

# SECTION 3

## INFORMATION TECHNOLOGY PROJECTS

# INFORMATION TECHNOLOGY PROJECTS

## SECTION 3 INFORMATION TECHNOLOGY PROJECTS

3.1	Technology Overview.....	1
3.2	Public Safety .....	9
	2G70-056-000 Public Safety Subscriber Radio Replacement Project (E-911 - Fund).....	9
	2G70-059-000 Mobile Computer Terminal Project (E-911 - Fund) .....	10
	3G70-078-000 E 9-1-1 Telephony Platform Replacement Project (E-911 - Fund).....	11
	3G70-079-000 Public Safety CAD System Infrastructure Project (E-911 - Fund) .....	13
	2G70-007-000 Electronic Records Management System Project - (JDRDC) .....	15
	2G70-021-000 and 2G70-022-000 Circuit Court Technology Project .....	16
	2G70-034-000 Courtroom Technology Management Systems - Digital Upgrade.....	19
	2G70-067-000 Electronic Summons Project (e-Summons).....	21
	IT-0000013 Police Records Management Refresh Project.....	22
	IT-0000014 Sheriff Civil Enforcement System Project.....	23
	IT-0000015 Commonwealth's Attorney Case Management System Project .....	24
3.3	Corporate Enterprise.....	26
	2G70-011-000 Automated Board Meeting Records Project .....	26
	2G70-019-000 Public Access Technologies – Interactive Voice Response Project .....	27
	2G70-020-000 Internet/Intranet Initiatives Project – e-Government.....	28
	2G70-041-000 Customer Relationship Management (CRM) Project.....	35
	2G70-069-000 Tax System Modernization Project – Tax/Revenue Administration.....	36
	IT-0000006 Office of Elections Technology Project .....	38
	IT-0000007 Enterprise Project Management.....	40
	IT-000016 Budget Solutions Project .....	41
	IT-0000017 Enterprise Document Imaging Project.....	43
	IT-000024 Integrated Library System Project.....	44
	IT-000028 GeoSpatial Initiatives .....	45
	IT-000030 Invoice Processing Project – Department of Finance.....	47
	IT-000031 Data Warehouse and Business Intelligence – (DTA) .....	48
	IT-000032 Oracle Discoverer Replacement – (DTA) .....	48
	IT-000033 Tax Portal Enhancements – (DTA) .....	49
	IT-000036 TARGET Enhancement Project – (DTA) .....	51
3.4	Technology Infrastructure .....	52
	2G70-018-000 Enterprise IT Architecture and Support Project.....	52
	2G70-026-000 Fairfax Radio System Project .....	53
	2G70-036-000 Remote Access Project .....	55



2G70-052-000 Cyber Security Enhancement Initiative.....	55
IT-00034 Enterprise Data Analytics and Business Intelligence Project .....	56
<b>3.5 Human Services.....</b>	<b>58</b>
2G70-008-000 Document Management and Imaging Project – (DFS) .....	58
2G70-009-000 Document Management and Imaging Project – (OFC) .....	59
2G70-037-000 Child Care Technology Project – Office for Children (OFC) .....	61
2G70-055-000 Volunteer Management System Project.....	62
IT-000008 Child Welfare Integration Project.....	63
IT-000009 Participant Registration System Project.....	64
IT-000020 County-wide Tele-Psychiatry Project.....	65
IT-000025 Integrated Human Services Technology Project.....	66
IT-000026 Diversion First Interoperability Project .....	68
IT-000027 HHS Integrated Electronic Health Record System Project.....	69
<b>3.6 Planning and Development .....</b>	<b>71</b>
2G70-040-000 Facility Maintenance Management System Project.....	71
IT-000010 Electronic Plan Submission and Review Project - (LDS).....	72
IT-000011 ePlans Project – Department of Planning and Zoning (DPZ) .....	74
IT-000012 ParkNet Replacement Project .....	75
IT-000019 Planning and Land Use System (PLUS Project).....	76
Capital Project Management Information System (CPMIS) .....	78





# SECTION 3

## INFORMATION TECHNOLOGY PROJECTS

### 3.1 Technology Overview

The Information Technology investment fund (Fund 100-C10040 – formerly Fund 104), was established in FY 1995 to optimize 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. The E-911 Emergency Telephone Service Fee, a General Fund transfer, other revenue funds, the State Technology Trust Fund, and interest earnings are sources for investment in eligible 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 for separately.

The County's technology improvement strategy has two key elements: redesign business processes and apply technology to achieve improvements in service quality and efficiencies for agencies, and provide an adequate technology infrastructure that supports County technology solutions. The County's long-term commitment to provide quality customer service through the effective use of technology is manifested in service enhancements, expeditious response to citizen inquiries, round the clock on-line service opportunities, improved operational efficiencies, and increased productivity and performance capabilities resulting in better information for management decisions and transparency.

### FY 2020 PROJECT FUNDING

In FY 2020 an innovative strategy for maximum flexibility and optimization of available County dollars was developed that provides \$31.38M (FY 2019 Third Quarter - \$17.90M, FY 2020 Budget - \$.45M, and FY 2019 Carryover \$13.03M) in support for County's IT investment portfolio. These initiatives meet one or multiple priorities established by the Senior Information Technology Steering Committee and include a mix of projects that benefit both citizens and employees and address the need for securing and strengthening the County's technology infrastructure. Funded projects 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.

### FUNDING PRIORITIES

The Senior IT Steering Committee, which is comprised of the County Executive, Deputy County Executives, the Chief Financial Officer, the Chief Technology Officer, and other senior County managers, adopted five strategic priorities that guide the direction of IT investments. These long-standing priorities include:

- **Mandated Requirements** - Provide support for requirements enacted by the Federal Government, Commonwealth of Virginia, Board of Supervisors, and those that are Court ordered or result from changes to County regulations.
- **Completion of Prior Investments** - Provide support for multi-year lease purchases and to implement a project phase, and/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 services that can be provided on-line. This includes corporate and strategic initiatives that add demonstrable value to a broad sector of government or to the County as a whole, and also improve productivity and/or enhance effective management of the County's information assets.

- **Maintaining a Current and Supportable Technology Infrastructure** - Focus on technology infrastructure modernization which upgrade, extend or enhance the overall architecture of major County infrastructure components, including hardware, software, and its environment. Ensure that citizens, businesses and County employees have appropriate access to information and services. This also includes cyber security protective solutions.

In line with FY 2020 Budget Guidelines, agencies were advised to submit new project funding requests that met one or more of the five above Senior IT strategic priorities; as well as specify tangible project outcomes, clear project start and completion dates, anticipated implementation and budget plans over the next five years, including subsequent fiscal year(s) impact on enterprise wide infrastructure, maintenance and support, and linkage to agency strategic and business goals. Agencies were further instructed to carefully evaluate urgency, feasibility, readiness, and the strategic business value of initiatives for which an IT Project funding request is submitted. FY 2020 funding requests for existing projects were limited to projects requiring additional support to meet existing contractual obligations, to complete a planned phase and where appropriate progress against existing project plans had occurred. The process is designed to facilitate the development of a solid business and technical case for IT project requests and to update the business and technical status for continuing projects.



Senior IT Strategic Priority	Total by Strategic Investment Priority
<b>Completion of Prior Investments</b>	\$3,030,000
<b>Enhanced County Security</b>	\$500,000
<b>Improved Service and Efficiency</b>	\$25,150,000
<b>Maintaining a Current and Supportable Technology Infrastructure</b>	\$2,700,000
<b>TOTALS</b>	<b>\$ 31,380,000</b>

Sec 3 Table 1 - FY 2020 Budget by Investment Priority

## COMPLETION OF PRIOR INVESTMENTS – \$3.03 M

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. While some projects can be completed within the fiscal year, most are multi-phase projects requiring more than one year of funding.

The County's **Geospatial Initiatives** are supported by funding of \$450,000 as part of FY 2019 Third Quarter. Planimetric data layers make up many key GIS layers used in most of County maps including those used by: the Police, Fire and Rescue, Transportation, Housing and Community Development, Public Works and Environmental Services, Planning and Zoning, and Tax Administration. Oblique imagery is also essential for many of key critical County functions including public safety, zoning, tax administration, and 3D Virtual Fairfax. These key datasets are used in all County's web applications that incorporate maps, and in nearly all public safety vehicles through the Computer Aided Dispatch (CAD)/911 system.

Funding of \$400,000 at F Y 2019 Third Quarter continues to support the County's **Customer Relationship Management** project for continued development and implementation of the Customer Relationship Management (CRM) solution in County agencies. This initiative provides a unified user approach for handling citizens' service requests, case management, issue tracking, and development of a specialized FOIA application to comply with a Commonwealth of VA mandate for local jurisdictions to track and monitor FOIA requests. CRM is a foundational technology that supports the County's strategic goal of improving the quality and efficiency of responses to citizen requests by implementing on-line 24x7 access strategies, integrating social media tools and techniques to enhance the overall customer experience, and managing service requests via a single user enterprise-wide interface tool.

The **Interactive Voice Response** (IVR) project is supported by \$250,000 at FY 2019 Third Quarter for continued deployment of the new IVR platform in County agencies. This multiphase initiative will migrate agencies that use an IVR systems to a more contemporary platform enabling interactive text to speech applications and voice/phone applications for self service automation. The new IVR platform supports more efficient payments, information processing, management of citizen requests and inquiries, and provides opportunities to improve business processes.

The **Courtroom Technology Project** is supported with \$800,000 at FY 2019 Third Quarter and \$280,000 at the FY 2019 Carryover for continued upgrading of the high technology courtrooms digital platform.

The system enables evidence presentation in courtrooms through a centralized, integrated audio/video network of microphones, monitors, assistive listening devices and flat screen displays.

Funding of \$850,000 (\$100,000 included in the FY 2020 budget together with \$400,000 at FY 2019 Third Quarter and \$350,000 at FY 2019 Carryover) supports the **Enterprise Document Management Project**, an enterprise wide effort for imaging documents and integration with case management systems across County agencies. The goal is to make records more accessible, easily retrievable, secure and compliant with records management requirements. Imaging and automated workflows improve business process efficiencies and productivity, reduce paper records and storage needs. This funding includes support for a new digitization effort in the Department of Tax Administration.

## ENHANCED COUNTY SECURITY – \$0.50 M

Support for cyber security initiatives and critical security requirements for enterprise-wide IT systems is a long standing cornerstone of the County's strategic IT policy.

Funding of \$500,000 in this project (\$100,000 included in the FY 2020 budget and \$400,000 at FY 2019 Third Quarter) supports **Cyber Security** strategic and tactical initiatives to safeguard the County's IT assets from evolving cyber threats and support mandated regulatory compliance requirements. IT security continues to be a fundamental component of the County's enterprise architecture and strategy; fusing best practice principles with a hardware and software infrastructure supported by policies, plans, and procedures. This project provides for IT security system requirements, replacements and upgrades, consulting expenses, and future security product and service acquisitions to protect the confidentiality, integrity and availability of County systems and information.

## IMPROVED SERVICE AND EFFICIENCY – 25.15 M

Projects recommended for funding in this category provide improved service and efficiency in the provision of services to County residents and the business community. Many of these projects are multi-year initiatives and include projects supporting the County's e-government and public access programs, transparency efforts, strategic human services and land development initiatives, tax and revenue services, and technology efforts designed to improve County processes for enhanced efficiencies and service delivery.

The County's strategic **e-Gov Program** is supported by \$1,250,000 provided as part of FY 2019 Third Quarter. This project supports the need to meet increasing demands for the County's web site, multiple e-government channels, e-transactions services, improved navigation, web content synchronization, mobile applications, social media integration, transparency, Web 3.0, support of the County's intranet (FairfaxNet), and sustained compliance with Department of Justice (DOJ) Americans with Disabilities Act (ADA). A key initiative of the e-Gov program, is the County's Website Reconstruction Project. This strategic

effort redesigned the County's website with a more contemporary and user-friendly design, implemented a modern enterprise Web Content Management (WCM) System, refined the site's information architecture, and improved search functionality. In FY 2020 the e-Gov program will continue to optimize content and design of the website and deploy functional modules to the core WCM for enhanced service delivery.

Funding of \$1,000,000 (\$400,000 at FY 2019 Third Quarter and \$600,000 at FY 2019 Carryover) continues support for the **Integrated Health and Human Services Technology Project**. This multi-year strategic initiative supports the design, development and deployment of a unified Health and Human Services IT architecture supporting the Health and Human Services Integrative Model; including a system-wide vision, shared commitment and decision making, and accountability for outcomes across Fairfax County Health and Human Services agencies. A holistic approach to address needs along the spectrum of crisis to self-sufficiency to sustainability, as well as strong communication, coordination and collaboration components are key factors. The data collected within the Health and Human Services systems helps shape policy within the County and those policies shape future action. The use of technology is important to ensure these policies and actions are based on robust meaningful data.

Funding of \$1,500,000 (\$1,000,000 at FY 2019 Third Quarter and \$500,000 at FY 2019 Carryover) supports the **Integrated Electronic Health Record System Project**. The goal of this multi-phase project is the acquisition and deployment of an electronic health record system for the Health Department, Department of Family Services, and the Community Services Board. Each of these agencies provides distinct health care services and has unique documentation needs. This project will optimize the potential value of leveraging a common information technology solution with the requisite configuration flexibility to enable these agencies and other health care providers to more effectively collaborate and coordinate the management of health care services for residents.

Funding of \$20,000,000 (\$10,000,000 at FY 2019 Third Quarter and \$10,000,000 at FY 2019 Carryover) is provided to continue support for the **Planning Land Use System Project (PLUS)**. This project is a major strategic investment that will replace and consolidate multiple legacy and disparate land use systems supporting zoning and development plan review, building permit/license issuance, code enforcement, inspection, and cashiering activities with an integrated adaptable enterprise solution, with e-Plans review capabilities.

Funding of \$400,000 (\$200,000 in the FY 2020 Adopted budget and \$200,000 as part of FY 2019 Carryover) provide for the **DTA Target Project** supporting the redesign of the Tax Evader/Target website into a more an interactive application, integrated with County revenue systems, GIS, CRM solutions, and available via web/mobile platforms for easy access and use by County citizens and staff.

Funding of \$1,000,000 is provided as part of FY2019 Third Quarter to support Circuit Court's new **Case Management System**. The Court plans to replace its current application with a new and fully integrated case management system which includes document and financial management modules, an e-filing portal,

electronic fee filing, judicial dashboard, and digital trial modules. Other features include digital evidence submission, electronic orders, digital audio recordings, electronic signatures and e-appeals.

## MAINTAINING A CURRENT AND SUPPORTABLE TECHNOLOGY INFRASTRUCTURE – \$2.70M

In an ever evolving technology and communications environment, maintaining current and supportable technology architecture is a continuing challenge. The County's technology 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 2020 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 \$1,500,000 (\$1,204.250 included in FY 2019 Third Quarter and \$295,250 as part of FY 2019 Carryover) provides for the **Enterprise Architecture and Support Project**. This strategic initiative supports enterprise infrastructure and expert services for complex multi-phase business transformation IT systems for County general services, enterprise technology, security, infrastructure, and corporate systems, including the County's Enterprise Resource Planning (ERP) and related business systems. This funding supports necessary software upgrades and integration of business application and infrastructure system components to meet both the County's IT architecture and interoperability goals.

Funding of \$200,000 (\$100,000 included at FY 2019 Third Quarter and \$100,000 at FY 2019 Carryover) provide for the **Remote Access Project** which supports secure remote access to County networks and systems, and provides improved security, reporting, and data analysis. This project supports telework capabilities, disaster recovery operations, and recognizes the 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. Currently over 4000+ users can access County systems remotely, with 3000 able to do so simultaneously.

The **DIT Tactical Initiatives Project** is supported by \$300,000 (\$150,000 at FY 2019 Third Quarter and \$150,000 at FY 2019 Carryover) for appropriate and timely response to critical unexpected technology needs created by changes in agency business processes, non-IT initiatives with unexpected IT impact, response to state/federal mandates, new regulations and compliance requirements, and other system upgrades, infrastructure and/or integration requirements.

Funding of \$200,000 (\$150,000 at FY 2019 Third Quarter and \$50,000 at FY 2019 Carryover) support ongoing **Information Technology Training** and certification in recognition of the challenges associated with maintaining technical skills 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, support for training is even more essential.

