



# SECTION 3

## INFORMATION TECHNOLOGY PROGRAMS

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## SECTION 3

### 3.1 INFORMATION TECHNOLOGY PROGRAMS

#### Technology Overview

##### Purpose

The Information Technology investment fund (Fund 100-C10040 – formerly Fund 104), was established in FY 1995 to strengthen centralized management of available resources by consolidating major Information Technology (IT) projects in one fund. Based on the 1994 Information Technology Advisory Group (ITAG) study, this fund was created to account for spending by project and is managed centrally by the Department of Information Technology. Historically, the E-911 Emergency Telephone Service Fee, a General Fund transfer, the State Technology Trust Fund, and interest earnings are sources for investment in Information Technology projects. However, in FY 2001, the E-911 Emergency Telephone Service Fee revenue and related project expenses were moved to Fund 400-C40091 (formerly Fund 120 E-911), to satisfy a state legislative requirement that E-911 revenues and expenditures be accounted separately.

The County's technology strategy has several key elements: provide an adequate technology infrastructure for agencies in making quality operational improvements; redesign existing business processes with technology to achieve large-scale improvements in service quality and achieve administrative efficiencies; and promote the use of technology in enabling government services without "doors, walls or clocks". The County's long-term commitment to provide quality customer service through the effective use of technology is manifested in service enhancements, improved access to services electronically, expedited response to citizen inquiries, improved operational efficiencies, better information for management decisions, and increased performance capabilities.

##### FY 2013 Initiatives

In FY 2013 funding of \$8.84 million, which includes a General Fund transfer of \$5.28 million, a transfer of \$3.62 million from Cable Communications Fund (400-C40030 formerly Fund 105), and interest income of \$0.30 million, is provided for initiatives that meet one or multiple priorities established by the Senior Information

Technology Steering Committee. These initiatives include a mix of projects that provide benefits for both citizens and employees and that adequately balance new and continuing initiatives with the need for securing and strengthening the County's technology infrastructure. Funded projects will support initiatives in general county services, public safety, human services, and enterprise technology security and infrastructure. Although many initiatives meet more than one of the technology priorities, for narrative purposes below, projects have been grouped into only one priority area.

In accordance with the FY 2013 Budget Guidelines IT project funding requests were limited to projects requiring a funding increment to meet project milestones, contractual obligation, security, and infrastructure requirements for enterprise-wide IT systems. The projects recommended for funding meet one or more of the IT priorities established by the Senior IT Steering Committee and align with the County's strategic and business requirements.

In keeping with established procedures, a Project Review Team consisting of business and technical staff from the Department of Information Technology (DIT) and the Department of Management and Budget (DMB) evaluated submissions requesting additional funding for clear alignment with project plans and anticipated deliverables. Projects were reviewed for continued alignment with project plans from both a business and a technical perspective, including whether the continued implementation of the project would realize proposed benefits. Benefits of the projects were weighed against the cost and several risk factors, including potential unknown related expenses, changes in scope necessitated by new business drivers, technological relevance, operational transformation needs, project schedule viability, and the impact of not funding or otherwise delaying the project. Technical factors examined include alignment with County technology architecture and standards, impact on existing County IT infrastructure and availability of viable products and services. Also considered is the organizational experience with the solutions that support the project business goals, and

the availability of human resources both in DIT and the sponsoring agency to implement the project.

### Funding Priorities

The Senior IT Steering Committee establishes the funding priorities for technology projects. Beginning in FY 2004, based on global changes in social and economic paradigm shifts, the new priorities shown below were adopted. The recommended IT investments meet the five key investment policy objectives shown below and are supported by the Senior IT Steering committee and the Information Technology Policy Advisory Committee (ITPAC). A more detailed explanation of the projects within these requirements is provided within:

- **Mandated Requirements:** provide support for requirements enacted by the federal government, Commonwealth of Virginia, Board of Supervisors, Court ordered or as a result of County regulation changes.
- **Completion of Prior Investments:** provide support for multi-year lease purchases and to implement a project phase or to complete a planned project.
- **Enhanced County Security:** provide support for homeland security, physical security, information security, and privacy requirements.
- **Improved Service and Efficiency:** promote consolidated business practices; support more efficient government; optimize management and use of County assets and data; enhance systems to meet the expectations and needs of citizens; and promote service that can be provided through the Internet/e-government. This includes corporate and strategic initiatives that add demonstrable value to a broad sector of government or to the county as a whole, which also provide productivity benefits and/or effectively manages the county's information and knowledge assets.
- **Maintaining a Current and Supportable Technology Infrastructure:** focus on technology infrastructure modernization which upgrade, extend or enhance the overall architecture or major county infrastructure components, including hardware, software, and its environment. Ensure that citizens, businesses and county employees have appropriate access to information and services.

The five investment policy objectives relate to the county's continuing focus on making access to government services more reliable, secure, and efficient. The projects on the following pages are supported and will receive additional funding in FY 2013. The established

priorities for IT projects for FY 2013 are summarized as follows:

PRIORITY	FY 2013 Adopted Funding
Completion of Prior Investments	\$1.19 million
Improved Service and Efficiency	\$3.26 million
Maintaining a Current and Supportable Technology Infrastructure	\$4.39 million
<b>TOTAL</b>	<b>\$8.84 million</b>

### Completion of Prior Investments – \$1.19 million

The County's IT program focuses on using technology as an essential tool to enable cost-effective delivery of services, and continues to stress the need to build reliable, supportable projects for these services in a timely manner. Many projects funded can be completed within that fiscal year, while others are multi-phase projects that require more than one year of funding.

Funding of \$337,744 is included for continued support for the County's planned on-going maintenance of essential Geographic Information System (GIS) data. Through a series of complex geospatial transformations the raw imagery, taken from aerial imagery flown by the state, is converted to GIS data available to many County agencies including: Police, Fire and Rescue, the Departments of Transportation, Housing and Community Development, Public Works and Environmental Services, Planning and Zoning, and Tax Administration.

Funding of \$550,167 is included for operational support of the County's Public Service Radio System network infrastructure. The project replaced a 20 year old Public Service Communications System, which provided two-way radio communications for all County non-public safety agencies, as well as the Fairfax County Public Schools Transportation Department (school buses), and Fairfax Water, with updated technology that meets the needs of user agencies.

Funding of \$300,000 is included to support the Department of Family Services (DFS) Data Reporting System. DFS currently utilizes multiple IT systems ranging from mandated Virginia Department of Social Services case management systems to customized off-the-shelf systems, to locally developed and maintained databases. This project provides funding for the development of a data

warehouse of electronically stored data from the multiple divisions within DFS in order to facilitate effective reporting and analysis. A data repository provides a standardized, consistent, cleaned and integrated form of data sourced from various operational systems in use in the department, structured in a way to specifically address the reporting and analytic requirement of each of the divisions as well as the department as whole. It provides a systematic means to retrieve and analyze data, to extract, transform and load data, and to create management reports. It is not yet known if this funding level is sufficient to complete the project pending final vendor negotiations on specific systems requirements.

### **Improved Service and Efficiency – \$3.26 Million**

Projects funded in FY 2013 provide for improved service and efficiency in provision of services to the residents and the business community in Fairfax County. These included projects supporting the county's e-government programs as well as initiatives that improve county processes resulting in enhanced efficiencies and service delivery.

Funding of \$400,000 is included for the County's continuing commitment to e-Government initiatives that improve public accessibility to county information and services. The project supports the county's web and e-government programs and services, web content, social media integration, transparency, Web 3.0, and compliance with e-health records. Additionally, e-government program enhances citizen participation with county government through online public input processes, this support is provided through the Cable Communications Fund.

Funding of \$1,860,000 provides for the second year of a two-year project to install digital surveillance video cameras in the Police Department's fleet of 800 patrol vehicles. The In Vehicle Video system enables accurate recording of events, statements, and scenes, enhances both the Commonwealth and County Attorneys abilities to prove their cases, and improves the Department's accountability to the public. The use of in-vehicle video supports the Police Department's commitment to provide safe, fair, unbiased and responsible service in carrying out law enforcement duties. Video evidence provides the Police Department with an invaluable objective perspective when reviewing the actions of officers on the scene. Each system includes a software license package and a five year required maintenance agreement. The system meets standards published by the International Association of Chiefs of Police (IACP) for in-vehicle video surveillance. It should be noted that because of the primary role the I-Net will play in terms of transmitting

the video to secure storage, funds available the Cable Communications Fund, will be used to secure and install the capital hardware and software necessary.

Funding of \$1,000,000 is included to support implementation of the Tax Systems Modernization Project. Project goals are to eliminate the technology risks and functionality gaps of existing mainframe systems for the Personal Property and Business Professional and Occupational Licensing (BPOL). The current systems designed and developed during the 1980s and 1990s use outdated technology and programming languages, which have reached the end of their viability. The outdated technology platform limits integration with other County and State systems, as well as limits citizen interaction and self-service opportunities via web based technologies. Integration with Virginia State Department of Motor Vehicles and Department of Tax Administration applications which are critical for assessment, taxation, and enforcement purposes, cannot be automated due to limitations within Personal Property and Business Professional and Occupational Licensing. All of these issues have a direct impact on the County's revenue. Funding provided by the Cable Communications Fund.

### **Maintain a Current and Supportable Technology Infrastructure – \$4.39 million**

In an ever evolving technical environment, maintaining a current and supportable technology environment is a challenge that must be continually addressed to ensure performance, operability, security and integrity of business operations and information. The County's technological improvement strategy strives to balance business needs that require technology investments with the desire to adopt contemporary but relevant and supportable technology industry trends, as well as the ability to leverage existing infrastructure. Projects funded in FY 2013 will support the goal of updating and strengthening the technology foundation where practical, and ensuring that residents, the business community and County staff have appropriate and reliable access to information and services.

Funding of \$3,500,000 is included for strategic infrastructure and services necessary for implementation of complex multi-phase enterprise-wide business transformation IT systems for county general services, enterprise technology, security and infrastructure, and corporate systems including implementation of the County's Enterprise Resource Planning (ERP) and related business systems. This funding supports necessary integration of business application and infrastructure

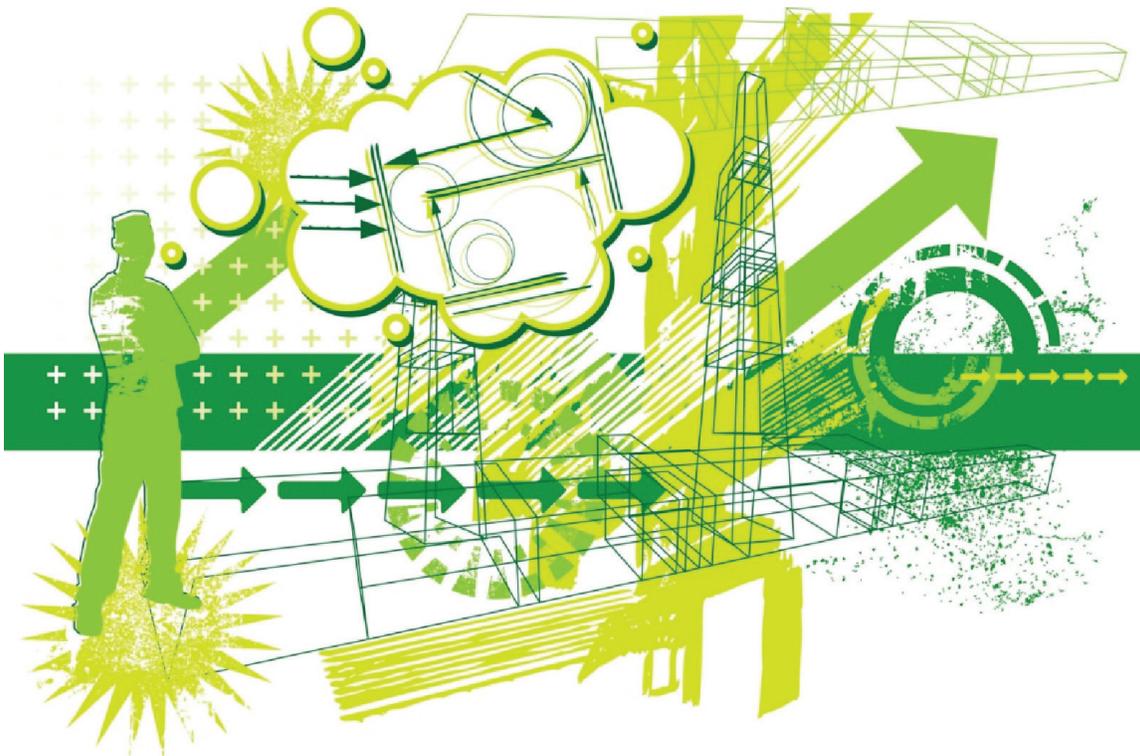
systems components to meet the County's IT architecture and interoperability goals in alignment with county enterprise technology plans to enhance opportunities for county/schools shared cost efficiency goals.

Funding of \$500,000 is included to continue support for the conversion and migration of the County's remaining legacy financial, public works, public safety, personal property, and human services mainframe systems. Significant historical data needs to migrate off the mainframe onto more contemporary IT platforms. Upon completion, the county's legacy mainframe platform will be substantially retired.

Funding of \$200,000 is included to support growing need for internal county users to access the county systems remotely. This project supports telework capabilities,

disaster recovery, and increasing reliance of agency mobile workers on wireless solutions. Enterprise wide standardized access control methodology enables secure identity authentication for authorized access to County networks, data, and systems. This project supports secure access from remote locations and provides improved security, reporting, and data analysis.

Funding of \$193,668 is included to provide on-going information technology training and certification in recognition of the challenges associated with maintaining skills at the pace of technological changes and to ensure that the rate of change in information technology does not out-pace the County's ability to maintain proficiency. As the County's workforce becomes increasingly dependent on information technology, training support has become more essential.



