- Train IT staff on VOIP communication set-up and protocol.

- Present a plan to the BOCC to implement VOIP (Voice Over Internet Protocol) technology county-wide in phases over the next 3 years.

- Select a competent and accessible vendor with VOIP specialization skills to provide telecom support.

Legacy Software

Older legacy software is inhibiting user and system efficiency, reducing employee productivity, contributing to avoidable errors and generally adding operational challenges to many County departments. Older, familiar software may offer a sense of comfort to end-users but also introduces a variety of compatibility, efficiency, licensing, liability, and productivity issues to departments that have not kept pace with upgraded software. While some may argue that known software allows greater productivity and efficiency, it also creates a false sense of status quo that cannot be maintained, especially in a climate of IT growth that will not support legacy applications. Without thoughtful, organized and *planned migration* to more effective, compatible, and reliable software, County departments cannot operate efficiently. IT department staff has witnessed a significant decline in general system reliability and growing user capacity issues in departments that do not have planned software migration.

Goals

- To increase overall County efficiency, effectiveness, quality and productivity.

- To increase system reliability and cost-effectiveness.

- To reduce IT staff time required to intervene due to old, outmoded software.

- To increase the number of provided services and service delivery speed.

- To reduce software upgrade deployment times.

Strategies/Actions

- Schedule meetings throughout 2014 in at least six (6) targeted departments with which the IT Business Analyst will partner and meet to identify current department software asset status and create outlines of upgrade/migration plans as appropriate.

- Determine initial software upgrade needs by creating and distributing a countywide IT questionnaire.

- Engage with the County Strategic Plan Utilize Technology Committee monthly to evaluate software upgrade needs to set priorities and draft related planned migration documentation.

- Present 2-year, 5-year, 7-year, and 10-year software migration plans (including tentative costs) to the BOCC.

End-User Capability and Capacity

As technology has advanced and the variety of hardware devices and software has proliferated, County employees have struggled to keep pace. This has led to a wide divergence in knowledge and skill levels required for efficient, effective and high quality agency operation. Relatively few end users have the requisite skills or understanding of County IT equipment or operating software, which has hampered productivity growth among departments. Lower than desired user competence and understanding has unnecessarily used valuable IT resources, reduced user efficiency and productivity, and created disharmony due to variances in understanding and capacities relative to high-tech equipment/operating software. It is difficult to calculate actual cost of a technical skill deficit, but in productivity alone it is easily in the hundreds of thousands of dollars.

Goals

- To increase overall County efficiency, effectiveness, quality and productivity.

- To reduce the number of IT events and hours associated with interventions related to insufficient end-user technology knowledge or skill.

- To reduce extraneous costs and human resources expended due to user issues.

- To increase users' ability to leverage technology to provide county services without IT intervention.

- To increase the number of county computer users that have baseline competence on the MS Windows platform, and the MS Office suite.

Strategies/Actions

- Convene an informal work/study team from various departments to explore deficits in end-user capability and capacity.

- Develop a user survey to determine KSA (Knowledge, Skills, and Abilities) requirements relative to IT software/hardware and topical areas that could be addressed through training.

- Administer survey and analyze results.

- Use work team to establish priority courses, instructors, content and timeline for beginning training.

- Deploy new IT training room environment.

- Assess training value and outcomes after each course and an overall review.

- Creatively produce and distribute short (2-3 min) "IT-TV" quarterly education segments (distributed on our media server) that educate users on critical IT items (i.e. passwords, email, new IT policies, etc.).

Personal Electronic Devices in Workplace (BYOD)

The burgeoning Bring Your Own Device (BYOD) workplace phenomenon is alive and well in Cowlitz County. While investing one's own money in a new electronic device and bringing it into the workplace may seem innocuous to some, it becomes a serious issue for the IT department which is charged with managing IT systems, security, connectivity and applicability on a very limited budget. Over the past two years, IT staffers have seen as much as a 10 percent increase in non-system or mission-driven IT work hours dedicated to solving problems related to non-sanctioned personal devices. Employees bring their own phones, laptop computers, iPads and other devices to the workplace, then request connection to the County system. Or, they request help operating said devices. This breeds security issues, adds risk, reduces time dedicated to essential work and promotes a voice/data/communications system that is poorly managed, prone to failure and inefficient.

Goals

· To increase overall County efficiency, effectiveness, quality and productivity.

· To reduce the number of IT hours devoted to assisting users having issues with personal devices.