Budget ID No.	Project Title	FY 2014 ADOPTED	FY 2015 ADOPTED	FY 2016 ADOPTED	FY 2017 ADOPTED	FY 2018 ADOPTED	FY 2018 3RD QUARTER	FY 2019 ADOPTED	FY 2018 CARRYOVER	FY 2019 3RD QUARTER	FY 2020 ADOPTED	FY 2019 CARRYOVER
<b>FUND 40091</b>												
2G70-056-000	Public Safety Subscriber Radio Replacement	2,314,500	3,531,352	3,531,352	3,531,352	3,531,352		3,531,352			3,531,352	
2G70-059-000	Mobile Computer Terminal	2,314,500	1,616,200	1,616,200	1,616,200	1,616,200		1,616,200			1,616,200	
3G70-078-000	E911 Telephony Platform Replacement		2,100,000	2,180,000	2,180,000	2,180,000		2,180,000			2,180,000	
3G70-079-000	Public Safety CAD System Infrastructure		1,260,000	1,180,000	1,180,000	1,180,000		1,180,000			1,180,000	
	<b>TOTAL FUND 40091</b>	<b>4,629,000</b>	<b>8,507,552</b>	<b>8,507,552</b>	<b>8,507,552</b>	<b>8,507,552</b>	<b>0</b>	<b>8,507,552</b>	<b>0</b>	<b>0</b>	<b>8,507,552</b>	<b>0</b>
<b>FUND 10040</b>												
2G70-003-000	Oblique Imagery – GIS ( <a href="#">Consolidated into IT-000028</a> )	146,280		136,000	136,000							
2G70-004-000	Planimetric Data Acquisition – GIS ( <a href="#">Consolidated into IT-000028</a> )	92,000	162,000	90,000								
2G70-006-000	Information Technology Training	75,000	200,000	100,000	200,000	200,000		186,010	13,990	150,000		50,000
2G70-011-000	Automated Board Meeting Records				75,000							
2G70-015-000	DIT Tactical Initiatives					300,000	154,000	146,000		150,000		150,000
2G70-018-000	Enterprise IT Architecture and Support	2,500,000	2,900,000	1,800,000	1,800,000	1,696,000		1,500,000		1,204,750		295,250
2G70-019-000	Interactive Voice Response (IVR)					300,000	250,500			250,000		
2G70-020-000	Internet/Intranet Initiatives – e-Government	200,000	675,000	528,000	528,000	725,000		425,000	300,000	1,250,000		
2G70-021-000	Court Case Management System (Circuit Court)									1,000,000		
2G70-034-000	Courtroom Technology Management System - Digital Refresh				596,500	690,000	40,000	188,500	501,500	800,000		280,000
2G70-036-000	Remote Access	100,000	200,000	100,000	200,000	100,000	100,000	100,000		100,000		100,000
2G70-040-000	Facilities Maintenance Management					500,000						
2G70-041-000	Customer Relationship Management		200,000	400,000	428,500	428,500	22,000	428,500		400,000		
2G70-052-000	IT Cyber Security				500,000	500,000		500,000		400,000	100,000	
2G70-053-000	Retirement of Legacy Systems ( <a href="#">Project Completed/Retired</a> )	400,000										
2G70-055-000	Volunteer Management System	175,000					122,000					
2G70-067-000	e-Summons	175,000										
2G70-069-000	Tax System Modernization – Tax/Revenue Administration	800,000		450,000								
IT-000003	Data Loss Prevention Project ( <a href="#">Project Completed/Retired</a> )	500,000										
IT-000004	Emergency Management Portal ( <a href="#">Project Completed/Retired</a> )	200,000										
IT-000005	GRC Auditing ( <a href="#">Project Completed/Retired</a> )	750,000										
IT-000007	Enterprise Project Management		200,000									
IT-000009	Participant Registration System		300,000									
IT-000010	Electronic Plan Submission and Review - LDS		600,000									
IT-000011	ePlans - DPZ		400,000									
IT-000012	ParkNet Replacement		600,000									
IT-000014	Sheriff Civil Enforcement System		315,000		200,000							

Budget ID No.	PROJECT TITLE	FY 2014 ADOPTED	FY 2015 ADOPTED	FY 2016 ADOPTED	FY 2017 ADOPTED	FY 2018 ADOPTED	FY 2018 3RD QUARTER	FY 2019 ADOPTED	FY 2018 CARRYOVER	FY 2019 3RD QUARTER	FY 2020 ADOPTED	FY 2019 CARRYOVER
IT-000017	Enterprise Document Management			450,000			250,000			350,000	150,000	350,000
IT-000018	Enterprise Identity Management (Project Completed/Retired)			800,000								
IT-000019	PLUS project			1,000,000	1,400,000		6,500,000			10,000,000		10,000,000
IT-000020	Tele-Psychiatry			300,000								
IT-000021	Fire and Rescue and Police Stations Telephone Replacement (Project Completed/Retired)			270,000								
IT-000024	Integrated Library System				300,000							
IT-000025	Integrated HS Technology				150,000	1,000,000	900,000		100,000	400,000		600,000
IT-000026	Diversion First Interoperability				150,000							
IT-000027	HHS Integrated Electronic Health Record System <sup>3</sup>				150,000	600,000			600,000	1,000,000		500,000
IT-000028	Geospatial Initiatives					130,740	199,260	130,740		450,000		
IT-000030	DOF Invoice Processing						500,000					
IT-000031	DTA Data Warehouse and BI						300,000					
IT-000032	DTA Oracle Discoverer Replacement						200,000					
IT-000033	DTA Tax Portal Enhancements						200,000					
IT-000034	Enterprise Data Analytics and BI Project						400,000					
IT-000036	Target Project (DTA) - NEW										200,000	200,000
TBD	Enterprise ePayment Project - NEW											500,000
	<b>TOTAL FUND 10040</b>	<b>6,113,280</b>	<b>6,752,000</b>	<b>6,424,000</b>	<b>6,814,000</b>	<b>7,170,240</b>	<b>10,137,760</b>	<b>3,604,750</b>	<b>1,515,490</b>	<b>17,904,750</b>	<b>450,000</b>	<b>13,025,250</b>
	<b>GRAND TOTAL: IT PROJECTS</b>	<b>10,742,280</b>	<b>15,259,552</b>	<b>14,931,552</b>	<b>15,321,552</b>	<b>15,677,792</b>	<b>10,137,760</b>	<b>12,112,302</b>	<b>1,515,490</b>	<b>17,904,750</b>	<b>8,957,552</b>	<b>13,025,250</b>



## 3.2 Public Safety

### 2G70-056-000 PUBLIC SAFETY SUBSCRIBER RADIO REPLACEMENT PROJECT (E-911 - FUND)

#### *Project Description*

This project was a technology refresh/life-cycle replacement program for all MHz digital two-way radios (portable and mobile) in use by the Fairfax County Police Department, Fire and Rescue Department, and the Sheriff's Office. The radios replaced were physically 7-9 years old, over 12 years old in terms of technology, had reached end of life, and no longer met Public Safety needs or critical interoperability with National Capital Region (NCR) neighbors. The new public safety radios have the necessary feature set for encryption of voice traffic, thereby limiting outside scanning and interception of the radio traffic, are compatible with other NCR jurisdictions, and were deployed throughout Fairfax County's Public Safety agencies to maintain operational performance, employee safety, and effective operations in a regional emergency event. Failure to have radio compatibility would compromise mutual aid situations, result in failed response, and increased risk of injury or death to public safety personnel and the public.

#### *Project Goals*

This project provided for the replacement of all public safety voice subscriber portable and mobile radios. Successful deployment of the new radios enhances communications security, ensures that public safety users are on the same platform to provide immediate and systematic response to emergencies, maintains performance, availability, reliability, and provides capacity for growth due to the increase in County population and public safety services demands.

### *Progress to Date*

This project was completed with final system acceptance in December 2012. An additional antenna site (Bailey's Crossroads) was added to the System and both the Primary Antenna Control Site and System Master Site were moved from their previous unprotected sites to the Public Safety and Transportation Operations Center (PSTOC).

With the completion of the Radio Upgrade Project, Fairfax County completed the next logical step in the modernization process, which was the replacement of its Public Safety Subscriber Radios. Over 6,000 portable and mobile radios were procured in September 2013. All radios were programmed to proper frequencies and talk groups, tested, and deployed. This project was completed in the fall of 2014.

This project will be retired from the IT Plan in FY2021.

### *Project Budget*

FY 2020 funding of \$3,531,352 is included for annual increment of a lease payment schedule.

### *Return on Investment*

Keeping the technology current for essential public safety systems is critical to first responder operations, community security and protection of public safety personnel. The new subscriber radios provide end users with updated equipment with increased functionality and serve as a basis for future growth. Nearly all new infrastructures now support multiple non-proprietary protocols, IP and digital technology, and various types/mixes of mobile radio equipment using fast data transmission speeds. This replacement provides the County with a radio capability that will allow incremental migration to newer technologies in the future. The return on investment is realized by the performance, productivity, and effectiveness of public safety services, with seconds enhancing life/safety results.

## **2G70-059-000 MOBILE COMPUTER TERMINAL PROJECT (E-911 - FUND)**

### *Project Description*

Fairfax County public safety communications 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 and rescue, and sheriffs) to receive dispatch messages, event notifications, to self-initiate events, make traffic stops, check on licenses and registrations, maintain status for response, and communicate with one another and the Department of Public Safety Communications (DPSC) without the use of voice radio or intervention of a dispatcher at the DPSC. The entire structure of the County's public safety response system, including staffing at the DPSC, is based on the heavy utilization of mobile data communications for critical public safety activities.

## *Project Goals*

This project supports the recurring life cycle replacement of Mobile Computer Terminals (MCT) to ensure this critical equipment is kept contemporary and functional for public safety personnel who respond to emergency and non-emergency requests for services.

## *Progress to Date*

This project supports an on-going program for the replacement of Mobile Computer Technology used by Public Safety personnel. A five year replacement cycle was determined to be a reasonable replacement term for the mobile computer fleet.

## *Project Budget*

FY 2020 funding of \$1,616,200 supports the third year funding of the 5 year lifecycle replacement cycle established for MCT equipment; or replacement of 1/5 of the mobile fleet. This is an ongoing approved IT replacement project supported by Department of Public Safety Communications, the Police, Fire/EMS and Office of the Sheriff.

## *Return on Investment*

In 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 the many operations utilized by the field personnel. The current fleet has approximately 1500 units including spares. It is anticipated that this number will continue to grow throughout the life cycle replacement of computer equipment as additional functionality is added that can be made available to additional users in the mobile environment.

MCTs keep officers on the street versus behind a desk as they provide an efficient, quick method where the officer can complete reports and perform routine queries from a mobile device in their vehicle. In addition to the many functions currently performed on the MCT units, police officers use the MCT for mobile field reporting. The County has incorporated a field reporting system into records management and integrated it with the CAD system allowing officers to complete investigative reports online from their vehicle with most of the preliminary information downloadable from the event history reports in the CAD system. This enhancement saves countless hours previously expended writing field investigation reports longhand by patrol personnel.

## **3G70-078-000 E 9-1-1 TELEPHONY PLATFORM REPLACEMENT PROJECT (E-911 - FUND)**

### *Project Description*

This project supports Fairfax County's initiative to replace legacy 9-1-1 call center hardware and software for dispatch of police and fire units in response to the emergency calls and to enable a transition to a Next Generation 9-1-1 set of services. Due to the life cycle end of the hardware/ software and termination

of maintenance support as declared by the 9-1-1 telecommunications service provider in 2015, this project began a multi-phase update of the PSAP (Public Safety Answering Points) communications technology environment within the County to continue 9-1-1 call processing functions, and to replace the external service provider network provided by Verizon. The widespread adoption of rapidly advancing technologies like text, video, Voice over Internet Protocol (VoIP), and the increased reliance on high speed broadband services have raised the expectation of 9-1-1 services Fairfax County will provide for Next Generation 9-1-1 services. Improvements are needed to support new requirements and expectations.

### *Project Goals*

This project will support a multi-phase effort to transition the County's core 9-1-1 system architecture to a new supportable platform that is technologically current and is compliant with National Emergency Number Association (NENA) Next Generation 9-1-1 standards to facilitate 9-1-1 services well into the future.

### *Progress to Date*

**Phase 1 –** In September of 2015, implementation of interim Text-to-9-1-1 capabilities was completed in Fairfax County, making Fairfax the first jurisdiction in Virginia, Maryland and the District of Columbia to provide vital access to 9-1-1 for individuals who are deaf and hard of hearing.

**Phase 2 –** The selection of a new vendor for the replacement of 9-1-1 call taking equipment and voice recording equipment in all Fairfax County 9-1-1 centers and associated secondary locations was completed. Project design and implementation began in 2016 and cutover to the new NG9-1-1 equipment at the Fairfax County Alternate Center occurred on January 11, 2017. Implementation of the system in the Towns of Herndon and Vienna and the City of Fairfax was completed. Final installation of the equipment at the Fairfax County primary 9-1-1 Center (MPSTOC) was complete in February 2017; transition to an integrated Text-to-9-1-1 capability in the NG9-1-1 platform was completed in March 2017; and incorporation of radio recording within the NG9-1-1 system was complete in the third quarter of 2017.

**Phase 3 –** Fairfax County was awarded grant funds from the Department of Homeland Security (DHS) to plan and develop the technical specifications for transition to a new Next Generation 9-1-1 ESInet (Emergency Services Internet Protocol Network) for 9-1-1 call routing. During this phase, grant funds also supported analysis of the legacy 9-1-1 tabular address location information by Fairfax County's GIS staff to enable automatic location information to be transitioned into GIS formats that support NG9-1-1 routing of calls on the ESInet. Competitive evaluation of vendor proposals for the ESInet was completed and a contract award made during the fourth quarter of 2017. The new ESInet service will replace the Verizon provided 9-1-1 call routing network, making Fairfax County the first jurisdiction in Virginia to transition off the legacy Verizon 9-1-1 network. Other Northern Virginia jurisdictions, most of the Commonwealth of Virginia, Maryland jurisdictions, and the District of Columbia plan to use Fairfax County's contract for their transition into a Next Generation 9-1-1 network. This transition to the Next Generation 9-1-1 ESInet

will involve careful testing and development of policies to ensure interoperability is maintained across jurisdictional boundaries.

**Phase 4** – This phase of the project begins after transition onto the ESInet and involves incorporating the ability to receive additional media (such as pictures and video) from the initial 9-1-1 call. Plans also include the exchange of multi-media from the caller to the 9-1-1 center and out to the First Responders' device through FirstNet, and the development and testing of interfaces between the Next Generation 9-1-1 ESInet and the new nationwide First Responder Network (FirstNet).

### *Project Budget*

In FY 2020 funding of \$2,180,000 continues support for the required hardware and software upgrades associated with this strategic initiative.

### *Return on Investment*

The improved systems for 9-1-1 services will provide enhanced services and capabilities to the citizens of Fairfax County at a high degree of functionality and in a technologically appropriate manner. These technology upgrades strengthen system resiliency and reliability, and establish a technology foundation for implementation of Next Generation 9-1-1 multimedia capabilities such as text, video and photographs. This project will improve system interoperability with other jurisdictions, call overflow with other Public Safety Answering Points, and location accuracy. The new 9-1-1 call processing technology platforms will result in cost savings for Fairfax County as specialized proprietary systems are replaced with commercial off the shelf components that will reduce maintenance costs.

## 3G70-079-000 PUBLIC SAFETY CAD SYSTEM INFRASTRUCTURE PROJECT (E-911 - FUND)

### *Project Description*

The Public Safety Computer Aided Dispatch System (CAD System), requires a hardware and software replacement life cycle to keep the functionality and capabilities of the system current with updated technology, hardware, software, security requirements and functionality. The CAD System is the core technology supporting the intake and dispatch response functions for all Fairfax County public safety agencies including Police, Fire and Rescue, Sheriff, and the Department of Public Safety Communications (DPSC 9-1-1 Center) in their core mission of keeping Fairfax County and its citizens safe. This system is used by the call takers and dispatchers to process all calls for service received on 9-1-1 and other requests for emergency and non-emergency services in Fairfax County, as well as for mutual aid interoperability. This project supports replacement of the supporting hardware infrastructure and required supporting software licenses, workstations and associated licenses, and the CAD system.

### *Project Goal*

This project supports replacement of the supporting hardware infrastructure and required supporting software licenses, workstations and associated licenses, and the CAD system over a five year span, and baseline a rationalized replacement structure for the future. The Fairfax standard for IT foundational and workstation equipment is five years, keeping in mind usability, maintenance and supportability. Keeping the infrastructure current allows the system to sustain better performance, reduce risks of equipment failures, keep pace with changing technology and increase security requirements.

### *Progress to Date*

Staff from the Department of Public Safety Communications, public safety agency stakeholders, Department of Information Technology and advisory experts have researched the issues associated with sustaining 9-1-1 Center performance, best practices for hardware replacements, security and resilience, state of the industry and readiness to operationalize and integrate next generation 9-1-1 needs.

Each phase of the proposed project plan addresses the replacement for the components and related software versioning processes with activities including identification, purchase, installation, software license obligations, and eventual transition to a new CAD solution. The hardware replacement schedule will be coordinated with the partner agencies to ensure minimal impact with other public safety projects that may be occurring at the same or similar times. Software updates are also coordinated and driven by the manufacturer and industry standards.

### *Project Budget*

In FY 2020 \$1,180,000 supports the next year of the replacement plan established for this project.

### *Return on Investment*

Public Safety agencies rely on the CAD System to provide mission critical lifesaving and property protecting services to Fairfax County and the surrounding areas. By replacing hardware in a timely fashion, the County safeguards against equipment failure and legacy vendor abandonment of aging technology that could potentially result in service interruptions with grievous consequences. This project incorporates the requirements needed to upgrade and replace all CAD system components, including software versioning, over a span of five years to keep the system contemporary and upgraded and to allow for continued use by the Public Safety user community. The need for improved CAD system capacity and functionality will continue into the future as a necessary funding requirement. Using a phased, life cycle approach insures that required funding is spread out over a five-year period and thus relieves the County of the impact of a major system overhaul in any one fiscal year.

## 2G70-007-000 ELECTRONIC RECORDS MANAGEMENT SYSTEM PROJECT- JUVENILE AND DOMESTIC RELATIONS DISTRICT COURT (JDRDC)

### *Project Description*

Fairfax County's Juvenile & Domestic Relations District Court (JDRDC) and the Department of Information Technology (DIT) partnered with the Supreme Court of Virginia's (SCV), Office of the Executive Secretary, to implement a Case Imaging System for the scanning, retention, electronic viewing and submission of court documents. The Juvenile and Domestic Imaging System (JDIS) is a custom built SCV solution utilizing off-the-shelf software, modified by SCV that interfaces with and exchanges data between the Juvenile Secure Viewing System (JSVS) and the existing Juvenile Case Management System (JCMS). The JSVS provides remote access to JDIS cases containing scanned documents to court services locations throughout the County. This shared initiative benefited all courts, related agencies and jurisdictions throughout the Commonwealth of Virginia.

### *Project Goals*

The JDIS project's goal is to reduce and/or eliminate labor intensive and time consuming hard copy record searches, retrieval and re-filing, and provides simultaneous and instant access to court records with improved security. The JDRDC Clerk's Office and multiple Court Services Units (CSU) have realized improved efficiencies from the availability of records; additionally, the electronic backup capabilities provide added safety and security for court-related document.

### *Progress to Date*

JDIS functionality is in production. The application captures all juvenile and adult case types through the scanning and assignment of case file court documents. Once the scanned documents are assigned to the appropriate case, the documents can be distributed through a number of queues to both the JDRDC Clerk's Office and multiple Court Services Units. Additional functionality also includes enhanced expungement processing for the Clerk's Office, and the most recent addition of public viewing of JDIS documents at public kiosks for adult cases and restricted viewing of juvenile cases.

Additional JDIS functionality includes future automated quality assurance processes and reporting and interfaces with the Sheriff's Advanced Civil Enforcement System. Future functionality includes remote secure submission of documents from all CSU locations (in and outside of the physical courthouse) to the Clerk's Office. Additionally, Division of Child Support Enforcement attorneys and personnel from the Fairfax County Magistrate's office will begin accessing case documents in JSVS.

This project is complete and will be retired from the IT Plan in FY2021.

### *Project Budget*

Additional funding is not required.

## *Return on Investment*

This project improved public access to court records, enhanced data security and significantly reduced staff time dedicated to locating missing files, retrieving and re-filing court records. The system improved response time for customers and court staff at the Records, Fines and Costs counters, and reduced the incidence of misplaced court files and documents necessary for the continuity of courtroom proceedings. The system makes needed court documents electronically and immediately available to all staff working court cases. The JDIS has been implemented for all juvenile courts throughout the Commonwealth of Virginia, and the SCV is also proceeding with plans to implement JSVS statewide. The JSVS will provide secure remote access and will also serve as a continuity of operations and disaster recovery solution.