BUDGET ID NUMBER	PROJECT TITLE	FY 2008 ADOPTED	FY 2009 ADOPTED	FY 2010 ADOPTED	FY 2011 ADOPTED	FY 2012 ADOPTED	FY 2013 ADOPTED
<b>FUND 400-C4009</b>							
2G70-056-000 (IT0001)	Public Safety Communications Network/Systems	7,233,079	7,984,403	4,304,000	4,629,000	4,629,000	4,629,000
	<b>TOTAL FUND 400-C4009</b>	<b>7,233,079</b>	<b>7,984,403</b>	<b>4,304,000</b>	<b>4,629,000</b>	<b>4,629,000</b>	<b>4,629,000</b>
<b>FUND 100-C10040</b>							
2G70-001-000 (IT0002)	Human Services	75,000					
IT0004**	Geographic Information System (GIS)	386,680	158,840	150,000	278,212		
2G70-003-000 (IT004.03)	Oblique Imagery – GIS					128,212	150,744
2G70-004-000 (IT004.04)	Planimetric Data Acquisition Program – GIS					150,000	187,000
2G70-006-000 (IT0010)	Information Technology Training	250,000	100,000	50,000	75,000	75,000	193,668
IT0011**	Doc. Management and Imaging	1,145,000					
2G70-013-000 (IT0015)	Health Management Information System (HMIS)	280,785					
IT0022**	Tactical Initiatives	96,648					
2G70-018-000 (IT0022.15)	Enterprise IT Architecture and Support					2,163,200	3,500,000
IT0024**	E government	275,000	208,190		300,000		
2G70-020-000 (IT0024.03)	Internet/Intranet Initiatives – E-Government					400,000	400,000
2G70-021-000 (IT0039)	Circuit Court Technologies		988,960				
2G70-025-000 (IT0048)	FRD Incident Reporting & Records Management System		416,691	1,835,791			
2G70-026-000 (IT0050)	Public Service Radio Project	632,166	663,223	781,901	862,882	550,167	550,167
2G70-027-000 (IT0054)	CSB SYNAPS and HIPAA Database Consolidation	500,000			175,000		
2G70-030-000 (IT0055)	Fairfax Inspection Database Online (FIDO)	351,000					
2G70-034-000 (IT0056)	Pilot Courtroom Technologies			182,000	75,000		
2G70-036-000 (IT0058)	Remote Access					200,000	200,000
IT0059**	Child Care Technology Systems	194,165					
2G70-038-000 (IT0060)	Telecommunications Modernization	1,757,461	1,534,750	2,100,000	1,742,000		
2G70-052-000 (IT0061)	Information Technology Security	244,160	300,752				
2G70-039-000 (IT0062)	System – I/LEADs	2,200,000	4,147,000	1,224,691			

BUDGET ID NUMBER	PROJECT TITLE	FY 2008 ADOPTED	FY 2009 ADOPTED	FY 2010 ADOPTED	FY 2011 ADOPTED	FY 2012 ADOPTED	FY 2013 ADOPTED
2G70-040-000 (IT0065)	Facility Maintenance Management	392,000	188,218		665,550		
2G70-067-000 (IT0071)	E-Summons		200,000		350,000		
2G70-041-000 (IT0072)	Customer Relationship Management	250,000	300,000				
IT0074**	Data Analysis Reporting Tool (DART)	450,000					
IT0077**	Land Development Industry Enhancement	150,000					
2G70-043-000 (IT0078)	Courthouse Expansion Technology		500,000				
IT-000001-001 (IT0079)	FOCUS	800,000	7,000,000				
IT0080**	JUVARE Data Conversion and Expungement	217,200					
IT0081**	Housing and Community Development Information	125,000					
2G70-044-000 (IT0082)	Land Use Information Accessibility	300,000					
2G70-045-000 (IT0083)	Public Safety Architecture Modernization	2,687,750	1,892,458	3,156,293	843,705	1,215,000	
2G70-049-000 (IT0085)	Loan Processing System Replacement		126,000				
2G70-050-000 (IT0086)	Fire Station Alerting Technology Replacement		200,067				
IT0087**	Parknet Security Upgrade		179,571				
2G70-053-000 (IT0088)	Retirement of Legacy Systems					500,000	500,000
2G70-051-000 (IT0089)	Data Reporting Project – DFS				100,000		300,000
2G70-054-000 (IT0090)	Police In Vehicle Video System					3,670,000	1,860,000
2G70-055-000 (IT0091)	Volunteer Management System					200,000	
2G70-069-000 (IT0092)	Tax System Modernization – Tax/Revenue Administration						1,000,000
	<b>TOTAL FUND 100-C10040</b>	<b>13,760,015</b>	<b>19,104,720</b>	<b>9,480,676</b>	<b>5,467,349</b>	<b>9,251,579</b>	<b>8,841,579</b>
	<b>GRAND TOTAL: IT PROJECTS</b>	<b>20,993,094</b>	<b>27,089,123</b>	<b>13,784,676</b>	<b>10,096,349</b>	<b>13,880,579</b>	<b>13,470,579</b>

\*Adopted Budget funding reflects new investment for each fiscal year and does not include incremental investments made during annual Carryover or Third Quarter Budget Cycles.

\*\*Depicts older Projects in FAMIS whose project numbers did not transfer to the new system (FOCUS).

## 3.2 Public Safety

### 2G70-056-000 Public Safety Communications Network/Systems (IT0001)

#### Project Description

This project provides for continued support and maintenance of the Department of Public Safety Communications (DPSC) network, radio and mobile communication components. The network's component systems are vital for ensuring immediate and systematic response to emergencies, and replacement and enhancement is necessary to maintain performance, availability, reliability, and capacity to meet growing County population and demand for public safety services. Fairfax County DPSC relies heavily on mobile data communications for the dispatch of equipment and personnel to emergencies and other non-emergency requests for public safety services. Digital communications are used to allow field units (e.g., police, fire, rescue and sheriffs) to receive dispatch messages, event notifications, to self-initiate events, make traffic stops, check on licenses, registrations, wanted persons, to maintain their status for response, and to communicate with one another and the DPSC communications center, without the use of voice radio or intervention of a dispatcher at the Public Service Communication Center (PSCC). An excess of 150,000,000 transactions are currently processed each year via MCTs through the mobile data communications infrastructure and therefore, it is critical to keep this equipment contemporary and available for use for the many operations utilized by the field personnel equipped with this equipment.

The Public Safety Communication Network (PSCN) supports emergency communications of the Police, Fire and Rescue, and Sheriff's departments. This includes public safety call taking (E-911, Cellular E-911, non-emergency), dispatching, and all affiliated communications support. Two of the major technologies utilized are a Computer Aided Dispatch (CAD) system with an integrated mobile data communications component and a wireless digital radio network for voice communications. The mobile data communications capability facilitates the dispatch of resources with minimal voice communications, provides field units direct access to local, state and national databases, and allows continuous contact with DPSC. The Public Safety Architecture Modernization Project (2G70-045-000) provided the underlying infrastructure components and shared capabilities required for the implementation of a new integrated, interoperable Computer Aided Dispatch.

This project supports the upgrade of Fairfax County's Public Safety Radio System from an 11 site, SmartZone 3.0 Trunked Radio System to a 7.9 ASTRO25 Digital Trunked Radio System, including the addition of a 12th site to improve radio coverage. The upgrade transitions the radio system to an IP based network, further enhances existing outdoor and in-building radio coverage, as well as relocating the radio system central controllers from their previous vulnerable locations to the heavily secured Public Safety and Transportation Operation Center. Following completion of the enhanced infrastructure, this project will support the 5 year replacement of Public Safety Subscriber radios, which will be nearing end-of-life.

#### Project Goals

The goal of this project is to provide systems and equipment required to ensure immediate and systematic response to emergencies, and to maintain performance, availability, reliability, and capacity for growth due to increase in County population and demand for public safety services.

#### Progress to Date

Technical requirements for the upgrade of Fairfax County's public safety radio system were completed and a contract was awarded in January, 2010. Equipment was received and implementation began in July 2010. The 12th radio antenna site has been constructed and is in operation at Bailey's Crossroads. This additional tower infrastructure significantly improves radio coverage throughout this vital area. Both the Primary Antenna Control Site and the System's Master Site have been moved from their previous unprotected sites to the Public Safety and Transportation Operations Center. Final system acceptance is scheduled for October 15, 2012.

It should be noted, that during this same period of time, Fairfax County as well as the rest of the National Capitol Region was involved in the Federal Communications Commission's (FCC) directive for rebanding the 800 MHz Radio System for Sprint/Nextel's nationwide frequency conversion. This involved twice touching and converting nearly 47,000 subscriber radios as well as the retuning of frequencies for every tower in the NCR. Following completion of the Radio Upgrade Project, Fairfax County will embark on a five-year replacement of its Public Safety Subscriber Radios. Continued funding will be

required for this replacement, as well as replacement of the County's Mobile Data Communications equipment, see below.

The Mobile Data Communications System is an ongoing five year lifecycle replacement program for equipment used to support the mobile fleet. Funding is required each year in support of the program and to provide for contemporary updated communication equipment used by the public safety fleet.

### Project Budget

FY 2013 funding of \$1,200,000 is included for the first year life cycle replacement of a five-year replacement cycle for Mobile Computer Terminals (MCTs).

The equipment for the Public Safety Radio System upgrade was funded via an equipment lease. The second payment of four annual payments is to be made by September 1st each year through 2014. FY 2013 funding of \$3,429,000 is provided in support of the County's Public Safety Radio System to the most current technology platform. Funding is provided by Fund 400-C40091.

### Return on Investment

The return on investment for this project is realized by the performance, productivity, and effectiveness of public safety services in Fairfax County. Replaced and upgraded technology for these systems is critical to the safety of the public and the public safety personnel they support.



## 2G70-007-000 Electronic Records Management System – JDRC (IT0011.5)

### Project Description

Fairfax County's Juvenile & Domestic Relations District Court (JDRDC) and the DIT have partnered with the Supreme Court of Virginia's (SCV), Office of the Executive Secretary to implement a Case Imaging System for the scanning, imaging, retention, and electronic viewing of court documents. The Juvenile and Domestic Imaging System (JDIS) is a custom built in-house solution, developed by the SCV technology staff, that includes built-in interfaces with the existing SCV's *Judicial Case Management System (JCMS)*, and other requirements unique to Fairfax County's JDRDC. This implementation introduces shared compatibility between the state and the county with the integration

of court documents into the core system of record, JCMS. This shared initiative will ultimately benefit all courts, related agencies and jurisdictions throughout the Commonwealth of Virginia.

### Project Goals

Provide simultaneous and instant access to court records with improved security. The JDIS project seeks to reduce or eliminate labor intensive and time consuming hardcopy record searches, retrieval and re-filing processes. The JDRDC will realize improved efficiencies and reduced costs associated with storage of paper documents, and provide a means of safeguarding documents with electronic backup capabilities.

## Progress to Date

JDIS phase I was implemented and includes scanning, imaging, capturing, and displaying all JDRDC traffic related documents. JDIS phase II has been partially implemented and includes full case searching capabilities, enabling court staff to view and interact with a real time daily court case docket. JDIS also delivers documents electronically between the courtroom and the post court counter, financial clerk and court services. Expanding capabilities to adult criminal cases and enhanced support of court services functions are currently underway.

## Milestones

- Phase I completed for traffic related cases in all JDRDC courtrooms, May 2011.
- Phase II iteration 1 completed to improve scanning and add interactive docket features, February 2012.
- Phase III iteration 2 is in-progress to exchange electronic documents between the clerk's office and the court services units for adult criminal case types.

- Phase III to include additional case types, and court related business processes.

## Project Budget

Existing funding is adequate. No new funding requested in FY 2013.

## Return on Investment

This project will reduce staff time previously expended locating missing files, and retrieving and re-filing court records. The project will also reduce the physical storage space required for court records, thus eliminating the need for leased space near the courthouse. Response time will be expedited for internal and external customers at the Records, and Fines and Costs counters, and easier and more efficient access to public court records will be provided to the community. JDIS will reduce the incidence of missing files and documents necessary in the courtroom. Planned back-up systems will enhance data security.

## 2G70-021-000 Circuit Court Technology (IT0039)

The Fairfax Circuit Court is nationally recognized for its delivery of outstanding public service and continues to actively pursue state of the art technological solutions to improve customer support and operational efficiencies. This project covers multiple facets of Circuit Court operations and receives funding through the Commonwealth of Virginia's Technology Trust fund.

## Project Description

**Court Automated Recording System (CARS) / Court Public Access Network (CPAN)** – The Clerk's Office of the Fairfax County Circuit Court is responsible for providing citizens with reliable, timely, and accessible public records. More than 42 million Land Records, Public Service and Probate images, dating from 1742 to the present have been digitized, indexed and loaded into CPAN; a web-based, online retrieval system that is available 24 hours a day, 7 days a week, with more than 2,000 subscribers located domestically in thirty states, the District of Columbia, and internationally in India. Subscribers include citizens, title examiners, law offices, mortgage companies, banks, Commissioner of Accounts, Federal, State and County agencies.

**Case Management System (CMS)** – The current case management system automates case processing

through the court system and includes: case initiation and indexing, docketing and related record keeping, scheduling, document generation and processing, calendaring, hearings, disposition, accounting functions, security, management and statistical reports. Circuit Court is working with Justice Systems Inc. (FullCourt) to negotiate a new contract to upgrade the existing case management software to the FullCourt Enterprise version which can provide imaging, electronic filing, DMV interfaces, as well as many other enhancements. The contract is in final stages of review with the County Attorney's office and the Department of Purchasing.

**Radio Frequency Identification (RFID)** – The RFID project became operational during FY 2012 and has incorporated an RFID based system to assist in the real-time tracking of courts case file folders as they move throughout Circuit Court. The goal to improve efficiency and customer services by greatly reducing staff time, effort and resources dedicated to searching and locating court case files was met. Ongoing enhancements will be implemented as the need arises. Additional readers were required in specific areas for better system coverage. During FY 2013, the Circuit Court will expand the RFID system to include criminal evidence which will allow the criminal section to have an

evidence management system for audit, inventory and tracking purposes.

**On-Line Scheduling System (OSS)** – The Circuit Court recently launched an On-Line Scheduling System (OSS) to allow attorneys to schedule their domestic and non-domestic, civil case trial dates (both jury and non-jury) on-line. The OSS was developed in a collaborative effort with the Fairfax County Department of Information Technology (DIT) with the goal of saving attorneys and court staff time and money by allowing users to select and schedule civil case trial dates electronically without the need to travel to the Courthouse to attend a scheduling conference.

**Redaction** – The Commonwealth of Virginia passed legislation mandating the Clerk of the Circuit Court to redact the social security numbers (SSN) from all images in Circuit Court automated systems that are viewable via secure remote access. The Circuit Court has identified more than 42 million backfile images currently online and viewable through CPAN, a subscription internet service. Additionally, Federal Communications Commission required implementation of a Commercial-Off-The-Shelf (COTS) software application with the capability of integrating into CARS for day-forward operations in order to remove SSNs prior to final export of the new images into public view. Finally, the software must be capable of adding additional privacy requirements into the redaction process, backfile and day-forward, if future legislation is passed.

The backfile image review is complete and images with SSNs have been redacted and the redacted images in CPAN are available via secure remote access. The integration of redaction in day-forward recording processes is scheduled to be released into production early June, 2012 in order to meet the July, 2012 legislative deadline.

### Project Goals

Circuit Court modernization initiatives in the Clerk of Court's technology program include:

- Replacement of the 10 year old windows case management system with a fully integrated web based browser system providing civil and criminal processing, imaging and electronic filing capabilities.
- Increase the number of courtrooms equipped with technologies in order to facilitate remote testimonies, audio-visual evidence displays, integrated assisted listening, and interpretation capabilities.

