



**Baltimore County**

**Information Technology**

**Innovation, Efficiency and Consolidation (IEC) Report**

**February 2011**

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## **EXECUTIVE SUMMARY**

In order to meet the new County Executive's vision of a more efficient, and innovative County Government, the County's Administrative Officer requested Baltimore County Agencies work with the Office of Information Technology (OIT) and the Office of Budget and Finance (OBF) to identify projects which would provide innovation, efficiency, cost savings, consolidations, vacancy reductions and better serve public safety - all of which could be realized within a six to eighteen month time frame. OIT & OBF began working immediately with agencies within Baltimore County Government to determine their needs and areas for potential focus.

In order to realize results in the time frame of only six to eighteen months, OIT focused on solutions already in-house or which were available through an existing procurement mechanism to facilitate timely purchase. Each agency completed a survey designed to determine if there were business processes that could be automated through potential technology solutions. OIT Management met with the Department Head of each agency to discuss and review these potential solutions.

Items reviewed for potential savings included technology solutions such as, document management, workflow tools, automated route planning/optimizers, land management tools and business process analysis efforts. As a result of the meetings and the information gathering process, OIT was able to determine which projects would lead to greater efficiency and innovation while providing cost savings to the County.

Working with the agency heads and the Office of Budget and Finance, the Office of Information Technology was able to determine which projects should be the focus of future investments by the County. From this process there were twenty-three projects which meet the requirements set forth. For each of these resulting solutions, a high level evaluation of costs and efficiencies was completed to verify that the use of this product would show a return on investment. Each project was reviewed to determine if it met the project category of Innovation, Efficiency, Vacancy Reduction, Consolidation of services or enhancing Public Safety. The projects identified in this report meet at least one and in many cases more than one of the project categories selected.

## **SECTION I: OFFICE OF INFORMATION TECHNOLOGY**

The Office of Information Technology supports over twenty agencies and over eight thousand employees, 24 hours a day, 7 days a week, 365 days a year. This support includes all general government agencies and critical public safety applications and systems such as 800MHz public safety radio, CAD 911, Corrections and the back office systems in HR and Finance that ensure all Baltimore County employees are paid and receive correct benefits. The County's service and support functions are broken into five main areas.

The Business Applications unit manages all new development of software applications while supporting existing applications and performing database management. They have broken their areas of concentration into the functional business areas of County government. These include Administration, Human and Financial Services, Public Safety, Web Service, Land Management and Geographical Information Systems (GIS). This allows each of those areas to focus on the business processes used by those areas of County Government.

The Network and Systems area manages all of the back end systems, infrastructure, data storage/retention, telecom and cabling which deliver connectivity to desktops and phones allowing employees to access all of the applications and systems to perform their daily functions. This team is also responsible for the County's enterprise email system. Within this team is the server and systems group, infrastructure group, technical services for Mainframe support, Operations for monitoring all systems throughout the day and night, and Telecom for phone support and Infrastructure for wiring and connectivity

The Service Delivery team manages the "first touch to the customer" areas such as the Service Desk for first call, Desktop Support for work directly at the customer desk, Access Management for receiving proper access to the applications needed, Business Process Improvement for insuring new applications are not installed over bad processes, Data Security for ensuring that proper security practices are utilized, Computer Training and Quality Assurance for verifying applications and hardware are working properly before they are delivered to the customer. Also within this group is Central Printing. This area covers all printing and scanning needs of the County with in house personnel and equipment and runs an in-house, full-service print shop and provides scanning services for large volume scanning of information into electronic format.

Electronic Services supports all 800 MHz radio systems used by Police and Fire communications as well as Public Works. This support also extends to the support of the electronic devices in vehicles including installation and maintenance.

CAD/Communication Center (911) support is yet another area of focus for the Office of Information Technology. This area supports all CAD (Computer Aided Dispatch) and standard IT functions within the Baltimore County 911 Center.

The Office of Information Technology as a whole currently supports 49 Major/High Profile projects, 135 small projects and 18 upgrade projects for a total of 198 active projects. In addition to project support,

the Services Desk received a total of 39,901 calls for service in 2010 and Desktop support responded to 4,038 incidents for user support. Network Services received a total of 20.5 million emails of which a total of 13.6 million were filtered out as spam before ever being delivered to the user community and a total of 7 million were delivered. Network Services provided server support to 386 servers and Applications Development provided support to 289 applications, of which, 43 are deemed as mission critical to the daily operations of the County.

## SECTION II: PROJECT OVERVIEW

The **Accela Permits, Inspections and Licensing** project will automate the business processes around building, electrical, plumbing and miscellaneous permits and their associated inspections. It will integrate the County's Geographical Information System (GIS) to support spatial analysis and quick business decisions with a customer service portal and e-permitting capabilities. These automations will improve data integrity and accuracy while providing efficiencies and staff time reductions.

The Department of Permits Approvals and Inspections will implement an **Accela Land Management Application**. This project will implement a Land Management solution to coordinate and track the subdivision and development review and approval process. This will include a business intelligence and statistical reporting tool for stakeholders to assist with decision making and analysis. The information will be stored in a centralized database to support easy to use query and report operations. This will improved the efficiency and accuracy of data entry, analysis and reporting for the agency.

The Department of Permits Approvals and Inspections will also implement **Automated Route Planning** software to optimize driving routes for mobile service agents. The automation will increase their service time and reduce travel time and expenses.

The **Constituent Service Portal** will allow constituents to come to one web page to utilize and request services. This innovation will grant Baltimore County constituents the flexibility and on demand services they require to keep them aware and informed.

The Police Department will implement the **iWATCH** program to create an automated tracking system to receive, categorize and track incoming crime tips from the community. This will enhance their ability to efficiently track and respond to tips and engage the community in prevention of crime.