## **2G70-021-000 AND 2G70-022-000 CIRCUIT COURT TECHNOLOGY PROJECT**

The Fairfax County Circuit Court is nationally-recognized for its delivery of public service. The Court continues to actively pursue state-of-the-art technology solutions to improve both court efficiency and the court-customers' experience. This project covers multiple facets of Circuit Court operations.

### *Project Description*

**Court Automated Recording System (CARS) / Court Public Access Network (CPAN)** – The Clerk of the Fairfax County Circuit Court is responsible for providing citizens with reliable, timely, and accessible public records. Over 50 million court records have been digitized into the Court's Public Access Network (CPAN,) which is a web-based, online, digital image retrieval system. CPAN offers subscribers 24 hours a day, 7 days a week online access to land records, judgments, marriage licenses, trade names and probate record images, dating from as early as 1742 to the present. CPAN has over 2,000 subscribers who are located domestically and internationally. Subscribers include citizens, real estate title examiners, law firms, mortgage companies, banks, media outlets, and federal, state, and local governmental agencies.

**Case Management System (CMS)** – The Clerk of the Fairfax County Circuit Court is responsible for receiving and maintaining all court records for felony prosecutions and civil litigations in Fairfax County. The Clerk files, indexes, and manages the complete life-cycle of a court case and its pleadings, from case-initiation (Search Warrants/Indictments in criminal prosecutions and Petitions/Complaints in civil actions) to the compilation of the appellate record for submission up to the Court of Appeals and the Supreme Court of Virginia. All pleadings, criminal discovery, trial evidence and post-trial motions, as well as Orders of the Court, are kept in perpetual record by the Clerk's Office. This kind of dynamic public-record keeping, held in perpetuity, is a ripe environment for the efficiencies today's digital technology has to offer. The Clerk's current Case Management System (CMS) automates case -processing through the Circuit Court, allowing for real-time case indexing, docketing, trial calendaring, data-integrated document-generation and processing, trial/hearing calendaring, disposition-entry, account-ledgering and the running of statistical reports.

## Project Goals

Circuit Court modernization initiatives aim to make the Clerk's over 800-Virginia Code-mandated duties more efficient and cogent, using software programs and integrated systems. This unity of effort, through modern systems and processes better-serves Fairfax County court-customers, and protects important Constitutional protections, like due process and speedy trial rights. As the trial-level court, and only court of record in Fairfax County, technology will continue to help the Clerk's Office preserve Fairfax's public history. The review of past project accomplishments, recited below as "Progress to Date" and future project goals, set out as "Planned Project Schedule," are broken-out between the Court's Land Records systems, and the Case Management systems.

## Progress to Date

- Redesign and modernization of the Court's Electronic Filing System (EFS) for Land Records. The redesigned system includes a streamlined workflow that incorporates electronic documents into the existing document management system, and it provides the ability to electronically record documents that contain oversize plats.
- Replacement of the 10 -year old, Microsoft Windows-based case management system, with a fully - integrated web browser -based Case Management System, which supports civil and criminal case processing.
- Upgrade of the Court's Public Access Network (CPAN) to .NET, which also includes a completely redesigned look for a more user-friendly interface for search and retrieval operations, including the addition of new search features.

Other accomplishments include:

- Development and deployment of the Circuit Court's Land Records Recording System, including document imaging; with comprehensive redaction capabilities.
- Implementation of the CPAN retrieval system.
- Deployment of an automated jury management system, which serves as a system clearinghouse for the 60,000 Fairfax citizens who make-up the Court's annual jury pool.
- Implementation of the Clerk's "Paperless Probate" process, which makes a difficult time in a family's life, swifter and more efficient.
- Development and implementation of a streamlined Marriage License Application, which utilizes scanners to import data from customers' driver's licenses.
- Implementation of electronic docketing display, which serves as directional signage for the public, as they navigate the large courthouse, to find their courtroom.

These systems provide a platform and foundation for additional capabilities, as the Court's business requirements evolve. Technological system updates, which are critical to platform vitality and customer-service delivery, are also addressed through this fund.

## CARS

- Indexed, and stored all land record documents for electronic processing
- Completed cashiering and scanning capabilities, to update the public record in a more efficient manner
- Automated the Administration of Estates System
- Integrated the automated scanning in Virginia's Marriage License Application process
- Integrated the redaction of data and into existing workflows as mandated by Virginia's General Assembly
- Developed Online Marriage Pre-Application, an online resource used by 50% of all marriage license applicants in Fairfax, use of the application has significantly reduced customer wait-times
- On-boarded E-Submitters to the Electronic Filing System which now accounts for 60% of all land transactions recorded in Land Records, thus reducing staff workload
- Deployed Phase 1 of a collaborative project with the Commissioner of Accounts of the 19th Judicial Circuit and the Circuit Court's Probate Division, to electronically exchange, maintain and record administration of estate documents and relevant data

## CMS

- Enhanced Expungement Process for improved quality control and quality assurance
- Implemented court-wide scanning of all case documents with redaction capability
- Increased the scope of e-transferred Orders to include final Divorce Decrees, final Law Orders, Name Change and Guardian Ad Litem (GAL) Orders
- Initiated imaging all sentencing guidelines within the case management system to facilitate electronic transmission to the Virginia Sentencing Commission
- Improved Protective Order Interface with the Supreme Court of Virginia: Office of the Executive Secretary, to communicate injunctions in real-time
- Expanded a Report Service Library, where custom-built SQL-reports are kept for both on-going and ad-hoc statistical Report-Requests
- Enhanced Central Criminal Records Exchange (CCRE) report capabilities allowing for charges to be removed from the Exception Report

### Planned Project Schedule

- Continued modernization of the Probate Forms Application, Marriage License Utility, as well as expansion of Phase-2 and Phase-3 of the Clerk's Interface with the Commissioner of Accounts, will be the focus of the CARS project over the next year.
- As a result of an RFP the Circuit Court awarded a contract for replacement of its current Case Management System with a fully integrated application. Project kick off is planned for spring 2019.

## *Project Budget*

FY 2019 Third Quarter funding of \$1,000,000 will contribute towards implementation of a new Case Management System. In addition, annual funding from Virginia's Technology Trust Fund revenue (mandated by Virginia Code for addressing Circuit Court Clerk's Office technology needs), CPAN subscription revenue, Administration of Justice revenue, and agency funds support technology initiatives in the Circuit Court.

## *Return on Investment*

Taken together, the Clerk's modernized land record and public records systems, and the continued digitization of the Court-side case management systems, provide Fairfax with a secure, highly-efficient, and dynamic trial court that protects important, unquantifiable civil liberties. For instance, CARS provides immediate electronic access to CPAN for over 2,000 commercial customers, making all land records, deeds, deeds of trust, liens and judgments available to the public on every parcel of land located in Fairfax County. In addition to citizen-customers, CARS serves federal, state and local agencies, particularly sister-agencies such as the Fairfax County Department of Tax Administration (DTA), the City of Fairfax Tax Assessor's Office, The Fairfax County Geographic Information Systems (GIS) and the Fairfax County Department of Public Works and Environmental Services (DPWES).

Once complete, a comprehensive Court Case Management System will offer Virginia's largest trial court real-time case document imaging, electronic filing, electronic-certifying and payment system portal, and the ability to develop digital trial practice (for the management of digital evidence submission and police body-camera evidence) as well as real-time judicial dashboard capabilities. Multiple parties will be able to access electronic case files simultaneously, and e-file pleadings and other documents from their firms, at any hour of the day or night, reducing road-travel to the courthouse. A more efficient trial court process and e-filing will save self-represented litigants (as well as attorneys) time and money in the life-cycle of their case. When the time and cost of litigation reduces, meaningful access to justice is achieved. Finally, potential interfaces with agencies like the Sheriff's Office or other Virginia jurisdictions, will allow the exchange of electronic documents and/or data and eliminate existing manual processes between jurisdictions.

## **2G70-034-000 COURTROOM TECHNOLOGY MANAGEMENT SYSTEMS - DIGITAL UPGRADE**

### *Project Description*

Fairfax County's Court Technology Office (CrTO) began efforts to complete the digital upgrades necessary for the existing high technology Courtroom Technology Management System (CTMS) in 2008 to provide electronic evidence presentation, video conferencing and systems management for all three Fairfax County Courts. The new digital design and upgrade is necessary to replace obsolete analog hardware, and include newer, digital components for courtrooms undergoing renovation. As analog equipment and repair parts are discontinued the existing hardware components require replacement with digital

components. Upgrading to digital hardware is not a “plug and play” fix, and requires new cabling, connections and new software code.

### *Project Goals*

The primary goal of this project (CTMS2) is to upgrade the high-tech courtrooms in Fairfax County Courthouse to a modern digital platform necessary to meet industry standards. The digital upgrades will support Bring Your Own Devices (BYOD), HDMI (High-Definition Multimedia Interface) connectivity, annotation enhancements, upgraded touch panel displays, and network-managed video services, while retaining existing CTMS functionality. The digital CTMS2 will continue to improve citizens' access to the Courts, facilitate trials and hearings in the most effective and efficient means possible, allow for all three Courts to share common resources, and provide for the flexibility and adaptability required to incorporate future changes in technology and court proceedings.

### *Progress to Date*

A multiphase deployment to upgrade existing courtrooms to the digital platform is necessary, the initiative commenced in FY 2017 and is planned to continue through FY 2020. The digital migration requires careful planning and scheduling as only a limited number of courtrooms can be “out of service” at one time. The digital retrofit is anticipated to take twelve weeks per courtroom, planned over multiple fiscal years.

Milestones and planned implementation are:

- CTMS Digital Design – Completed January 2016
- FY 2017 – Completed Digital Upgrades for four Circuit Court courtrooms (5A, 5B, 5C, 5D)
- FY 2018 – Completed Digital Upgrades for four Circuit Court courtrooms (5E, 5F, 5G, 5H).
- FY 2018 – Completed Digital Upgrade for two General District Court courtrooms (2J, 2K)
- FY 2018 - Completed Digital Upgrade for two Juvenile and Domestic Relations District Court courtrooms (3A, 3B)
- FY 2019 – Complete Digital Upgrades for five JDRDC courtrooms (3C, 3D, 3G, 3H, 3K)
- FY 2020 – Complete Digital Upgrades for two JDRDC courtrooms (3E, 3F)
- FY 2020 - Complete Digital Upgrades for two Circuit Court courtrooms (5J, 4J)  
(Courtrooms 5J and 4J were deferred to FY 2020 due to 4th floor renovation and construction schedules.)
- FY 2020 - Complete Digital Upgrades for two General District Court courtrooms (1A, 1E)  
In addition to courtrooms, two Jury Assembly rooms require digital upgrades.

### *Project Budget*

FY 2019 Third Quarter funding of \$800,000 and \$280,000 planned for FY2019 Carryover continue support for the Courtroom Technology Project.

## Return on Investment

The CTMS allows new and renovated courtrooms to share a common infrastructure with distributed services through a centralized control room. This capability provides consistency, standardization, and scalability between the three courts supporting improved citizen access, internally and externally to the courts, facilitation of trials and hearings in the most effective and efficient means, and the ability of all three courts to share common resources. Improved access and facilitation of court processes and services for citizens, judges, court staff, litigants and others who need to conduct business with the courts continues to be the primary benefit of this project. Substantial benefits and opportunities have been realized by centralizing and standardizing courtroom technology and sharing resources and infrastructure between the three courts. The implementation of CTMS has improved trial management and provided savings for the County, the courts, attorneys, and litigants.

## 2G70-067-000 ELECTRONIC SUMMONS PROJECT (E-SUMMONS)

### *Project Description*

This project is designed to develop automated solutions to streamline the traffic ticketing and summons processes by implementing an integrated Electronic Summons (e-Summons) solution to capture and transfer traffic summons information from the point of issuance, through the Police Department to the Courts.

### *Project Goals*

Project goals are to provide efficient and timely public access to electronic traffic case records, reduce the time officers spend on each traffic stop thus lessening the inherent risk involved in traffic stops on the highway, improve accuracy and efficiency of data capture, increase the efficiency with which traffic summons are issued and adjudicated in Fairfax County, eliminate redundant paper and manual processes, and enhance data quality as it relates to accuracy, reliability, and timeliness.

### *Progress to Date*

Equipment and initial e-Summons configurations for police vehicle and motorcycles were piloted and tested in earlier phases of this project. Fairfax County Police Department identified an integrated e-Summons solution to build on that foundation and implemented an e-Summons solution that includes integration and interfaces with other stakeholder groups and systems including the Courts, Department of Public Safety Communications (DPSC)/CAD 9-1-1, and the Police Records Management System. Department wide phased deployment was completed in CY 2018.

This project is complete and will be retired from the FY 2021 IT Plan.

### Project Budget

FY 2020 funding is not required; anticipated revenues from the mandated court fees (details below) will support of e-Summons in Fairfax County.

*(In July 1, 2014 the Virginia General Assembly added new provisions to VA state law (Virginia Code § 17.1-279.1) which permits the assessment of an additional \$5 as part of the cost of each criminal and traffic court in each localities district and circuit courts. The Fairfax County Board of Supervisors approved an amendment to Fairfax County Code to adopt the state law. Effective on August 1, 2014 as specified by the legislation all funds generated from the new fees are to be used solely to fund software, hardware, and associated equipment costs for the implementation and maintenance of an electronic summons system in Fairfax County. Funding from the ordinance will also support the purchase of new peripheral equipment such as handheld devices, portable printers, driver's license scanners, and barcode readers. All funds received will be posted to the e-Summons project as part of regularly scheduled budget reviews.)*

### Return on Investment

E-Summons is an automated solution that enables police officers to issue traffic tickets safely and more efficiently with greater accuracy, reducing manual processes, and eliminating data entry errors that can have potentially serious repercussions for the public, courts and the police department. A fully integrated e-Summons solution eliminates redundant data entry, reduces duplication of effort between agencies, and streamlines court scheduling and docketing processes creating multiple opportunities to improve existing operations. Additional benefits include near real time electronic access to traffic case information for payment of traffic fines.

## IT-000013 POLICE RECORDS MANAGEMENT REFRESH PROJECT

### Project Description

This project supports replacement of the current Police Department Records Management System (RMS).

### Project Goal

This project aims to replace the current Police Records Management system (iLEADS) with the next generation case management solution that fully utilizes and supports the present and future police department needs and business processes, and maintains close integration with the current 9-1-1 Dispatch (Computer Aided Dispatch – CAD) system.

### Progress to Date

After concerted effort, the Police Department canceled the contract with the vendor when it was determined that the application lacked the requisite functionality. The Police Department is drafting an RFP to solicit for a new RMS system to replace the current iLEADS application.

## *Project Budget*

Additional funding is not required in FY 2020.

## *Return on Investment*

A modern Records Management System (RSM) is a critical necessity in large police departments across the country. A new RMS system will allow Fairfax County police officers to more efficiently respond to incidents, issue electronic summonses, and complete reports on the scene of incidents rather than waiting to enter case information at a field office, station, or other locations. A modern system also assures more accurate, timely, reliable and accessible information on events, and enables the Police Department to more efficiently act upon incidents, from initial response through tracking, investigation and reporting.

## **IT-000014 SHERIFF CIVIL ENFORCEMENT SYSTEM PROJECT**

### *Project Description*

The Office of the Sheriff, in collaboration with the three Fairfax County Courts (Circuit Court, General District Court, and Juvenile and Domestic Relations District Court), and the Department of Information Technology's Court Technology Office is implementing an Advanced Civil Enforcement System (ACES) to automate existing civil enforcement business processes. The ACES will also provide interfaces between the Sheriff's Office, the Courts, and other County agencies, introduce a mobile solution, and provide enhanced security, reporting, and statistics.

### *Project Goal*

The Sheriff's Office is required by Virginia Code 8.01-293 to execute civil processes within its jurisdiction, and to report statistics as required by the Virginia Compensation Board. The goal of this project is to replace the current Civil Enforcement module with an automated solution that will provide significant improvements and efficiencies necessary to manage the large volume of documents served daily.

### *Progress to Date*

Development for Phase 1A was complete in FY 2019 and included implementation of the core civil enforcement processes for improved efficiencies with automated entry of service information, bi-directional interface with the General District Court's Case Management System (CMS), interface with the County's Geographical Information Systems (GIS) for geocoding to electronically track service document, and a basic mobile solution utilizing the existing infrastructure. Phase 1B, which is ongoing, includes electronic signatures and reporting and statistics.

## *Project Budget*

Additional funding is not required in FY 2020.

## *Return on Investment*

When fully implemented, the new Advanced Civil Enforcement System (ACES) will provide an integrated and comprehensive civil enforcement solution for electronically processing, distributing, and tracking service documents. The system will significantly reduce staff time spent to manually process physical service documents, and improve response time to public inquiries with secure public and internal web accessibility. The ACES will also enhance reporting and statistics required by the Virginia Compensation Board, minimize lost or misplaced documents, and provide electronic backup for business continuity.

## **IT-000015 COMMONWEALTH'S ATTORNEY CASE MANAGEMENT SYSTEM PROJECT**

### *Project Description*

The Office of the Commonwealth's Attorney (CWA), in collaboration with the Department of Information Technology's Court Technology Office, is implementing a Commercial-Off-The-Shelf (COTS) case management system with a secure, scalable multi-user platform compliant with the County's IT standards. The existing system captures a fraction of the data and information needed by the CWA, and places the data at significant risk due to inadequate back-up and recovery capabilities. The CWA has a very high case volume and attorney case and courtroom scheduling is a very complex and labor-intensive process.

A new solution selected to address the requirements of the CWA's office is a County compliant web-based application developed on industry standard that will streamline and automate existing manual processes and improve efficiencies with law enforcement agencies and the Courts.

### *Project Goal*

The goal is to replace the legacy case management system with a modern comprehensive case management application for improved workflow tools, streamline processes, enhanced accountability and improve office efficiency. Other components include conversion of all legacy data, the ability to scan arrest warrants, and interfaces to the Police Records Management System and other County departments.

### *Progress to Date*

Project scope and requirements were finalized in FY 2017, and a contract was awarded to the selected vendor. System design and configuration began in FY 2019 and implementation will continue in FY 2020 to better capture barcode and case information at the point of origin.

### *Project Budget*

Additional funding is not required in FY 2020.

## *Return on Investment*

A modern case management system will significantly improve management and tracking of a large volume of criminal cases handled by the Fairfax County Commonwealth's Attorney's Office. Improvements such as barcode scanning of arrest warrants, auto-generated legal documents, and the automated syncing of attorney calendars will dramatically reduce data entry by office personnel. Generating real-time case assignment reports showing the number of cases assigned, types of cases, and where cases fall into the case life cycle will improve and enhance the current task of case assignment and court scheduling.





