



# **Information Technology Vision & Strategic Plan**

**2013**

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## **Kent County's Mission**

The mission of Kent County government is to be an effective and efficient steward in delivering quality services for our diverse community. Our priority is to provide mandated services, which may be enhanced and supplemented by additional services to improve the quality of life for all our citizens within the constraints of sound fiscal policy.

## **Information Technology's Mission and Goals**

### ***Mission***

The mission of the Kent County Information Technology (IT) Department is to provide responsive, quality, and cost-effective information technology solutions and services that enable County departments, agencies, and local government units to be successful in achieving their objectives, striving always to exceed expectations.

### ***Goals***

- Provide leadership to the County in applying technology to the challenges of local government.
- Provide a full range of application services, including consulting, project management, and business process analysis / re-engineering.
- Provide a robust and flexible computing infrastructure that is capable of handling current and projected needs of internal customers and external client agencies.
- Provide responsive and cost-effective support of installed applications, services, and hardware.

## **IT Vision**

The vision of the Information Technology department is to be a customer-focused, cost-effective, well-run IT operation that is recognized for its responsiveness, flexibility, and the effectiveness of the solutions it provides and supports.

## **IT Guiding Principles**

In addition to the mission statement, goals, and vision, there are several guiding principles that we use in IT to provide daily direction and focus.

- Commitment to customer service. IT exists to service the needs of its internal customers and the citizens of Kent County. In order to fulfill this role, all IT staff must be focused on providing value in every interaction.
- Building customer relationships. As a corollary to customer service, we must build strong, effective relationships with County departments and related agencies so that we understand their needs and can plan how best to meet them.
- Communication is critical. Another corollary to customer service is the need to constantly update customers on what we are doing to solve their problems and on project progress.
- Focus on delivering value. We will focus on introducing technology because we should do it to meet a customer's requirement, not because we can do it to keep up with the latest technology fad.
- Keep things simple for the customer. Managing technology and technology-based solutions is complex and growing in difficulty all the time. However, managing that complexity is a responsibility of the IT department. Keeping it simple for the customer allows other departments to concentrate on their objectives rather than having to be concerned about technology.
- Offer technology leadership. There are a multitude of challenges that confront Kent County. Some of these may be answered by deploying technology-based solutions to either extend our services or maintain current service levels in the face of mounting demand with existing staff. However, it will take leadership by IT employees to help those involved in performing analysis and making informed decisions.
- Find a way to say "Yes". Due to time and money constraints there can be a tendency to answer "we can't do that" to more difficult requests. Instead, we will concentrate on working with our customers to find innovative ways to meet their needs.
- Accelerate results delivery. Part of providing effective solutions means delivering them on a timely basis. We will keep the critical portions of planning and coordination but eliminate parts of processes that slow down response or do not add value.
- Act ethically. As employees of a government organization, we owe the public that funds us a responsibility to perform our duties in a manner that upholds high ethical standards.
- Treat others with respect and dignity at all times.

## IT Scope of Services

IT (or Central IT, to differentiate this department from those supporting Aeronautics, Department of Public Works, and the Health Department) offers a full array of technology services to all but the above three departments. For those three parts of the County, IT handles certain aspects of technology, which vary depending on the department. In general, IT does not provide technology planning or strategy for them; however, each participates in the County's bi-annual review of IT policies and procedures and has a seat on the Executive IT Steering Committee (EISC). Except for services IT currently provides to Aeronautics, DPW, and the Health Department, other strategies and plans mentioned in this document do not pertain to these County functions.

## IT Priorities

The following priorities are to be used to resolve conflicts between projects.

1. **Enterprise-wide** – these are applications that serve most or all County employees or are common infrastructure projects.
2. **Limited-Time funding** – these are applications or projects that need to be completed in a specific time frame in order to receive outside funds. The most common example is a grant-funded project.
3. **As Negotiated**

These priorities reflect our emphasis on leveraging solutions to the widest extent possible, which will result in maximizing the benefit to the County. The IT Department recognizes there are numerous needs across the County and its operations, and many will achieve benefits for that area. However, in order to achieve the best use of scarce resources, IT will first concentrate on those projects that serve a wide variety of departments. The second priority will be projects that are undertaken with outside funds and have specific time limits. Typically these are narrow in scope and limited to a single department. Negotiation among departments with conflicting needs will be used to settle remaining project priorities, unless a requesting department has funding available that can be used to supplement available IT resources.