The Police Department will begin the **Electronic Citation** Initiative which will install equipment into Police vehicles to automate the ticketing processing for the Officers in the field. This process will issue the offender a printed computer generated/drop down selected offense type ticket at the point of the stop reducing data entry and potential for errors. This will reduce the length of traffic stops, increase Officer safety and automate Meters and NCIC checks for violators and vehicles. The information from the ticket can then be automatically delivered to the District Court system for processing.

The Police Department will also implement the **Field Based Reporting** initiative to allow the Officers to complete reports in Police cars, from the field, via web browser. This information will be automatically sent to the Quality Assurance department to verify information and then accepted into Police Systems. This process will dramatically reduce data entry efforts and accuracy of data entered.

The Police Department is also implementing the **Enterprise Booking** project between Baltimore County Police, Corrections and Sheriff. The new application will replace the existing booking system that is no longer supported, unstable and does not integrate with other applications causing duplication of efforts. The new application will allow personnel to process offenders from the point of intake/booking to release.

The Department of Health will be implementing an automated **Animal Control and Licensing** system to support the Health Department and Permits Approvals and Inspections' animal licensing group. This will reduce manual processes, reduce paper storage and decrease time spent researching and responding to complaints.

The Department of **Corrections Automated Route Planning** project will allow the Correctional Officers to visit the 35 Work Release sites and the 40 Home Detention Residences using a route that is optimized for both travel time and fuel efficiency. By optimizing the routes in this manner, the County will save in both fuel usage and time savings allowing Correctional Officers to remain in the facility.

The Department of Environmental Protection Services' **Envision Expansion and Upgrade** project will implement an enhancement to provide field staff with the ability to perform data entry during field inspections through the use of either office synchronization or web-based application. This will reduce duplication of effort within the business processes as well as reduce clerical time spent on performing post inspection data entry.

Also within the Department of Environmental Protections Services, will be the **DEPS Master Inspections and Enforcements Enhancements and Wireless Access**. This will provide an enhancement to the existing Inspections form by adding additional inspection criteria and information as well as add laptops to the field for faster more accurate entry of information. This will allow them to increase their inspections as per a mandate from the State of Maryland. This will streamline the inspections process and reduce duplication of data.

The Department of Aging will be implementing their **County Ride IVR/IWR** (Interactive Voice Response system and the Interactive Web Response system). This will allow seniors to call-in their daily rides or use the internet to schedule these rides. Time will be saved in processing requests and automating the follow up process with citizens on a daily basis.

The Office of Planning will implement its **2012 CZMP (Comprehensive Zoning Map Process) Initiative**. The new application will improve the efficiency, accuracy and convenience of filing an application based on experiences from the 2008 CZMP. Information will be more readily available and easily disseminate saving time and improving customer satisfaction.

The Office of Information Technology will implement the **My Neighborhood Redesign** project. This redesign will consolidate all current My Neighborhood and public ArcIMS web sites into a single, easily navigated site. This will simplify the use and bring everything needed to one site saving the customer's time and frustration.

The Office of Information Technology will complete the **Service Center Upgrade**. The upgrade to the Office of Information Technology's service request tracking system will allow employees to request services in a self service manner which will provide them with a work request number which is easily searched for status updates. This will save the customers time by providing answers to common questions and reduce time spent waiting for a status update.

The Office of Information Technology will implement an **Enterprise Learning Management** system to be used by all agencies within Baltimore County Government. This system will include online

training and registration, classroom and instructor scheduling, content authoring as well as training and career development. This will reduce cost of training development as well as provide tracking for all of the County agencies required to track and re-certify their employees specific to their functions within the County. This new application will allow completion of the requested training remotely.

The Office of Budget and Finance will implement a **Inventory Scanner** in the Vehicle Maintenance area. Vehicle Maintenance uses an inventory system called Faster to track and manage their vehicle maintenance. The ability to scan part numbers into the system will allow them to better manage their inventory, process that inventory more quickly and give management transparency into the vehicle operations and maintenance process through reports.

The Office of Information Technology will be moving most Baltimore County desktop user community to a new **Virtual Desktop Infrastructure (VDI)** solution. This VDI solution will allow replacement of approximately 50% of the standard labor intensive, higher cost desktop computers with a small, more efficient, low maintenance, low cost thin client solution. This replacement will reduce cost of equipment and support.

The Office of Information Technology will implement the **Broadband Fiber** project which will install a fiber optic network throughout the County. This fiber will be used to deliver reliable high-speed network and Internet access allowing data and information to be shared for multiple purposes including public safety, healthcare, education and job creation. It will eliminate most of the need to rely on third party providers who charge us for these services.

Baltimore County will be upgrading the old analog radio transmission system to a new **P25 National Standard Digital Radio System**. This upgrade will allow for interoperability with other regions and the State of Maryland as well as expanding coverage and improving communication quality.

In tandem with the digital radio system upgrade, Baltimore County will be creating a new **Central Communication Center (911 Center)** which will be innovative, efficient and state of the art. This new center will allow Baltimore County's 911 Center to receive and respond to constituent calls for emergency services with improved equipment and enhanced communication methods.

The Office of Information Technology and Office of Budget and Finance will be implementing a new **Pension System** for Baltimore County employees and retirees. This system will replace an outdated, unsupported and very manual previous system and process. Efficiency gains will provide improved response as well as cost savings.

## SECTION III: SELECTED PROJECTS

### **Permits Approvals and Inspections (PAI) Accela Permits, Inspections and Licensing**

#### ***Description:***

This project will automate the business processes around building, electrical, plumbing and miscellaneous permits and their associated inspections. It will integrate the County's Geographical Information System (GIS) to support spatial analysis and quick business decisions with a customer service portal and e-permitting capabilities. The system will also manage the issuing and maintenance of professional plumbing and electrical licenses allowing for standardized tracking and easy verification. Currently there are several methods used for this process in several different formats. Data entry is performed in multiple places. This project will take those disparate data stores and merge them into one automated system.