### 3.3 Corporate Enterprise

#### 2G70-011-000 AUTOMATED BOARD MEETING RECORDS PROJECT

##### *Project Description*

This project streamlines, automates, and supports mobile-enabled submission, preparation, and delivery of the Board of Supervisors Meeting Agenda and Board Book Package by converting a manual paper-exclusive process to an electronic format.

##### *Project Goals*

This initiative is sponsored by the Board of Supervisors and the County Executive to enable the Office of the County Executive and the Clerk to the Board to electronically create the agenda, supporting documentation, document Board of Supervisor meeting matters and post documents on-line for improved accessibility. This project significantly improves the quality and efficiency of producing the board packages for the Board of Supervisors and associated committees and subcommittees.

##### *Progress to Date*

Easy to use and secure Board meeting management software was successfully deployed to support the Board of Supervisors meetings, subcommittee meetings, and other County Boards, Authorities and Committees (BACs) such as Retirement Board, Board of Equalization of Real Estate Assessments, and Water Authority. In FY 2020 deployment to additional Board subcommittees and BACs will continue.

## Project Budget

FY 2020 funding is not required.

## Return on Investment

This project increases efficiency and streamlines the production of the Board of Supervisors' package by providing the information and supporting materials on-line, offering Board members an efficient way to review meeting material electronically, increases accessibility, and provides for better management and distribution. Additional benefits are improved productivity in preparing and submission of agenda items, reduction in manual paper intensive processes, as well as reduced space requirements for maintaining large paper copies for Board offices and the Clerks' Office. Cost savings are achieved from implementing electronic board-books by eliminating the print, labor, and transportation costs that were required to produce, assemble, and physically deliver the large multi-volume board books. In addition, revisions to board book content can be updated easily and made available instantly so that a reprint and redistribution of hard copy is not necessary.

## 2G70-019-000 PUBLIC ACCESS TECHNOLOGIES - INTERACTIVE VOICE RESPONSE PROJECT

### Project Description

This multiphase initiative will migrate agencies using legacy Interactive Voice Response (IVR) systems to a more contemporary platform enabling interactive text to speech applications and voice/phone applications for self service automation. The new IVR platform supports more efficient payments, information processing, and management of citizen requests and inquiries.

### Project Goals

This 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", in particular for citizens without internet access. IVR is one of the foundational programs for enhancing public access to government information and business transactions. The primary goal is to continue the application of text-to-speech technology for certain applications aligned with e-Government goals.

### Progress to Date

To date the project has successfully achieved the following:

- The Department of Tax Administration (DTA) and the Courts' new IVR applications have processed around half a million calls with an average of 30,000 calls per month.  
  
and are vital to the Chief Judge and Clerk of the Court operations.
- The Circuit Court's Jury application allows jurors to verify if their group number has been assigned, duty dates, and the ability to postpone jury duty based on Commonwealth of Virginia regulations.

- The General District Court's IVR application enables citizens to pay their traffic and criminal violations, verify court dates, process continuances, request interpreters or court appointed attorneys, file appeals or motions, and access other court services. The Court is also working with the IVR team to in response to changes mandated by state law to support the Court's case and financial management systems.
- DTA's Customer Information and Payment IVR applications enable County residents to handle vehicle and real estate tax payments and liens and also provides collection information in English and Spanish.
- Health and Human Services Coordinated Services Planning and Community Services Board used IVR to conduct surveys that have aided and improved customer services efforts.
- The Institute for Early Learning's IVR application enables educators to register for courses, workshops and online sessions.
- The Office of General Election Information IVR application provides callers critical data regarding in person or absentee voting, upcoming elections, registration deadlines, and general information on common questions in English, Spanish, Korean and Vietnamese.
- The Fairfax County Public Library's Information application offer callers the ability to locate the closest facilities by zip code or area names to gain access to educational and recreational resources closest to the callers' location.

### *Project Budget*

In lieu of the FY 2020 Budget, FY 2019 Third Quarter funding of \$250,000 continues support for the IVR initiatives across County agencies. This initiative requires on-going support from e-Gov and Telecommunications staff to support and expand the IVR application capabilities in additional business areas and implement enhancements.

### *Return on Investment*

Public access technologies such as the IVR expand citizen access to County information and services, minimize staff resources needed to provide basic information, and allow staff deployment to more complex and specialized tasks. The County's IVR system 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 are most in need of personal attention.

## **2G70-020-000 INTERNET/INTRANET INITIATIVES PROJECT - E-GOVERNMENT**

### *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 and mobile applications, improvements in search and navigation, integration with internal systems and other public access channels, and sustaining infrastructure.

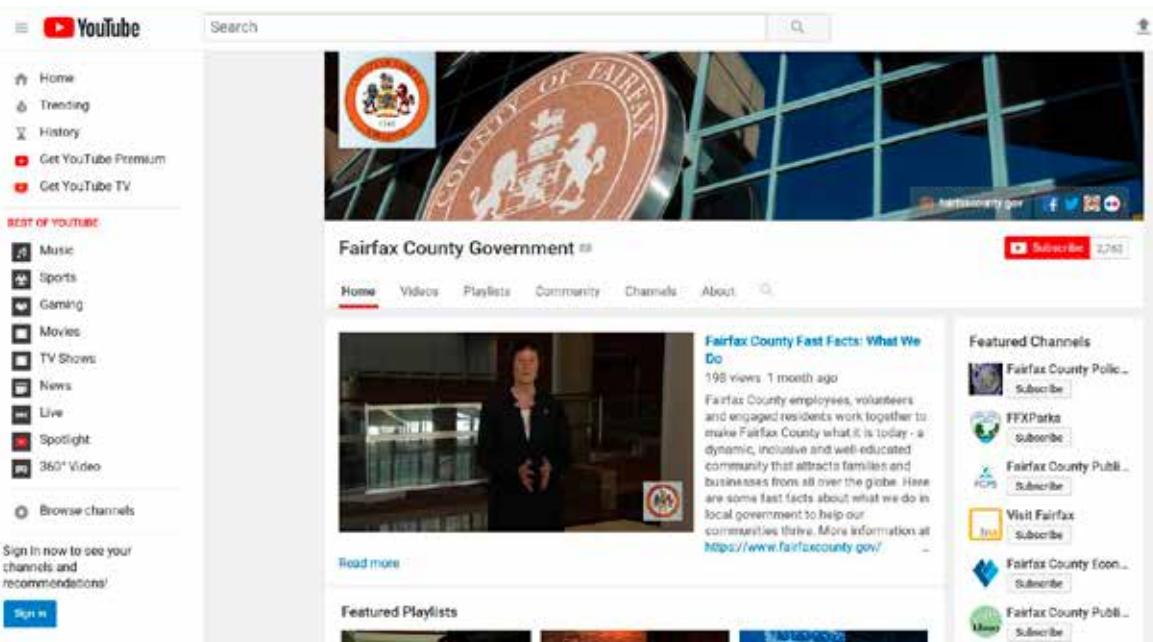
### Project Goals

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 is 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, provides additional search capabilities on the public web site, and enables 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. 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, as well as mobile version of the County website with mobile and iPhone applications. The County website is also translated into 12 languages using machine translation powered by Google. In order to empower public services and affirm County's strategic





Sec3 Figure 2 - County YouTube page

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** (<https://www.section508.gov/manage/laws-and-policies>) and the Americans with Disabilities Act by passing through the County's automated compliance checking tool.

A new open source enterprise **Web Content Management System** was implemented in 2018, which was a major achievement of the e-Gov program. Along with replacement of the backend system, this effort included refining the current site's information architecture, redesigning the entire website with a more modern responsive design ensuring seamless accessibility in mobile devices, and improving search functionality. In addition to installing and configuring the new system to meet requirements, this major effort involved a complete review of the current web content for 55 agencies and reorganizing information to make it a more user centric site promoting ease of use and delivering more online services for public consumption. The goal was to create a more topic oriented web presence with improved business delivery model, enhance search engine optimization, generate better information indexing, and eliminate data silos thereby promoting transparency on the County's web site.

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. 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.

In addition to a mobile website, the public can download the official Fairfax County application on their smartphones and tablets for emergency information, news headlines, one-touch calling through a contact directory, GPS maps, social media links, transportation resources and more at <https://www.fairfaxcounty.gov/topics/mobile>.

The ongoing strategy includes ‘transparency’ and ‘sharing’ which has become an integral part of the Web experience. Recognizing that online collaboration and social media are essential business function in today’s rapidly changing world and key to improving citizen-to-government networking, Fairfax County offers multiple channels such as Facebook, Twitter, YouTube, Instagram, SoundCloud 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 thus augmenting the standard website.

In addition to the use of numerous County-developed cross-agency applications like RSS (Really Simple Syndication feeds), Ask Fairfax!, E-mail 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. These are integrated together and come under the umbrella of NewsCenter which is the County’s one-stop news shop.

The County has about 27 official social media sites/accounts on Facebook, Twitter and YouTube:

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

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

YouTube – <https://www.youtube.com/user/fairfaxcountygov>

Flickr – <http://www.flickr.com/photos/fairfaxcounty>

Instagram – <https://www.instagram.com/fairfaxcounty/>

SoundCloud - <https://soundcloud.com/fairfaxcounty>

## 1 – PUBLIC WEB SITE, MOBILE APP, SEARCH AND NAVIGATION

Fairfax County’s innovative use of technology combined with user-friendly web site design has streamlined the interaction between citizens and the government to provide the necessary tools for interaction and participation with County government. To improve citizen service delivery and provide effective e-Government services, the County website continues to be redesigned with improved functionality and accessibility features since its inception in early 2000. These efforts are achieved with various forms of outreach such as focus groups, online surveys, and usability tests with constituents. Various social media

platforms are employed to expand and redefine communication efforts beyond traditional news releases. To continue empowering citizen access to public services, Fairfax County's Mobile App (available on various mobile devices) provides citizens the added convenience and flexibility of interacting with their government on the go from anywhere at any time.

In FY 2011 - FY 2013, 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. Stewardship of scarce resources was achieved by complete in-house development and repurposing of existing technologies. To date over 28,700 copies of the official Fairfax County Mobile App have been downloaded with numbers increasing every day. Both the County's website and its mobile version provide residents of Fairfax County with a wealth of information, online services and connectivity with their government, mobile browsing is undeniably on the ascendancy – it is expected that more people will be using mobile devices to access the web than traditional laptops and PCs.

In FY 2014, the County launched a family of new homepages for its primary website at <https://www.fairfaxcounty.gov>. The County homepage used responsive design to render seamless information across three device types: desktop, tablet and mobile. The search engine was refined in FY 2014 to improve the accuracy and refinement of results and integrate select social media results.

In FY 2015-2016, the County outlined plans to upgrade its web content management system and review the current information architecture to identify steps and gather requirements to improve, restructure and re-engineer the County's website. The goal of this initiative was to create a more topic oriented Web presence rather than an organization focused site.

In FY 2017, the program continued its focus on more citizen/community engagement, providing multiple communication channels for access to County government 24/7 and on the go. The County's website and the County's mobile applications were re-engineered to deliver more visual, intuitive, citizen-centric, and topic driven content. Enhanced search functionality and more native mobile applications was deployed for public consumption.

A new open source Enterprise Web Content Management System was implemented in FY 2018. This major initiative, which started in FY 2017 included replacing the web content management system, refining the current site's information architecture, redesigning the entire website with a more modern design and "mobile first" approach, as well as improving search functionality. The goal was to create more topic oriented web presence with improved business delivery model, enhance search engine optimization, generate better information indexing, and eliminate data silos thereby promoting transparency on the County's web site. The redesign effort is based on industry best practices, metrics and public engagement. The refresh and redesign of the public website, to improve the digital experience, is an ongoing effort of the e-Government Program to keep pace with evolving internet technologies and further promote user engagement, and open government initiatives.

In FY 2019-20, the program will continue to focus its efforts on innovative projects that will provide services and programs using new technologies like Artificial Intelligence and Chabot's. A new release of the official County mobile app is also planned.

## 2 – WEB FARM INFRASTRUCTURE ARCHITECTURE AND MANAGEMENT

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

- Secured network settings on high availability internet/intranet server farms for constant improvement of system reliability and security
- Continuous refinement of the monitoring system to ensure 24x7 availability
- Enhance web analytical reporting to provide data-driven insights for dynamic content distribution on both Internet and intranet

## 3 – INTEROPERABILITY

The Fairfax County CAD2CAD Data Exchange between the 9-1-1 CAD systems of Alexandria, Arlington, Fairfax, Loudoun, and the Metropolitan Washington Airports Authority provides the ability for these systems to exchange real-time fire and rescue unit status and incident data and allows dispatchers to request resources during mutual aid events from within their respective CAD systems. This collaboration is both a technology integration success and a long sought-after milestone in operations of 9-1-1 dispatch that reduces response times and improves service to citizens. Expansion of the CAD2CAD service regionally to Prince William, Montgomery and Prince George's counties is underway. The unit and incident information from CAD2CAD is also available via web services that can be consumed as XML feeds by the Fairfax County Geospatial Data Exchange. This interoperability initiative, known as CAD2GIS, delivers map ready data services that can be consumed in agency dashboards for fire operations staff or in common map viewers in emergency operations centers for situational awareness.

## 4 – INTRANET

“**FairfaxNet**”, the County’s intranet, which is an employee focused enterprise SharePoint portal that provides an intelligent platform to seamlessly connect users, teams and knowledge supporting the ability to leverage relevant information across business processes to help employees work more efficiently. FairfaxNet is a centralized resource for internal County content, forms, policies, news, application, training and other sources of information, it is also the gateway to the County’s enterprise ERP solution (FOCUS).

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, including applications, pages, documents, PDF, and graphics 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.

Development of project sites to manage and keep track of projects, integration tools to create and automate forms, implementing records management for document storage and archival purposes were the focus in FY 2017-FY 2018.

In FY 2019 - FY 2020, the goals include upgrading FairfaxNet to SharePoint Online to keep the system in line with the evolving technology. Work will continue with the County agencies to automate and streamline business process for operational improvements.

## 5 – WEB CONTENT MANAGEMENT

In FY 2017, a new open source Web Content Management system was selected for the county's website. The scope included fit-gap analysis, requirements refinement, defining information architecture (content classification), and system configuration with appropriate modules plug in/development to enable the reconstruction of the public website including search engine optimization.

In FY 2018, the county implemented Drupal 8 as its Web Content Management system. This state of the art platform provides a scalable solution that puts the county in a position to adapt to new technologies. This system meets the County's requirements for security, publishing workflows, and distributed site management responsibilities. Due to the complex architecture, robust utilities were developed and utilized for rolling out updates and enhancements to the site, ensuring the code and configurations always in sync across the County's website landscape. Enhanced functionality in the form of content sharing was also developed to allow authors to promote and share content with the county's homepage as well as other county agencies and topic sites. The collaborative transition to the new platform provided an opportunity to review, create and update the existing content, where appropriate. Emphasis was placed on user-friendly, modern and responsive "mobile first" design.

The implementation of this new WCM has increased employee efficiency, boosted citizen engagement while being cost effective in removing licensing costs. The newly launched Fairfax County Website demonstrates how collaboration, technology and design can bring the strengths of modern web

applications to bear upon the needs of a wide array of users. The refresh and functional aspect of the public website is an ongoing effort to keep up with evolving technology and public demand.

## 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 2019 Third Quarter funding of 1,250,000 continues support for the County's e-Gov program.

### *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.

## 2G70-041-000 CUSTOMER RELATIONSHIP MANAGEMENT (CRM) PROJECT

### *Project Description*

Customer Relationship Management (CRM) is a foundational technology that supports the County's strategic goal of improving the quality and efficiency of responses to citizen requests/issues by integrating stovepipe applications, implementing on-line 24x7 access strategies, social media tools, and techniques to enhance the overall customer experience and manage service requests via a single user enterprise-wide interface tool.

### *Project Goal*

This project is a multi-year effort for the replacement of the legacy CRM solutions with a contemporary-platform that integrates with County agencies' business applications and processes, consolidating and reducing redundant hardware, software, and maintenance expenses. The enterprise CRM provides for unified tracking and case management of service requests and manages requests via a multi-platform CRM solution across many channels including e-mail, web, social media, and call center capabilities. The improved integration with the County's Web environment, e-mail and communications systems, promotes service efficiency and effectiveness, improved customer experience, and citizen engagement. Information and data provided with an enterprise view enhances opportunities for cross-agency processes and service planning.

### *Progress to Date*

Phase 1 included environment setup, business process analysis, configuration, application development, and data migration for eleven County business systems including Board Offices. Phase 2 consisted of successful data conversion and migration from IQ to the new CRM application for the Board Chairman's office and the Dranesville Board office.

Phase 3 (FY 2018) of the project included implementation of MS Dynamics for Department of Tax Administration, Office of Public Private Partnerships, Office of Public Affairs - VFOIA (VA Freedom of Information Act) Front Desk, Media relations, and Sully and Mount Vernon Board Offices. Future phases will continue planned migration from the legacy to the new consolidated CRM platform to remaining agencies. Migration to Microsoft Dynamics' 365 cloud environment begun with successful implementation of the Health and Human Services Front Porch application and VFOIA training. Currently conversions are underway at: Cable and Consumer Services, Purchasing and Materials Management, Human Resources, and the Legislative Monitoring. Future phases will continue planned migration from the legacy to the new consolidated CRM application.

### *Project Budget*

FY 2019 Third Quarter funding of \$400,000 provides for continued deployment of an enterprise CRM to County agency in order to optimize the County's ability to address citizen's service requests, enhance case management and issue tracking.

### *Return on Investment*

CRM technology facilitates increased efficiencies and effectiveness in managing the many citizen requests and interactions within and across County agencies and business functions. It allows a constituent-focused operation where government is positioned to be proactive to citizen concerns by enhancing collaboration among all agencies and by providing knowledge of common issues for follow-up. The CRM solution also improves transparency by allowing constituents to easily view how the County manages their request by providing a tracking number. Savings are generated by consolidating intakes, reducing the number of duplicate request, and eliminating redundant systems. This cost savings provide tangible evidence to citizens that their government is working for them efficiently by providing better access to information, optimized issue response/processing, and improved accountability/compliance.

## **2G70-069-000 TAX SYSTEM MODERNIZATION PROJECT - TAX/REVENUE ADMINISTRATION**

### *Project Description*

This project provides for the replacement of the two core tax systems, Personal Property and Business Professional and Occupational Licensing (BPOL) with a web based application. Implementation allows 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 enhances opportunities for integration with other County and State systems, as well as facilitates citizen interaction and self-service opportunities via web-based technologies.