### Progress to Date

Past accomplishments include development and deployment of the Court's Land Records Recording System, including document imaging; implementation of the CPAN retrieval system, use of an automated jury management system to administer 60,000 potential jurors annually; deployment of a case management system to control the administration of the Court's judicial caseload; development and implementation of paperless probate processing; development and implementation of a streamlined marriage license process which utilizes scanners to import data from customers' operator licenses; implementation of electronic docketing display directing public to the assigned courtroom.

### Milestones

#### CARS

- Digitized back-file images with associated indices and implemented web-based CPAN, 1999
- Scanned, indexed, and stored all land record documents for electronic processing, 2000
- Added non-deed document processes for indexing and storage (judgment abstract and notices, marriage licenses, financing statements), 2000
- Redesigned processes to include automated cashing and scanning capabilities to update the public record in a more efficient manner, 2001
- Electronic filing prototype for mortgage releases using the ACH transfer of funds, 2002
- Implemented Public Services cashing system, 2005
- Automated the administration of estates system, 2006
- Incorporated the use of commercial credit cards for payment of fees and taxes, 2007
- Land records Electronic Filing System (EFS) made available to the public, 2010
- Integration of automated scanning in the marriage license application process, 2010
- Integration of redacted data and processes mandated by the legislature, 2012

#### CMS

- Provided web-based availability of court information on CPAN, 2005
- Implemented electronic docketing display, 2006

## RFID

- Became operational during FY 2011 and has incorporated an RFID based system to assist in the real-time tracking of courts case file folders as they move throughout Circuit Court.

## Redaction

- Integration of redacted data of backfile via secure remote access mandated by the legislature, FY 2011
- Integration of redaction in day-forward recording processes mandated by the legislature, FY 2012

## Project Budget

Funding of \$777,552 from the Virginia State Technology Trust Fund supports Circuit Court's technology projects.

## Return on Investment

CARS provides immediate electronic access to CPAN for over 2,000 commercial customers. The system provides added functionality to search for and correct errors that occurred in documents recorded in the previous land records system. Additional benefits include enhanced retrieval and administration of Circuit Court records and an expedited transfer of information to the Department of Tax Administration (DTA), Geographic Information Systems (GIS) and the Department of Public Works and Environmental Services (DPWES).

The Case Management System, anticipated imaging and electronic filing enhancements will provide increased efficiencies in the processing of more than 22,000 civil and criminal case filings annually. Multiple parties will be able to access electronic case files simultaneously and file documents from their office or home, reducing the need to travel to the courthouse and provide 24/7 accessibility. Potential interfaces with other jurisdictions will allow the exchange of electronic documents and/or data and eliminate existing manual processes between jurisdictions.

Through the implementation of the RFID project the Circuit Court saves considerable staff and resources previously expended in tracking down case file folders. The RFID repository has been growing annually by approximately 27,000 files. The RFID system significantly improves operational efficiency and ensures the safe guarding of legal records and files.

The Redaction Project enhances the security and integrity of CPAN by removing social security numbers from public view. An added cost savings of the project will be the ability of the software to identify items that may be redacted by future legislative mandates without incurring additional reprocessing costs.

## 2G70-025-000 Incident Reporting and Records Management Systems - FRD (IT0048)

### Project Description

The Fire and Rescue Department's (FRD) Incident Reporting and Records Management Project is part of the multi-system, multi-phase initiative called the Public Safety Architecture Modernization project which successfully delivered a unified technology platform across public safety agencies in Fairfax County.

### Project Goals

Project goals included the replacement of the legacy CAD system with a new and fully integrated and interoperable Computer Aided Dispatch system. The CAD system is integrated with the Fire Records Management System (FRMS) and Electronic Patient Care Reporting System (ePCRS).

### Progress to Date

The ePCRS was implemented in FY 2008 with the deployment of a tablet based computer system for all

Fire and Rescue units. Patient treatment information is collected directly on the tablet computer while the crew members provide emergency medical care. The patient information is linked via secure wireless service to the Electronic Patient Care Reporting Servers for direct data storage. The process is fully HIPAA compliant; and digitally capturing patient information reduces the overall time required to complete the requisite reporting process through the elimination of duplicate processes (paper and pen reporting) and provides more accurate information for better recordkeeping. This system enables the Fire and Rescue department to comply with the Commonwealth of Virginia's Office of Emergency Medical Services (OEMS) mandated emergency medical services (EMS) data reporting requirements. In addition, the data captured can be reviewed to assist the Fire and Rescue Department in both the strategic planning for future services and the tactical deployment of Emergency Medical units based on that information. The ePCRS is currently in full production.

In FY 2009 integration of the new incident reporting system with the new CAD system was completed. A system upgrade that includes expanded capability for state reporting compliance and additional capabilities including training, personnel, maintenance, work orders, supplies and inventory is scheduled for FY 2013 which will complete this project.

### Milestone

- Rolling go live and field tuning of ePCRS, April 2008
- Completion of Fire Records Management installation and configuration, FY 2009
- Implementation of additional modules of Fire Records Management, FY 2013

### Project Budget

Additional funding from IT Fund 100-C10040 is not provided in FY 2013.

### Return on Investment

A unified public safety architecture consisting of a modern records management system, integrated with CAD and other public safety agencies management systems enables more effective public safety operations

in Fairfax County. This project improved data management, statistical analysis, FRD's resource and apparatus standards, improved operations and decision making capabilities.

The Electronic Patient Care Reporting System provides more timely and accurate tracking of patient transport information by creating more detailed patient treatment documents electronically with a tablet device directly interfaced with the current Computer Aided Dispatch system. With this system, billing information is readily, securely extracted, and electronically transmitted to the billing vendor which greatly improves the efficiency of billing and revenue collection. Patient care is enhanced through accurate documentation and information dissemination to the medical facility when the patient is transported. Furthermore, a reduction in the staff time required to complete patient care and incident reports provides units with a quicker "return to service" time.

Enhancements to the Fire Records Management System consolidating personnel, training logistics and apparatus records in a single system of records, will eliminate several legacy applications, and provides a central business system for the Fire Department.

## 2G70-039-000 Police Records Management System - I/LEADS (IT0062)

### Project Description

This project aimed to implement a modern, intelligent, comprehensive Law Enforcement Records Management System (I/LEADS) which operates on the principle of "single point of data entry" and query to improve reliability, accuracy, and quality of data. The I/LEADS System based on proven current industry and county standards, replaced the legacy Police Records Management System. The system expands the capacity of the Police Department, allowing it to better analyze – statistically and through spatial techniques – data on incidents and personnel. It also aids in identifying trends, and assists in staffing decisions and monitoring departmental effectiveness. Intelligence led policing, improved criminal justice, and overall strategic public safety resource deployment will be improved upon implementation.

### Project Goals

The police records management application I/LEADS integrates with the CAD system in the Department of Public Safety Communications, ensuring a unified

technology platform approach that seamlessly shares processes and data across public safety functions and leverages available technologies. I/LEADS increases the Police Department's ability to prevent, respond to, manage, and analyze situations that threaten the safety and property of citizens.

### Progress to Date

I/LEADS system went live January 2010. This implementation was one of the largest technology initiatives and was an extensive records management upgrade for the Police Department.

### Milestones

- Data mapping and data conversion from the Old PRMS to (I/LEADS) – FY 2009
- Installation and configuration of software (I/LEADS) – FY 2009
- Acceptance testing – FY 2009
- Go Live to production – January 2010
- End user training – in progress through FY 2010

- Acquisition of a Business Intelligence (BI) solution – September 2010
- Development and end user BI training – December 2010
- BI Go Live – January 2011
- Time management and staffing module implementation and reporting – FY 2012
- Payroll interface with the County FOCUS project – FY 2012

**Project Budget**

Additional funding is not required in FY 2013.

**Return on Investment**

A unified public safety architecture consisting of a modern records management system, integrated with CAD and other public safety agencies management systems, results in more cost effective public safety

operations. This project impacts nearly all aspects of police work and police information collection, and links them through an integrated system with the new CAD. A modern system that assures accurate, timely, reliable and accessible information on events, county geography and police information will permit the Police Department to efficiently act upon events, from initial response through tracking, investigation and reporting. Additionally, capture and storage of reliable and accessible data from the system will result in the ability to effectively address staffing, crime analysis, resource allocation, tactical planning and strategic planning. The new system will provide opportunities to increase effectiveness by eliminating redundant work and open up opportunities for information sharing and interoperability between law enforcement agencies. This is a significant tool in developing investigative leads, linking crimes across jurisdictional boundaries, and conducting crime analysis.

**2G70-067-000 Electronic Summons (IT0071)**

**Project Description**

This project is designed to develop automated solutions to streamline the traffic summons processes and implement of an Electronic Summons (E-Summons) application to automate the capture and transfer of traffic summons information from the Police Department to the Courts.

- Vehicle pilot expanded – April 2011
- Pilot solution identified for motorcycles – April 2011
- Vehicle e-Summons implemented – August through December 2011
- Motorcycle e-Summons implementation – September through November 2012

**Project Goals**

Project goals are to provide efficient and timely public access to electronic traffic case records in order to enable quick citizen access to traffic case records, enhance and improve case review, enable more efficient on line traffic fine payment, and improve court docket management. The e-summons project aims to reduce manual data entry and improve data quality as it relates to accuracy, integrity, reliability, and timeliness

**Project Budget**

Additional funding is not required in FY 2013.

**Return on Investment**

Automated solutions will allow for the reallocation of existing staff to positions that provide direct assistance to the public, ensure greater data accuracy, eliminate data entry errors with potentially serious repercussions for the public, allow faster ticketing processes that get officers back on the road more quickly, reduce overtime for officers waiting in court, reduce the frustration and time citizens have to wait in court for a hearing, provide more efficient use of Commonwealth's Attorneys and Deputy Sheriffs, as well as provide the public near real time electronic access to case Information. Eliminating double data entry, reducing redundancies between agencies, and streamlining court scheduling and docketing processes, will create multiple opportunities to improve existing operations and provide better customer service to the citizens of Fairfax County.

**Progress to Date**

After extensive analysis and following implementation of a new police records management system, the Police Department is moving forward with an e-summons solution in Fairfax County.

**Milestones**

- Project direction and pilot solution identified for vehicles – FY 2010
- Vehicle pilot initiated – September 2010

## 2G70-045-000 Public Safety Architecture Modernization (IT0083)

### Project Description

The Public Safety Architecture Modernization project supports implementation of common infrastructure supporting integrated CAD and Public Safety Records Management System (RMS), including public safety communications, as well as Police, Fire and Rescue, and Emergency Medical Services records management. This project provides the underlying infrastructure components and shared capabilities required for an integrated, interoperable public safety system. This project also supports operational components of a CAD and RMS including network infrastructure, and adopting standard GIS to meet public safety requirements.

### Project Goals

The project implemented an integrated public safety information architecture enabling data sharing across functional areas of the CAD and RMS in order to support key public safety lines of businesses and provide flexibility to respond to both internal and external data sharing requirements. This multi-track and multi-phase project, replaced the legacy CAD and Mobile, Police RMS and Fire and Rescue RMS Systems.

### Progress to Date

In May 2008 a new Emergency Patient Care Reporting system (EPCR) was the first application to be implemented as part of this project. In November 2009 implementation of a new iCAD system for Fairfax County public safety agencies was successfully completed, and in January 2010 the new Police Records Management System – ILEADS also went into production. FY 2011 work focused on completing planned product enhancements and post implementation tasks. In FY 2012 the focus for the project continued to be completion and acceptance of the planned features of the CAD system. The project will be completed at whole system acceptance with implementation of the CAD Version 9.1.1 upgrade scheduled to occur in August 2012. Post whole system acceptance, the system will go into maintenance mode and the system will transition to the responsible agencies for support. Each agency will support its own applications through agency funding for maintenance support. The Department of Public Safety Communications will be responsible for the maintenance of the core CAD components and interface connections.

All Fire and Police Department work sites have been upgraded with wireless hotspots. They now support the EPCR application and CAD Mobile. Both Police Records

Management (ILEADS) and other Fire and Rescue applications are also supported via wireless technologies. The public safety wireless hotspots provide data communications to the field units, which enable updates to the systems to be pushed out over an internal network instead of having to manually touch every one of the mobile units in the County fleet. Additionally, a commercial cellular carrier provides the primary means of communication between the mobile devices in the field and the wired infrastructure located in the McConnell Public Safety Transportation and Operations Center (MPSTOC). Additionally, a significant amount of geospatial information was captured, verified and incorporated into the new data model adopted by the Fairfax County GIS Branch. This information allows the CAD system to more accurately locate an incident and actually route first responders to the incident.

### Project Budget

No additional funding was requested in FY 2013; however, it should be noted that funding for FY 2014 and beyond, over the life of the system, will be required for upgrades and enhancements designed to keep the system viable into the future to reduce risk and be in compliance with contract obligations associated with the solution provider software upgrade cycles. Some of the costs associated with this project are being transitioned to operational cost centers.

### Return on Investment

The Public Safety Architecture Modernization project represents a joint initiative undertaken by the public safety agencies in Fairfax County (Department of Public Safety Communications, Police Department, Fire and Rescue Department, Sheriff's Office, and the Office of Emergency Management) and provides an integrated public safety suite for CAD and RMS, with supporting network infrastructure to support robust GIS including automatic vehicle location (AVL), automatic vehicle routing recommendations (AVRR), broadband wireless data services and automated field reporting. Savings are achieved in implementing standards for all stakeholders, consolidating system infrastructure, and reducing system tool redundancies from prior independent systems. More importantly, this project greatly enhances Fairfax County's ability to respond quickly and effectively to emergencies that require coordination among the various responder organizations and share information required for collaboration, case management, reporting, remediation and mitigation.

## 2G70-050-000 Fire Station Alerting Technology Replacement (IT0086)

### Project Description

This project provides a turn-key system replacement of fire station alerting (FSA) components. This alerting system is a critical part of the 911 systems and public safety response, and is a requirement specified in the National Fire Protection Association (NFPA) 1221 Standard. This technology lifecycle replacement brings the Fire and Rescue Department's (FRD) station alerting system to a technical level that will permit integration with the selected Public Safety Computer Aided Dispatch and Records Management Systems (CAD/RMS).

### Project Goals

The business and operational objective is to purchase and implement a proven FSA system that enables Fairfax County to meet the public safety goals of reduced response times, enhanced communication, and immediate access to relevant and critical information. The goal is to integrate the Fire and Rescue Department's station alerting system with the Public Safety Communication Center systems. The system will reduce reflex time for response by providing immediate unit based visual and verbal alert indication at time of dispatch and prior to radio voice dispatch, provide safe lighting and alert process throughout station for personnel response to vehicles, recorded announcement, provide station alerting capabilities as required by NFPA 1221, and streamline maintenance and support for system components.

### Progress to Date

The first phase for the core system infrastructure to interface and align with the new Computer Aided Dispatch System and replace end-of-life infrastructure and network components has been completed in all

Fairfax County Fire and Rescue stations. Phase II includes upgrading FSA in existing stations, the remaining infrastructure and component will be planned as funding becomes available. The upgrade to phase II specifications for three stations will be complete prior to FY 2013 end.