All priorities are subject to changes due to emergencies or critical needs. In those situations, the IT department will respond immediately to provide required services.

## IT Focus Areas

- Customer Service
- Architecture
  - Simplify
  - Unify
  - Solidify
  - Mobilize

- Communication / Collaboration
- Applications
  - PeopleSoft
  - GIS – Geographic Information System
  - JNET – Justice Network
  - Document Imaging / Workflow
  - Internal Applications
  - accessKent
- Infrastructure
- Staff

## ***Customer Service***

- **ITIL.** The Information Technology Infrastructure Library (ITIL) is a series of modules that outlines best practices in various aspects of IT. We are committed to the use of ITIL within County IT, and we will continue to modify our practices so that we are in general conformance with most, if not all, of ITIL's approaches. We should note here that ITIL is fairly generic, so individual tailoring to an organization's requirements is part of a standard implementation. For 2013 we will continue our efforts at diversification and we will work on refining our project management methodology.
- **Service Level Agreements (SLAs).** At this time we continue to monitor our compliance with agreed standards. In addition, we will tailor individual function or department SLAs where required. Meeting SLA requirements is a standard portion of each IT staff member's Management Pay Plan (MPP) goals and objectives. SLA performance is now a routine part of our performance assessment, and these figures were reflected in our annual updates to the County Board of Commissioners. As we progress with our ITIL implementation, SLAs and their review will become integrated with service support.
- **Deliver value when we engage.** One of the challenges we confront as an IT department is to continually evolve the value we provide. As part of this process, IT staff members will be encouraged to build relevant and meaningful relationships with our customer base and to understand the processes and needs of each area of the County. We will look for opportunities to provide additional services and improve current service levels. Finally, we will strive to stay current with plans in all departments so that we can insure investments in technology are in line with department needs. As part of our ongoing commitment to customer service, we have incorporated the results from the annual IT survey into our department performance measures.

- **Outline product selection criteria.** Given the diversity of services that are offered by County departments, the number of potential technology solutions is quite large. Many solutions, however, are narrowly focused and have very specific infrastructure requirements that may not be well-aligned with overall technology investments by the County. The best answer to this is for departments to engage the Information Technology department early in their evaluation process. For a number of reasons, however, this will not always occur. Therefore, IT will develop and publish an outline of selection criteria that departments should use in evaluating technology purchases. Following these guidelines will mean that IT will be able to provide the best possible infrastructure and technical support. The selection criteria will be revisited and updated as often as necessary to insure that we are responsive to the needs of our customers.

## **Architecture**

- **Simplify**
  - **Reduce the number of computing platforms.** Today IT supports three server operating systems (OS). While all are relatively stable, there are still issues that arise with upgrades and applications of patches. Over time, we will take advantage of equipment and application upgrades to migrate to one of two server operating systems:
    - Linux
    - Microsoft Windows

HP/UX is now confined strictly to CourtView, and there will be no new usage of this OS. We have a CIP to use for replacing the HP/UX systems, which, when the project is complete, will eliminate this OS at the County. We anticipate the project to be complete and HP/UX to be gone from our environment in 2013.
  - **Thin-client delivery.** We will deliberately favor solutions that employ the web browser (or so-called thin client) for the client interface. This greatly simplifies desktop PC installation and support, and also allows for easy access by users in remote locations that have low-bandwidth connections to the data center. Further, we favor “browser agnostic” applications over those that dictate use of specific web browsers (such as Internet Explorer).
  - **Cloud-based computing.** This is a significant shift in the computing paradigm and brings with it a number of advantages as well as risks. We have already made a commitment to “the cloud” with our implementation of Office 365 for e-mail in 2012. We will continue to evaluate the trade-offs as opportunities become available, but in general we favor those applications that offer a hosted version.
- **Unify**
  - **Fully implement Active Directory.** This was a point of significant activity in 2012. We have now fully implemented Microsoft’s Active Directory (AD),

replacing Novell's eDirectory. In 2013 we will be looking at new ways to leverage this resource.