· To reduce the number of operational issues occurring due to unauthorized personal devices.

· To increase the availability of county-sanctioned and/or county-provided devices that will allow county users to conduct relevant county business more efficiently.

Strategies/Actions

· Implement MS SCCM 2012 (MicroSoft System Center Configuration Manager) to provide an IT BYOD management option.

· Engage with Departments as needed to show them the various mobile and non-standard devices that IT has available that could preclude BYOD.

· Educate users on the "do's and don'ts" of BYOD using our new IT training room, and our "IT-TV" monthly educational media segments.

· Create IT policies and procedures that will allow managed use of BYOD in the workplace.

Archaic User Policies, Perspectives, and Expectations

The County in caught in an evolutionary period of electronic hardware and software expansion that can be both beneficial and detrimental to agency operations. Rather than comprehensive and modernized policies and protocols, there are too many that are outdated and irrelevant. This has led to employee and management expectations that are impossible to achieve, due to the lack of priorities based on plans that could assign resources according to where they will have the greatest positive impact across all departments. This collective issue has created and sustained conflict, reduced interdepartmental collaboration, and limited the County's ability to achieve the desired level of productivity and efficient performance.

Goals

- To increase overall County efficiency, effectiveness, quality and productivity.

- To increase the level of interdepartmental collaboration and adherence to County IT policies.

- To reduce the number of outmoded, irrelevant IT policies.

- To increase the number of departments that understand and comply with clear IT policies and procedures.

Strategies/Actions

- Create current comprehensive written IT policies that include:
  - Cellular phones and associated devices.
  - Mobile devices (without cellular radios).
  - Social Media.
  - IT Small Asset Management.

- Update current IT policies as needed, including:
  - Backup protocol and procedures.
    - Include Disaster Recovery and testing.
  - Wireless Network access/use.

- Distribute new/updated IT policies to BOCC for corroboration, and to all departments for adherence.

Insufficient Level of User Innovation and Active Partnering Re: Information Technologies

While computers have been a workplace fixture for over twenty years and most employees are generally familiar with their basic operations, there remains a 'break/fix' culture that requires constant intervention. Rather than focusing on building sustainable long-term business partnerships based on innovation and progress toward mission fulfillment, too many employees only engage IT when something "breaks". This adds unnecessary time to IT staff workloads, adds cost of service, creates constant delays, requires triage for virtually every call for assistance and reduces the County's operating effectiveness and productivity. Maintaining equipment properly, understanding basic maintenance requirements, and engaging IT sooner in IT-related planning would allow IT staff to offer pro-active solutions that would bring enormous value to all departments. This is a classic Catch-22, in that employees must attain a higher level of self-sufficiency and operating skill to reduce reliance on IT intervention for minor issues. However, once this level of self-sufficiency is reached, and once users and departments begin engaging IT in their planning efforts, the County will see immediate gains in overall system compatibility, speed, reliability, cost/time savings, and functionality.

Goals

- To increase the number of purchasing requests from departments that have properly executed business case/ROI analysis attached.

- To reduce the IT hours devoted to avoidable repair, intervention and instruction.

- To increase overall system compatibility and integration through properly researched, analyzed and ordered software and equipment that meets business case and County IT standards.

Strategies/ Actions

- Provide open communication channels to departments and employees for IT-related planning.

- Engage with users both one-on-one as appropriate and in the IT training room environment to teach/train on user best practices for hardware/software assets.

- Provide users and departments clear descriptions of the options and solutions provided by the IT Department.

- Train departments on how to provide business case and ROI justifications for IT acquisitions.

Over the next three to five years, the department will focus on six critical areas:

1. **County Department Operating Efficiency** – The IT strategic plan has one central theme: *to continually improve the County's overall operating efficiency, effectiveness, quality and general productivity through the application of technology*. While technology is not a panacea, it is the most centralized tool for improving the operation of County government. Virtually every issue and associated goal, if properly addressed, will improve these four interrelated areas while reducing operating costs.

2. **Server Virtualization** - Migrate the County from numerous servers that require significant maintenance, constant monitoring, intervention and upgrading to three to five scalable servers that have upgradable capacity with the capability to serve all County departments.

3. **Modernizing Voice Communication** - Compatibility and applicability continue to create internal issues that hamper efficient departmental operation. The County has an antiquated voice system but also has discontinuity relative to how it standardizes voice communication. This will be addressed as a major force behind improving overall County operations, including cellular options.