### Milestones:

- Contract awarded – FY 2009
- Design complete –FY 2009
- Install basic Fire Station Alerting system in all stations – FY 2010
- Installation in new fire stations following new contract award – FY 2012
- Implementation of Phase II – FY 2013

### Project Budget

New FY 2013 funding was not requested.

### Return on Investment

The Fire and Rescue Department expects to reduce overall response time to emergency incidents through immediate alerting of personnel. The system leverages the CAD system and provides immediate unit based alert indications at time of dispatch and prior to radio voice dispatch. The process reduces what the industry calls the "reflex time", or the amount of time between when the call is dispatched and when the response units are boarded by personnel and ready to respond. This is a life-cycle replacement from aging and incompatible equipment to an integrated COTS system. Maintenance and support costs for system components will be streamlined.

## 2G70-054-000 Police In Vehicle Video System (IT0090)

### Project Description

This project will install digital surveillance video cameras in the Police Department's fleet of approximately 800 patrol vehicles and provide secure storage and accessibility of the data captured, which is a new capability to support the law enforcement processes. The basic components of the system will include the in-vehicle camera systems which will capture the digital audio/video data. Each patrol vehicle will require a video package that will include an in-vehicle video

camera, controller, a display component, digital recording device, and wireless data communications. The data will be wirelessly uploaded and transmitted via the County's I-NET to DIT servers for storage and retrieval.

### Project Goals

Goals include the Police Department's ability to accurately record events, statements and scenes in order to enhance public accountability and the ability of the Commonwealth and County Attorneys to prove court

cases. The use of in-vehicle video supports the Police Department's commitment to providing safe, fair, unbiased, and responsible service to the residents of Fairfax County.

### Progress to Date

- Project kick off meeting and requirements analysis – FY 2011
- RFP published through US Communities Contract – FY 2012
- Vendor selection and procurement – FY 2012
- Installation, testing, and training – FY 2012
- Go Live early FY 2013

### Project Budget

FY 2013 funding of \$1,860,000 is provided from the County's Cable Communications Fund (400-C40030).

### Return on Investment

In-vehicle video provides benefits to the public, the law enforcement community and the legal system

across the nation. Locally, the use of in-vehicle video supports the Department's commitment to provide fair, unbiased and responsible service to the residents of Fairfax County in a number of ways. First, in-vehicle video is a valuable aide to criminal investigations through accurate recording of events, statements, and scenes. Video evidence enhances both the Commonwealth and County Attorneys abilities to prove their cases. Second, in-vehicle video enhances the Department's accountability to the public by providing the Department an invaluable, objective perspective when reviewing the actions of officers. Third, in-vehicle video provides the Department with a means to observe and assess its primary method of service delivery. Video footage can be reviewed, critiqued, and then used to develop better practices, policies, and training for staff. This can improve officer safety, quality of service, and public satisfaction. The overall return on investment is increased trust and confidence by the public in their police department.

## 3.3 CORPORATE ENTERPRISE

### 2G70-002-000 Orthoimagery Update - GIS (IT0004.2)

#### Project Description

This project is part of the County's ongoing effort to maintain aerial imagery in the Geographic Information System (GIS). GIS provides County staff and citizens the means to electronically access, analyze and display land related data. The imagery is used in the My Neighborhood viewer, the Digital map viewer, the new 3-D viewer (Virtual Fairfax) and in all of the County web and desktop mapping applications that include maps.

#### Project Goal

The goal of the project is the continued implementation of a four-year cycle to update orthoimagery for all 407 square miles of Fairfax County with high resolution and accuracy for County applications and users.

#### Progress to Date

With the acquisition of state imagery in FY 2007 and FY 2009, the four-year imagery update cycle is up-to-date. Due to a change in the state's scheduling, the County benefitted from a one time 2-year update cycle. The state is now back on its 4 year cycle with the County

scheduled to be flown again in 2013 as part of the state-wide effort. The county has cost-sharing partnership with the state to obtain the higher resolution imagery for specific Fairfax County needs.

#### Project Budget

No new funding for orthoimagery was included in the FY 2013 budget.

#### Return on Investment

The orthoimagery project provides a combination of cost-savings, enhanced revenue and non-quantifiable benefits. Multiple County agencies have benefited from the use and availability of high resolution orthoimagery data and others are expected to utilize the data to enhance efficiency and program management. For example, orthoimagery is used successfully in property appeals cases and allows the County to effectively defend increased property assessments and help citizens with home assessment valuations. The imagery is also utilized to resolve zoning enforcement cases, often providing definitive information about when illegal

structures were built, thus helping the county maintain desirable neighborhoods and safe structures. Use of aerial photography has also reduced the need for field visitations where county staff has a need to reconnoiter an area for various reasons.

The orthoimagery serves as a highly accurate quality controlled layer in the GIS to which can be used to accurately locate features (e.g., building outlines, streetlights, storm water features, and sanitary sewers). It provides the basis from which many of the fundamentally important GIS layers are derived. This is possible because

the aerial imagery used to create the orthoimagery is of high enough quality and accuracy that it can be used for the County's planimetric update project, saving the cost of additional imagery acquisition. Orthoimagery is also available in the public web applications that include maps, enabling users to view aerial imagery of any area of the county. These applications serve over a million maps per year enabling public users the ability to view parcel outlines, hydrography, as well as major and minor roads. The accurate orthoimagery serves as a base for the 3-D imagery in Virtual Fairfax.

## 2G-003-000 Oblique Imagery - GIS (IT0004.3)

### Project Description

This project provides oblique imagery that enables users to view the sides of buildings and structures, ascertain the urban character of a location, and measure the heights of visible features. The project collects images of every location in the county from at least four directions (N, S, E, and W). This image product enables agencies such as the Department of Public Works, Tax Administration, the Department of Public Safety Communication and Public Safety Agencies to reduce field staff time involved in their work by enabling virtual visitation, which enable staff to easily assess values and conduct analyses on buildings not previously possible.

Additionally oblique imagery is instrumental in identifying sites for quick dispatch of responders to 911 calls. It is available on all of the call-taker and dispatch terminals at the 911 center and is used daily. This imagery is also the source of the 3-D building imagery of the Tyson's Corner and Reston Herndon areas that is displayed in the Virtual Fairfax web application (the buildings sit on top of the orthoimagery from the state). The 3-D imagery is essential in meeting a board mandated requirement. This oblique imagery augments orthoimagery which is taken directly overhead and does not capture the sides to structures. Together, both sets of imagery are complimentary parts of the spatial data in the GIS data warehouse, giving county-staff access to a wide range of geo-spatial information about Fairfax County required in their business processes.

### Project Goal

This project's goal is to provide oblique imagery as a useful and key component of the county's spatial data warehouse that also serves as a historic reference imagery base.

### Progress to Date

The county has complete oblique imagery libraries for calendar years 2003, 2005, 2007 and 2009 and 2011. The next update is scheduled for 2013. The current contract with the oblique provider expires in 2012 and an open procurement is underway to establish a new contract for oblique imagery. That process will conclude in time for new imagery in 2013.

The imagery has progressively been made available through a series of software deployments. This effort includes regular training conducted by DIT in support of promoting the dissemination of the program for staff. The use of oblique imagery continues to increase; especially, since it is now available internally via the GIS-based GEM web application which has made accessing and using the imagery easier and available on staff desktops. Currently in addition to CAD/911 usage, there are over 140 unique users of oblique imagery who log on average over several thousand hours per year using oblique imagery. In support, GIS staff coordinate agency needs, specify requirements, perform QA, and provide the training and desktop implementation at no cost to agencies. The County shares the GIS imagery with the town of Herndon and Vienna since they are within the boundaries of Fairfax County.

### Project Budget

Funding of \$150,744 is recommended in FY 2013 to maintain the county's spatial data for oblique imagery.

## Return on Investment

The oblique imagery project provides a combination of cost-savings, enhanced revenue and non-quantifiable benefits to its users. In particular, The Department of Tax Administration (DTA) has found it very useful in supporting their operations because of the ability to see all sides of a structure to determine material composition, floors, decks and other features. In FY 2010, DTA increased usage of oblique imagery and successfully reduced field inspection time and costs further.

Oblique imagery is particularly useful in public safety since it enables staff to view and measure the sides of

buildings to determine risks, site lines, rescue apparatus requirements, and other key features. The oblique imagery is now used daily in the CAD/911 system to assist call takers in correctly identifying incident location and to assist dispatchers in supporting response to an incident. For instance, it helps Fire and Rescue dispatchers to detect small vertical features such as fences which could block fire fighter and fire hose access and helps call takers more accurately determine the location of callers (e.g., at complex intersections). Oblique imagery is also the source of 3-D imagery since it contains building facades (skins) and elevation information, essential for effective representation for the actual areas.

## 2G70-004-000 Planimetric Data Acquisition Program – GIS (IT0004.4)

### Project Description

Planimetric data is planar data (2D) derived from observable natural and manmade features visible on aerial imagery. Planimetric data layers make up many of the key GIS layers used in most of the maps made in the county. These key datasets are used in all of the county's web applications that incorporate maps, and in nearly all of the county's public safety vehicles through the CAD/911 system in the CAD maps. This update program is replacing the existing planimetric data which was derived from aerial photography flown in the spring of 1997. Since that time the county has grown considerably, adding new housing, commercial locations, new and modified roads, storm water management features, and other man made features. Additionally the topography has changed with new development. The update program will leverage the 2007 and 2009 aerial imagery acquired in partnership with the State. Acceptable newer imagery will be used as it becomes available.

### Project Goal

The goal of the GIS Planimetric Data Acquisition Program is to update approximately 25% of the county's planimetric and topographic data annually. The current effort is more comprehensive and can serve more county needs. Data sets include impervious features such as roads, pools, basketball courts and driveways; they also include a capture of 2' contours - a substantial improvement in the accuracy of the elevation data and building elevations. This program is dependent on the availability of current aerial imagery in order to acquire the latest changes on the ground.

### Progress to Date

The County's planimetric features, digital terrain model (DTM), and topographic contouring data need updating to reflect extensive topographical change and development activities. Through user surveys, agencies have indicated that they would benefit from regular planimetric data updates.

Initial funding for this project was provided in FY 2010. A detailed statement of work was developed, and the SE quadrant of the county, which is densely populated, was selected for the initial quadrant. The aerial photography source for the first quadrant data update was from the spring 2007 state imagery. Results from the first and second quadrants are now available to GIS users. The third quadrant data compilation is underway and should be completed by July 2012; work will then begin immediately on the fourth quadrant. Imagery acquired in 2009 will be used for the remaining three quadrants. The county will then initiate another round of updates to the planimetric data using the 2013 state aerial imagery. Prior to the conclusion of the fourth quadrant work, the county will determine the best approach for the next round of updates to the planimetric data.

At the conclusion of the four quadrant's update the county will have a more detailed planimetric and digital surface (contours, spot elevations) with the number of total features almost tripling to over 4,000,000.

### Project Budget

This project is jointly funded by DPWES and DIT. FY 2013 funding of \$187,000 is provided in Fund 100-C10040, to

procure the county's share of the aerial imagery (flown by the state), which is the basis of the planimetric data.

### Return on Investment

The planimetric, DTM, and topographic contouring at 2' contour interval data update project provides a combination of cost-savings, enhanced revenue and non-quantifiable benefits. Planimetric, DTM, and contour data has proved extremely valuable in a wide range of county operations. In particular, a much more accurate elevation model of the surface of the county significantly improves the accuracy of storm water analyses. Cost savings have been achieved over time as GIS staff have assisted key agencies develop high resolution data. These included, DPWES, The Park Authority, and also Fairfax County Water, where a 1' or 2' detailed and accurate DTM was needed. For instance a 1' contour data set was developed for flood plain mapping of New

Alexandria and Belleview project. The planimetric, DTM and contour update project makes a tremendous impact as it enables agencies to readily access data needed to assist projects anywhere in the County, which saves time and money and enhances response, efficiency, and overall productivity.

Planimetric data is also an important component in the mapping applications in the county's new CAD system. The data is used in all public safety vehicles with CAD (about 1,400) as well as county dispatchers and call takers. The planimetric maps provide a clear and fast visual display on terminals to enable emergency response personnel to navigate and analyze the environment around an incident. Since planimetric maps are very small from a data perspective, they do not place heavy processing demands on the mobile display terminals, thus improving response time of the terminals.

## 2G70-005-000 Tax/Revenue Administration (IT0006)

### Project Description

This project provides the information systems development and technology infrastructure required to redesign the County's tax and revenue systems. The Tax/Revenue project facilitates a simpler process for citizens to fulfill their tax obligations and pay for services by modernizing the internal processes used for assessing, billing, and collecting County taxes and other revenues. In FY 2002, the County began replacement of the aging real estate mainframe system with a COTS product called Integrated Assessment System (IAS). Implementation of IAS allowed for a comprehensive overhaul of many existing functions such as real estate administration, account maintenance, assessment, exemptions and adjustments, accounts receivable, and billing. The core system was completed in FY 2004. The migration to of the core system to the WEB based iasWorld product was completed in FY 2010. The current focus of the project is the migration of the Real Estate Public Information web site, iCare, currently hosted externally by a COTS vendor, to the Fairfax County web environment.

### Project Goals

The final Project goal is to provide a Fairfax County web hosting solution for the IASWorld/iCare module, currently hosted externally. Providing a web hosting solution for IASWorld/iCare will eliminate the need to transfer sensitive Real Estate Information to an external vendor and provide iCare users and Fairfax County taxpayers with a more recent view of Real Estate Information.

### Progress to Date

The assessment administration, CAMA (assessment), accounts receivable and delinquent collection modules of the client server tax system are operational and fully integrated with the County's cashing system. These modules comprise the core tax system. Implementation of the web-based product, IASWorld, was complete in FY 2010. The county hosted web solution for iCare is scheduled for implementation in late FY 2012.

### Milestones

- Implementation of IAS modules with the exception of the Delinquent Collections Tracking product- February 2004
- Installation of the WEB citizen inquiry tracking system module of iasWorld, iRespond) – June 2007
- Implementation of the web- based real estate system iasWorld – June 2008
- iMaintain Module Implementation – FY 2009
- iField Module Implementation – FY 2009
- iTax Implementation – FY 2010
- Fairfax County Hosted Real Estate Public Information Web site – FY 2012

### Project Budget

No additional funding is provided in FY 2013.

## Return on Investment

The final phase of the project will permit improved customer service without the addition of staff. Staffing can be held constant as inquiries and correspondence increase as a result of population growth, changing demographics, and changes in real estate assessments and rates. Citizen inquiries will be more effectively managed, and response turnaround times improved. Improvements in data quality and currency will better

equip the County to provide more equitable assessments, defend appealed assessments, and improve the timeliness of revenue generated from the real time recording of property improvements. By operating the real estate public information web site within the County's infrastructure, staff can ensure the security of County data communicated over the internet, monitor the application on a 24/7 basis for optimal availability, and ensure secure access.

