Department of Information Technology

Mission

To deliver and support an innovative technology environment to strengthen the public service commitment of Fairfax County.

Focus

The Department of Information Technology (DIT) is a central technology provisioning agency that designs, manages, and implements all aspects of information technology (IT) solutions and supporting infrastructure enabling County agencies to deliver information and services. In that role, DIT is responsible for overall IT policy, governance, and enforcement for the deployment and use of countywide IT assets and resources. DIT also performs application development and integration and provides IT project management oversight for technical execution of agencies' major/core business applications. Goals for County technology include leveraging IT solution investments across the enterprise, ensuring the integrity of the County's information systems and data, and enabling secure access to County information and services. The DIT General Fund budget provides for staff and service resources based on technology specialty subject matter expertise, including systems analysts and software developers that support revenue systems (tax); corporate systems; human services agencies; land development, public works and zoning; public safety/judicial administration; Library; Park Authority; Facilities Management; and others. DIT is also responsible for the multi-channel e-Government program, a specialized courtroom technology group, countywide telecommunications, data networks and radio systems, and the countywide information security program. Open data, data analytics, and smart communities are important growth areas. DIT fosters an environment that harnesses new information, communication, and social technologies in order to empower the public services of tomorrow.

DIT continues to manage growth in demand for County agencies' needs through prudent resource planning, use of selected sourcing opportunities and investment in IT support automation tools. DIT strives to accommodate agencies' needs as they implement their strategic plans, automate business processes, and introduce new technology capabilities. In addition, DIT implemented enterprise-wide programs such as mobile device management, enhanced internet capabilities such as social media, enhanced wireless infrastructure, and Geographic Information Systems (GIS). DIT also supports major business transformation and cross-agency initiatives such as the Tri-Court Courtroom Technology collaborative, land-based system processes, inspections, code enforcement, FOCUS, public safety interoperability, Integrated Human Services and Diversion First, a host of County agencies' production business applications, and regional interoperability for secure communications and data exchange.

The work of DIT is primarily performed by County staff in direct execution, project management and asset management roles. DIT utilizes private sector expertise to augment the overall capacity to develop and implement projects, and to support operational activities. Competitive contracts are used for major project efforts and commercial solutions. In addition to the General Fund, other components of the IT enterprise functions are supported by funding in other DIT funds:

- Fund 60030, Technology Infrastructure Services, includes data center operations, enterprise automated productivity tools and email, the enterprise data communications network, the countywide PC replacement program, servers, data storage, radio communications network, Wireless Technologies services and voice telecommunications. The County has been recognized for successful IT infrastructure and power management projects that decreased the County's carbon footprint and achieved enterprise-wide IT efficiencies and cost savings.

- Fund 60020, Document Services, supports the Print Shop, Multi-Functional Digital Device (MFD) program, Mail Room and County Archives. The MFD solution incorporates copying, printing, faxing, and scanning via the County's network throughout the County government, providing flexibility and document printing and digitizing efficiencies. The Print Shop provides digital printing, offset printing and bindery services to the County and Fairfax County Public Schools. Print Services are integrated with Data Center operations, improving overall print output options and efficiencies, coverage, utilization of staff and reduced cost. The Mail Room processes outgoing and incoming U.S. mail and parcel deliveries and delivers inter-office mail daily to 217 offices in 113 County facilities. Finally, the County Archives offers expert consultations and trainings to assist agencies to maintain compliance with the numerous laws affecting the collection, retention, security, and dissemination of public records.

- Fund 10040, Information Technology Projects, supports technology-related programs and projects that provide improvements, efficiencies and innovation for County agencies, citizens and employees and optimize enterprise-wide resources. Projects include e-Government and GIS initiatives; County agencies' business modernization and inter-agency applications in financial management, land development processes, Human Services and Public Safety business areas; enterprise technology infrastructure modernization projects in communications; and other areas such as document management, server platform consolidation/virtualization and 'cloud' technologies, and cyber-security.

DIT also manages significant technology programs in other funds, including supporting technology for Fund 40090, E-911; capital construction for technology infrastructure tasks in Fund 30010, General Construction and Contributions; the fiber institutional network (I-Net) in Fund 40030, Cable Communications, that interconnects over 400 County and school sites; and several Department of Homeland Security Urban Area Security Initiative (UASI) grants supporting National Capital Region (NCR) interoperability and cyber security initiatives for which Fairfax is a major stakeholder. DIT conducts the technical work and program management for the related regional projects. DIT also has a major emergency support function in its role to support the County Emergency Operations Center during natural and other disaster situations.