4. **IT Policy/Protocol Standards** - The IT department will devote resources to compiling all current voice/data/Wi-Fi SOP's and guidelines into a comprehensive document that integrates all elements. It will also collaborate with departments and senior managers to create realistic new policies and protocols to guide this element of county government operations. Once done, for the first time the County will have a complete document to plan, evaluate, and develop its overall IT capability in a manner that continually improves service to the public.

5. **Wi-Fi System Development** - Due to the ubiquitous nature of Wi-Fi and the positive impact mobile devices have on productivity, efficiency and the ability to respond, the IT department will make every effort to continue system modernization and refinements.

6. **Disaster Recovery Planning** - Even though voice and data communication is ubiquitous and vital to every County department, the IT Department has never been invited to participate in disaster recovery planning. The Department will request involvement and will collaborate with all departments to develop a voice/data system disaster recovery plan that integrates into the County's emergency response plan.

Major Strategic Initiatives FY 2014-2015

Over the next two years, the IT department will address the issues described above and will develop at least 12 major initiatives. While touched on in previous plan text under various issues, each initiative listed below will be undertaken as a standalone project that will most likely involve and depend on other County departments for full and successful implementation.

1. **Server Virtualization** - Migrate the County from numerous servers that require significant maintenance, constant monitoring, intervention and upgrading to three to five scalable servers that have upgradable capacity with the capability to serve all County departments.

2. **Consolidate Voice Communications** – Move to Voice Over Internet Protocol (VOIP) to reduce cost and establish all County departments on one system. This will reduce cost, eliminate compatibility issues and establish more control over basic communication.

3. **Expand and Unify Countywide Wi-Fi** – Fully implement one countywide Wi-Fi network that is compatible with all sanctioned mobile devices and allows broad, fast and reliable coverage. This will reduce dropped data connections, save time, increase efficiency and increase productivity.

4. **Modernize Mobile Phone Policy & Practice** – According to a business case analysis, establish a new and more contemporary policy framework for mobile phone features, purchase, connection and use on the County system. This will save money, time, and effort currently dedicated to solving totally avoidable problems associated with poor or ineffective mobile phone policies and protocols.

5. **Create IT Voice/Data System Orientation Tutorial** – As part of the department's renewed training effort, staff will develop guidelines and clear tutorials for existing and new employees based on policies, protocols, guidelines, regulations and system parameters. This will allow faster and more complete orientation of new personnel and more clarity for existing employees who are often unaware of County policies or how to work with the overall IT system.

6. **Develop an IT Training Curriculum** – For greater knowledge, skill and abilities (KSAs) regarding the IT system, this series of simple programs will promote end-user development. This will be comprised of several short courses (self-taught or staff taught) and will be created in parallel with a tutorial, which is a written overview. Subjects such as email use, software use, software compatibility guidelines, equipment guidelines, system access, process improvement, Wi-Fi, personal device guidelines, and FAQs will be included.

7. **Consolidate Printers** - Migrate printer acquisition and use away from one printer per person to better networked multi-function printers serving multiple employees. This will save money, reduce breakdowns, simplify purchasing, improve print quality and resolve some space and equipment sharing issues.

8. **Develop an IT Disaster Recovery Plan** – While there are currently fundamental plan elements, there is no comprehensive plan that integrates into the County's emergency response plan. This is a high priority. Other counties have strong internal IT disaster recovery plans and guidelines and Cowlitz County must have a comprehensive plan that integrates with other area and regional plans.

9. **Develop a Comprehensive IT Policy/Protocol Document** - This document integrates all IT SOP's and guidelines that would then be available for reference on-line or via a hard document. Without such a central comprehensive document, it would be impossible to develop an IT tutorial and orientation for new and existing employees.

10. **Revise the BYOD (Bring Your Own Device) Hardware Protocol** - This will provide written and on-line guidelines for what the County allows relative to new hardware and what is considered compatible and cost-effective.

11. **Institute an IT Business Process Analysis (BPA) Approach** – To reduce errant technology costs and deter compatibility issues, the department will create guidelines for how to use basic business process analysis when assessing any requirements that (may) require or have only a technology solution. Implement a process that integrates ROI analysis into all user IT planning BEFORE it comes to the IT department as a request for service.

12. **Prepare and Conduct a User Needs Assessment** – There has been no end-user needs assessment for quite some time regarding technology and how technology could cost-effectively improve performance and operating efficiency, effectiveness, quality and productivity.