#### ***Benefit:***

The implementation of this project will reduce staff time required to work around shortfalls of the current system or modify business processes. Staff efficiency and data integrity will be improved with the integration of GIS and the use of an easy to use interface with list of values and data entry restrictions. IT support and maintenance will be more efficient with the consolidation and modernization of disparate systems.

#### ***Potential Examples:***

- Homeowners can apply for, track the status of, pay for, and receive building, plumbing, and electrical permits online.
- Plumbers and electricians can renew professional license online.
- Employees can answer desk, phone and email inquiries through a centralized interface.
- Employees will be able to check for violations and outstanding fees and liens before issuing a new permit.
- Employees can verify payments for permits and licenses.
- Inspectors can query the status of permits and update results in the field making the information available in real time.

#### ***Expected Implementation:***

Estimated Fourth Quarter 2011 (Second Quarter FY12)

#### ***Project Category:***

Innovation, Efficiency, Vacancy Reduction, Consolidation

## **Permits Approvals and Inspections (PAI) Accela Development Management**

### ***Description:***

This project will implement a Land Management solution to coordinate and track the subdivision and development review and approval process. This will include a business intelligence and statistical reporting tool for stakeholders to assist with decision-making and analysis. The information will be stored in a centralized database to support easy to use query and report operations. This project will integrate with the Accela Permits, Inspections and Licensing system to allow the permit applications and tracking to be available to the public through the Internet.

### ***Benefit:***

This will improve the efficiency and accuracy of data entry, analysis and reporting for the agency, saving time and increasing efficiency in the development management process. Time spent performing analysis in multiple data stores and applications will be reduced by the integration of an easy to use interface for County users and the public.

### ***Potential Examples:***

- Property owners and developers will be able to submit subdivision applications, including maps and plans, digitally through a constituent services portal.
- Multiple plan reviewers from different agencies will evaluate plans simultaneously in digital form, reducing the need for routing paper plans, improving workflow and speeding approval process.
- Employees can answer desk, phone, and email inquiries regarding application status through a centralized interface.
- Property owners, developers, plan reviewers and other stakeholders can view affected properties and geographic features on digital maps.

### ***Expected Implementation:***

Estimated Fourth Quarter 2011 (Second Quarter FY12)

### ***Project Category:***

Innovation, Efficiency, Vacancy Reduction, Consolidation

## **Permits Approvals and Inspections (PAI) Route Planning**

### ***Description:***

Field agents within Permits, Approvals and Inspections travel throughout the County on a daily basis in order to perform various inspection and permitting duties. Currently, each inspector is given their assignments for the day and travels to the sites that work best for them for that given day. With the implementation of an Automated Route Optimizer tool, the work orders for the day can be entered into a tracking system that develops the most efficient route for each of the inspectors that optimizes travel time and fuel efficiency.

### ***Benefit:***

The use of this Automated Route Optimizer tool, will allow the PAI to manage better mileage reimbursement, staff time out of the office and daily inspections.

### ***Potential Examples:***

- Inspectors receive a route manifest detailing daily work assignments in optimal sequence, including route map and driving directions.
- Supervisors can identify who to deploy to an emergency inspection based on work assignments and location.
- Managers can generate individual and fleet mileage reports comparing planned versus actual miles for specific time periods.

### ***Expected Implementations:***

Estimated Second Quarter 2011 (Fourth Quarter FY11)

### ***Project Category:***

Innovation, Efficiency, Vacancy Reduction

## **Constituent Services Portal**

### ***Description:***

As technology has evolved, more and more people look to the Internet for all of their service needs and the services they need from County government are no exception. A Constituent Services Portal is under design for the Baltimore County web page to allow constituents to visit one web page where they will request and utilize services offered by the agencies of Baltimore County. This portal will be implemented in a phased approach and will continuously improve as new services and information are added.

### ***Benefit:***

The implementation of this Constituent Services Portal will improve efficiency by encouraging and enabling greater online customer self-service. This will free call takers to handle requests rather than spending additional time on the phone answering routine questions. This process will also improve customer satisfaction by empowering customers to initiate, manage and complete common tasks and contacts online rather than waiting until the right person is available by phone. Customer inquiries will be tracked more efficiently and effectively as each inquiry will be tracked and logged within the site.

### ***Potential Examples:***

- Citizens will be able to submit a request or inquiry to County agencies, receive a tracking number, and follow up to check up on the status of their inquiry through the portal.
- Citizens will find the most requested online services - such as real property search, property tax payment, parking ticket payment, and daily court docket and jury qualification questionnaires - available through the portal.
- Citizens will find contact information quickly through the portal.

### ***Expected Implementation:***

Phased Approach, Final Phase Implementation Estimated Third Quarter 2011 (First Quarter FY12)

### ***Project Category:***

Innovation, Efficiency

## **Police iWATCH**

### ***Description:***

The Baltimore County Police Department will work with the Office of Information Technology to create an automated tracking system to receive, categorize, and track incoming crime tips from the community. County citizens will be able to visit the iWATCH web page and enter the information regarding their tip on an easy to use screen. The involvement of the citizens of Baltimore County in crime prevention is extremely important. In some cases, the volume of information coming into the Police Department can be challenging to track and evaluate. This system will allow for more efficient tracking and analysis of this information.

### ***Benefit:***

This project will enhance the ability for the Police Department to efficiently track and respond to incoming crime tips. It will improve communication and further engage the community to help prevent crime.

### ***Potential Examples:***

- Provide the Police Department with a central tool to manage incoming crime tips.
- Provide citizens with a central location for providing non-emergency crime tips.
- Provide the Police Department with a tool to encourage citizen participation in community policing.
- The program will give County residents a central place to register for automatic emails on crime alerts and Police activities and events.