### *Project Goals*

The legacy mainframe platform for the Personal Property system and BPOL limits integration with other County and State systems, limits reporting, as well as constrains citizen interaction and self-service opportunities via web based technologies. System enhancements and modifications, many of which are required by changes in State and County code, cannot be made economically and require lengthy development periods. Integration with Virginia State Department of Motor Vehicles (VA DMV) and Department of Tax Administration (DTA) 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 systems.

### *Progress to Date*

This project was initiated an in-house effort to redevelop the outdated legacy Personal Property Tax System which includes Personal Property and Business Professional Occupational License, Delinquent Collections and associated reports and interfaces to the cashiering system, WEB, and Commonwealth of VA DMV and DTA. The goal was to redevelop the legacy applications to modern, supportable technology platforms for the existing functionality. The focus was then expanded to include enhancing the citizen, business, and staff user experience with DTA. The expanded scope included database re-organization to eliminate batch processing requirements, addressing data deficiencies and other application limitations, as well as DTA identifying business processing improvements and integration with on-line capabilities.

In late FY 2018, the Personal Property, Business Professional and Occupational Licensing, Short Term Rental, and Delinquent Tax Online Web applications were delivered to the Department of Tax Administration for user testing and evaluation. Development of batch related functions for most of the applications is complete and delivered for DTA user testing in March 2019. The web service integration with internal County applications (FOCUS-SAP, iNovah, MyFairfax/Tax Portal, and EPAY), external County partners (Nationwide Credit), and Virginia State agencies (Department of Motor Vehicles, Department of Taxation) will be delivered to DTA for user testing in early FY2020. In addition, the applications will be optimized to facilitate mobile platform use by County citizens and staff in FY 2020.

### *Project Budget*

Additional funding is not included in FY 2020 budget.

### *Return on Investment*

This project eliminates risks to County revenue generated from the assessment and collection of Personal Property and BPOL taxes. Modern technology platforms will enable the Department of Tax Administration

to enhance customer access and improve services to citizens and the business community and enhance the security and use of web technologies for self service functions increasingly used by the community to interact with County systems. This project will also provide for automated integration with other County and State systems directly impacting the County's revenue collection activities, and contribute to retirement of the legacy mainframe environment in the data center.

## Online Payments



Sec 3 Figure 3 - Menu from Department of Tax Administration website

### IT-000006 OFFICE OF ELECTIONS TECHNOLOGY PROJECT

#### *Project Description*

The purpose of this project is to coordinate the strategic enhancement of election-related technologies and data-driven initiatives for election systems in Fairfax County. The project aims to do so by helping the County identify and implement the business and technical requirements for election-specific hardware, management systems and applications, as well as manage the acquisition and lifecycle deployment of these systems. All project deliverables and services are designed to meet the operational, security and performance requirements of the County and to comply with Federal and State election laws and mandates.

#### *Project Goals*

The primary objectives of this project are to identify and resolve election-specific technology gaps and implement technical solutions that consolidate business practices and increase public access to election information and services. Efforts consistent with these objectives include modernizing the agency's voting equipment and electronic pollbooks, as well as upgrading the practices associated with asset management, voter registration, poll worker management and the aggregation of election results.

#### *Progress to Date*

**Voting Equipment** - was successfully modernized by shifting from a multi-vendor model to a single unified system. All stages of the project, including procurement, machine testing, implementation and post-

production maintenance/support have been executed and are complete. The equipment has been used in 15 elections and has processed nearly 2.5 million ballots since it was procured in FY 2014.

**Election Insights** - web application that analyzes election results and machine logs and layers it against polling place and geolocation data to provide an in-depth visualization of voting activity and machine performance. This project, while informative, has been canceled and is no longer in use.

**Electronic Poll books** - transitioned legacy electronic poll books to an enterprise iOS application using current technology. All aspects of the project were successfully executed. The devices have been used in 16 elections and processed more than 1.9 million voters since they were procured in FY 2016.

**Voter Registration** - digitized more than 820,000 paper-based voter registration applications to be batch uploaded into the state's central voter registration system. This project has helped streamline several business processes within the agency and has decreased application review times by approximately two-thirds.

**Poll Worker Management** - migrated 5,500 volunteer records to a current database and technology platform. Work continues on enhancements to the system.

**Asset Management** - The Office of Elections is implementing an asset management system to account for and track its election-critical resources, which in turn, will help establish a comprehensive audit log and chain-of-custody for each asset. These resources include, but are not limited to, voting equipment, electronic pollbooks, ballot definition files, physical ballots, results media and so forth.

**Election Results** - The Office of Election implementing a reporting system that allows for the transmission of unofficial results to be performed at the precinct-level using an interactive webform that is accessed through the pollbook application. A recent pilot test of the system improved reporting times by 80 percent and reduced data entry errors by 98 percent.

### *Project Budget*

Additional funding is not included in the FY 2020 Budget.

### *Return on Investment*

This project will ensure the County's compliance with Federal and State elections mandates as well as the Report and Recommendations of the Presidential Commission on Election Administration and the Fairfax County Bipartisan Commission report on Election Improvement.

## IT-000007 ENTERPRISE PROJECT MANAGEMENT

### *Project Description*

The Enterprise Project Management initiative addresses a need for a more structured enterprise approach to project and portfolio management for County projects and the County's IT Investment Portfolio. This project provides for more effective and streamlined IT project portfolio and project management practices across County departments.

### *Project Goals*

Project goal is implementation of a project/portfolio management solution to strengthen centralized management of the processes, methods, and technologies used to manage IT Projects. The proposed solution will provide an integrated dashboard for monitoring key project performance indicators, automated project tracking and reporting capabilities, standardized project management methodology, improved communication, collaboration and decision making, and reduced manual processes. A standardized project management solution can support various business areas across multiple departments. This project will also leverage and expand the use of existing SharePoint licenses.

### *Progress to Date*

In FY 2017 - FY 2018 design, development and testing of Phase 1 – Portfolio Management Module was completed and the solution was moved to production.

FY 2019 work will include the design and development of Phase 2 which includes a project management portal to improve communication, consolidate and present performance data, develop dashboards, and provide stardadized project management methodologies is planned to go live in FY 2020.

### *Project Budget*

Additional funding is not required in FY 2020.

### *Return on Investment*

Project/portfolio management tools provide the County with the ability to enhance management of large complex enterprise wide projects, enhance and improve project planning and organization, scheduling and resource management, cost control and budget management, communication, decision-making, and documentation. In addition, project management tools improve project resource management – physical, financial and otherwise, to meet overall project objectives.

## IT-000016 BUDGET SOLUTIONS PROJECT

### *Project Description*

Fairfax County Government (FCG) and Fairfax County Public Schools (FCPS) have partnered on a multi-year, joint initiative to implement a budget solution to accommodate the requirements of the end-to-end public sector budget formulation process, projections, reporting and program measures. The annual budget process is an ongoing cyclical process simultaneously looking at two fiscal years (current and future/budget preparation).

Fairfax County Government (FCG) and Fairfax County Public Schools (FCPS) have similar overall budgeting processes with distinct development calculation methodologies, timeframes, and reporting requirements, necessitating the maintenance of autonomy between FCG and FCPS. Business requirements for handling budget development and quarterly adjustments vary from year to year. A budget solution on a modern platform will provide the necessary structure and flexibility to meet strategic and tactical requirements also with flexibility to adjust to evolving needs and opportunities.

Modern technology will support preparation of complex budget publications with rapid turnover that rely on consistent data presentation and formatting, in which data must be quickly verified and edited and published in a variety of formats including the WEB.

### *Project Goal*

This project plans to Development of a budget solution to support all facets of budget preparation on a single platform for both County and Schools including:

- Base and incremental budgeting for both expenditures and revenues
- Annual budget formulation and quarterly review adjustments
- Operating fund budgeting
- Multi-year Capital Project and Grant budgeting
- Modeling and forecasting
- Personnel expenditure forecasting, planning, and management

The new design also will:

- Support the end-to-end process in a single solution platform that is centrally developed and used across the Fairfax organization
- Facilitate autonomy between FCG and FCPS budget development processes and query
- Provide functionality to manage related budget office functions such as management and control of position count, performance measurement data tracking, budget monitoring and forecasting/projections.
- Presentation of budget data in a wide variety of formats and levels of detail including summary reports and detailed line item reports.
- Seamless integration of budget processes (development, monitoring, reporting, etc.)

with enterprise financial and human resource processes, including the SAP financial system, FOCUS budget modules, grants, human capital management applications in County and FCPS.

- Integration with the FOCUS data warehouse for the extraction of budget and actual data at user-defined intervals and upon request.

- Implementation of security and user role management
- Achieve system maintenance and data management efficiency

### *Progress to Date*

Phase 1 of the budget solution is currently in progress, with base requirements defined and development underway for County and Schools. Future phases for the solution include forecasting/projections, performance measurement data tracking, position count tracking, and budget monitoring.

### *Project Budget*

Additional funding is not required in FY 2020.

### *Return on Investment*

During the period since FOCUS went live, County and Schools budget staff have been utilizing different legacy and manual solutions for budget preparation needs. The marketplace did not have a commercial solution that met the needs of a local public budget formulation process of the complexity and scale of Fairfax County. After researching the market and other governments, it was determined that custom development using industry standard tools and leveraging existing county IT infrastructure was the best and most cost effective path.

Phase 1 of this project will provide functionality for budget preparation and budget publication including the ability for central budget staff to prepare Advertised/Afforded budgets and quarterly reviews. The solution will provide a permanent budget system that will have built-in integration with other County systems including integration with the enterprise resource planning systems (FOCUS/LAWSON) and the reporting data warehouse while also providing security roles and user administration to allow access by department end users, thus relieving much of the additional work from central budget office staff. In addition, with role-based access, system controls and security are enhanced.

In addition, it is anticipated that the budget solution will be better positioned to mitigate risks for system failure by implementing disaster recovery and backup protocols on an enterprise platform. Also, the enterprise platform will be scalable and supported by multiple resources. Long-term opportunities remain in gaining operational improvements in a cost-effective manner through continuous implementation of enhancements on a platform that is scalable, maintained on-site and supported by in-house staff. Creation of a custom budget solution will allow for significant cost savings and efficiencies in terms of staff time management and other resources.

## IT-000017 ENTERPRISE DOCUMENT IMAGING PROJECT

### *Project Description*

This project provides for the multi-phase implementation of a contemporary enterprise document management platform and its utilization in support of on-going County agencies' efforts for imaging documents and integration with case-management systems and/or agencies operations. This initiative also, provides for more cost effective compliance with mandated document retention requirements. Current document imaging systems at the County will be upgraded to latest versions and newer technology.

### *Project Goals*

Goals include implementation of a contemporary Enterprise Document Management platform designed to address the ongoing evolution of technology and its utilization in support of the business functions within the County. This project supports the strategic goals of reducing paper records, promotes efficient archival and retrieval of documents, and facilitates electronic workflow process improvement initiatives in County agencies.

### *Progress to Date*

Contract was awarded to multiple-vendors for contemporary document management solutions. Business, technical requirements, analysis, stakeholders working sessions and phased implementation began in FY 2016 and continues across County agencies.

### *Project Budget*

Funding of \$850,000 (\$350,000 at FY 2019 Third Quarter, \$150,000 in the FY 2020 budget and \$350,000 planned for FY 2019 Carryover) will continue supporting this initiative.

### *Return on Investment*

Enterprise Document Imaging systems will enable the County to have a rich document management and business process flow for retrieval and storage of a vast quantity of required paper records. The new platform will automate workflows, improve business process efficiencies and productivity, reduce paper records and storage needs, and make data more accessible, easily retrievable, secure and compliant with records management regulations such as the Freedom of Information Act (FOIA). Implementation of a more current document management solution will enable on-line search of digital documents that will provide significant improvement in efficiency for County agencies using data as an integral part of daily operations. It also allows more effective use of advanced analytics for decision making, resulting in service improvements for Fairfax County residents. In addition to fast and reliable business processes, the document management solution minimizes the need for storage of paper records, reduces storage space needs and protects against mounting storage costs.

## IT-000024 INTEGRATED LIBRARY SYSTEM PROJECT

### *Project Description*

This multi-phase project will replace the aging Integrated Library System (ILS) used by the public and staff to access nearly all library transactions. The legacy system has reached end of life and will be replaced with a more contemporary integrated web-enabled system with social media features to provide better online features as well as informative content, enhanced formats, improved stability and response time. The Integrated Library System (ILS) is at the center of all library processes, integrating with the library's public-facing web pages, used for fine payment, online resources such as Overdrive for eBooks, enhanced catalog content such as NoveList, used for collection of delinquent accounts, collection analysis, mobile library catalog apps, SharePoint for internal work processes, and other services. In FY 2017, the system had 430,000 card holders and included 2.1 million items in the collection; it fulfilled 1.3 million customer holds and 11.4 million items were checked out. The Library's website had 3.9 million visits, 7.2 million page views, and the library catalog (ILS) had 30 million page views.

### *Project Goals*

The goal of this project is to replace the legacy library information management system with a more contemporary ILS system with enhanced formats, improved stability and response time, integrated interfaces with all content, and a web-enabled system with social media features. Implementation of a new library system supports the Library's strategic goals of expanding access to information, resources and services; engaging and empowering the County's diverse communities; enhancing Fairfax County's investment in education, and fostering a culture of innovation and creativity.

### *Progress to Date*

- Phase One: CY 2016-2017: Conduct research, focus groups, surveys, write and publish RFP
- Phase Two: CY 2018: Select vendor, conduct legal review and purchase product
- Phase Three: CY 2019: Deploy and launch new product

### *Project Budget*

Additional funding is not required in FY 2020.

### *Return on Investment*

A contemporary Integrated Library System will provide an enhanced customer experience for those who use library services, both in person and online. Every online transaction results in fewer transactions that need to be addressed by library staff. While there will always be services that are best managed by County employees, many of the most common library services can be managed by the customers independently. In a time of reduced budgets, enhanced online services can help maintain a high level of service. Public

library customers, like all members of the public, are spending increasing amounts of time online and with mobile devices. A contemporary and fully-featured integrated library system, with elements intended to engage the public, will encourage the public to access and utilize the library's site to meet their needs.

## IT-000028 GEOSPATIAL INITIATIVES

### *Project Description*

GIS is a strategic foundational technology, integrated with numerous County applications and business processes. It is an essential component of County operations and is heavily used by a wide range of County agencies. GIS data and maps are extensively used in tax assessments, emergency response, public safety, planning and response in the Health Department, forest management, storm-water management, and planning and zoning.

GIS is utilized across most County agencies on a daily basis for planning and decision making. The quality of those decisions depends on the data being used in terms of its currency, accuracy and completeness. The current initiatives include support for 4 important sets of data: Ortho/aerial imagery, oblique imagery, planimetric data, and LiDAR (Light Detection and Ranging). Aerial imagery is the foundation for accurately placing most of the data in the GIS and planimetric data. Derived from aerial imagery, orthoimagery is used in almost every GIS application in the County. The planimetric data is important to many County operations. The highly detailed contour and surface data is critical for the County's Stormwater Management Program and is used in all of the displays in the County's public safety/emergency response vehicles. Oblique imagery is essential for critical 911 call takers, in the review of homes by Tax Administration, checking zoning applications, and provision of 3D data for Virtual Fairfax. The County collaborated with US Geological Survey to acquire its first LiDAR, that data has proven to be of significant value to Urban Forestry and Stormwater. As a result, the County will pursue regular refreshes of LiDAR, particularly as its cost continues to decline. Additionally, the highly detailed and accurate LiDAR data may reduce expenses for planimetric update.

### *Project Goal*

This initiative supports acquisition, maintenance, and refresh of key "foundational" GIS data assets at frequencies necessary for optimal County operations. Currently there are three data sets that must be maintained and a fourth (LiDAR) that is being planned. The refresh goals for each are as follows:

- Oblique Imagery acquisition - refresh every 2 years.
- Ortho Imagery - refresh/ every 4 years at no cost from the state (12" resolution). Every other period (8 years) the County will pay the state to upgrade the resolution (6") of the imagery for use in the planimetric update. The 2017 imagery had a 6" resolution.
- Planimetric data (derived from the orthoimagery acquired with the state) update every 8 years. Because of the size of the investment necessary to update/add up to 17 million features, an 8-year refresh cycle, that

is carried out across 4 years, was determined to be the most efficient and cost effective approach. The highly detailed contour and surface information is particularly important for the County's Stormwater management program. Tests were performed to determine if the surface and contour information from LiDAR can replace that from the planimetric update (and reduce its cost.) It was determined that LiDAR would replace the topographic update from this project. This change will pertain to the second through

fourth quadrants of the current planimetric update project.

- The highly-detailed LiDAR surface and elevation data is able to detect erosion and other changes in the ground surface. It is also useful in analyzing line of site options as with the Route 1 Embark project, and helping with land use/land cover analyses. In 2017, the County's Environmental Quality Advisory Council (EQAC) specifically recommended that the county pursue regular acquisition of LiDAR which is refreshed every 4 years.

### *Progress to Date*

The County has been acquiring oblique imagery biennially for 15 years and will be re-flown in 2019. The imagery is used directly by Department of Tax Administration and many other agencies in the heavily used Geographic Exploration & (GEMS) application. Soon the imagery will be available via the public version of GEM. Oblique imagery, which was refreshed in 2017, is also the source of the 3-D buildings that are used in the publicly available Virtual Fairfax application. The aerial and orthoimagery that is jointly acquired through the state is the essential foundation of the planimetric data update. It is also the most locationally accurate base for placement of other County map-based data. Six-inch resolution imagery was acquired in 2017 and will be used in the update of the planimetric data. The County now has complete LiDAR coverage (part in 2012 and the rest in 2014) for the first time. With the acquisition of updated and enhanced LiDAR data in FY 2020, the County will have imagery from two different points in time that can be used for surface change analysis.

### *Project Budget*

Funding of \$450,000 is provided as part of FY2019 Third Quarter to continue support for the County's Geospatial Initiatives.

### *Return on Investment*

Key GIS data sets are used in all County web applications that incorporate maps and in nearly all public safety vehicles through maps included in the CAD/911 system. Oblique imagery is essential for multiple County functions including critical 24x7 public safety response and tactical tasks, review of zoning applications, property review by the Department of Tax Administration, and provision of 3D data for Virtual Fairfax. The GIS database with new impervious features and contouring, facilitates key land use applications as recommended by EQAC. GIS data also provides County agencies readily accessible data for locations across the County and the ability to view field conditions from a desktop reducing the need to travel, resulting in significant staff time savings and improved response. Planimetric data is planar data (2D) derived from observable natural and man-made features visible on aerial imagery, making up many of the key GIS layers used in most maps created in the County, and providing an easy to display base map

for all format devices. Finally, LiDAR is providing the most detailed surface elevation data that the County has ever had available, making it especially helpful in stormwater run-off analyses, Urban Forestry canopy evaluations, and line of sight determinations for proposed developments.