- **Move toward Single Sign On (SSO).** Due to the wide variety of servers and applications we run at the County there is a proliferation of user IDs and passwords required. Introducing Active Directory is helping us move to a time when one user ID and password can be used for most applications. There will always be some, however, such as LEIN access, which will be outside the scope of this approach. The first step in this approach was the introduction of a new user name system for the Digital Paystub project. Over time, this new user name will become the standard for all applications. There will be a period of time when both user names are still in use; which to use will depend on the application.
  - **Upgrade all Windows Servers to the Same Version.** Currently we are using multiple versions of Windows on our servers, which means we support them less effectively with having to keep track of where each version sits regarding patches and other issues. Going to a consistent version of Windows will make us more effective at ongoing support, in line with the goal of reducing the number of operating systems.
  - **Linux Variants.** We are in the midst of a transition from Novell's SuSE variant to one from Red Hat. We anticipate that this will provide us with both improved management capabilities and lower operating costs over time. The transition to Red Hat should be completed during 2013.
- **Solidify**
    - **Plan for a dynamic, adaptable infrastructure.**
      - Review single points of failure and plan for redundancy. While we attempt to eliminate single points of failure during design, due to growth and complexity sometimes changes will introduce them. In other situations, budget constraints or available technology may have restricted our options. This effort will be on-going as we seek to insure that we offer the best available service for the available level of funding.
      - Implement server clustering for higher availability. As hardware prices continue to fall we have determined that one way to approach higher availability is to use clustering of relatively inexpensive servers. Clustering essentially "pools" multiple servers, so that when the primary server fails other servers in the pool act in its place and maintain uninterrupted service. Eventually, all critical applications will be run in a clustered environment to provide improved reliability.
      - Cluster-tolerant applications. We will highly favor solutions that are designed to operate in a clustered-server environment. While clustering file / print and database servers provides some protection, we also need to do the same with application servers. To do so, however, we need to deploy applications that are designed to work in this environment or the benefit is lost.
    - **Improve network / systems monitoring.** This is an area of increasing attention. Because we have multiple internet-facing applications, we are consistently striving to increase and improve the methods we use to monitor the traffic and transactions that take place. We also participate in multiple security



associations in order to gain insights from other participants into best practices. Efforts regarding cyber-security will continue to receive significant attention as the number of threats in this arena is on a steep upward trajectory.

- **Mobilize**

- **Improve access to core applications for mobile workers.** We currently offer some access for mobile employees, including VPN access, web access to e-mail, and terminal server access for selected applications. However, these solutions have been put into place largely on an ad hoc basis. In 2012 we began looking at these and other solutions from a more strategic perspective, with an end goal of enabling remote access for any County employee that requires it. We plan to begin the introduction of wireless access in selected County facilities in 2013. The first target is the downtown Courthouse, and will offer both access to core applications as well as an internet connection.
- **Smartphone / tablet apps.** To date the County does not have any applications specific to these devices generally available. As part of our overall review of supporting a mobile work force we will look at what applications make sense, what platforms to target, and what type of return on investment we can anticipate.
- **Virtual desktops / applications.** While the ability to “remote in” to a desktop has been available for some time, there are some inherent security risks involved and it also means that individuals have to remember to leave their desktop PCs on. We are investigating the use of virtual desktops, which run desktop sessions on servers to alleviate these problems, as well as to potentially address other issues. We are also looking into solutions that “virtualize” applications and deliver them remotely where that would provide a better experience on a small form-factor device.

## ***Communication / Collaboration***

- **Revamp and improve the Intranet.** The intranet in its current form has been in place for many years. While useful, it is not particularly compelling, particularly because the content changes infrequently. While it does act as a portal in some respects, it is primarily used as a resource for forms, documents, and policies. Our vision is to re-invent the intranet and begin positioning it as a primary information vehicle for County staff. This means we will address timeliness of information as well as linking applications. Over time, we intend to move many of our in-house applications to run in a browser. These will be accessed via the intranet, which turns the intranet into more of a portal. With the planned acquisition of full Office 365 in 2013, we are looking seriously at using Microsoft’s SharePoint product to support our intranet.
- **Investigate collaboration technologies.** There are numerous applications on the market today designed to enhance sharing and organizing of information, as well as facilitating the work of teams on projects. Some of those include Microsoft’s SharePoint portal, wikis, and blogs. We will be working with these during 2013 to determine what, if any, role they should play in the IT infrastructure and publish the results as part of our

product selection criteria. As an example, the department currently uses wikis for handling some internal documentation.