### ***Expected Implementation:***

First Quarter 2011 (Third Quarter FY11)

### ***Project Category:***

Innovation, Public Safety

## **Police Electronic Citation Initiative**

### ***Description:***

The Electronic Citation Initiative will equip all Baltimore County Police vehicles with an electronic citation writing system to automate the ticketing process for officers in the field. The system will electronically scan barcodes on driver's licenses and vehicle registration, complete a traffic ticket, check various databases for warrants and provide correct Maryland DMV codes on the ticket based on the violation selected by the officer from their laptop. This process will issue the offender a printed computer generated ticket at the point of the stop, reducing data entry requirements and the potential for errors. The information from the ticket will then be automatically delivered to the District Court system for processing.

### ***Benefit:***

Implementation of this project will reduce the length of traffic stops, resulting in greater availability of officers and increased officer safety. It will enhance public safety by providing officers more quickly with information from multiple law enforcement sources. The project will automate background checks through the National Crime Information Center and checks for violators and vehicles. Statistics which are legally mandated for capture during traffic enforcement stops will be automatically captured and submitted to the appropriate databases for analysis. The transfer of information directly into these systems will dramatically reduce the data entry time by transferring information captured during these enforcement stops from written form into the correct databases.

### ***Potential Examples:***

- Traffic stops can be reduced from 20 minutes to 5 minutes
- Hand written paper tickets will no longer need to be deciphered or processed by the Police Department or the District Court
- Citation information will be sent electronically to the District Court on a daily basis
- Driver's license and vehicle information will be automatically populated on citation using a barcode reader
- Officers can generate a 'court packet' of all citations for a particular court date
- Officer will know if the vehicle or driver has been stopped by other users of the MSP e-ticket application

### ***Expected Implementation:***

First Quarter 2012 (Third Quarter FY12)

### ***Project Category:***

Innovation, Efficiency, Public Safety

## **Police Field Based Reporting**

### ***Description:***

The Police Field Based Reporting initiative will allow Baltimore County officers to complete reports in Police cars from the field via a web browser. This information will be automatically sent to the Quality and Assurance area of the Criminal Information Processing unit through a workflow process that verifies information and then accepts it into the appropriate Police systems through developed interfaces. This information can be sent automatically from the field instead of waiting for the officer to return to the precinct to upload reports from the day.

### ***Benefit:***

The implementation of this project will automate the collection, review and approval of report data collected in the field by officers. This automation will dramatically reduce data entry efforts and enhance the accuracy of data. The workflow process will allow the information to flow smoothly within the Police Department.

### ***Potential Examples:***

- Reports created in the field will be sent in real time to the Quality and Assurance unit through efficient workflow processes
- Officers will not need to go into the precinct to transfer and print reports.
- Eliminate duplicate data entry of report information by the Police officer and records clerk
- Report information can be in Police systems faster with electronic workflow
- Eliminates potential for lost paper reports
- Intelligent forms will provide officers with immediate feedback on data entry errors
- The ability to easily query data from Police systems to eliminate duplicate data entry

### ***Expected Implementation:***

Estimated Fourth Quarter 2011 (Second Quarter FY12)

### ***Project Category:***

Innovation, Public Safety, Vacancy Reduction

## **Enterprise Booking**

### ***Description:***

The new Enterprise Booking application will replace the existing offender booking system that is no longer supported, unstable and does not integrate with other applications causing duplication of efforts. The new application is a modern and robust system which will allow personnel to process offenders from the point of intake and booking to release. This will meet the needs of the Police Department, the Sheriff's Office, and the Department of Corrections allowing for smoother transfers of offenders between agencies.

The solution will include image capture and data capture. There will be several interfaces to existing systems including the Jail Management System, Inpursuit (the Police Department's Records Management System) and Livescan (the Police Department's fingerprinting system). Processing offenders will entail data input, storage and management of all offender-specific information (personal information, status, etc.) as well as providing the ability to track the offender through the booking process.

### ***Benefit:***

The implementation of the Enterprise Booking application will increase efficiency by providing a more stable and reliable system. The reduction of duplicate data entry by proving the interface to existing systems will allow all three agencies to realize time savings for the processing of inmates. Information will be more accurate and reporting of the data will be more efficient and effective as all the data is in one location.

### ***Potential Examples:***

- The system will have an interface with the County's Jail Management System, Police Records Management System and State of Maryland LiveScan fingerprinting system eliminating duplicative data entry by the Corrections staff that was already performed by a Police officer during the booking process.
- Replacing the old booking system with a new and stable system will allow support staff to perform other duties.

### ***Expected Implementation:***

First Quarter 2011 (Third Quarter FY11)

### ***Project Category:***

Innovation, Efficiency, Public Safety

## **Animal Control & Licensing**

### ***Description:***

The Departments of Health, and Permits Approvals and Inspections work together to monitor and maintain the County's animal shelters and animal licensing functions. The Animal Control and Licensing project will implement an automated system for tracking reports, licensing and various shelter information. This information is currently captured in several databases of different format and function. This system will provide consolidated information to be used by both agencies, reducing redundancy and improving communication.

### ***Benefit:***

The implementation of the project will reduce manual processes and time spent researching complaints. This improved efficiency and accuracy of data entry will help to increase animal adoption rates, expand the micro-chipping program, increase transparency through management reports and reduce paper storage requirements. IT support and maintenance will be more efficient with the consolidation and modernization of disparate systems and business processes.

### ***Potential Examples:***

- Animal Control staff will open, dispatch, track and archive animal complaints in a centralized system replacing multiple manual, paper-based processes.
- Animal Control officers can initiate, query and update complaints in the field making the information available in real time.
- Animal shelter staff can track the disposition of animals in their care at any given time including medical care provided.
- Animal shelter staff can track enforcement activities and status including fees, hearings, and decisions.
- Animal owners can apply for and renew, and pay for animal licenses online when integrated with the Constituent Services Portal in a later phase.

### ***Expected Implementation:***

Second Quarter 2011 (Fourth Quarter FY11)

### ***Project Category:***

Innovation, Efficiency, Public Safety

## **Corrections Route Planning**

### ***Description:***

Correctional officers must currently visit 35 work release sites and 40 home detention residences. The implementation of Automated Route Planning software will allow the Correctional Officers to coordinate those visits using a route that is optimized for both travel time and fuel efficiency.