## 2G70-011-000 Automated Board Meeting Records (IT0011.13)

### Project Description

This project will design and implement a document-imaging program in the Clerk to the Board's Office, which will enable the Clerk to the Board's Office to electronically capture Board of Supervisor meeting records and make them available on-line to the public and county staff.

### Project Goal

To electronically capture Board of Supervisor meeting records and make them available on-line to the public and to County staff.

### Progress to Date

Components of a solution commonly used in governments supporting meeting agenda development and live meetings recordation that support this project have been deployed in the Department of Cable Communications and Consumer Services for easier search of meeting

videos and agendas from the WEB. Requirements for incorporating the Board of Supervisors' meeting videos with the agendas to create a robust easily accessible and searchable on-line record were developed.

### Project Budget

No additional funding is required for FY 2013.

### Return on Investment

This initiative is expected to increase the efficiency of producing the board matters package including streamlining the process of getting the records on-line; provide a viable, accurate document system for older and one-of-a-kind documents; reduce error rates as much of the manual data entry will be eliminated; and reduce the space requirements for maintaining paper copies of documents.

## 2G70-016-000 Correspondence Tracking and Management System (IT0022.9)

### Project Description

The Correspondence Tracking and Management project enables County agencies to capture communications, track contacts, events and complaints in order to enhance staff and interagency communication. Since its initial launch in 1999, this project continues to expand the implementation of a proven COTS product known as Intranet Quorum (IQ) which has been successfully deployed in several County agencies. IQ is a Correspondence Tracking and Management System that provides an integrated approach to delivering services to citizens and staff. In addition, IQ offers a variety of data points for easy and complete reporting.

### Project Goals

Project goals include enhanced communication between County staff, departments and agencies. The system provides an integrated approach to service delivery enabling users to link to other areas within the database, as well as extend outside the IQ system through scheduling, scanned images, email, fax, and incoming/outgoing postal mail. The project enables agencies to automate business processes and workflows, reduce duplication of effort, and share information. These benefits are amplified by the delivery of a seamless constituent interface and enhanced customer service.

**Progress to Date**

IQ was initially deployed at the offices of the Board of Supervisors, the County Executive, and the Clerk to the Board. Expansion to other agencies including the Office of Public Affairs, Consumer Protection, Office of Human Rights and Equity Programs, Department of Public Works and Environmental Services, County Executive and the County's Legislative function within the County Executive's office, Department of Purchasing & Supply Management, Department of Transportation, the Alternative Dispute Resolution Program, and the department of Code Compliance have been part of this effort. Address confirmation and validation from the Master Address Repository (MAR) and the GIS have been implemented within IQ to increase agency productivity. Migration to IQ version 3.7 was successfully completed for all user agencies and will allow staff to capitalize on IQ's latest product offerings. In FY 2013 project work will continue support for current IQ users.

**Project Budget**

No additional funding is provided in FY 2013.

**Return on Investment**

Successful implementation provides enhanced communications between County staff, departments, and agencies, thus allowing agencies to share and monitor the status of projects, responses, and track other issues and events as those items progress through County processes. The project enables agencies to automate business processes and workflows, reduce duplication of effort, and enable the sharing the information between agencies using present e-mail methods. These benefits are amplified by the delivery of a seamless constituent interface and enhanced customer service. In addition, this solution does not preclude installations of applications that support the County's IT architecture, or interact with other agencies' CRM applications.



**2G70-019-000 Public Access Technologies- Interactive Voice Response (IT0024.2)**

**Project Description**

Interactive Voice Response (IVR) technology program develops custom interactive telephone applications that can access and update data in variety of County databases, in addition to providing static information in a timely, convenient manner. For those citizens who do not have access to the Internet, the project was established at the request of the Board of Supervisors "to enable the County's customers to conduct business with the County wherever and whenever it is convenient for the customer". IVR is one of the foundation programs for enhancing public access to government information and business transactions.

**Project Goals**

The primary goal is to continue the application of text-to-speech technology for certain applications aligned with e-government goals. Interactive Voice Response enhancements include the continued integration of Web and IVR via XML technology for public use.

**Progress to Date**

The DIT IVR currently answers more than a million calls annually. The system is available approximately 24 hours a day to interact with citizens, providing an additional option for conducting business with the County after regular business hours. By handling the more routine calls, the IVR allows staff to concentrate on those calls that most need personal attention. It also allows access to a great deal of information after hours or on weekends. The IVR team is currently developing a Request for Proposal (RFP) for a new Interactive Voice Response system.

Health Department	Health Department Information Line
Housing and Community Development	Inquire Affordable Housing Waiting List
Human Resources	County Job Line
Information Technology	IT Service Desk Information Line
Library, Fairfax County Public	Library Information Line
Police Department	Victims of Crime Information Line
Public Works and Environmental Services	Building Plan Review Information Line
	Inquire Building Permit/Plan/Inspection Status
	Schedule/Cancel Building Inspection Requests
	Schedule/Cancel Special Collections (Trash Pickup)
Tax Administration	Real Estate Information & Tax Payment

County Executive, Office of	County Services Information Line
	Medical Registry – Special Needs
	OPA Survey Line (Seasonal)
Courts	Courts Information Line
	Traffic or Criminal Violation Prepayment
	Juror Information
Family Services	Coordinated Services Planning Survey
	Register for Institute For Early Learning

**Project Budget**

The program requires on-going support from e-Gov and telecommunications staff to support the system, expand application of the capabilities in additional business areas, and implement enhancements. FY 2013 funding of \$400,000 is provided for on-going support of multiple e-government programs.

**Return on Investment**

Public access technologies such as the IVR expand citizen access to county information and services and minimize staff resources need to provide basic information, and allow staff deployment more complex and specialized tasks. The Public Access Technologies continue to provide single information architecture and supporting infrastructure for all platforms to deliver new information and e-services to the public. It expands the capabilities of the content management system in order to improve automated workflow, revision control, indexing, search and retrieval for enterprise systems. The project also improves search capability for citizens and constituents, and enables the county to build applications quicker and more efficiently by maintaining reusable components.

## 2G70-020-000 Internet/Intranet Initiatives – E-Government (IT0024.3)

### Project Description

This project supports initiatives that improve public accessibility to government information and services. A comprehensive approach is employed to ensure efficient infrastructure capable of supporting multiple business solutions. In addition to enhancing customer service for availability anywhere, anytime, public access technologies reduce staff involvement in providing basic information and transactions, thereby allowing personnel to perform more complex tasks and respond to requests for more detailed or specialized information. Internet/intranet initiatives provide significant and wide-ranging opportunities to use technology as a means of making information more readily available to the public. Initiatives include research and development of emerging technologies, expansion of Web applications, improvements in search and navigation, integration with internal systems and other public access channels, and sustaining infrastructure.

### Project Goals

The project's vision is to provide new information and services on all platforms, while continuing to build on existing information architecture. The planned functionality will be delivered in support of the County's taxonomy of information and services, using a single supporting infrastructure. The solution is based upon a single content repository for all platform and agencies. The repository enables various features of content management to provide accurate and reliable information, provide additional search capabilities on the public web site, and enable information sharing. The project includes implementing standards and processes for information engineering so that the same application and data is used county-wide in the development of Web content and applications.

### Progress to Date

The County's Public Web site has been an extraordinary success and has received national recognition. The site receives approximately 11,257,040 visitors, which equates to about 54,412,502 page views and about 432,144,125 valid hits for FY 2012. Approximately 55 County agencies have a presence on the site. The functionality of the site has expanded significantly with the addition of an online discussion tool (Ask Fairfax!) to enable citizen interaction with government on various topics, mobile version of the county website

with mobile and iPhone applications to list a few. The county website is also being translated into 12 languages using machine translation powered by Google. In order to empower public services and affirm county's strategic vision and goals, the website has been enhanced with new and updated interactive features and online applications. In an effort to improve website accessibility, all pages on the public website are tested for compliance with Section 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act by passing through the county's automated compliance checking tool.

In order to continue to empower public access to service while affirming the county's strategic vision, Fairfax County has pioneered the implementation of governmental services through various mobile devices like iPhone/iPad, Android and Blackberry. In enhancing the county's long standing goal that our community should access their government 24/7 without walls, doors or clocks, Fairfax County now places government in the palm of their hands with the introduction of efficient and cost effective mobile apps and services.

Fairfax County Government's mobile app:

- Enable citizens instant connectivity to their government
- Provide them the benefit of getting services and information from anywhere at any time by delivering information in a more conveniently accessible platform
- Enhances the adoption of online governmental services by reaching a larger and wider user base

In addition to our mobile website, the public can download the Fairfax County smartphone application on iPhone/iPad, Android and Blackberry for emergency information, news headlines, one-touch calling through our contact directory, GPS maps, social media links, transportation resources and more at <http://www.fairfaxcounty.gov/news/mobile>

Ongoing strategy includes 'sharing' which has become an integral part of the Web experience. It is referred to as online collaboration, and known as Web 2.0, social networking or social media. Recognizing that social media is an essential business function in today's rapidly changing world and key to improving citizen-to-government networking, Fairfax County offers multiple

channels like Facebook, Twitter, YouTube and Flickr for public engagement with county government on various topics during emergencies and otherwise. It also advances the county goal of creating a culture of engagement, boosts county operations and furthers our business mission with residents. Using social media tools is a proven and acceptable way to enhance government transparency and encourages a two-way dialogue with the public which augments the standard website.

In addition to the use of numerous county-developed cross-agency applications like RSS (Really Simple Syndication feeds), Ask Fairfax!, email subscriptions to improve citizen-to-government networking, open source tools like Slideshare (presentation sharing), Google maps (event maps) and Ideascale (social voting) have been leveraged. All these are integrated together and come under the umbrella of NewsWire which is the county's one-stop news shop.

The County extended its presence by adding 22 official social media sites on Facebook while continuing its presence on Twitter and Youtube:

Facebook – <http://www.facebook.com/fairfaxcounty>

Twitter – <http://twitter.com/fairfaxcounty>

Youtube – <http://www.youtube.com/user/fairfaxcountygov>

## 1 – Public Web Site Search and Navigation

During the first phase of the project over 120 content contributors were involved in migrating information from the old site to the redesigned site with a six-month period. The Project team defined a basic Information Architecture for the site, which was then validated by 14 citizen and business focus groups. A “look and feel” template was developed for the redesigned site and migration of over 20,000 files to the new templates was coordinated by the project team. Most importantly, the establishment of working inter-agency groups for the development and dissemination of standards related to site design, application development and implementation proved critical in the project's success. As part of the redesign, a “Contact Us” database was implemented, which provides citizens with direct contact information to county staff from a single search interface. Additionally, site search functionality was enhanced.

In FY 2003, the main subject area pages (Living, Doing Business, Visiting and Government) were developed. Enhancements of the site included: News & Information section, Emergency Information, Local Weather and improved navigation. In FY 2004, a robust and secure environment that facilitates delivery of integrated and accurate information to citizens was built. In FY 2005, several new applications were added including Child Care training, My Neighborhood applications, kids and Teen portal, Seniors and Disability portal, Crime



Mapping, and revamped DTA e-pay and Consumer Protection pages. In FY 2006, a new search on the public web site was implemented making site accessible via mobile devices.

In FY 2009, the public web site was redesigned to improve the architecture and functionality with a fresh look and cutting edge enhancements. To provide easy access to county wide services and information, consistent left-side navigation was introduced throughout the site. The implementation of the Google Search Application augmented the overall search functionality of the web site. Additionally a highlighted news section provides easy access to information categorized by topic, and brings into focus various County agencies, County wide initiatives, and featured County services. The public web site is part of the "Going Green Initiative" and provides a conduit for carrying out on-line business with the County around the clock. Additionally, in order to improve ergonomics and enhance accessibility a new color palette as well as text only, printer friendly, and text resizing features were introduced.

In FY 2010 - FY 2011, the county developed mobile version of the public website including mobile and iPhone applications. The County's public web site content is also available multiple languages.

In FY 2011 - 2012, acknowledging trends in high adoption rates of mobile devices, Fairfax County increased the value of its e-government efforts with the add-on of mobile apps for all platforms like iPhone/iPad, Android and Blackberry for free downloads. Our attention to stewardship of scarce resources was achieved by complete in-house development and repurposing of existing technologies. Mobile accessibility further enhances citizen's convenience and reaches a wider user community with the ability to access services and information in the palm of their hands. There has been about 4500 copies sold and over 10,000 free updates made in App Store for iPhone alone since June of 2011 with numbers increasing every day. Through Fairfax County standard and mobile version of the website provides our residents with a wealth of information, online services and connectivity with their government, mobile browsing is undeniably on the ascendancy – it is expected that by 2013, more people will be using mobile devices to access the web than traditional laptops and PCs.

In FY 2013, to address this profound shift in how public is accessing online services and enhance citizen

engagement with their government at any time from any place and on the go, our goals continue to be development of more native mobile applications for public consumption.

## 2 – Infrastructure Architecture and Management

The following Internet/Intranet Infrastructure initiatives are on-going:

- Secured network settings on all 34 servers to minimize risk of intrusion
- Implement a statistical reporting system for both Internet and intranet servers
- Refined the server monitoring system

## 3 – Interoperability

As a participant in the Government without Boundaries cross-jurisdictional project, Internet Services staff installed ASP.Net and created a Web Service, which generates XML data from a SQL database using a collaboratively defined schema. This project allows Fairfax County to share park-related data with other local, state, and federal jurisdictions. Additional critical work on regional interoperability for homeland security linking Emergency Operations Centers and CAD functions began in FY 2005 with implementation of a pilot prototype in FY 2006.

On Feb 18, 2010 the **Unit Status** and **Request for Resource** Services of CAD2CAD Exchange between the operational CAD systems of Alexandria, Arlington, and Fairfax was successfully implemented. The project complies with emerging regional and national data sharing standards, thereby allowing for the inclusion of other regional partners as future grant funding permits. This achievement represents both a technology integration success and a long sought-after milestone in the operations of 911 dispatch.

## 4 – Intranet/Infoweb Redesign

In FY 2011, the county launched Phase I of "FairfaxNET", the county's new intranet, which is an employee focused enterprise SharePoint portal that provides an intelligent platform to seamlessly connect users, teams and knowledge so that Fairfax County Government can leverage relevant information across business processes to help them work more efficiently. FairfaxNET is a centralized resource for internal county content, forms, policies, news, application, training and other sources of information. It provides collaboration tools for agencies and work groups which are secure, convenient and a standard workspace for employees to work individually

or collaboratively. FairfaxNET is a centralized location for disseminating pertinent county-wide, agency-specific or team/project-specific information. It also provides a venue for automating business processes.