- **Actively seek collaboration opportunities.** The Information Technology management team will look for situations where working together with other local government units, school systems, or non-profit agencies can provide benefits to all parties involved. Examples of our efforts so far include support for the 61<sup>st</sup> District Court and participation in state / local government unit cross-boundary collaboration efforts. We have and will continue to explore collaborative opportunities with all local and regional government units as well as the State of Michigan.
- **Social media involvement.** While use of social media to promote County activities and objectives does not, per se, fall within the purview of the Information Technology department, there are clearly implications for such use for our Computing Environment. IT management will stay involved as the County develops social media policies and determines what channels are appropriate.

## ***Applications***

- **PeopleSoft**
  - **Begin the search for a replacement.** When we made our original decision in 2007 to “freeze” PeopleSoft maintenance, we knew that it meant we would have to eventually replace the system. There is a CIP in the approved 2013 budget that has sufficient funding for us to begin the search for a replacement. However, funding that will cover the full cost of a replacement has yet to be identified and secured. We do plan to develop the replacement strategy and begin the research process in 2013.
  - **Effective utilization.** Any changes or extensions to PeopleSoft will be reviewed carefully to insure that either the change is an absolute necessity (required by a change in the law, for instance) or will produce a short-term payback. We may elect to utilize other means to accomplish the same end, such as the use of the County’s website (accessKent) to facilitate improvements to purchasing procedures. Another option may be to acquire an application or subscribe to a service that would potentially be used even after the PeopleSoft replacement project is complete.
- **GIS – Geographic Information System**
  - **Leverage use of ArcGIS Server.** We upgraded our ArcGIS Server in 2011, and also put in place a new version of KCoGS application. This opens up new opportunities for IT to deliver GIS services, and we will be examining which of those opportunities makes the most sense for us. One thing we are planning the roll-out of mobile applications for use on smartphones and tablets.
  - **Integrate GIS further in business processes.** There are some areas, such as Property Description & Mapping, where GIS is totally integrated into their daily work processes. Another example is Central Dispatch; our staff spent

considerable time working through numerous issues relating to data provision and procedures. We will partner with departments that are interested in expanding their use of geographic data and services to assist them in integrating these tools into their daily work.

- **Data Access.** At the request of Canon Township we put together a pilot project allowing Canon staff to access a restricted version of our KCoGS application. This has since been expanded to other local units of government. We are also working with Property Description & Mapping to develop a facility that will permit direct bulk downloads of County GIS data.
- **JNET – Justice Network**
  - **CourtView**
    - **Judicial Data Warehouse.** This is a project undertaken by the Supreme Court Administrator's Office (SCAO). Kent County is one of the early participants, and we will be working with SCAO and its chosen vendor to implement the new system in 2013.
  - **JailView**
    - **Change Management.** Unlike CourtView, we do not have a completely separate testing / training environment for JailView. We are looking at establishing one and requiring that the vendor use that environment for all testing prior to upgrades or changes to the application.
  - **Tiburon.** There is a new release of this product available, which is used to support Juvenile Detention. We will explore with Circuit Court and Juvenile Detention staff the best options for proceeding, and begin implementation of the upgrade if that is indicated. Another option may be to explore replacing Tiburon altogether.
  - **RMS.** The Sheriff's Department implemented a new records management system (TIMS) in 2012. We are an early adopter, and there are still some implementation issues that remain to be resolved.
- **Specialty Applications**
  - **Workflow / Imaging.** OnBase has been extremely well-accepted at Kent County. There is a consistent queue of requests for image and workflow-based applications using this product. We do need to upgrade our current version so we can move away from the reliance on specific versions of Internet Explorer, and plan to accomplish that in 2013. Project requests will be accommodated as we have resources available.
- **accessKent – County eGovernment Portal**
  - **Maximize revenue opportunities.** This is becoming a challenge, as multiple departments are opting to move services away from accessKent to applications hosted by other vendors. Typically these moves occur as part of implementation of a wider-ranging solution than we can justify developing in-house. There may be some limited opportunities to develop revenue-generating applications, but we do not expect these to provide much income.

- **Improve government processes.** As the County seeks to improve both its internal and external processes, we will seek opportunities to use accessKent as part of the solution. While the primary focus of accessKent is on directly serving the County's citizens, it is also possible to use the site to facilitate cross-department or public-to-department information or transaction flows. Examples could include information gathering from specific public agencies or surveys to obtain public input on County priorities. During 2012 we expanded the reverse auction application for Purchasing to neighboring local units of government, and also implemented new online document requests for the Circuit and Probate courts.
- **Support mobile environments.** We expect to introduce in the first quarter of 2013 a revamped website that automatically recognizes and adjusts to mobile browsers. This adjustment will occur not only for content pages but also for our interactive applications.