DIT continually seeks to find the appropriate balance between a stewardship role in leveraging County technology investments and a strategic role in pursuing and embracing opportunities to innovate and strengthen technology use that will result in high value County services and optimized cost. In fulfilling its mission, DIT builds partnerships with internal and external stakeholders. DIT uses a strategic planning process and a collaborative business and technical execution model to ultimately provide the County with the best available return on investment that facilitates the ability to meet County growth and demand for services economically. The results are manifested in modernizing processes for County operations, greater efficiencies and effectiveness in service delivery, improved opportunities for data sharing and decision-making, embracing new internet-based capabilities and mobile apps for public access to information and services, transparency, and improved utility and security of County technology and information assets.

DIT employs a broad strategy that uses technology and policy to enable cohesive public access to information and services by utilizing contemporary web-based and communication solutions, digitization and open data concepts that also will improve citizen experience in engagement with County government – a key Board priority. The e-Government program, recognized as a national model, is a multi-channel solution that includes the County's website, Interactive Voice Response (IVR) system, mobile access solutions, emergency alerts via text messaging, Customer Relationship

Management (CRM) initiatives and broadcast cable television. The County embraces social media in its e-Government program, utilizing podcasts, RSS newsfeeds, moderated discussion sessions, and County presence on YouTube, Facebook, Twitter, and other outlets as e-Government tools to interact with all audiences. Social media platforms are employed to expand and redefine interactive communication and information dissemination efforts. The e-Government program also delivers mobile apps for its '*Government in the Palm of Your Hands'* initiative. The County expanded government-to-citizen transparency through leadership and collaboration with the Office of Public Affairs in the adoption of capabilities and initiatives that enhance customer experience that will continue and evolve over time.

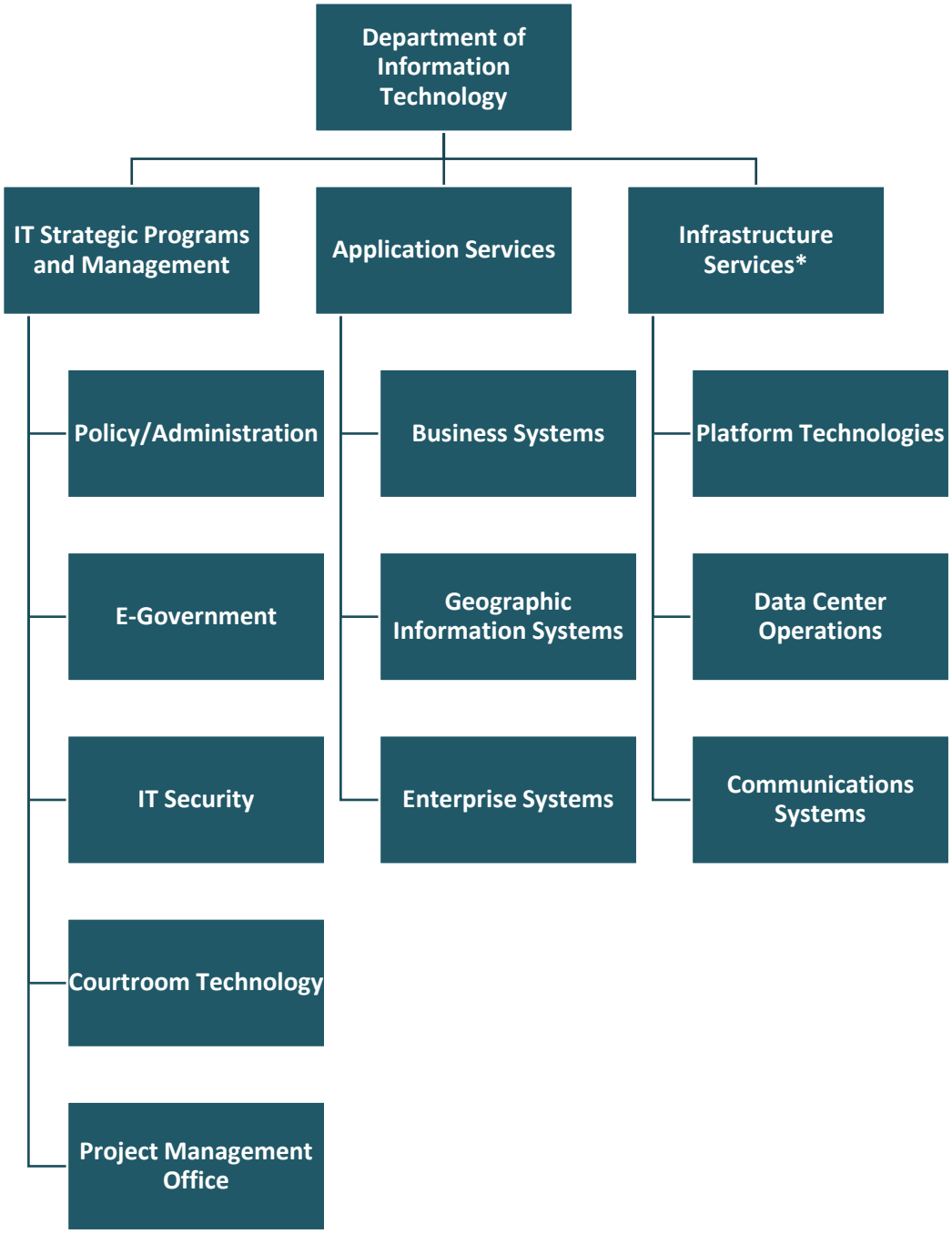
Another key technology platform is GIS. A significant number of County agencies, including Public Safety agencies, Land Development Services and the Health Department use GIS in their operations. The GIS portfolio includes "Virtual Fairfax", a 3D visualization tool, with zoom-in capability for County buildings and terrains with links to County land information systems and the Northern Virginia Regional Routable Centerline Project, a collaboration with five other Northern Virginia jurisdictions, recognized by the Commonwealth as a best practice.