Approximately 55 County agencies now have a presence on the county's intranet site (both InfoWeb and FairfaxNET), offering more than 11,000 HTML documents, 12,500 PDF documents, and 15,000 images on the internal site. Most agencies have Web content contributors, and Internet Services staff support content creation efforts for those agencies without a dedicated Web presence. The County's intranet will continue to be updated with additional access to enterprise data and interactivity, and expanded to become a viable alternative for full transaction-oriented applications. The addition of new information and increased business functionality is essentially an ongoing project. Based on conversations with a wide range of County managers, it is also expected there will be numerous concurrent application development requests from a dozen or more agencies for core web-enabled applications as the benefits of the technology become more widely recognized. These requests for support are handled on an as-needed basis based on priority, visibility and functionality, and highest Return on Investment.

In FY 2012, about 20 county agencies have transitioned into FairfaxNET and are using the new intranet solution as a platform for sharing information and collaboration with other agencies both on a countywide level as well as internal collaboration. Ongoing efforts are underway to complete transition of all county agencies into FairfaxNET. FairfaxNET is now a gateway to the enterprise ERP solution (FOCUS).

### IT-000001-001 Fairfax County Unified System – FOCUS (IT0079)



#### Project Description

Fairfax County government and school system have embarked on a multi-year, joint initiative to modernize the portfolio of enterprise systems that support finance, human resources, budget, procurement, and related administrative applications with an integrated approach that has the flexibility to meet current and future requirements. The project seeks to mitigate the risk that

FY 2013, goals are to make FairfaxNET available to all county agencies for both county-wide and internal collaboration. This is an on-going process that links with agency operational improvements.

#### 5 – Web Content Management

Web Content Management will address refining the site's information architecture, defining and implementing replicable workflows, as well as designing and implementing the supporting infrastructure for Web content contribution.

#### 6 – E-Services

Internet Services prototyped new application development platforms and developed standards and best practices for the current environment. DIT supports other agencies in the development of Web content and applications.

#### Project Budget

FY 2013 funding of \$400,000 is provided for on-going support of multiple e-government programs.

#### Return on Investment

This project continues to provide single information architecture and supporting infrastructure for all platforms and new information and e-services to the public. It further expands the content management system to improve automated workflow, revision control, indexing, search and retrieval for enterprise systems. The project improves the search capability for citizens and constituents while enabling the County to build applications faster and more efficiently by maintaining reusable components. Public access technologies minimize staff resources necessary for providing basic information, thereby allowing staff deployment to more complex tasks that require detailed or specialized information.

the legacy antiquated and disjointed systems posed for system failure and inferior data.

The current 'stovepipe' legacy business systems are on various, old technology platforms using a variety of hardware and software architectures integrated through a number of interfaces and reporting tools. Previous assessments of these aging systems revealed that they are past their projected useful lifecycle, no longer meet today's technology standards, and do not meet the demands of resource and financial management and decision-making. System limitations continue to drive a

proliferation of multi-step tasks to produce desired data and the development of numerous 'workaround' systems to gain necessary functionality currently not available. This has also resulted in an exponentially increased risk for fraud and security vulnerabilities. Due to their age, many of these systems have no vendor support and rely on retirement eligible in-house staff for maintenance.

### Project Goal

A governance body of senior officials of the County and school system stakeholder agencies has guided the procurement of an integrated financial/procurement/human resources/budget suite that will support agencies in the delivery of government and school services and activities; take advantage of best practices; provide the opportunity for multi-faceted data-driven decisions; significantly improve the efficiency and effectiveness of existing processes; enhance e-government initiatives; promote telework opportunities; and aid in the transformation, transparency and standardization of financial and human resource processes. This initiative will foster an environment of change and redesign to allow for more efficient and effective processes.

### Progress to Date

A joint Steering Committee and project team comprised of County and School personnel was formed in 2008 to develop the project and provide project oversight. The Government Financial Officers Association (GFOA) provided assistance in the identification of current processes, creation of requirements, and preparation and review of the procurement phases of the planning effort. Other work conducted that was required to initiate the project included an assessment of the legacy systems used to support core business functions; identification, review and streamlining of existing business processes; identification and refinement of functional business requirements necessary in the software; and the identification and mapping of core business processes, which involved the production of more than 200 diagrams to document 64 key current business processes. More than 400 County and school staff from a cross section of the user community including functional managers, subject matter experts and end users assisted in this effort. This was followed by a requirements gathering and validation process which involved examining 17 core processes in the finance, procurement, budget and human resource/payroll areas to identify what users need in a new system, followed by validation of those requirements. This provided the documentation necessary for the software procurement which was completed in the summer of

2009 with the purchase of SAP software. The procurement process for the implementer, also awarded to SAP was complete in the summer of 2010.

The project began implementation activities in summer, 2010, with a joint county/schools project team co-located and working jointly through all phases, blueprinting through realization activities, to include change management and training activities. The financial management and procurement system (Phase 1A) went live in November 2011. On-going work on project phase 1B (enhanced supplier management functionality and transparency), and phase 2 (human capital management) continued while the new financial management system was transitioned into agencies' administrative processes. This was a bold achievement that included a county government and school system consolidated, complex ERP implementation that other municipalities are interested in approaching. With the specifics and additional complexity of human capital management systems coupled with state and federal mandates, tax changes and reporting requirements, Phase 2 core county HR/payroll system went live in FY 2012, non-core human capital management functionality and transparency is planned for FY2013.

### Project Budget

Project funding has been provided as needed aligned with the phases of this multi-year project at the appropriate time to ensure milestone payments are met.

### Return on Investment

The project seeks to mitigate the risk that antiquated and disjointed systems pose for system failure and inferior data. Automation and modernization will empower both employees and managers to execute processes more efficiently, and make the best strategic decisions based on the most timely and accurate information. This shifts the orientation of the system from that of a data repository to one of an information system solution. With the migration to a more standard, supportable database and development environment that incorporates workflow and Web technology, the project expects to create a collaborative environment where access to data and information, even from remote locations, is based on system "look and feel" flexibility, intuition, data definition, data stewardship and security. The project will:

- Provide a seamless integration of a new system with existing applications;

- Reduce the number of shadow systems and reconciliations between systems;
- Align the reporting strategy with the County government and school system overall data reporting and consistent information management throughout the organizations;
- Incorporate fully integrated best business practices;
- Develop a system that is user-friendly and that empowers users to improve their business processes;
- Add and improve functionality in back-office functional areas;
- Improve the quality and accessibility of information for decision support;
- Reduce redundant data entry, storage, and paper processing;
- Support the countywide balanced scorecard initiative;
- Improve operational effectiveness and productivity;
- Enhance web self-service and improve customer service; and
- Retire obsolete legacy and back office systems, hardware and tools.

## 2G70-053-000 Retirement of Legacy Systems (IT0088.00)

### Project Description

The FOCUS/ERP project will replace the County's existing legacy mainframe systems for budget, human resources, finance, and procurement. The Retirement of Legacy Systems project supports the conversion and migration of other county agencies' remaining legacy business systems, databases, and data off the mainframe onto more contemporary platforms. This project is the final step in eliminating the old data center infrastructure and operational support model and embrace opportunities for accelerating the ongoing consolidation of server and storage environments and 'cloud' type services, which have yielding operational savings and enhanced 'green' IT initiative DIT is pursuing.

### Project Goal

This project aims to move several remaining legacy files and data off the mainframe onto more contemporary server based and virtual platforms. New relational data repositories, indexing schemes, analytics and search capabilities are being developed. Upon completion of the data migration and conversion, the county's mainframe platform can be retired.

### Progress to Date

Solution research and assessment was conducted in FY 2012. First phase legacy data in various areas

associated with public works' legacy land development system data was converted to a new repository, search and reporting capability in spring 2012. This work won industry recognition that also included two, multi-national corporations.

### Project Budget

Funding of \$500,000 is provided in FY 2013 to continue support for this multiphase initiative.

### Return on Investment

Many efficiencies and cost savings will be achieved with the conversion of old legacy data, which is required and useful information, into a modern data repository with advanced search and reporting capabilities, as well as with the migration off and eventual retirement of the mainframe system. With retirement of the mainframe system the county will achieve savings by ending lease payments for hardware, software licenses and utilities, mainframe data storage devices, as well as the cost of separate mainframe security software. Furthermore the converted legacy systems can utilize more efficient virtualized server environment thus providing opportunities for additional savings in the County's data center to include environment and utilities.

## 2G70-069-000 Personal Property Business, Professional, and Occupational Licensing – Tax/Revenue Administration (IT0092)

### Project Description

This project provides the information systems development and technology infrastructure required to redesign the County's tax and revenue systems. The Tax/Revenue project facilitates a simpler process for citizens to fulfill their tax obligations and pay for services by modernizing the internal processes used for assessing, billing, and collecting county taxes and other revenues. In FY 2010, the county completed the replacement of the legacy real estate mainframe system with a COTS product called Integrated Assessment System (IASWorld). This project provides for the replacement of the two remaining core tax systems, Personal Property and Business Professional and Occupational Licensing with a COTS product. Implementation of this new product will allow for a comprehensive overhaul of many existing functions such as personal property account administration, business filing and licensing, vehicle registration, tax assessment, exemptions and adjustments, accounts receivable, and billing. Elimination of outdated technology platforms will enhance opportunities for integration with other County and State systems, as well as, facilitate citizen interaction and self-service opportunities via web based technologies.

### Project Goal

Project goals are to eliminate the technology risks and functionality gaps of existing legacy mainframe systems: Personal Property and Business Professional and Occupational Licensing. The current systems designed and developed during the 1980s and 1990s use outdated technology and programming languages, which have reached the end of their viability.

### Progress to Date

#### Milestones (Projected)

- Request for Proposals (RFP) – Fall 2012
- Contract Award January – 2013
- Baseline Software Implementation – July 2013
- Phase 1 Business Professional Occupational Licensing – July 2013
- Phase 2 Personal Property and Business Tangible Property January – 2014

#### Project Budget

Funding for \$1,000,000 is provided to support project activities in FY 2013.

#### Return on Investment

The project will facilitate improved customer service without the addition of staff. Staffing can be held constant as inquiries and correspondence increase as a result of population growth, and changing demographics. Citizen inquiries will be more effectively managed, and response turnaround times improved. Application and System enhancements would enable the County to provide the level of customer service Fairfax citizens and businesses have begun to request. Use of web technologies to provide self-service functions, increasingly used by County citizens and businesses to interact with County systems, will become viable for both Personal Property and Business Professional and Occupational Licensing. Automated integration with other County and State systems and system modifications, required by changes in State and County code, would be more easily managed and deployed without impact to County citizens.

## 3.4 TECHNOLOGY INFRASTRUCTURE

### 2G70-018-000 Enterprise IT Architecture (IT0022.15)

#### Project Description

This project supports the implementation of the strategic infrastructure and expert services required for implementation of complex multi-phase enterprise-wide business transformation IT systems for County general

services, enterprise technology, security and infrastructure, and corporate systems including implementation of the County's ERP and related business systems.

### Project Goals

Implementation of projected system integration and infrastructure configuration services supporting the full scope of the county's ERP project. The plan includes various product platforms, security, middleware, document management, and the web services for seamless performance of between Fairfax County Government and Fairfax County Public Schools environments. Additionally, the project provides for on-going transformation support activities, on-going development of business intelligence and reporting model repositories, system performance, system engineering, security access technology and knowledge transfer.

### Progress to Date

A modern system landscape and server environment was engineered, acquired and installed in FY 2012, for development, testing, training, conversion and full production systems needs supporting the SAP ERP solution, portals, security and third party bolt-on products for overlapping project phases. On-going infrastructure and support services aligned with phased implementation of the FOCUS project will continue in FY 2013.

## 2G70-026-000 Public Service Communication Replacement (IT0050)

### Project Description

This project provides continuing support for the Public Service Communications System, which provides two-way radio communications for all County non-public safety agencies as well as the Fairfax County Public School Transportation Department (school buses), FASTRAN and the Fairfax County Water Authority. The completed system provides adequate call processing capacity and area coverage to more than 90 percent of the area within the jurisdictional boundaries for Fairfax County.

### Project Goals

The County's public service radio system eliminated sever geographical coverage problem for County agencies, and now provides reliable communications for the County's fleet, interoperability supporting emergency management activities, and communications for an increasingly mobile workforce. This system also provides a fully independent backup radio system for public safety agencies.

### Project Budget

FY 2013 funding of \$3,500,000 is provided to support all areas of expert support, on-going system and landscape transformation and stability activities.

### Return on Investment

This initiative continues to support the County's on-going technology modernization program in line with the IT investment priorities that provide for a stable and secure IT architecture while leveraging IT investments. Automation and modernization of county systems empowers both employees and managers to execute processes more efficiently, and make the best strategic decisions based on the most timely and accurate information and provide effective service to the citizens and the community. This project assists the business transformation process with modern technology infrastructure and required expertise to implement the new applications on consolidated platform, and enable the County to incorporate fully integrated best business practices, improve operations, improve the quality and accessibility of information.

### Progress to Date

Prior year activities have consisted of the completion of a consultant study with recommendation for the replacement system, the development of requirement specifications, contract award, tower site acquisition, FCC licensing requirement activities, construction, activation of transmitting tower sites, and the migration of schools and county fleets to the new system. The entire network and the remaining migrations were completed in FY 2007.

### Project Budget

Funding of \$550,167 is provided in FY 2013 for on-going operational requirements including site leases, inter site network charges, and system maintenance.

### Return on Investment

The replacement system provides reliable radio coverage to many areas of the county that were not covered by the older radio system. This provides the necessary protection and safety for bus drivers and other staffs that depend on reliable communications, improves customer service to county citizens and other county agencies, and reduces reliance on commercial

wireless networks in addition to future cost avoidance and other non-quantifiable benefits.

The system is fully compatible with the mobile and portable radios used by the County's public safety

radio system, which allows for direct communication between public safety and public service users for incident or disaster management, and provides a separate back-up system for the public safety system should that system fail.

## 2G70-036-000 Remote Access (IT0058)

### Project Description

This project provides county staff enhanced and expanded remote access to County systems to facilitate field activities for agency staff, telework, and remote access in case of regional emergency events or possible pandemic outbreaks.

### Project Goals

An enterprise-wide standardized remote access control methodology provides a solution for employees and external system users to access county networks by authenticating user identity in order to gain access to relevant data and conduct secure on line business with the County. All user authentication and authorization management is policy based and centrally managed allowing for comprehensive audit and reporting services to support and log information on the extensive user base. This project supports increased security, simplified management, rapid reporting and data analysis, and secure access from remote locations.

### Progress to Date

Through this project, over 4,000 users can access county systems as authorized, with over 3,000 being able to

access simultaneously. Project activity is on-going in order to support, enhance and expand enterprise wide remote access, which supports county Telework and Continuity of Operations (COOP) goals.

### Project Budget

FY 2013 funding of \$200,000 is provided for the remote access project.

### Return on Investment

This project provides a cost effective approach to enhance the County's infrastructure in order to provide flexibility for a variety of remote access devices that may be used by County staff. The capability encourages more employees to take advantage of telecommuting in line with regional goals supported by the Board of Supervisors and also provides County staff necessary remote access capabilities in case of emergency events such as snow storms, hurricanes or possible pandemic outbreaks.