## IT-00030 INVOICE PROCESSING PROJECT – DEPARTMENT OF FINANCE

### *Project Description*

Fairfax County's Department of Finance and Fairfax County Public Schools' Financial Services scans approximately 100,000 invoices for image capture and workflows for accounts payable routing. The process currently relies on a legacy document management platform that is no longer supported. This project supports migration and conversion of existing data to the County's new enterprise document management platform, including implementation of the Vendor Invoice Management (VIM) system. This initiative is a collaborative effort between the County Government and Fairfax County Public Schools' Financial Services.

### *Project Goals*

The goal of this project is to deliver an improved and streamlined accounts payable process for Fairfax County Government and Schools by migrating invoice scanning and workflow management from a legacy document management system to the County's new enterprise document management platform.

### *Progress to Date*

Following project initiation in FY 2019, to date, the project has completed invoices image scanning and migrated all archived invoices to the County's new enterprise document management platform. The switch in scanning programs and document migration represents approximately 40% project implementation. The remaining phases of the project will go live in FY 2020.

### *Project Budget*

Additional funding is not included in the FY 2020 Budget.

### *Return on Investment*

Each invoice image provides an audit document for review and approval as well as purchase justification, is saved as part of document retention requirements, and alleviates the need for storage of hard copy invoices. Scanning invoices begins the accounts payable process and starts the aging for all documentation, limits the routing of paper copies thus preventing lost invoices and reducing late payments. The automated workflow allows finance personnel in agencies and at FCPS to locate and review all invoices for their agency. Copies of these invoices can be printed at any moment and used to provide support for internal and external reports, including audit and FOIA requests. This initiative will increase efficiencies in invoice processing as well as agency approval routing, and provide quicker turnaround time on invoice submission and approval which will assist prompt vendor payment and discount realizations.

## IT-00031 DATA WAREHOUSE AND BUSINESS INTELLIGENCE - DEPARTMENT OF TAX ADMINISTRATION (DTA)

### *Project Description*

This project supports the development of a data warehouse business intelligence solution for the Department of Tax Administration (DTA) to collect and analyze data from disparate internal tax systems and third-party data sources, develop composite data queries, reports, dashboards, and data visualizations to make analytical results available to County decision makers, staff, and external users. The analysis of the impacts of raising or lowering tax rates, creation of new special taxing districts, and the identification of business development areas currently require extensive efforts to develop mission specific reports.

### *Project Goals*

This project will provide a Business Intelligence Data Warehouse for internal and external analytical use, support development of composite views of the County's tax information for use by management and staff for improved business decisions, support optimized internal business processes and compliance with tax requirements.

### *Progress to Date*

Business process review is planned for FY 2020.

### *Project Budget*

Additional funding is not included in the FY 2020 budget.

### *Return on Investment*

This project will support replacing multiple disparate tax and ad hoc database systems with an integrated solution that supports standardized processes for data gathering and sharing across all County tax systems. The data warehouse will be a self-service tool designed to improve response to tax/revenue reporting needs more efficiently and enable DTA to create on-demand management and analytical reports for improved decision making and operational effectiveness.

## IT-00032 ORACLE DISCOVERER REPLACEMENT - DEPARTMENT OF TAX ADMINISTRATION (DTA)

### *Project Description*

This project supports the replacement of Oracle Discoverer, a reporting tool currently used in conjunction with DTA's iasWorld Computer Assisted Mass Appraisal (CAMA) System. The system allows both Residential and Commercial appraisal staff to retrieve, analyze, review and print "Live" tax and assessment valuation data as soon as it is entered into the CAMA system. These reports support development and distribution of timely and high quality annual tax assessment. The Oracle Discoverer application is no

longer supported and will be discontinued in the near future. This project will facilitate replacement of the current application with a similar product to ensure both the quality and timeliness of the County's annual assessments.

### *Project Goals*

The goal of this project is to replace the existing legacy reporting tool with a contemporary enterprise solution that can meet DTA's many reporting requirements.

### *Progress to Date*

DTA reviewed the function and criticality of all existing Discoverer Reports to determine reports critical for operations and required for conversion. The review process eliminated over 50% of report no longer needed and focused on reports based on priority, usage and critical data needs, results indicate approximately 550 Discoverer Reports in need of conversion. An analytics and reporting tool was identified which provides self-service reporting by enabling operational and ad-hoc reporting on demand from any device. The platform offers strong reporting capabilities including support for multiple output formats, drag-and-drop visual report and dashboard builder, drill down feature for in-depth analysis, on-demand or ad-hoc reporting, intelligent query generation, scheduling of reports, and easy sharing.

### *Project Budget*

FY 2020 funding is not included.

### *Return on Investment*

The Discoverer Reporting tool is used daily by DTA staff to produce and support County tax assessments, support Department of Management and Budget's forecasting, and produce reports for the Board of Supervisors and the County's executive management. Its replacement is necessary and central for DTA operations and revenue reporting requirements.

## **IT-00033 TAX PORTAL ENHANCEMENTS – DEPARTMENT OF TAX ADMINISTRATION (DTA)**

### *Project Description*

This project supports enhancements for an improved and streamlined, citizen-oriented experience on the My Fairfax - Tax Portal. The County has experienced tremendous growth and steady demand for online and mobile access to the County's tax and revenue systems. This initiative will continue to modernize and provide easier access to the County's tax portal while maintaining established information security protocols.

### *Project Goals*

Enhancements to the MyFairfax - Tax Portal coincide with established customer service and business initiatives to provide easy access to tax related information and history and to empower County citizens and businesses to perform all tax related activities, inquiries, payments, etc. remotely, via the web or on a mobile device. Security improvements such as the use of a two-factor and bio-metric identification as well as integration with various password management applications will continue to provide secure access to tax and revenue data. Additionally, functional improvements such as access to tax history via a mobile device by scanning intelligent 2D bar-code information already contained on all County tax correspondence, can be realized and leveraged. Also, further integration with 3rd party applications to facilitate functions such as taxpayer initiated and managed recurring payments provide an additional benefit. These enhancements to the MyFairfax Tax Portal will provide a more robust online experience for all taxpayers by enabling an interactive online experience County citizens and businesses expect.

### *Progress to Date*

During the initial phase, the project identified the need to enhance the customer service experience on the Tax Evaders Online Application (Target) used by citizen to report possible residents evading Personal Property tax payments. In collaboration with the CRM (Customer Relationship Management) team, a plan was developed to move the Tax Evaders application out of its current non-integrated, legacy application to an integrated Microsoft CRM environment. This segment of the Tax Portal Enhancement project is currently in the design and once implemented with interface with the Tax Modernization Project.

### *Project Budget*

Additional funding is not included in FY 2020.

### *Return on Investment*

Enhancements to the MyFairfax Tax Portal will improve customer service, decrease the volume of phone calls and in-person visits, help reduce expenditures associated with the printing and mailing of bills, and free staff for other more complex business initiatives. The continual application of new technologies and service delivery methods is necessary to keep up with the demand and expectations for easier online and mobile access to tax information and transactions.

## IT-00036 TARGET ENHANCEMENT PROJECT – DEPARTMENT OF TAX ADMINISTRATION (DTA)

### *Project Description*

This project supports the redesign of the Department of Tax Administration's (DTA) Tax Evader/Target website into a more interactive application, integrated with County revenue systems, GIS, CRM solutions, and available via web/mobile platforms for easy access and use by County citizens and staff. Virginia Code § 58.1-3518 requires all owners of vehicles normally garaged in Fairfax County to report their property to DTA. If a taxpayer fails to do so, Virginia Code § 58.1-3519 empowers DTA to make a statutory assessment based on the best information available. This redesigned application will significantly improve the County's ability to track and manage revenue collection.

### *Project Goals*

The goal for this project is to redesign and deploy a single application for reporting vehicle tag and location information, integrated with the Master Address Services (GIS), County tax applications for vehicle registration, license plate reader applications, and CRM MS Dynamics for workflow management, tracking and reporting.

### *Progress to Date*

To date, the project has worked with stakeholders to gather and document detailed requirements, analyze the existing solution and identify integration points. This work resulted in the development of a Requirements Specification Document, which will be used to design and develop a prototype for the Target System's workflow process. Using an agile development methodology the project will continue to work on design, architecture and development to address the requirements as defined by the Department of Tax Administration.

### *Project Budget*

FY 2020 funding of \$200,000 and FY 2019 Carryover funding of \$200,000 supports this initiative.

### *Return on Investment*

The redesign effort will provide a single point application for reporting vehicle tag and location information, accessible to County citizens and staff using web and mobile platforms; integration with County Master Address and Location services (GIS); integration with County Tax applications for vehicle information retrieval and automated registration; integration with License Plate Reader applications; and integration with County Microsoft Dynamics CRM for Workflow Management, Revenue Tracking, and Constituent Reporting.



## 3.4 Technology Infrastructure

### 2G70-018-000 ENTERPRISE IT ARCHITECTURE AND SUPPORT PROJECT

#### *Project Description*

This project supports the strategic infrastructure and expert services required for complex multi-phase enterprise-wide business transformation of IT systems for County general services, enterprise technology, security and infrastructure, and corporate systems including the County's ERP and related business systems.

#### *Project Goals*

The main goal is to realize optimal system performance and infrastructure environment efficiencies, and support system enhancement and open-government initiatives. This includes various product platforms, security, middleware, document management, and the web services for seamless performance between Fairfax County Government agencies and Fairfax County Public Schools environments. Additionally, the project provides for on-going transformation support activities, development of business intelligence and reporting model repositories, system performance, system engineering, security access technology and knowledge transfer. The funding supports projected system integration and configuration services and includes various product platforms, security, portal and web services enabling seamless system integration.

#### *Progress to Date*

A modern system landscape and server environment was implemented for development, testing, training, conversion and full production systems needs that support the SAP ERP solution, portals, security and

third party bolt-on products for overlapping project phases. On-going infrastructure and specialized expert support services will continue in FY 2019 to support system enhancements and required upgrades, workflow and reporting improvements, transparency, system performance and engineering, security access technologies, and technical system refresh.

### *Project Budget*

Funding of \$1,500,000 (\$1,204,750 at FY 2019 Third Quarter and \$295,250 at FY 2019 Carryover) continue supporting services necessary for enterprise wide business applications and infrastructure processes.

### *Return on Investment*

This initiative supports the County's on-going technology modernization program aligned with the IT investment priorities that provide a stable and secure IT architecture while leveraging IT investments. This program allows for a 24 x 7 system availability and extends the ability of agencies to perform work with an improved window for planning and executing system maintenance activities with fewer resources. On-going support for modernization of County systems empowers both employees and managers to execute processes more efficiently, and support functions that improve overall system performance and availability.

## **2G70-026-000 FAIRFAX RADIO SYSTEM PROJECT**

### *Project Description*

The County has two 800 MHz radio systems: the Public Safety system on newer technology supporting all the public safety responder agencies, and, the Public Service systems and a legacy 800 MHz radio system serving the general government agencies and Fairfax County Public Schools. The Public Safety Radio system was upgraded in FY 2014 to the new P25 digital/IP technology (this system is supported in the DIT Operating part of the E911 - Fund). The Public Service system is over 13 years old using proprietary technology developed in the 1990's and based on the older circuit-switched analog technology which is lacking in sufficient call processing capacity to meet current end user requirements, and has high maintenance costs. Further, at the end of 2018 the manufacturer (Motorola) declared it will no longer be supported, thus system must be decommissioned as it can no longer reliable for critical communications. This project provides redundancy to improve the reliability and disaster recovery capabilities of Public Safety system, and to retire the legacy Public Service system.

The initial plan was to leverage the expanded capabilities and capacity of the Public Safety Radio System P25 digital/IP system, however, after careful analysis and more recent availability of commercially based Push-to-Talk solutions, this project has been modified to replace aging Public Safety Answering Point (PSAP) dispatch center consoles, provide improved back-up and redundancy to the Public Safety radio system, and implement Push-To-Talk for non-public safety radio users. Implementing broadband wireless IP phones with Push - to- Talk for non-public safety users meets a wider set of business requirements for

mobile workforce communications. These efforts will significantly reduce the County's recurring radio systems expenses while providing new capabilities for all of the Fairfax County radio users.

### *Project Goals*

This project provides for the necessary upgrade of the Public Safety system for improved redundancy and modernized dispatch center equipment, and leverages commercial wireless IP phones with Push - to - Talk for numerous non-public safety County agencies including Connector, FASTRAN, Department of Facilities Management and Public Works Environment Services fleets, Fairfax County Water Authority, and Fairfax County Public School Transportation Department (school buses) - approximately 3200 users.

### *Progress to Date*

The Push -To-Talk radio solution was successfully implemented in numerous County agencies, including: Community Services Board, Department of Vehicle Services, Department of Planning and Zoning, Elections Office, Department of Information Technology, Security Staff in the Department of Facilities Management, Department of Vehicle Service, Fairfax County Water Authority, FASTRAN (CSB Merrifield Neighborhood Services), Department of Public Works and Environmental Services, Department of Transportation (CONNECTOR) non-revenue, and Fairfax County Park Authority. Fairfax County Public Schools began piloting the Push-to-Talk service after the amended code § 46.2-919.1 authorizing the use of wireless telecommunications devices became effective, July 1, 2017. Given emerging technologies, Fairfax County public schools Transportation Division continues to evaluate the Push-To-Talk solution.

Interoperability links have been established between the commercial Push - to - Talk network and the P25 Public Safety radio network. Dispatch center call processing equipment has been upgraded at Department of Public Safety Communication (DPSC) and the County's backup facility, Towns of Herndon, Vienna and Fairfax City. The upgrade to the Public Safety radio system and disaster recovery began in late FY 2017 was completed on time and within budget in FY 2018.

### *Project Budget*

Additional funding is not required in FY 2020.

### *Return on Investment*

Broadband Push-to-Talk far exceeds the current Public Service system capacity and provides a future-proof solution by leveraging smartphones and reducing the out-year cost associated with a future "fork-lift" system replacement and associated annual maintenance costs for a separate system. The enhanced Public Safety Radio system will provide continuing dedicated utility and enhanced backup capability for improved reliability for Public Safety agencies and other emergency support functions. Leveraging the use of the new Push-to-Talk functionality on smart-phones provides enhanced mobile workforce capabilities for the County workforce at a lower cost. The two capabilities will be interoperable, allowing communication between public safety and public service users for incident or disaster management.

## 2G70-036-000 REMOTE ACCESS PROJECT

### *Project Description*

This project supports enhanced and expanded capability of authorized County users to securely access the County's systems from remote locations for field service activities, telework, Continuity of Operations Plans (COOP), and emergency events such as pandemic outbreaks or natural and weather emergencies.

### *Project Goals*

This project established an enterprise-wide standardized remote access control methodology and architecture that provides a solution for employees and external system users, partners and County customers to authenticate their identity in order to gain access to systems and relevant data to conduct work securely. All user authentication management is based on policy and centrally managed allowing for comprehensive audit and reporting services. This project supports increased security, simplified management, secure access from remote locations, and mobility.

### *Progress to Date*

Through this project, over 4,000+ users can access County systems as authorized, with over 3,000+ able to gain 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*

Funding of \$200,000 (\$100,000 each at FY2019 Third Quarter and Carryover) continues support for remote access capabilities.

### *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.

## 2G70-052-000 CYBER SECURITY ENHANCEMENT INITIATIVE

### *Project Description*

The Department of Information Technology defines and enforces the security standards and policies necessary to protect the County's information assets and technology infrastructure. This project supports ongoing cyber security projects and services to support various initiatives safeguarding the County's IT assets from evolving security threats, cyber security system enhancements, replacements and upgrades, service consultation

expenses, and future security product and service acquisitions to assist with ensuring the confidentiality, integrity and availability of County systems and information and support for regulatory compliance requirements.

#### *Project Goals*

The goal of the County's IT security program is to ensure confidentiality of information, integrity of data, systems and operations, technical compliance with legal mandates such as HIPAA and PCI, privacy, and availability of information processing resources. The basic elements of identification, authentication, authorization, access control, and monitoring are employed throughout the County's technology enterprise.

#### *Project Budget*

Funding of \$500,000 (\$400,000 at FY 2019 Third Quarter and \$100,000 as part of FY 2020 Budget) will continue to support the County's Cyber Security program.

#### *Return on Investment*

Cyber security continues to be a fundamental component of the County's enterprise architecture and strategy. The security architecture and practices fuse best practice principles with a hardware and software infrastructure supported by policies, plans, and procedures. This multi-layered approach is designed to provide an appropriate level of protection of all County information processing resources, regardless of platform, and includes incorporation of industry best practices for an overall risk reduction. The secure network architecture is a defense-in-depth approach to network security design. The County is dedicated to the protection of its IT assets from evolving cyber security threats and blocking unauthorized access to County data and information.

### IT-00034 ENTERPRISE DATA ANALYTICS AND BUSINESS INTELLIGENCE PROJECT

#### *Project Description*

This multiphase project supports the County's strategic objective of improving evidence-based decisions ensuring resources (time, money, and people) are used efficiently and effectively, and developing sustainable strategic plans to better serve constituent populations.

#### *Project Goals*

This project supports implementation of a centralized data analytics and Business Intelligence platform to eliminate agency data silos by integrating information from disparate County systems for improved analysis, decision making, and more effective service delivery across a spectrum of County services. The goal is to provide timely and accurate data that is easily accessed, understood, and acted upon, resulting in a more proactive and effective decision making that is financially and operationally more efficient.

## Progress to Date

The County currently has an existing infrastructure that will enable implementation of this proposed data warehouse/dashboard/business intelligence solution. Phase I will include development of a unified search capability across core custom and commercial Public Safety and Community Services Board (CSB) systems, and implementation of modern, self-service executive dashboards, business intelligence, and reports. Phase II will expand capabilities to more operational public safety data, and other non-public safety agencies (Health and Human Services, Libraries, Schools, Land Development, etc.)

DIT has met with the Community Services Board (CSB), the Courts, the Police, and the Department of Public Safety Communications (DPSC) to review how and what data is captured and reported on in support of Diversion First efforts. Opportunities to automate manual data capture processes were identified, and web-based applications have been built and implemented. This enables more timely and accurate data capture for eventual ingestion in the Data Warehouse. Use cases were created that illustrate the capture and use of the Diversion First data elements. These use cases identified other opportunities to enhance and refine data capture. Data dictionaries are being built in anticipation of the next phase of building a data warehouse prototype.

## Project Budget

Additional funding is not included in FY2020.