DIT continues to strengthen the County's information security and disaster recovery posture which protect the County's technology assets, business operations, and data from rapidly advancing cyber-attacks and IT disaster events. In ensuring the integrity and viability of the County's technology assets, DIT executes the County's security policy through strategies that build a secure technology infrastructure with security architecture and processes. The objectives of the information security program are to ensure confidentiality of information, integrity of data, systems and operations, technical compliance for the Federal Health Insurance Portability and Accountability Act (HIPAA), Payment Card Industry (PCI), other privacy mandates, and to ensure the availability and security of the County's networks, systems, and data. Security architecture uses 'defense-in-depth' designed to provide protection for all levels of County information processing resources and includes application of industry best practices for overall risk reduction. Over the years, the County's security program has been nationally recognized as a best practice and based on vigilant enforcement and implementation of modern security tools, breaches or wide-scale vulnerabilities have been kept below appreciable levels.

The County has a significant leadership role in developing the technical architecture and standards that are being adopted through the National Capital Region (NCR) in regional geospatial map views, situational awareness and data and communications interoperability. This architecture also is a key foundation for the County's technology strategy that ties together agency-based independent applications and enables them to share data. The demands of the regional collaborative work continue to grow, and with this expansion it is especially important to leverage IT resources and assets. Fairfax County is often the lead jurisdiction for technical design and implementation of regional capabilities that support public safety and homeland security critical infrastructure and applications which are deemed best practices.

The County's overall technology programs continue to be recognized with many honors for innovation and contribution to excellence in public service and are routinely referenced in the industry as best practice examples. Fairfax County was recognized in the top ten of the Center for Digital Government's 2021 Digital Counties Survey, as a technological innovator, in the category of jurisdictions with populations greater than 1 million. Fairfax County has been in the top 10 in sixteen of the last seventeen years of the award and in the top 3 nine times. Fairfax County is recognized as a perennially high-achieving County which relies on agile development, flexible technology infrastructure and strong governance to align IT strategies with overall County business objectives - and this alignment is critical as the County is challenged with limited resource growth

Organizational Chart



*A portion of staffing and operating support for the Infrastructure Services area is found in Fund 60030, Technology Infrastructure Services, in Volume 2.

Budget and Staff Resources

Category	FY 2021 Actual	FY 2022 Adopted	FY 2022 Revised	FY 2023 Advertised
FUNDING				
Expenditures:				
Personnel Services	$23,512,225	$26,744,281	$27,080,893	$28,342,685
Operating Expenses	13,848,191	11,504,081	11,809,055	12,748,491
Total Expenditures	**$37,360,416**	**$38,248,362**	**$38,889,948**	**$41,091,176**
Income:				
Map Sales and Miscellaneous Revenue	$782	$11,115	$782	$782
Total Income	**$782**	**$11,115**	**$782**	**$782**
NET COST TO THE COUNTY	**$37,359,634**	**$38,237,247**	**$38,889,166**	**$41,090,394**
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	257 / 257	257 / 257	257 / 257	257 / 257

FY 2023 Funding Adjustments

The following funding adjustments from the FY 2022 Adopted Budget Plan are necessary to support the FY 2023 program:

Employee Compensation **$1,470,792**

An increase of $1,470,792 in Personnel Services includes $1,077,561 for a 4.01 percent market rate adjustment (MRA) for all employees and $393,231 for performance-based and longevity increases for non-uniformed merit employees, both effective July 2022.