## 2G70-038-000 Telecommunication Modernization (IT0060)

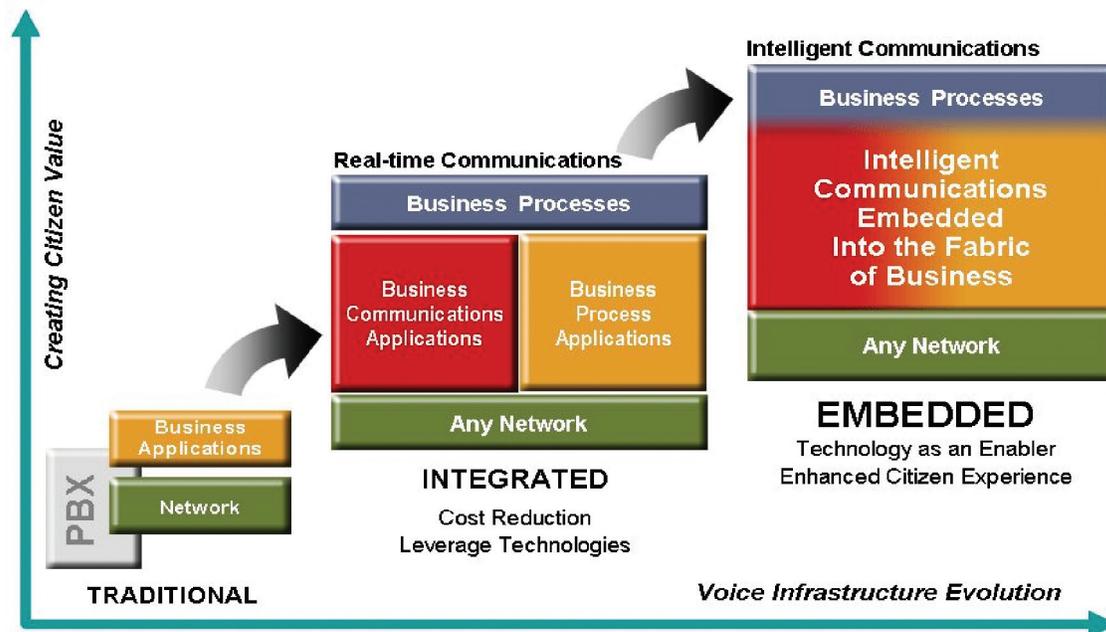
### Project Description

This project continues the implementation of Fairfax County's strategic goal for providing Voice over IP (VoIP) services over the County's fiber optic network – I-Net. This strategy includes a solution architecture that is scalable to support a variety of county sites and agency business requirements using IP-based telephone service. An IP based solution means medium and smaller sized sites can be economically brought into the common voice enterprise architecture. The plan is in full alignment with the County's principle of implementing contemporary, but proven, technologies, optimizing IT investments and fostering operational cost efficiencies.

### Project Goals

The strategic goal of this project is to move Fairfax County towards a long-term, flexible voice solution that will underwrite the use of Voice over Internet Protocol (VoIP). An IP enabled enterprise-class platform provides the County with the ability to adopt newer cost saving services such as Session Initiation Protocol (SIP) Trunking from the maturing IP telephony environment. The County's new architecture will yield a flexible yet stable infrastructure that will be the foundation for the eventual evolution to true broadband network architecture.

## Evolution of Intelligent Communications Across Fairfax County



The new voice platform provides a foundation for more complete wireless integration. Future deliverables include the ability to incorporate a wide variety of smart phones, tablets and mobile devices. Wireless devices will be seamlessly integrated into the enterprise voice network giving users: one number capability enhanced messaging – including visual voicemail, access to the corporate directory, VIP lists, synchronized call logs and contacts; and provide presence/availability information across the network.

When completed, this multi-year project will touch approximately 16,000 telephones, fax machines, private lines and devices used by Fairfax County employees. The installations is planned to occur in phases to ensure a smooth change of voice platforms.

### Progress to Date

When measured against the original end point count in the RFP, the project is at 99.94% completion with 15,000 end points installed. However, sufficient funding remains to add an additional 900 – 1200 end point:

- Remote access for controlling telephone functions and call routing
- Integration of wireless devices into the voice communications network

- Telework capabilities for call center agents
- County owned audio conference bridge
- Quality monitoring and call recording
- Enhance employee location information for 911 purposes
- Enhance network redundancy and failover capability
- Continued reduction in telco circuit costs

### FY 2013 Goals:

- Transition to SIP Trunking
- Avaya platform upgrade
- Add ten County Recreation Centers to the network
- Add two large sites to the network (>350 telephones)
- Add ten Medium and Small sized locations (<50 telephones)

### Project Budget

FY 2013 funding is not required. Existing project balances will carry the project to conclusion.

### Return on Investment

The benefits derived from the implementation of this project are quantifiable and substantial. Direct cost

savings include: reduction in leased circuit costs; a reduction in message unit costs for outside phone calls; and a reduction in overall maintenance costs, including moving phones, adding new phone and changes to existing phone service. In addition, the new voice infrastructure will allow Fairfax County to leverage embedded technology assets and to improve service

delivery quality. Business processes will be streamlined because of the ability to share information over an integrated communications platform. Further significant savings are projected once the County begins moving its Verizon connections from PRIs to SIP Trunks.

### 3.5 HUMAN SERVICES

#### 2G70-008-000 Document Management and Imaging – DFS (IT0011.9)

##### Project Description

This is a multi-year, multi-phased project that supports the transition within the Department of Family Services (DFS) from manual to automated processes for filing, storage and access to records using document management platform technology. Phases focus on specific divisions of the agency with the goal of providing an agency wide document management solution built on the County standard platform. Phase I is the Self Sufficiency Division; Phase II is the Children Youth and Families division; and the Office for Children division is a separate Fund 100-C10040 project (2G70-009-000).

##### Project Goals

Goals of the project are: a) to provide a reliable and secure system for cataloging, archival and retrieval of sensitive Family Services documents for case management, and, b) improve response times for client inquiries of case records. In addition, the project allows for the management, retention and destruction of DFS records in accordance with State and Federal mandates, and avoids non-compliance issues associated with the degradation, damage, or loss of paper files.

##### Progress to Date

This is a multi-phased project, where phases will be delivered in modular components aligned with the readiness of the necessary infrastructure. By implementing smaller phases, disruption to business operations is minimized. In FY 2005 and FY 2006, Infrastructure components were developed to support the delivery of the initial component for Family Self Sufficiency (FSS). Functional requirements and a prototype design were completed in FY 2007. In FY 2007, requirements definition began for the integration of the Commonwealth's SPIDeR system, and for the replacement of a data feed to a key financial system. In FY 2008 system design and initial

development / configuration tasks were completed. Since implementation in FY 2010, the Family Self Sufficiency document management system stores over 70,000 client case files containing over 26 million documents.

In FY 2010, Phase II requirements definition began for the Children, Youth, and Families (CYF) division. Initial design and development began in FY 2012 for the CYF division and is underway.

##### Phase I – Self-Sufficiency Document Management and Imaging:

- Development efforts complete – winter 2008-2009
- User Acceptance Testing completed – Summer 2009
- End user training and phased implementation – late summer 2009
- Production go live and continued end user training – Fall 2009
- Completed user training and phased implementation at four sites – Fall 2010

##### Phase II – Children Youth and Families Document Management

- Finalized vendor statement of work for requirements analysis – Spring 2011
- Request cost proposals – Spring 2011
- Prepare project schedule – Summer 2011
- Design and development of system solution – Spring/Summer 2012
- User Acceptance Testing – Summer/Fall 2012
- End User Training – Fall 2012 to Winter 2013
- Phased Implementation – Fall 2012 to Spring 2013

### Project Budget

Existing project balances were used to purchase enterprise Document licenses for the CYF implementation. Funding within Family Services budget will support remaining deliverables for this project.

### Return on Investment

Cost savings will be realized as a result of improved processing of paper documents, use of staff time, and

reduced error rates for more effective and efficient document management. Imaging and workflow project are expected to increase the security of records, promote telework; reduce case filing errors and reduce the space requirements for maintaining paper copies of documents. With the increased availability of accurate records, social workers will be able to more easily access case records that will result in increased productivity.

## 2G70-009-000 Document Management and Imaging – OFC (IT0011.10)

### Project Description

This project provides for the Office of Children's (OFC) Electronic Records Management system. In FY 2007, the project transitioned Community Education and Provider Services, and the Child Care Assistance and Referral program to document imaging technology. The second phase of this project includes the Head Start and School Age Child Care program. Head Start maintains files for over 500 children and families in multiple locations. With this technology field staff and federal auditors will have the ability to review files electronically without traveling to multiple locations.

The School-Age Child Care Program provides direct services to over 10,000 children in 137 centers throughout the county. Files are maintained on all staff, children and centers. The transition to an electronic system will ensure that citizens receive the most efficient, highest quality service and that all legal mandates are satisfied regarding record archival and citizen and client privacy. Phase III includes imaging the files in the Director's office.

### Project Goals

This project provides for a structured enterprise approach to the development of imaging and workflow capabilities in agencies that have identified an opportunity to provide increased security and integrity of their records; reduce the labor intensive record retrieval and re-filing

process; expedite workflow processes through an electronic workflow management system; provide simultaneous and instant access to records; and reduce costs associated with space and shelving for storage of paper requirements.

### Progress to Date

Community Education and Providers Services, Child Care Assistance and Referral program and SACC Registration are currently in production. Head Start, SACC Licensing, the Director's Office and SACC children's files have been delayed due to budget constraints.

### Project Budget

No additional funding is provided in FY 2013.

### Return on Investment

Imaging and workflow projects increase the security of records, protect sensitive information from unauthorized access; reduce staff time required for retrieval and refining of documents; reduce processing time as workflow efforts streamline the reviews required; provide a viable, accurate documents management system for old and one-of-a-kind documents; promote telework; reduce error rates by reducing manual data entry; and decrease the space requirements for maintaining paper copies of documents.

## 2G70-027-000 SYNAPS, HIPAA Database Consolidation, and SYNAPS Replacement – CSB (IT0054)

### Project Description

SYNAPS was developed for the Fairfax-Falls Church Community Services Board (CSB) to improve client tracking, client/third-party billing, enhance client demographic information, staff productivity data, and provide for

compliance with the Health Insurance Portability and Accountability Act (HIPAA) of 1996. The replacement of SYNAPS was recommended by the Beeman Commission which was established in 2008 to advise the Board of Supervisors on the future direction and design of the

mental health services delivery system. On March 1, 2012, SYNAPS was replaced with implementation of the new Electronic Health Record (EHR).

The CSB – HIPAA Database Consolidation project provides support for the design and development of a secure, scalable and easy to use Community Services Board (CSB) HIPAA data repository to store current and future HIPAA related information.

**Project Goals**

The CSB – HIPAA Database Consolidation project will ensure CSB's compliance with federally mandated HIPAA regulations designed to protect the privacy and confidentiality of individually identifiable health information. The design will include appropriate role based security and scalability to enable multiple departments to store HIPAA-related information on a consolidated and secure platform.

**Progress to Date**

Requirements and design for the CSB HIPAA Database Consolidation will continue in FY 2013 with an FY 2013 implementation schedule.

**Project Budget**

Existing FY 2012 funding of \$75,000 budgeted for HIPAA database consolidation will be used to design and develop the data repository.

**Return on Investment**

The CSB HIPAA Data Consolidation data repository will provide a more secure and scalable solution to enable multiple departments to store HIPAA-related information on a consolidated and secure platform. The new repository will provide enhanced search capabilities that will improve the efficiency and speed with which sensitive HIPAA information may be retrieved and reported.

**2G70-037-000 Child Care Technology – OFC (IT0059)**

**Project Description**

The Child Care Management System for the Office for Children (OFC) in the Department of Family Services (DFS) determines client eligibility, tracks child enrollments, and processes approximately \$2.7 million per month in provider payments for the Child Care Assistance Program and Referral Program. This application processes over 2,500 home child care facility permits for Community Education and Provider Services and connects families with child care providers participating in the Child Care Resource and Referral System. The application tracks current market rates for child care providers and interfaces with the county's financial management system.

The current OFCIS software was acquired in 1999 and has been upgraded several times to remain operational. Assessments of this aging system revealed that it is past its projected useful lifecycle and no longer fully met the agency's needs, reporting and compliance requirements or modern technology standards.

**Project Goals**

- Provide a new child care system that provides a seamless integration of services with the Virginia Department of Social Services' (VDSS) automated child care system and with the Virginia Child Care Resource and Referral Network (VACCRRN).

- Align reporting strategy with county and state data.
- Reduce redundant data entry.
- Improve operational effectiveness and productivity.
- Enhance web self-service for the child care community.
- Bring OFC technology in compliance with county standards and requirements.

**Progress to Date**

An RFP was developed to include a comprehensive set of requirements that satisfied state and local need for a new solution that can also achieve client access and interoperability. The RFP process which will include the solution and implementation services is anticipated to be complete in the first quarter of FY 2013.

**Project Budget**

New funding is not provided in FY 2013. The project is supported by FY 2011 Third Quarter transfer of \$2 million from Office for Children operating funds that will augment remaining project balances for complete implementation of the Child Care Management System.

## Return on investment

Modernization of the child care system will ensure a stable application to support the business functions of the Office for Children. Efficiencies will be gained in seamless integration of service for VDSS and VACCRRN

allowing for faster processing of applications and child care permits. Moving to a modern platform that incorporates web technology would create an environment where data and information would be more assessable from remote locations.

## 2G70-049-000 Loan Processing System Replacement (IT0085)

### Project Description

The Fairfax County Department of Housing and Community Development (HCD) provides loan assistance to resident homeowners under a number of County and Federally sponsored programs. These Loan programs are available to assist low-to-middle income residents in securing and maintaining affordable housing.

data mapping and testing is complete, remaining data conversion, testing and final implementation will be complete in early FY 2013.

### Project Budget

FY 2013 funding is not required.

### Project Goals

This project's goal is to replace HCD's twenty three-years old Loan Processing System with a COTS program that facilitates current loan processing and tracking need, as well as connectivity to the Department of Finance for reporting and compliance. Through the years both the functionality and technology associated with the existing system have become dated and the need for a more robust loan processing system have grown. Implementing a current loan servicing system that utilizes web technology to properly account, service and report on the excess of \$46 million in loans in the HCD portfolio will allow for enhanced revenue and compliance with federally mandated HUD programs. This will be interfaced to FOCUS.

### Return on Investment

To address current shortcomings of the Loan Processing System, the County would need to invest substantial amount of time at an estimated cost of \$300,000 and \$500,000 in programming fees and discontinue its plan to phase out the inefficient IDMS and its associated maintenance costs. Procuring and implementing a loan servicing system that utilizes web technology is needed to properly account, service and report on the excess of \$46 million in loans in the HCD portfolio, many of which are not captured in LPS. It also allows for enhanced revenues through the use of database matches (e.g., the Clerk of the Court, DPZ, etc.) which can enable HCD to independently determine if the conditions for loan repayment have become due. Given the large dollar amounts in our Proffer and various deferred loan programs the opportunities to enhance revenues or deter the loss of funds justify the need for this new system.