### ***Benefit:***

The implementation of the Automated Route Optimizer will allow Corrections to make the most efficient use of staff time as well as provide the most fuel efficient route saving the County money in fuel costs. These efficiencies will reduce the amount of time correctional officers spend out of the facility and allow improved accountability and management oversight into the daily operations of county inspectors.

### ***Potential Examples:***

- Correctional officers will receive a route manifest detailing daily work assignments in optimal sequence, including route map and driving directions.
- Supervisors can identify who to assign to special details based on work assignments and locations.
- Allows the correctional officer to return to the facility for other duties.
- Managers can generate individual and fleet mileage reports comparing planned versus actual miles for a time period.

### ***Expected Implementation:***

Estimated Fourth Quarter 2011 (Second Quarter FY12)

### ***Project Category:***

Innovation, Efficiency, Vacancy Reduction

## **Department Environmental Protection (DEPS) Services Envision Expansion and Upgrade**

### ***Description:***

The Envision Expansion and Upgrade project will implement an enhancement to an existing system to provide field staff with the ability to perform data entry during field inspections through the use of either office synchronization or a web-based application. The initial installation of this software was completed on desktop computers. This gave inspectors a period of learning in order to reduce the impact on the section's production goals and objectives. Field use of the product can now be quickly integrated into the daily work practices with minimal training. The system will provide direct electronic imaging of reports, more legible inspection reports, immediate management review of inspection reports, and possible web posting of restaurant inspections.

### ***Benefit:***

The implementation of the Envision Expansion and Upgrade will reduce duplication of effort within the business processes as well as reduce clerical time spent on performing post-inspection data entry. Duplication of back office data entry and document scanning will be eliminated and allow for immediate management review of inspection reports. Mobile hardware and automation of field inspections will allow staff to log inspections into Decade Envision during the inspection and print correction notices and citations on location.

### ***Potential Examples:***

- Sanitarians can query status of restaurant inspections and update results in the field making the information available in real time and eliminating redundant data entry.
- Sanitarians will save digital inspection reports in a centralized document management system eliminating the need for sanitarians/clerical staff to scan and index paper reports, making them available in real-time.

### ***Expected Implementation:***

First Quarter 2012 (Third Quarter FY12)

### ***Project Category:***

Innovation, Efficiency, Vacancy Reduction

## **DEPS Master Inspections and Enforcements Enhancements and Wireless Access**

### ***Description:***

The Department of Environmental Protection Services is mandated by the State of Maryland to increase their Inspections & Enforcements (I&E) inspections from 9,000 annually to approximately 19,500 annually. Currently, the staff inspects only active sites every two weeks (two times per month per active site). Under the new state regulations, I&E staff will now need to inspect inactive sites as well (anyone holding a sediment control permit) two times per month. In order to support this increased requirement, an enhancement to DEPS Master will be necessary to add additional information to be gathered during the inspection and reduce duplicate entry of data. DEPS inspectors will use mobile tablet computers and a secure broadband connection to submit reports in real time.

### ***Benefit:***

The implementation of these enhancements will streamline the inspections process and reduce duplication of data entry. This will enable the agency to better meet the state mandated increased inspection requirements without additional staff.

### ***Potential Examples:***

- Field staff can query the status of active site inspections and update inspection results in the field making the information available in real time.

### ***Expected Implementation:***

Second Quarter 2012 (Fourth Quarter FY12)

### ***Project Category:***

Innovation, Efficiency, Cost Savings

## **Aging CountyRide IVR/IWR**

### ***Description:***

The Department of Aging, in conjunction with the Office of Information Technology implemented a new Interactive Voice Response and Interactive Web Response (IVR/IWR) CountyRide system to allow seniors and disabled individuals to call in or use the Internet to schedule rides to medical appointments, shopping and other general purpose trips. This new system will save time in processing requests and following up with citizens to confirm trips. Instead of staff members personally fielding these calls and inputting the information into the ride scheduling software, this new system will allow customers to schedule their rides directly into the system either on the phone or on the web themselves.

CountyRide staff spent many hours each day calling to verify and remind Baltimore County seniors of the time for their rides. This function is now handled by the new IVR/IWR system and will not require those staff to make those phone calls.

### ***Benefit:***

The implementation of this system will increase efficiency and self-service options when scheduling rides with the Department of Aging's CountyRide. These efficiencies will allow staff normally handling calls, to be reallocated within the Department of Aging thus mitigating the need for additional staff.

### ***Potential Examples:***

- Using the Interactive Web Response system or the Interactive Voice Response system, senior and disabled citizens can book, confirm, and cancel a ride through the internet at their convenience from the Baltimore County website, even after county business hours.
- Senior and disabled citizens will receive an automated reminder call (and/or e-mail) for their rides.
- The IVR and IWR systems assist Department of Aging fleet managers by minimizing no-shows and driver wait times.
- IVR and IWR reduce pressure on call center agents, affording them more time to assist passengers with special needs.

### ***Expected Implementation:***

First Quarter 2011 (Third Quarter FY11)

### ***Project Category:***

Innovation, Efficiency, Cost Savings

## **2012 CZMP (Comprehensive Zoning Map Process)**

### ***Description:***

The Office of Planning manages the CZMP every four years. The new 2012 CZMP application will improve the efficiency, accuracy and convenience of citizens participating in this process. It will enhance the capabilities of disseminating accurate information in a timely manner to the Planning Board, County Council, State and County agencies and the general public. The application will generate maps and reports as requested by county staff and the general public.

### ***Benefit:***

The implementation of this web-based application will enable County employees and the general public to locate their properties on a map and to request a zoning change. This reduces the number of public inquires and personal visits to the Office of Planning. The revised application will improve customer service and provide information in a more timely fashion. It will also reduce errors from occurring during the data transfer operation and provide better coordination between county agencies throughout the CZMP process.