## Return on Investment

Enterprise Data Analytics will create a one-stop-shop for County program information and data, operationalizing data currently held in system silos via a central data warehouse. Providing an Enterprise Data Analytics solution to public safety initiatives (i.e. Diversion First and the Opioid Epidemic) will inform the County of what its most pressing public safety needs are, and how best to allocate people, time, and money in achieving the outcomes and metrics critical to the success of programs and initiatives.





### 3.5 Human Services

#### 2G70-008-000 DOCUMENT MANAGEMENT AND IMAGING PROJECT - DEPARTMENT OF FAMILY SERVICES (DFS)

##### *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.

##### *Project Goals*

This project provides a reliable and secure system to catalog, archive and retrieve sensitive Family Services documents for case management and to 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*

Project phases are delivered in modular components aligned with the readiness of the necessary infrastructure. Phase I implementation for the Self Sufficiency Division was complete by the end of fiscal year 2010. Since then the Family Self Sufficiency document management system stores over 70,000 client case files containing over 26 million documents.

In Phase II base document management functionality was implemented for the Children, Youth, and Families (CYF) division in FY 2013, since then 2,000 electronic family and child cases have been created containing over 30,000 documents.

In FY 2017, the Human Services Information Technology Governance Board approved the Document Management component of the IT Roadmap and made it priority in the first phase of implementation. This project is in alignment with the Human Services' Five Year Plan and the consolidated Document Management components in the Human Services Integrated IT System. While, this project will be retired from the FY 2021 IT Plan, the work will continue on transition to the County's new document management platform, including end user identified enhancements to improve functionality and incorporation of business and document workflows to ensure consistency of process.

### *Project Budget*

Additional funding is not required in FY 2020.

### *Return on Investment*

This project provides a reliable and secure system to catalog, archive and retrieve sensitive Family Services documents for case management, improved response time for client inquiries, enhanced management and retention and destruction of DFS records in accordance with State and Federal mandates. The project also prevents non-compliance issues associated with the degradation, damage, or loss of paper files, more effective and efficient use of staff time, and reduced error rates. Additional benefits include improved case and document security, streamlined field work, enhanced opportunities for telework, and reduced space requirements and risks associated with maintaining and routing paper copies of documents.

**This project will be retired from the IT Plan in FY 2021.**

## 2G70-009-000 DOCUMENT MANAGEMENT AND IMAGING PROJECT - OFFICE FOR CHILDREN (OFC)

### *Project Description*

This multi-phased document management project continues the structured enterprise approach of imaging and workflow capabilities in the Department of Family Services' Office for Children's (OFC). The School-Age Child Care Program provides direct services to over 13,000 children in 138 centers throughout the County. Files are maintained on all staff, children, and centers. The transition to an electronic system will ensure that County residents receive the most efficient, highest quality service and that all legal mandates are satisfied regarding record archival and client privacy.

### *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*

In FY 2007, Phase I of the project transitioned Community Education and Provider Services (CEPS), Child Care Assistance and Referral (CCAR) program and the School Age Child Care (SACC) registration files from a paper-based system to electronic document imaging technology (Phase I). Phase I is currently in production. Head Start maintains files for over 350 children and families in multiple locations. With this technology, field staff and federal auditors have the ability to review files electronically without traveling to multiple locations.

In FY 2017, the Human Services Information Technology Governance Board approved the Document Management component of the IT Roadmap and made it priority in the first phase of implementation. Department of Family Services/Office for Children was selected to be the pilot. This project is in alignment with the Human Services' Five Year Plan and the consolidated Document Management components in the Human Services Integrated IT System.

While, this project will be retired from the FY2021 IT Plan, the work will continue on transition to the County's new document management platform. The transition to an electronic system will ensure that County residents receive the most efficient, highest quality service and that all legal mandates are satisfied regarding record archival and client privacy.

**This project will be retired from the IT Plan in FY 2021.**

### *Project Budget*

Additional funding is not required in FY 2019.

### *Return on investment*

This project supports reduced paper usage and provides for more efficient and less costly file storage for the agency and County Archives. Imaging and workflow projects increase the security of records, protect sensitive information from unauthorized access, reduce staff time required for retrieval and re-filing 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.

## 2G70-037-000 CHILD CARE TECHNOLOGY PROJECT - OFFICE FOR CHILDREN (OFC)

### *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 \$1.5 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. It also tracks current market rates for child care providers and interfaces with the County's financial management system.

### *Project Goals*

This project will develop and implement a new Child Care Management System providing 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). This project will also 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, and bring OFC technology in compliance with County standards and requirements.

### *Progress to Date*

In FY 2016 Phase 1 of the CCMS project was completed with the following functionalities:

- Streamlined business process workflows and reports which enable staff, customers, and stakeholders to efficiently manage work and expectations.
- Enhanced interface with some Fairfax County systems and vendor supported systems thus eliminating manual duplicative processes.
- An improved Provider Access module which allows approved family child care programs to conveniently update elements of their business profile on OFC's website; request information about family child care permit requirements and inspections; and manage and view online Reimbursement Submissions.

FY 2018 Phase 2 Priority One functionality was completed to meet required federal and state legislative mandates, improved provider search, tablet inspection functionality and forms updates, public search updates, an archive and purge process, and enhancements to the CCMS system designed to improve OFC's operations and provide improved customer access.

FY 2019 plans include integration of the Child Care Management System with the newly implemented Health and Human Services Enterprise Content Management System (HHS-ECMS) to provide a seamless, streamlined integrated case management process. Integration project was initiated in April 2019 and expected to be completed in early 2020.

FY 2019 plans also include additional Phase II Priority Two functionality listed below:

- Develop Application Checklist workflow in CCMS for Virginia State applications to ensure seamless processing for clients when child care funding changes from State to local funding.
- Develop a Quality Control workflow for randomized application review and create a system administrator permissions to manage randomization percentages.

FY 2020 plans include:

- Develop a module to capture family inquiries about the availability of child care services including Head Start, SAAC, and child care subsidy and track the referrals to programs, prior to family submitting an application for child care assistance. Link the child care assistance inquiries to the online Child Care Search function on the County website.
- Explore a Learning Management System that will allow for registration, tracking, reporting and data aggregation/analysis of adult education sessions across multiple OFC programs.

### *Project Budget*

FY 2020 funding is not required.

### *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 processes for VDSS and VACCRRN allowing quicker processing of applications and child care permits. Migrating to a modern platform that incorporates web technology will provide improved accessibility to data and information from remote locations.

## 2G70-055-000 VOLUNTEER MANAGEMENT SYSTEM PROJECT

### *Project Description*

This project provides an integral approach for recruiting, scheduling, managing volunteers, and producing 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 facilitate enterprise growth of volunteer programs with a single software solution that improves efficiency, recruitment, management, placement, and scheduling. Another goal is to better track and report the contributions of volunteer activities and provide an easy to use 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*

Since its launch in 2013, the system has added 27 agencies including 46 programs covering 250 County sites. In FY 2019, a major software upgrade was accomplished. Development of a pilot program for Boards, Authorities and Commissions (BAC) will continue into FY 2020 with the goal of improving BAC recruitment, accountability for service hours, and strengthen undertaking additional engagement opportunities with community partners. The project will work to enhance reporting capabilities to improve user experience.

### *Project Budget*

Additional funding is not included for FY 2020.

### *Return on Investment*

With over one million County citizens and budget constraints, volunteers are an important component in the sustainability of County programs and services. There are now more than 31,500 volunteers registered in the system, representing all supervisor districts, who are ethnically and educationally diverse.

An Enterprise Volunteer Management System expands the culture of engagement, provides centralized volunteering opportunities and facilitates tracking and reporting of volunteer activities, resulting in additional volunteer services provided to citizens. Additionally, capturing data about volunteer employers allows agencies to apply for corporate grants that are increasingly influenced by employee volunteer contributions.

## IT-000008 CHILD WELFARE INTEGRATION PROJECT

### *Project Description*

The Child Welfare Integration System project will provide a single source for case management and alleviate the time social workers spend updating multiple disparate state and local data systems as they work to serve children and families. Considerable time is lost from direct client services as social workers comply with manual processes and update redundant data in silo systems to fulfill both state and local program reporting requirements. The lack of integration between the various systems results in the inability to demonstrate client specific and program-wide progress and does not support data driven decision making. Child welfare clients often exist in complex and unpredictable situations. As such, social workers need a view of all factors influencing children and families which allows them to assess the challenges and to develop comprehensive plans aimed at successful and sustainable outcomes.

### *Project Goals*

The goal of this project is to develop a single solution for child welfare case management which provides a holistic view of case information, incorporates rules and assessment tools, business workflows, and provides for operational and compliance reports supporting effective service delivery. The Online Automated Services Information System (OASIS) mandated by the Virginia Department of Social Services (VDSS) for case management does not fully support child welfare practices and does not provide the Department of Family Services access to all the information required. Consequently, reporting on customer data is time consuming, requires redundant data entry and data validation with the state systems.

### *Progress to Date*

Project initiation and planning began in F Y2016. This project is on hold pending the outcome of discussions with the Virginia Department of Social Services on the availability of child welfare collected data stored in the state's case management system; OASIS. These conversations are aligned with the Health and Human Services IT Road Map.

### *Project Budget*

Additional funding is not required in FY 2020

### *Return of Investment*

The Child Welfare Integration System project will eliminate the duplication and redundancy involved with updating multiple stand-alone systems by providing a single secure portal for data recording activities, thus allowing social workers to do their job more effectively. The time savings gained can be applied toward guiding clients towards successful and sustainable outcomes. Savings are also anticipated with relation to measuring and understanding the impact of program efforts on participants through improved reporting capabilities to track efforts, outcomes, and participant progress. This system consolidation effort is expected to reduce the amount of IT support required to maintain the multitude of systems currently in place.

## **IT-000009 PARTICIPANT REGISTRATION SYSTEM PROJECT**

### *Project Description*

This project provides the Department of Neighborhood and Community Services (NCS) a consolidated electronic system to register and track participants at community, neighborhood, senior, and teen centers. As part of the new system, participants are issued identification cards with identification codes that they will scan upon entrance at any NCS Center. The new system enables staff to verify program/center eligibility and track participant attendance at both the center and the individual activities offered at the center, provide for better and more accurate data reporting, and enhanced protection of confidential participant data.

## Project Goals

The primary goal of this project is to support implementation of one centralized, web based, participant registration and tracking system to be used at all NCS centers.

## Progress to Date

NCS entered into a joint effort with the Fairfax County Park Authority to obtain a solution to replace both the current Park Authority ParkNet system, and also provide NCS with an electronic Participant Registration System. A final implementation of all centers was complete by the end of FY 2018. Phase 2 included a Financial Module, integrating registration and payment as part of the overall system deployment.

**This project is complete and will be retired from the FY 2021 IT Plan.**

## Project Budget

FY 2020 funding is not required.

## Return on Investment

The primary focus of this initiative is improved customer service, significantly enhanced efficiency and accuracy of data reporting, and improved data protection and security. Response from the community indicates tremendous acceptance of an ID card system for entrance into NCS centers. This project significantly reduced the burdensome paper registration processes and substantially eased the burden on the participants since each participant has to register only once to be eligible to use any NCS center. The system also interfaces with existing financial systems to manage program and related fees. NCS will be able to use the data recorded in the system to meet state and local reporting requirements, assist in program development, and enhance results-based strategic planning within the agency. It is anticipated that revenue collection processes will be enhanced through the use of the proposed system.

## IT-000020 COUNTY-WIDE TELE-PSYCHIATRY PROJECT

### Project Description

The Tele-psychiatry Expansion project supports the Fairfax-Falls Church Community Services Board (CSB) initiative to expand the delivery of specialty and general psychiatry services to Fairfax County areas that do not currently have reasonable access to services. To meet the needs of these residents, CSB's Tele-psychiatry project will expand the use of mobile televideo units to eliminate the rigidity of where clients are seen and increase efficiency by using other non-local psychiatrists.

### Project Goals

Enhancement of existing CSB Tele-psychiatry services, a component of telemedicine services using interactive audio, video, or other electronic media to provide diagnosis, consultation, or treatment. This project focuses on establishing the availability of static and mobile telepresence or teleconferencing

systems for providing psychiatric services to underserved population of youth and adult clients and to make services available to additional sites and more clients.

### *Progress to Date*

Major installation and configuration of hardware and successful preliminary testing with INOVA and Dominion Hospitals were completed in FY 2017. Additional Health and Human Services system sites to be rolled out in phases as more redundancy is also built into the system.

### *Project Budget*

FY 2020 funding is not required.

### *Return on Investment*

In addition to improved delivery of mental health services to the entire community, tele-psychiatry also results in reduced travel time for clients and CSB psychiatrists, increases efficiencies in provision of access to specialty psychiatric providers such as child and adolescent and psychiatrists who speak other languages especially Spanish, provides the ability to conduct unscheduled/emergent psychiatric evaluations 24 hours per day, enables delivery of enhanced psychiatric support for community partners, increases psychiatric evaluations from emergency departments in local hospitals, as well as hospital pre-screenings, and pre-discharge psychiatric appointments.

## IT-000025 INTEGRATED HUMAN SERVICES TECHNOLOGY PROJECT

### *Project Description*

Within the Health and Human Services system, clients, individuals and families are often assessed with multiple needs spanning multiple service programs. A holistic approach to addressing needs along the spectrum of crisis to self-sufficiency to sustainability, as well as strong communication, coordination and collaboration components are key factors in successfully meeting their needs. As the Fairfax County Health and Human Services system moves to an Integrated Business Model, technology will be required to enable and support that vision. The data collected within the Health and Human Services systems help develop policy which shapes future County action. The strategic use of innovative information technology to support Fairfax County's health and Human Services Systems will help find the connections in fragmented data and incrementally link pockets of information across and within functional areas for both a mobile and community based workforce, as well as a diverse client base. This project supports the development of a roadmap and implementation plan for integrated Health and Human services technology.

### *Project Goals*

This project plans to develop a comprehensive view of clients and their needs; deliver a scalable set of properly coordinated services, improve service quality with accurate and timely data, and deploy

and maintain cost-effective IT assets and services. A well-defined technology strategy will lead to solid planning and successful deployment of resources in support for the Integrated HS business model.

### *Progress to Date*

IT Roadmap development including organization and facilitation of Process and Data Optimization and Requirements Teams, extended due diligence, educational showcase demonstrations, and an update to IT Five-Year Plan (post Roadmap completion) was complete in FY 2016. Targeted business process modeling and analysis in support of laying the groundwork for implementation of IT Roadmap initiatives were initiated in FY 2017; phased implementation began in FY2018 and will continue in FY 2020. Work in FY 2019 included completion of the initial phase of a ‘front porch’ intake application using constituent interaction functionality, a system level data analytics pilot, the design of document management functionality for select HHS programs and the design of a HHS master client index.

### *Project Budget*

Funding of \$1,000,000 (\$400,000 at FY 2019 Third Quarter and \$ 600,000 at FY2019 Carryover) continues support for this major HHS strategic effort.

### *Return on Investment*

The strategic use of information technology to support Health and Human Services in Fairfax County will help find the connections in fragmented data across many Health and Human Services systems. It will incrementally link pockets of information across and within functional areas for both a mobile and community based workforce, as well as a diverse client base, and enable analysis of information across programs. Multiple agencies partnering to view clients holistically, tailor services to their specific needs and identify at-risk persons in a timely fashion will enable better client service. Creating an integrated view of client information across Health and Human Services programs and a central point to access data from relevant Health and Human Services systems will also remove redundancy in the client experience (e.g., eliminate the need for clients to submit basic eligibility information numerous times). Additionally, common standards will be created across agencies for critical areas such as IT security, data confidentiality, etc. and appropriate mechanisms to deliver information technology and services that support and improve preparedness, coordination, communication, compliance, and response of human service agencies will be designed.



## IT-000026 DIVERSION FIRST INTEROPERABILITY PROJECT

### *Project Description*

Diversion First is a multi-phased (Sequential Intercept Model) program aimed at diverting persons with serious mental illness (SMI) from arrest to assessment and treatment. This program offers alternatives to incarceration for people with developmental disabilities, mental illness, and substance abuse disorders who have committed low level offenses. It is intended to prevent repeat encounters within the criminal justice system, and has seen positive results in its first two years. Fairfax County began implementation of its Diversion First program in 2016.

This project supports implementation of a technology solution to standardize and automate data capture, analysis, and reporting, to ensure accuracy of the data, and significantly improve turn-around times for reporting and predictive analytics. This will ultimately result in improved public safety, a healthier community and a more cost effective and efficient use of public funding.

### *Project Goals*

Primary technology goals for the Diversion First program are to automate the processes involved in data capture from various sources, standardize the data captured from several agencies and systems, and populate the captured data into a newly designed data warehouse.

Information Technology is vital to support the data collection and return on investment measures across systems and within each component of the Diversion First Initiative. The project will identify associated internal and external systems of partner organizations and interventions as well as data elements and intervention measures across varied law enforcement, justice, and mental health systems to support the data collection, data sharing, and outcome evaluation of these diverse initiatives necessary to determine overall success and assist with decision-making and assessing outcomes. Creating interoperable data capacity is vital to measuring outcomes and assuring quality improvement as additional diversion components are implemented.

### *Progress to Date*

The project teams from DIT and stakeholder agencies researched and evaluated data analytics systems, services and strategies. DIT has met with the Community Services Board (CSB), the Courts, the Police, and Department of Public Safety Communications (DPSC) to review data that is captured and reported in support of Diversion First efforts. Opportunities to automate manual data capture processes have been identified, and web-based applications have been built and implemented. This enables more timely and accurate data capture for eventual ingestion in the Data Warehouse. Use cases have been created that illustrate the capture and use of the Diversion First data elements. These use cases identified other opportunities to enhance and refine data capture. Data dictionaries are being built in anticipation of the next phase of building a data warehouse prototype.

## Project Budget

FY 2020 funding is not required.

## Return on Investment

Providing a data analytics and warehouse solution to initiatives such as Diversion First (and eventually other initiatives like Opioids) will inform the County of its most pressing needs, best ways to allocate people, time, and money in achieving the outcomes and metrics critical to the success of the programs. Replacing manual inquiries about past involvement in a mental health or related systems and implementing interconnectivity between disparate systems improves access to pertinent information, streamlines processes, and will result in more informed and timely decision making. Diverting individuals with mental illness away from jails towards more appropriate community based mental health treatment is an effective strategy for providing necessary mental health care, enhancing public safety by making jail space available to more violent offenders, providing the criminal justice system with alternatives to incarceration, and reducing the cost and associated risks to the individual offender and the public.