### Progress to Date

A request for Proposal was issued in the spring of 2009 with contract award in FY 2010. Software installation,

## 2G70-051-000 Data Reporting Project - DFS (IT0089)

### Project Description

Department of Family Services (DFS) is the largest of the County's human services agencies. DFS provides a vast array of programs and services through its four major divisions – Self-Sufficiency; Adult and Aging; Children, Youth and Families; and Child Care – as well as through the department's other components including the Office for Women and Domestic and Sexual Violence Services, the Comprehensive Services Act, and Disability Services Planning and Development. An intensive strategic planning process identified the need for a more

integrated use of information technology systems. Currently multiple IT systems ranging from mandated Virginia Department of Social Services case management systems to customized off-the-shelf systems to locally developed and maintained databases are used to support the department. A data warehouse will provide a systematic means to retrieve and analyze data, to extract, transform and load data and to create management reports that will increase efficiency and effectiveness.

**Project Goals**

Goals include development of a data warehouse to enable effective management of information reporting from various disparate DFS systems. This project will enhance security and efficiency within DFS by providing standardized, consistent, clean and integrated data sourced from ultimately 30 distinct departmental IT systems. The data will be structured to address the reporting and analytical needs of each division and the department.

**Progress to Date**

Requirements assessment will continue in FY 2013; with a working pilot scheduled for completion by fall of 2012 for final requirements scope.

**Project Budget**

FY 2013 funding of \$300,000 is provided for continued support of this initiative.

**Return on Investment**

A data warehouse will provide a standardized, consistent, clean and integrated form of data sourced from various operational systems in use in the department, structured in a way to specifically address the reporting and analytic requirements of each of the divisions as well as the department as a whole. The system will streamline processes, improve communication and data sharing, reduce dual data entry, enhance collaborative decision making, improve data quality, and enhance overall service delivery and better customer service.

**2G70-055-000 Volunteer Management System (IT0091)**

**Project Description**

This project will provide an integral approach for recruiting, scheduling, and managing volunteers on a daily basis as well as produce reports by operational unit. Aggregate reports across county agencies will also enable more accurate tracking and reporting of volunteer contributions to the citizens of Fairfax County. This system will also support integration with legacy volunteer software products used by County agencies and partners (some of which may be converted later).

**Project Goals**

The primary goal for this project is to better manage over 100 programs spread across multiple facilities within

Fairfax County and facilitates enterprise growth of volunteer programs with a single software solution that improves recruitment, management, placement, and scheduling. Another goal is to better track the contributions of volunteer activities and provide a shared point of entry for citizens interested in volunteering with Fairfax County. Project objectives include developing common policies and data elements for the County's volunteer programs and streamlining the process of matching volunteer abilities, interests and availability with county agency needs.

**Progress to Date**

The contract was awarded May 9, 2012.



## Milestones

The project milestones are as follows:

- Contract kickoff and project preparation – spring 2012
- Gap analysis, detailed project planning and design completed – summer 2012
- Implementation of Phase I (including four county agencies with 9 volunteer programs and interface with the Volunteer Center and Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP)) – winter 2013
- Phase II which will integrate 16 plus County agencies/groups plus interface with Crisis information management System by summer 2014
- Implementation of additional County agencies and external organizations ongoing beginning fall 2014

## Project Budget

Approved FY 2012 funding of \$200,000 has been carried forward to FY 2013 to fund Phase I of the project.

## 3.6 PLANNING AND DEVELOPMENT

### 2G70-030-000 Fairfax Inspection Database Online (FIDO) (IT0055)

#### Project Description

The FIDO Project involved the replacement and consolidation of several platform-specific land use systems with a single enterprise solution that supports land use permit/license issuance, inspection, and code enforcement operations at five County agencies (DPWES, Department of Planning and Zoning (DPZ), Fire and Rescue Department (FRD), Health, Department (HD) and Department of Code Compliance (DCC)).

FIDO supports a broad range of permits/licenses (building, roof, basement, restaurants, sign, sprinkler systems, fire alarms, etc.) and land use complaint types (residential overcrowding, tall grass, junked cars, etc.). It also includes a web portal to allow citizens and businesses to submit building permit applications and reports of alleged violations of the county's land use code.

#### Project Goals

The goal of the FIDO Project was to eliminate land use system redundancy in multiple agencies with cost minimization and government efficiency opportunities.

## Return on Investment

With over 1million county citizens and with growing county budget constraints, volunteers are an important component in the sustainability of county programs and services. In 2008, over 12,000 volunteers provide approximately 500,000 hours of volunteer service. At an average rate of \$20/hour, this effort resulted in an approximate value of \$10M in services provided and cost avoidance by the County. An enterprise Volunteer management system will help to expand the culture of engagement by providing centralized volunteering opportunities and facilitating the tracking and reporting of volunteer activities. This will result in additional services provided to citizens and increased cost avoidance by the county as the program expands enterprise-wide. Additionally, capturing data about volunteer employers allows agencies to apply for corporate grants that are increasingly influenced by employee volunteer contributions.

Project goals also included streamlining the permitting process, reducing permit issuance, plan review and inspection timeframes, and acquiring a flexible technical architecture capable of embracing business process enhancements.

#### Progress to Date

All FIDO modules (Permits, Code Enforcement, License, Customer Service, and Cashiering) are in production and provide Land use systems support to over 600 county employees.

In this capacity (during FY 2012), FIDO supported the issuance of over 4400 licenses, and 53000 permits, while also managing approximately 9600 land use complaint submissions. Participating agencies performed over 137,000 inspections in support of the permit, license, and complaint management activities. Other agencies such as the Department of Housing and Community Development, the Department of Tax Administration, and the County Attorney also access FIDO on an as needed basis.

In addition to corporate network access for agencies, virtual private network (VPN) and commercial wireless technologies facilitate agency inspector access to FIDO from the field by transforming Inspector cubicles to field based mobile workstations that include wireless laptops and printers.

To address BOS directives concerning customer accessibility transparencies to government services, during FY 2012 FIDO web portal was expanded to include 10 building permit application submissions via the web. The FIDO web portal also supports citizen complaint submissions; citizens reported over 4000 complaints via the web, which led to approximately 4800 commercial and residential land use code investigations.

FY 2012 FIDO system enhancements included the development of an Apple Apps store resident iPhone application and Android compatible application that provide citizens with the ability to:

- Report alleged land code violations to Fairfax County agencies.
- Apply for (pay and print) building permits and licenses.
- Schedule inspections for existing permits.

In FY 2012, FIDO was one of the several disparate data and document driven land use systems migrated to DIT's new "Big Data" GIS-Land Use data warehouse. The warehouse provides land use business intelligence for citizens (and agencies) that include:

- Property development history profiles (1985-present).
- "Free style" search capabilities of past, present and future land use activities that drive economic growth.

- The assessment of prospective property procurements for compliance with county zoning, building, and health codes.

FY 2013 FIDO initiatives shall focus on:

- Expanding the web portal to include additional building permit and license applications for the DPWES, the DPZ, and the HD.
- Expanding the data warehouse to include permit construction and technology.
- Migrating wireless building, health, and code inspection systems to the iPhone/iPad and Android environments.

**Project Budget**

FY 2013 funding is not available.

**Return on Investment**

FIDO consolidated land use data from several disparate systems into an enterprise solution that has transformed multiple agencies heterogeneous business processes to a homogeneous presentation layer that provides accessible business intelligence to key decision makers and customers.

Government transparency and efficiencies have been achieved by providing customers with 24/7 web access to land use services, mobile workers with wireless mobile workstations to provide real time updates of property inspection activities, and the elimination of redundant technical infrastructure cost for servers, storage and license fees. FIDO's flexible architecture and in-house development team have also led to cost savings by eliminating county dependence on ASP's and third party contractors.



## 2G70-040-000 Facility Maintenance Management System (IT0065)

### Project Description

This project supports the acquisition of an Integrated Facilities and Grounds Management System as a single, integrated facilities information resource for the Facility Management Department (FMD) and the Fairfax County Park Authority (FCPA). An updated system will increase the effectiveness and efficiency of staff and utilization of capital resources required to maintain and manage County and Park facilities and properties. The new system will support the goals of the project through the enhancement of data collection methods and tools, improved warranty tracking, elimination of redundant facilities information databases, user friendly interfaces for internal and customer access, and a strong reporting system.

### Project Goals

The goals of this project are to acquire and implement a Computer Integrated Facilities Management (CIFM) System. FMD and FCPA hold the greatest portion of responsibility for the maintenance of County's largest and most valuable physical assets: its properties, facilities and the subsystems that keep them operational. The maintenance aspect must be fully integrated with the management of those assets by encompassing all the functional components and activities that support Lease Management, Space Management and scheduling, Inventory Control, Grounds Management, Contracts Managements, Utilities Management, Physical Security, and Emergency Preparedness/Disaster Recovery.

Implementing a web base, "one stop shop" for facilities information, will enable internal improvement and efficiencies as well as provide more accurate, completed, and timely information to customer agencies. By consolidating the redundant facilities tables and databases maintained by various branches within FMD as well as by the participating "partner" agencies, the County will gain the benefit of more consistent data and improved interagency coordination of information.

Multiple county agencies currently use functionalities of the CIFM system to ensure county facilities, parks, grounds, sidewalks, curbs, trails and parking lots comply with requirements of the American with Disabilities Act (ADA). The Department of Administration for Human Services (DAHS) will be added as a system user in order to track facilities related work to manage and maintain

232 residential units, 100+ leased sites as well as the various shelters under their direct supervision. DAHS will provide funding for additional licenses from agency operating funds.

The initial investment in the Tririga system continues to be fully leveraged by the county as new expanded uses of the Tririga system by the other county agencies have been and continue to be successfully accommodated.

### Progress to Date

Work completed:

- Portfolio and Demand Maintenance module was implemented – March 2007
- Planned Maintenance and Space Management modules was completed – June 2009
- Real Estate Leases module was completed – August 2009
- Initial phase of the Capital Project module was completed – December 2009
- Last phase of the Capital and Facility Project modules was completed – Spring 2010
- A Syclo Server to deploy the Tririga wireless application and the wireless device management software was installed; however, testing has been postponed because of the need to upgrade the Tririga application to meet the FOCUS requirements – see below
- Remaining work: Implementation of the Syclo wireless application and the deployment of the 200 wireless hand-held devices to the FMD and Park Authority field staff. This last phase of the CIFM project is scheduled to be completed by late October 2012.

### Project Budget

FY 2013 funding is not provided.

### Return on Investment

Extensive savings will be realized through the streamlining of communications and processes throughout FMD and the Park Authority, the most quantifiable savings derived from time saved by field personnel (crafts, trades, and grounds personnel) and

Work Control Center staff within the agencies. The replacement system will provide wireless technology to greatly improve the speed and consistency of data collection necessary to better utilize field staff the elimination of excessive hand recording of information that is entered into the system at a later time and/or by a different individual. Accurate and timely data collection plays a vital role in improving time management for field staff and will ultimately work to extend the life cycle of equipment. Improved

data collection in the field, along with a web based customer request and inquiry interface will save time for staff in terms of handling customers' status inquiries and work order processing from initiation to close out. With the implementation of this system, duplicate work orders, work performed by vendor for inventory that is under warranty and multiple tasks on work order will all equate to savings by cost avoidance.

## 2G70-044-000 Land Use Information Accessibility Initiatives (IT0082)

### Project Description

During January 2006, the Board of Supervisors established the Land Use Information Accessibility Advisory Group ("Advisory Group"). The purpose of the Advisory Group was to review the ways in which land planning and development information is made available to the public, make recommendations for accessibility improvements, and develop a high-level plan of action. The Advisory Group made a number of recommendations which were accepted by the Board of Supervisors in January 2007. See <http://www.fairfaxcounty.gov/landusecomm/> for the final Advisory Group report.

### Project Goals

Project goals are to improve the ability of citizen and business constituent to easily access information concerning land use planning and development activities in their communities.

### Progress to Date

During the past four years, DIT has taken an incremental approach to address the Group's recommendations due to on-going budget constraints and funding challenges.

During FY 2007 LDSNET web page enhancements were made to provide two new inquiries; the Search Land Use Information by Address, and the Search Land Use Information by Magisterial District. Both of these functions also supported searching by, and accessing spatial views of land development information on a map. During FY 2008 staff addressed several Advisory Group recommendations including:

- Improving navigation between the LDSNET & GIS My Neighborhood web pages for common data elements,

- Expanding the Search by Address/Search by Magisterial District features to incorporate building permits and additional Plan types/Plan history,
- Expanding the LDSNET web page to include Site and Rezoning plan summaries in downloaded PDF files,
- Documenting requirements for citizen email notification of Site/Rezoning plan submissions, and 3D imagery tool integration for the My Neighborhood web page.
- My Neighborhood web page integration to streamline end user navigation.

During late FY 2010, Virtual Fairfax was released to the public (<http://www.fairfaxcounty.gov/gis/virtualfairfax/>). It is a web-based application that integrates web-based GIS 3-D imagery and GIS capabilities with existing land use systems such as IAS (tax assessment), LDS (Commercial and Residential development plans), and FIDO (building permit issuance). The application has thousands of 3-D buildings in the Tyson's and Reston/Herndon areas as well as some zoning information around the planned Metro stations in Tysons Corner. With a single mouse click 3-D aerial tours of the County – business centers, historic sites, schools, parks – along with easy address-based searches/queries of construction sites and building permit issuance activities is now possible. Users can also view their own 3-D models within the application and conduct shadow analyses of 3-D objects.

On-going efforts to address the Advisory Group's recommendations to meet government transparency objectives will continue in FY 2013 (subject to funding priorities) with the following initiatives:

- Expansion of web-based building permit application capabilities for County business partners and citizens.

- The implementation of data warehouse/business intelligence software to provide the public with unfettered access to land use data, including (but not limited to) commercial and residential development plans, building permits, complaints, and inspections.
- A new release of Virtual Fairfax that will enable other county agencies to establish co-branded Virtual Fairfax implementations. For instance, there could be a Virtual Fairfax – Tysons that focuses specifically on Tyson's and has Tyson's specific data, while including the other general Virtual Fairfax imagery and data.

### Project Budget

FY 2013 funding is not available.

### Return on Investment

The project streamlines constituent access to relevant land use information, enhances navigation and provides more intuitive and web-based visualization tools for understanding the spatial environment. These efforts exhibit Fairfax County's commitment of make land use process and information more open, inclusive, and citizen-oriented. These projects further enable citizens' awareness of land use information impacting their neighborhoods and facilitate citizen participation in the process. Information on these systems is available 24/7 over the County's website.