### ***Potential Examples:***

- Citizens, developers, and lawyers can verify a property's zoning classification and Councilmatic district via the County's "My Neighborhood" web feature prior to submitting zoning request.
- Citizens, developers, and lawyers can submit a request to re-zone a property through the constituent services portal.
- Planning staff will use digital tools to create digital zoning maps for council approval. Citizens can view a map of proposed zoning changes using online digital maps.

### ***Expected Implementation:***

First Quarter 2012 (Third Quarter FY12)

### ***Project Category:***

Innovation

## **My Neighborhood Redesign**

### ***Description:***

The My Neighborhood Redesign will consolidate all current My Neighborhood and public ArcIMS web sites into a single, easily navigated site. This will simplify the usability of this existing web feature and bring everything needed to one location, increasing value and improving the user's experience. This new environment will leverage virtualization and will provide a development, staging and production environment with a GIS-only web server. Standard tools will be used to allow ease-of-use and information will be organized logically around functions and activities.

### ***Benefit:***

This effort will consolidate multiple interactive maps and searches into one place making them easier to find and reducing the number of "clicks" customers will use to access the information they require. Navigation will now be easier to follow with controls from standard mapping sites that require no GIS experience to use. Commonly asked questions can be answered quickly with a simple address search. This simplified operation will increase customer satisfaction and reduce calls for assistance. The implementation of this redesign will allow for improved support and testing of the County GIS environments.

### ***Potential Examples:***

- Employees, developers, citizens with no GIS experience will have easy navigation for GIS mapping and results in a single web site.
- Advanced GIS users have more advanced functions if needed.
- Users will have many links and contact information to locate the correct county or government agency for further clarification of information. Example – when a property owner looks at their property and zoning classifications, zoning explanations will be provided. If they need further help with the Planning Department, contact information will be on the site.
- Developers will have all the mapping and report information necessary to submit plans in a single tab ready to incorporate on plans.
- Permit applicants will have the necessary map and report information in a single tab for verification before submitting an application. Example – a property owner can verify if they are in a historic district, a floodplain, or sewer-deficient area before submitting a permit.

### ***Expected Implementation:***

Second Quarter 2011 (Fourth Quarter FY11)

### ***Project Category:***

Innovation, Efficiency

## **Service Center Upgrade**

### ***Description:***

Service Center is the Office of Information Technology's service request tracking system. This system will upgrade and enhance current functionality within the service request product. Some of these enhancements include items such as self-service where customers will be able to request service online and receive their work request number. They can then easily search for status updates. This will save the customer's time with answers to common questions and time waiting for a status update. This new system will follow the ITIL v.3 framework (best practices in IT) and will support the ITIL best practices going forward. Additional automation of the Office of Information Technology's Change Control and Problem Management processes will reduce call volume and manual entry saving time and efficiencies in the Service Desk process. The new system will provide a centralized inventory system for all county application, pcs, peripherals and network components. This will reduce duplicate of information and standardize the inventory process.

### ***Benefit:***

The Upgrade of the Service Center product will provide flexibility to support the growing IT environment of Baltimore County Government. The self-service functions of the upgraded system will allow the Service Desk to handle the expected call growth of the coming years without extensive increases in staff.

### ***Potential Examples:***

- Online 24/7 ticket status lookup to reduce calls to the Service Desk for status
- Automated Change Control process to reduce manual processes and time spent by Service Desk staff
- Automated Problem Management process and escalation to reduce manual processes and time spent by Service Desk staff.
- Automations will allow Service Desk staff to handle increase in call volume without addition of staff

### ***Expected Implementation:***

Phased Approach, Final Phase Implementation Fourth Quarter 2011 (Second Quarter FY12)

### ***Project Category:***

Innovation, Efficiency

## **Office of Budget and Finance Inventory Scanner**

### ***Description:***

The Vehicle Maintenance area of the Office of Budget and Finance (OBF) uses an inventory system called Faster to track and manage their vehicle maintenance. This project will provide the ability for staff to scan part numbers into the system, managing their inventory better and more quickly. It will give management transparency into the vehicle operations and maintenance process through reports. In order to facilitate this process, a point of sale scanner will be purchased and installed and the current Faster system will be reconfigured to accept the new inventory system.

### ***Benefit:***

The Inventory Scanner system integrated with the Faster inventory system will provide multiple benefits, including better management of inventory, quicker inventory processing and a transparency into the entire vehicle operations and maintenance process by management through reports. This will reduce time for entry and errors while increasing productivity and improving customer service.

### ***Potential Examples:***

- Integrated point-of-sale inventory scanning equipment at VOM will provide technicians, supervisors, and managers the ability to better manage inventory using Faster.
- Individual shop supervisors and VOM managers will be able to create and run reports at individual shop level as well as department-wide.
- VOM personnel will be able to see views and updates of their shop, warehouse, and inventory.
- VOM technicians will reduce work-processing time by scanning and inventorying parts as they are used.
- Mobile hand-held scanning equipment provides technicians with the flexibility to move around in the workshop – scanning inventory as they maintain and repair vehicles.

### ***Expected Implementation:***

Estimated Second Quarter 2011 (Fourth Quarter FY11)

### ***Project Category:***

Innovation, Efficiency, Vacancy Reduction

## **Enterprise Learning Management System**

### ***Description:***

The Enterprise Learning Management system will be used by all agencies within Baltimore County Government to meet varying training needs. This system will include online training and registration, classroom and instructor scheduling, content development as well as training and career development. This will reduce training development costs as well as provide tracking for all of the County agencies required to track and re-certify their employee's specific to their functions within the County. This new application will allow completion of the requested training remotely.