## ***Infrastructure***

- **IP Telephony.** With the introduction of Voice over Internet Protocol (VoIP) telephony to the Fuller Campus, over half the phones in the County now operate on VoIP. We will be looking at the possibility for introducing VoIP to the Parks Department headquarters now that the high speed fiber connection is in place. In addition, we will look to VoIP implementations as the need to upgrade or replace portions of our current digital PBX arises
- **Disaster Recovery.** Our disaster recovery plan is over five years old and is in need of updating. As part of the update process, we identified the need for a second data center facility. Working with Facilities Management, we have established a second data center (called "DC2") in a secured County facility. In 2007 we began the migration of equipment to that facility. In 2013 we will continue to move hardware to DC2 and update our recovery plans. We will also develop and implement a testing schedule that outlines how often we perform recovery tests and on which applications. In addition, we are working with individual departments to assist them in development of business continuity plans.
- **Storage Management.** Our data storage requirements are growing at an annual pace that far surpasses revenue growth. This mirrors industry trends, and is a result of the increasing amount of data that is collected not as text documents but as images, sound, and video clips. As we continue to move aggressively towards streamlined processes that eliminate paper this trend will accelerate. Given the tight budgets at the County there is an obvious collision point. Therefore, we are developing strategies for managing data through a framework called information lifecycle management. Essentially what this entails is using lower cost storage for information that is older and not referenced frequently, rather than storing everything on our high-availability storage network. In addition, we will begin assessing the viability of charging departments for storage space to garner their assistance in managing the rate of growth.

- **Information Security.** Given the rapid proliferation of devices that can hold large amounts of data, in 2013 we are looking at tools that will allow for management of external devices to provide additional layers of security. Another possibility is hosting our own externally-accessible storage system to help keep documents secure. Data encryption on portable devices, including laptops, tablets, smartphones, and jump drives, is also an area of inquiry. We further intend to investigate tools that allow for management of external devices to provide additional layers of security.
- **Windows / Office.** We are now in the process of rolling out Windows 7 to those PCs capable of running it. For those PCs that cannot support Windows 7, we have been urging departments to retire old, off-warranty equipment. Due to the phase-out of security support for Windows XP in 2014, this need is becoming imperative. While Microsoft is now shipping the successor product, Windows 8, we have no immediate plans to migrate to that product or support it.

We have funding in the 2013 IT operating budget to migrate our Office licensing to full Office 365. Currently we use it only for e-mail, but the upgrade will entitle us to use either web-based or full versions of Office 2010. We currently plan to begin the upgrade process in the first quarter of 2013.

- **Security.** The number and types of threats to the County's Computing Environment continues to grow. We continue to monitor these threats, largely through vendors that support our security mechanisms and through our participation in various security-related groups. We are also working to stay abreast of changes to all relevant regulations and industry standards. As required, we will reflect changes to our strategies, plans, policies, and procedures. To the extent that such changes affect our user community, we will work with affected County departments and staff to determine how best to introduce the changes.

## **Staff**

- **Training.** The Information Technology department is committed to giving IT staff members the training they need to both perform their jobs as well as to grow professionally. Training plans for every staff member are developed and reviewed annually as part of the MPP evaluation process. Over 90% of the IT staff is now certified in ITIL at the Foundations level, and we will continue to have staff training in ITIL-related disciplines. In late 2010 we introduced a project management class and implemented a standard project management methodology throughout IT in 2011. Training in 2013 will be aimed at leveraging both ITIL and project management, as well as keeping staff skills current.
- **Flexibility.** As technology continues to evolve we are finding that our needs are shifting within the department. In order to provide the best service possible, we will continuously examine the needs and staffing availability. We anticipate this will result in

shifting responsibilities over time, likely accomplished by beginning to split positions between functions. This will permit us to offer new opportunities to staff while encouraging higher productivity across the board.

- **Redundancy**. Similar to what we are proposing for critical equipment, we will be identifying skills where there is only one individual available and working through training and job responsibilities to ensure that we are at least two deep across the department.