## IT-000027 HEALTH AND HUMAN SERVICES INTEGRATED ELECTRONIC HEALTH RECORD SYSTEM PROJECT

### Project Description

This project will deliver person-centered health care services and improve the health status of County residents. The County's Health and Human Services agencies that provide essential health care services to residents – primarily the Health Department (HD) and the Community Services Board (CSB) – will pursue a common information technology solution that supports the development and management of individualized care plans. The system will also deliver functionality for inter-agency collaboration and interactions with other providers including but not limited to the County's Community Health Care Network and private providers in the community, authorization and coordination of health care services, documentation of health care encounters, practice management including event scheduling, workflow management and workload management, and revenue cycle management including registration, payer information, invoicing/billing based on encounter documentation and resource use, and functionality for financial and cost accounting.

### Project Goals

Using the framework supplied through the Fairfax County Health and Human Services IT Roadmap, the goals of this project are to elicit joint requirements for a common or interoperable electronic health records system, develop the optimal approach for acquiring and deploying the desired functionality and implement a solution that will support care coordination across Fairfax County Health and Human Services System.

### *Progress to Date*

The planning process, including requirements gathering was well underway in FY 2017; the procurement process commenced in FY 2018 with anticipated contract award in FY 2020.

### *Project Budget*

Funding of \$1,500,000 (1,000,000 at FY 2019 Third Quarter and \$500,000 at FY 2019 Carryover) will continue support for this multi-phase project.

### *Return on Investment*

While each agency provides distinct health care services and has unique documentation needs, there is significant value associated with leveraging a common information technology solution that has the requisite configuration flexibility and enables these agencies and other health care providers, including but not limited to the County's Community Health Care Network (CHCN) and private providers – to collaborate in the management of health care services they provide to the same residents and to more effectively coordinate those services.

The implementation of this initiative will avoid the fully loaded cost of individual, independent systems within multiple Human Service agencies; increase data sharing capabilities among Health and Human Services, Public Safety, and other key partnering agencies to view clients holistically, tailor services to their specific needs and identify at-risk persons in a timely fashion; create an integrated view of client information across human services programs and a central point to access data from relevant human services systems; remove waste and redundancy in the client experience (e.g., eliminate the need for clients to submit basic eligibility information numerous times); improve planning capabilities within the Health and Human Services agencies and across the system; increase visibility into, and accountability for, client outcomes, cost of service and other key program performance and success indicators; implement common approaches and standards across agencies for critical areas such as IT security and data confidentiality in keeping with Federal, State and County laws and regulations as well as with Integrative Model goals; and bridge service “silos” while increasing administrative flexibility.



## 3.6 Planning and Development

### 2G70-040-000 FACILITY MAINTENANCE MANAGEMENT SYSTEM PROJECT

#### *Project Description*

The Facilities Maintenance Management Project was divided into two separate efforts to address the specific needs of the Facilities Management Department (FMD) and the Fairfax County Park Authority (FCPA).

This project supports FMD's efforts to implement an Enterprise Asset Management System for effective management of the department's core business line, Operations and Maintenance service delivery. The new system provides FMD with a mobile application to support demand and preventive maintenance. The project also provides specialized reporting and dashboards to enhance FMD executive management of resources and workload management.

This project also supports the FCPA's enhancement of their Total Cost of Ownership Asset Management Program. The scope of FCPA's asset information program includes Operations and Maintenance for a variety of park authority business areas, capital planning, construction management, and integration with the County's human resources, financial and GIS systems.

#### *Project Goals*

The goals of this project are to deploy specialized asset and inventory management systems that meet the unique needs of the Department of Facilities Management and the Fairfax County Park Authority. The vision is to deploy mobile applications with an enhanced ability to manage large inventory of assets,

to view, manage, and report on work orders, improve the efficiency of preventative and corrective maintenance programs.

### *Progress to Date*

In FY 2019 an application with the requisite functionalities was identified to meet FMD's business needs. A statement of work was developed and work began on the design and configuration of a system to support the Operations and Maintenance workforce responsible for maintaining County facilities.

In FY 2019, an effort was launched to document requirements supporting the specific and unique needs of Park Operations, including supporting the asset lifecycle of non-standard assets.

### *Project Budget*

Additional funding is not included in the FY 2020 budget.

### *Return on Investment*

This project provides County facility managers with information and tools to support the effective planning and maintenance management of the County's portfolio of facility assets. The deployment of mobile applications will increase efficiencies and provide more accurate and timely responses to facility management requests, and provide robust reporting on maintenance program results for planning and resource management. These investments in service request management solutions will improve the quality of service by providing staff with the tools and data to manage customer requests for facility management. The features included will improve FMD and FCPA leadership's ability to track critical facility assets and track and report on the condition of County assets. The integration of asset information management systems with the County enterprise systems (human resources, finance, and GIS) will support effective program management, acquisition processes, planning and management for budgeting, scheduling, and asset acquisition processes.

## **IT-000010 ELECTRONIC PLAN SUBMISSION AND REVIEW PROJECT - LAND DEVELOPMENT SERVICES (LDS)**

### *Project Description*

The Land Use Information Advisory Council appointed by the Board of Supervisors (BOS) issued several guiding principles that included more robust use of technology to facilitate the electronic submission and review of land use applications. The Department of Land Development Services is implementing electronic plan submission, review, and approval to enable architects, engineers and construction professionals to submit plans and revisions online with markup and editing capabilities 24 hours a day, 7 days a week, from anywhere in the world. The electronic process enables constant communication where clients can collaborate with one another for real time editing. The requirement for printing and transporting paper plans will be eliminated, enabling users to submit plans and track review progress in an inexpensive and efficient manner.

## Project Goals

The goal is to leverage the pilot ePlans program conducted in the Department of Land Use Development Services and the Department of Planning and Zoning (DPZ) and expand the capabilities currently being developed to review building and site plans electronically. The ePlans initiatives will yield numerous benefits, including enhanced customer service, reduced carbon footprint, cost savings, cost avoidance, and meet recommendations of Board-appointed committees.

## Progress to Date

The LDS ePlans pilot project includes the implementation of two major plan types to evaluate the software and hardware tools for usability in Fairfax County and the subsequent implementation of several additional plan types for use by industry until the PLUS system is implemented. The implementation team completed internal tests of multiple site plans and building plans including the electronic review of the County's Public Safety Headquarters building in CY 2015. The Site Plan ePlans module was moved into production in October of 2016 and is being used with several selected industry partners. The ePlans team also implemented ePlans for the New Commercial Building plan review process on a limited basis in March of 2017. The project has included partner review agencies including the Fire and Rescue Department, the Department of Planning and Zoning, the Health Department, the Engineering and Surveyors Institute (ESI), the Virginia Department of Transportation, and other agencies within the County (Urban Forestry, Capital Facilities, etc.).

Progress to date has substantially satisfied the original goals of the pilot project regarding usability of the system in Fairfax County. The remaining project goals include platform architecture upgrades and the addition of more plan types submission capabilities to the industry at large. In addition to continued use of ePlans in production for both Site Plans and New Commercial Building Plans, the ePlans team has implemented the following additional permits/processes in FY 2018 - 2019: Commercial Interior Alterations, Minor Site Plans (MSP), and Major Site Plan Revisions (SPV). The Project will continue to work closely with the PLUS System project team to ensure the new system provides compatible and/or comparable electronic plan review capabilities. Additional phases, platform architecture upgrades and new plan types will be added during FY 2020. The plan types have been identified as Single-Family Dwelling (SFD), Addition – R (ADD R), Infill Lots (INF) and Infill Lots Revision (INFV) to be delivered in FY2020.

## Project Budget

Additional funding is not included in the FY 2020 Budget.

## Return on Investment

This project will provide a streamlined and more collaborative plan review process, which advances Goal 3 of the County's Strategic Plan to Facilitate the Economic Success of Fairfax County: Improve the Speed, Consistency, and Predictability of the Development Review Process. In addition to streamlined review and plan submission processes, this project provides significant environmental benefits and financial

savings stemming from reduced paper costs and reduced fuel consumption. Once implemented, this project will eliminate/significantly reduce the need to print large paper plans (which can weigh over 50 lbs.) and deliver them to numerous agencies for review. Customer savings and improved customer service combined with a streamlined and more collaborative plan review process advance the County's goal of supporting and enabling further development and redevelopment throughout the County.

Additionally, much of the current cost of physical storage (in excess of \$59,000 annually to digitize site plans for historical retention) will be eliminated when the electronic plan submission and review project is fully implemented. Other benefits include simplification of the plan submission and review process, staff efficiency, improved record keeping, streamlined review processes, improved accuracy of data transmitted due to a reduction in the number of times plan data needs to be copied and recopied, industry "goodwill" gained by satisfying a long-standing industry demand, and reduction of costs to retrieve historical plan records with a significant reduction of risk that the documents being sought have been inadvertently lost or destroyed.

## IT-000011 EPLANS PROJECT - DEPARTMENT OF PLANNING AND ZONING (DPZ)

### *Project Description*

The Land Use Information Advisory Council appointed by the Board of Supervisors (BOS) issued several guiding principles that included more robust use of technology to facilitate the electronic submission and review of land use applications. Since that time, the Department of Planning and Zoning (DPZ) made the initial investment to develop and implement a pilot ePlan system for the zoning application process. This pilot project supported the complete review process from distribution of the case material to the various County agency reviewers through action by the BOS with the intent to model a fully automated review process.

### *Project Goals*

This project's ultimate goal is complete automation of submission, review, plan markup, and collaboration of land use applications within County stakeholder agencies. The ePlan system facilitates this via many of its built-in features. The pilot project's interim goal was to identify and evaluate the unique challenges of electronic review in a system that must support long-term project review with multiple review cycles; the potential for individual reviewers to change over the life of the project; the need for multiple cases and case types to be reviewed and tracked concurrently; and the need to allow for significant amendments to a case (i.e., amendments such as an addition of land area or change in the zoning district, not just submissions of amended plans).

### *Progress to Date*

Following approved re-zonings, related site plans are now being accepted, distributed, and marked up via the ePlans system also deployed in Land Development Services. This project expansion builds directly on

DPZ's initial investment in ePlans. Electronic plan review (ePlans) is one of the key features of the Planning and Land Use System (PLUS). When the PLUS system is deployed, this capability will be employed as the standard business process abandoning paper-based plan review. The benefit of ePlans will become fully realized as County staff and customers will have become proficient with electronic plan review and its associated benefits.

The pilot project served its purpose to identify key benefits, concerns and desirable features of an electronic review system. This information is being used directly in the development of PLUS to ensure that the ePlan system incorporated in PLUS is not only functional, but provides similar benefits and desired features.

### *Project Budget*

Additional funding is not included in the FY 2020 Budget.

### *Return on Investment*

The incorporation of the ePlan system for plan review will enable staff to process land-use applications in a more efficient manner by significantly reducing the administrative aspects of manually distributing and digitizing large plan sets. The automation of site review, analysis, collaboration, distribution and parallel processing of agency comments and markups potentially yields considerable reduction in applicant costs and improved staff efficiency. The digital process also lends itself to creating higher quality files for better and easier record storage, retention, and access. The pilot project significantly advanced the staff inputs for the development of the electronic plan review feature of the PLUS system.

## IT-000012 PARKNET REPLACEMENT PROJECT

### *Project Description*

This project supported the Park Authority's initiative to replace the legacy ParkNet system with a commercial, off-the-shelf (COTS) application to meet Park Authority and County requirements.

The Park Authority operates nine recreation centers (RECenters) with indoor swimming pools and a variety of fitness/classroom/gymnasium spaces; three lake front parks; 68 picnic facilities, several historic sites that can be reserved; two campgrounds; five nature centers, and several other unique facilities that apply user fees and charges such as general admissions, passes, retail sales, equipment and facility rentals, classes and events. In addition to these sites, recreation programs are also held at non-FCPA locations throughout the County including public schools and private vendor sites.

### *Project Goals*

The project will replace ParkNet, the key management and information system for the Parks. The system no longer meets the present business requirements of the Park Authority, is technologically out-of-

date, and out of compliance with current County IT standards (it was implemented before most County standards for applications of its size were established).

### *Progress to Date*

The Park Authority then partnered with Neighborhood and Community Services (NCS) to develop a Request for Proposal (RFP) for the Recreation Management System that addresses the requirements of both agencies. Project implementation started in FY 2017, modifications to the base software required to meet Park Authority policies regarding fees and pricing were developed and tested. PCI-compliant and county-approved methodologies for accepting payment cards at sites and at back office locations have been deployed. The Park Authority began using Recreation Dynamics in FY 2019.

**This project is complete and will be retired from the IT Plan in FY 2021.**

### *Project Budget*

FY 2020 funding is not required.

### *Return on Investment*

With expanded system capability there are opportunities for improved customer satisfaction resulting in enhanced revenue through new application features, such as Electronic Fund Transfer payments for pass sales and online facility reservations. Investments in automating Park applications have resulted in increased revenue collections.

## **IT-000019 PLANNING AND LAND USE SYSTEM (PLUS PROJECT)**

### *Project Description*

This multi-phase initiative will replace and consolidate numerous legacy land use systems supporting zoning and development plan review, building permit/license issuance, code enforcement, inspection, and cashiering activities. The disparate legacy systems are heavily customized, unable to meet County business processes, customer service goals, deliver an integrated technology platform for seamless customer and staff interaction, and support land use and development operations. Land Use systems targeted for replacement include the 21 year-old Land Development System (LDS), Plans and Waiver System (PAWS), Zoning Application System (ZAPS), the 14 year-old Fairfax Inspections Database Online system (FIDO), and several complementary systems that provide e-services, and mobile wireless support for citizens and inspectors. These systems lack the native agility of modern technologies that provide a flexible enterprise platform for evolving business process and architecture requirements; they rely on outdated business processes, lack optimal security capacities, and have compatibility issues with emerging desktop, tablet and mobile wireless technologies.

## Project Goals

The goal of this project is to modernize the technologies supporting land use and development processes, which is in direct support of the County's Strategic Plan to Facilitate the Economic Success of Fairfax County, specifically Goal 3: Improve the Speed, Consistency, and Predictability of the Development Review Process. The PLUS project also aligns with other strategic initiatives including Fairfax First (an initiative to improve the speed, consistency, and predictability of County development review processes), zMod (and a plan to modernize the County's Zoning Ordinances), Chairman's Community Council of Land Use Engagement, and Phase 2 of the County's Lines of Business: requiring the delivery of modern, private-sector experiences, digitization, and multi-system integration opportunities.

This project will replace numerous legacy land use systems with a consolidated, modern enterprise solution that supports the County's zoning and development plan review, building permit/license issuance, code enforcement, inspection, cashiering activities, proffer management, and other related processes. Current systems are 14 to 21 years old; incorporating business requirements necessitated by newly mandated activities has become a challenging and time-consuming process that threatens system stability. In addition, the use of modern technologies, such as tablets, smartphones, web services, dashboards, and a single customer portal, is limited due to the age of the current technical architecture. Replacing the legacy systems will greatly reduce threats to system stability and will enable the use of technologies that will improve customer service and operational efficiency.

## Progress to Date

- The county established governance structure, project plans, developed statement of work, and contracted for consultant support to develop an implementation approach specific to county needs.
- In addition to replacing LDS and FIDO, the new system will also replace over a dozen complementary systems that have been developed over the years to meet new business requirements. The county selected Accela Civic Platform Land Management and Environmental Health Modules for its robust and feature-rich product offerings that will help the County achieve the recommended improvements in the Strategic Assessment.

Planning and design of the future state started in FY 2017, progress highlights and plans include:

- Began design and configuration of 166 of 217 records for the 5 primary stakeholder agencies. Refinement of functional and technical requirements for 13 business areas teams in multiple stakeholder agencies: Land Development, Planning and Zoning, Health Department, Fire and Rescue, and Department of Code Compliance.
- Completion of the design and baseline configuration of the replacement system is targeted for FY 2020
- Development, integration with county system and data conversion is targeted for completion in FY 2021
- An iterative configuration approach is planned, with project completion anticipated in FY 2022

### *Project Budget*

Funding of \$20,000,000 (\$1,000,000 at FY 2019 Third Quarter and 10,000,000 at FY 2019 Carryover) will continue support for this strategic County initiative.

### *Return on Investment*

In addition to providing a single enterprise platform that will enhance land use service delivery activities while eliminating risks associated with legacy system failure and recovery efforts, the PLUS project will deliver a customer service portal for constituents and industry partners with more real time status and transparency about permit applications and land use transactions. Other significant benefits to citizens and staff include GIS integration, modernized mobility platforms for customers and staff, integration with e-Plans and document management systems, decreased processing cycles, opportunities for business transformation, a scalable and flexible configuration to support evolving business needs, future improvements, and delivery of improved metrics and reporting capabilities.

## CAPITAL PROJECT MANAGEMENT INFORMATION SYSTEM (CPMIS)

### *Project Description*

This project will provide the Department of Public Works and Environmental Services (DPWES) and Department of Transportation (FCDOT) with a single capital project management information system (CPMIS) to manage, track and report capital project management information. The new technology solution will allow DPWES and FCDOT to move beyond project “tracking” to a cradle-to-grave system that allows management of the entire capital project lifecycle. In addition, the system will be relevant to what the construction and architect/engineering industry uses. Other County departments involved in construction project management may leverage the results of this project to achieve similar functionality in future efforts.

Specific components for the County solution will include:

- Project Planning
- Project/program scheduling, coordinating and tracking
- Contract management
- Document management
- Financial management
- Communication
- Reporting

### *Project Goals*

The project will improve the efficiency of capital project management, increase transparency into the project portfolio and individual project status, and consolidate financial and status reporting across all DPWES and FCDOT capital projects.

## Progress to Date

Evaluation of RFP proposals and vendor negotiations were completed, resulting in a contract award. A phased implementation began in January 2019 with wastewater projects. Subsequent phases will be building projects and public-private partnership projects, stormwater projects and developer default projects, and transportation projects. Full implementation is scheduled to be complete in three years.

In preparation for system implementation, the processes of managing major capital project types within DPWES and FCDOT were documented. Process mapping for wastewater, stormwater, building and transportation project life cycles was completed as well as processes documented for public-private partnerships and developer default projects. A series of follow-up workshops was held prior to implementation to further align business processes across project types where feasible to optimize functionality in the CPMIS system. The CPMIS configuration will be based upon this documentation.

## Project Budget

Project costs will be charged to capital projects in the Department of Public Works and Environmental Services and Fairfax County Department of Transportation.

## Return on Investment

The Capital Project Management System will reduce the amount of time project managers spend on administrative project management tasks, allowing them to manage their project more efficiently. In addition, the system will eliminate the duplication of data entry into multiple systems and spreadsheets, thereby resulting in time savings for project managers, construction managers, budget analysts, and financial managers.