Many County agencies have specific mandated needs to track training initiatives specific to their disciplines. The Department of Aging tracks re-certification of volunteers and workers. The Department of Environmental Protection and Sustainability tracks re-certifications of sanitarians. The Department of Health tracks re-certification of nurses. In addition to tracking, many of the County agencies can realize cost savings by providing training in an online environment rather than an instructor-led environment.

Currently, the Office of Information Technology, the Office of Human Resources, the Police Department and the Fire Department maintain redundant training databases related to Baltimore County employees. Each agency also has records of their agency-specific training. All of these records will now be consolidated into one system for one-stop training needs and reduction of duplications. The current LMS system used by the Office of Information Technology is out of date and limited in flexibility. Necessary production changes for custom training are costly and complicated.

### ***Benefit:***

The implementation of a new Enterprise Learning Management System will reduce production costs for custom training modules, reduce time and expense of instructor-led training to deliver mandatory and in-service training programs, reduce employee travel time to attend instructor-led training and reduce calls to the Service Desk for issues relating to access or online training.

An Enterprise Learning Management system will eliminate the duplication of databases and deliver mandatory training in a more efficient manner. This will increase the efficiency of HR and OIT staff by reducing time spent on registration and system administration. Accurate and current course availability and registration status will be available to registrants. Simplified administrative procedures and increased reporting capabilities mean training records will be readily available to supervisors when needed.

### ***Potential Examples:***

- Production costs for custom training modules developed by the County will be reduced.
- Time and expense of instructor-led training to deliver mandatory and in-service training programs will be reduced
- Agency tracking of specific certifications and the re-certification of staff will be in one location and easily available
- The system will allow County employees to register for classes online at their convenience as well as generate an automatic email confirmation and reminders of their class assignment.

- The system will handle wait lists and automatically notify students if a vacant seat exists in a class as well as track and verify course prerequisites.
- The system will allow supervisors to view employee course history and approve employee course requests.
- The system will eliminate multiple training databases used by Police, Fire, Human Resources, OIT and other agencies.

***Expected Implementation:***

Phased Approach, Estimated Final Phase Implementation Second Quarter 2012 (Fourth Quarter FY12)

***Project Category:***

Innovation, Efficiency, Cost Savings

## **Virtual Desktop**

### ***Description:***

The Virtual Desktop Infrastructure Pilot (VDI) was undertaken by the Office of Information Technology in 2010 to evaluate alternatives that would reduce the cost of ongoing maintenance for the computers used by County employees on a daily basis. VDI is the practice of hosting a desktop operating system within a thin client (instead of a standard desktop computer) running on a centralized server. This will allow the thin client at the customer's desk to have minimal requirements since most of the heavy processing is performed at the centralized server.

Using technology such as VDI allows for the central management of all desktops and control over what is installed and used on the desktops from a central location. Instead of computers with large hard drives and lots of memory, thin clients are very basic machines with no hard drives and minimal memory. All software is 'installed' at a central location and distributed through the County network, further reducing the service time needed to install user software or correct a problem with existing software.

Additionally, the thin client used for VDI is unlike the current County desktop computers in that it has a significantly reduced electronic footprint that requires little maintenance and consumes 85% less power than the traditional desktop computer. Thin clients have useful lives of nearly 10 years compared to the 3-5 year life of a traditional desktop thus reducing the labor effort needed to repair computers and the capital cost of replacing hardware on an ongoing basis.

### ***Benefit:***

The VDI Pilot project determined there would be significant labor cost savings over a 10-year life cycle should virtual desktop technology be utilized for only 50% of the County's desktop computers. Efficiencies will be gained in deployment, maintenance and electricity usage for each desktop that moves to the VDI platform. VDI desktops are more secure as the data is stored on the server and not on the machine itself. If the machine is lost or stolen, no data is with this device. Distribution of software is streamlined and takes less time than ever before.

### ***Potential Examples:***

- VDI desktops only need replacement approximately every ten years rather than three to five years
- Significant labor and operating cost reduction as VDI desktops require central support vs. distributed support
- Distribution of software will be faster and more efficient with centralization
- VDI uses less electricity thus reducing the carbon footprint of Baltimore County desktop computers.
- VDI allows County users to have access to their County desktop and applications from remote sites around Baltimore County

### ***Expected Implementation:***

Phase Approach, Estimated Final Phase Implementation First Quarter 2014 (Third Quarter FY14)

### ***Project Category:***

Innovation, Efficiency, Cost Savings

## **Broadband Fiber**

### ***Description:***

As a recipient of the Federal Broadband stimulus funds provided by the Broadband Technology Opportunity Program (BTOP) to a consortium of Maryland counties, Baltimore County will be constructing a fiber optic network throughout the County. This new fiber network will be used to deliver reliable high-speed network and Internet access allowing data and information to be shared in real time within the County and across other jurisdictions for multiple purposes including public safety, healthcare, education and job creation.

### ***Benefit:***

The fiber optic network will improve public safety initiatives by enhancing emergency communications to interconnect operations centers and enable critical videoconferencing for regional emergency communications including training and day-to-day operations.

Healthcare initiatives will be enhanced through connection between Health Department sites and clinics to local and regional hospitals. This will allow facilities to share data and alerts in real time and allow faster response in emergencies. This connection will also address a critical need to meet the requirements of the American Recovery and Reinvestment Act's (ARRA) and the Health Information Technology for Economic and Clinical Health (HITECH) Act.

Also with this fiber, Baltimore County will focus on connecting its high schools, libraries and universities to promote shared resources of educational material, lectures, video conferencing for interactive classrooms, and high speed Internet for research. This will bring the world into the classroom in an interactive way through partnerships with Maryland Public Television, and other educational content providers.

The creation of this fiber network will create private sector engineer, installation, support and management jobs within Maryland. The expanded service areas of the network will open the doors to future business development as well as growth of existing businesses.

### ***Potential Examples:***

- Regional emergency communications will be enhanced with the ability to videoconference across regions.
- Enhanced healthcare initiatives will be possible with the connection of local Health Department sites, clinics and regional hospitals.
- High schools, libraries and universities will be capable of interactive classrooms and sharing of resources from one school to another
- This will allow County, State and Federal agencies to share resources including but not limited to data centers, hardware, applications, voice, data and video services; reducing overall expenditure for the taxpayers of Maryland.

***Expected Implementation:***

Phased Approach, Estimated Final Phase Implementation Fourth Quarter 2013 (Second Quarter FY14)

***Project Category:***

Innovation, Efficiency, Cost Savings, Public Safety

## **New Radio System**

### ***Description:***

Baltimore County is upgrading from an old analog radio transmission system to a new P25 National Standards Based digital system. The County has selected the P25 National Digital Interoperability Standard so that County first responders will be able to communicate with other agencies building to this 700/800 MHz standard. This includes units of the State of Maryland's proposed statewide 700 MHz system since the State has adopted the P25 standard. The converse is also true, State and other agencies operating in the 700/800 MHz public safety band and utilizing the P25 standard will be capable of communicating with County units as well. In addition to the Maryland State system, a regional P25 700 MHz interoperability system is being constructed in the Central Maryland (CMARC) area further expanding interoperability communications capability among agencies and task forces.

The P25 National Digital Interoperability Standard is a critical element providing a communications common denominator between the many layers of government public safety agencies. This standard removes many of the past interoperability technical barriers; now allowing collaboration among agencies at all government levels. As these emergency communications systems evolve and more P25 networks and subscribers are deployed in the future, interagency radio communications will become second nature and not the exception.

The project also replaces and upgrades the mobile data system used by the Police Department in police vehicles. Officers use this data system for such tasks as running license tags, and employing GPS technology to track patrol vehicles. This is possible by utilizing some of the newly available 700 MHz frequency spectrum resulting from the recent digital television transition.

Additionally, the new system improves the Department of Public Works (DPW) radio network by folding the DPW channel frequency allocations into the new public safety network, greatly enhancing DPW's coverage area and enabling them to communicate seamlessly with Police and Fire as needed.

### ***Benefit:***

The upgrade from the antiquated end of life analog system to the new digital communications system will provide many benefits that will significantly improve the quality of transmissions for both public safety and public works employees in the field. In addition to increased interoperability, coverage inside of buildings as well as around the County will be improved with this upgrade. The increased coverage areas will mean that remote areas or those with challenging topography will benefit as well. The ability to use encryption of secure transmissions will also allow Baltimore County to increase the type and amount of information moving over the radio system.

### ***Potential Examples:***

- Improved communications between Public Safety officials in areas of the County where signal was weak or non-existent
- Improved signal within buildings for communication during emergency events
- Interoperability with other jurisdictions
- More secure communication for Public Safety officials

***Expected Implementation:***

First Quarter 2012 (Third Quarter FY12)

***Project Category:***

Innovation, Public Safety

## **New 911 Center**

### *Description:*

Baltimore County will be creating a new Central Communication Center (911 Center) that will be innovative, efficient and state of the art. This new center will allow Baltimore County's 911 Center to receive and respond to constituent calls for emergency services with improved equipment and enhanced communication methods.

### *Benefit:*

The New Central Communication Center will allow for use of the new Baltimore County Digital Radio System. Along with the Digital Radio System, many of the technology solutions used by the Center must be upgraded in order to integrate with the new radio system. Additionally, this upgrade will complete the 911 transition to a total VOIP (Voice Over Internet Protocol) solution from the existing VOIP and digital hybrid telephony solution. This phone upgrade along with the new radio data system will allow a more robust sharing of information between the Center and mobile public safety equipment.

### *Potential Examples:*

- The virtual phone switch allows Baltimore County to move from the main site to the backup site in a non-disruptive manner in case of emergency.
- The virtual phone switch will also allow for expansion of 911 resources by providing the ability to staff both the main site and the backup site as if they were one center.

### *Expected Implementation:*

First Quarter 2012 (Third Quarter FY12)

### *Project Category:*

Innovation, Public Safety

## **Office of Budget and Finance Pension System**

### ***Description:***

The current pension system for Baltimore County has been in place for many years and is unsupported by the current vendor. Unsupported software of this magnitude would mean future changes to pension benefits could not be handled by the pension system. The County is in the process of replacing this with a system that is more updated and automated. Many of the processes used today are either manual or require multiple other systems for final results. This lack of automation causes time delays and inefficiency.

### ***Benefit:***

The new pension system will automate these functions and provide a more efficient and improved response for Baltimore County employees and retirees. Supplemental worksheets and databases used to track and report information not available in the current system will be eliminated. Elimination of this manual system and data entry will provide greater accuracy and efficiency. There will be increased productivity due to a decrease in telephone calls requesting forms, account information and benefit calculations as this information will be available through self-service options. The new pension system will integrate with the Advantage Financial system, further reducing duplication of entry. The new web-based system will enable members to view and change their retirement account information online instead of calling and requesting these services from a staff member. The web system will also allow for benefit calculations and “what-if” scenarios and reports to allow employees to make informed decisions without the use of Baltimore County staff. Productivity gains will be realized with the elimination of manual benefit calculations.

### ***Potential Examples:***

- All plan rules and legislative requirements, including actuarial assumptions, will be fully managed and accessible by retirement administrators in a single pension system.
- Pension plan administrators will have control and flexibility in administering pension plans and plan changes, thus minimizing the need for support from computer programming staff or consultants.
- Pension participants will be able to add, delete, and edit member data online.
- The retirement office will be able to run all standard benefit calculations including reinstatements, buy-backs and life events.
- Employee Self-Service, available 24/7, will reduce administrative overhead.
- The retirement office will use the pension system to produce all standard member statements.
- Plan administrators will be provided with “what if” capabilities for policy setting, measuring & pricing impact of proposed plan changes.

### ***Expected Implementation:***

Estimated First Quarter 2013 (Third Quarter FY13)

### ***Project Category:***

Innovation, Efficiency