PC Program Chargebacks **$750,000**

An increase of $750,000 in Operating Expenses is included to support increased PC Replacement Program costs in Fund 60030, Technology Infrastructure Services, that are being charged through this agency. PC Program costs are increasing due to a combination of rising annual software license costs and increased device costs associated with supporting a more mobile workforce.

Compensation-Related Chargebacks **$486,324**

An increase of $486,324 in Operating Expenses covers changes associated with the market-rate adjustment, as well as performance-based and longevity increases for information technology staff supporting Fund 60030, Technology Infrastructure Services, that are being charged through this agency.

Office for Strategy Management for Health and Human Services Realignment **$132,433**

An increase of $132,433 is associated with the realignment of funding and positions as a result of a reorganizational review of Agency 77, Office of Strategy Management for Health and Human Services (OSM), approved as part of the *FY 2021 Carryover Review*. This funding includes $127,612 in Personnel Services to support the transfer of 1/1.0 FTE and $4,821 in Operating Expenses. This reorganization includes the re-envisioning of Health and Human Services strategic policy and planning efforts, previously coordinated by the OSM. Moving forward, this work will continue through a hybrid of centralized cross-system coordination and imbedded corporate agency supports. There is no net impact on the General Fund in terms of funding or positions associated with these changes.

Department of Vehicle Services Charges **$3,265**

An increase of $3,265 in Department of Vehicle Services (DVS) Charges is based on anticipated billings for maintenance and operating-related charges. This amount includes $1,591 to support DVS costs charged through Fund 60030, Technology Infrastructure Services.

Changes to FY 2022 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2022 Revised Budget Plan since passage of the FY 2022 Adopted Budget Plan. Included are all adjustments made as part of the FY 2021 Carryover Review, FY 2022 Mid-Year Review, and all other approved changes through December 31, 2021:

Carryover Adjustments **$509,153**

As part of the *FY 2021 Carryover Review*, the Board of Supervisors approved funding of $509,153, including $209,000 in Personnel Services for a one-time compensation adjustment of $1,000 for merit employees and $500 for non-merit employees paid in November 2021. The remaining amount of $300,153 is due to encumbered carryover for enterprise business intelligence solutions, IT system stability, IT security testing, geographic information systems (GIS), contracted IT technician support, Open Text implementation for the Office of Human Rights and Equity Programs, computer equipment, and office supplies.

Office for Strategy Management for Health and Human Services Realignment **$132,433**

An increase of $132,433 is associated with the realignment of funding and positions as a result of a reorganizational review of Agency 77, Office of Strategy Management for Health and Human Services (OSM), approved as part of the *FY 2021 Carryover Review*. This funding includes $127,612 in Personnel Services to support the transfer of 1/1.0 FTE and $4,821 in Operating Expenses. This reorganization includes the re-envisioning of Health and Human Services strategic policy and planning efforts, previously coordinated by the OSM. Moving forward, this work will continue through a hybrid of centralized cross-system coordination and imbedded corporate agency supports. There is no net impact on the General Fund in terms of funding or positions associated with these changes.

Position Reduction **$0**

A review of positions for potential reduction was conducted as part of the *FY 2021 Carryover Review,* and 1/1.0 position was eliminated in Agency 70, Department of Information Technology, as a result of this review. Based on current budget constraints, this position was unfunded and could be eliminated without adversely impacting agency operations.

Cost Centers

The General Fund supports three Department of Information Technology cost centers: IT Strategic Programs and Management, Application Services, and Infrastructure Services.

IT Strategic Programs and Management

The IT Strategic Programs and Management cost center provides for policy, administrative and programmatic management, compliance functions supporting the entire DIT department, and strategic innovation centers for certain specialized IT programs and initiatives.

Category	FY 2021 Actual	FY 2022 Adopted	FY 2022 Revised	FY 2023 Advertised
EXPENDITURES				
Total Expenditures	$17,579,998	$17,603,500	$17,935,341	$19,039,157
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	68 / 68	68 / 68	68 / 68	68 / 68

Application Services

The Application Services cost center provides for the design, implementation, and maintenance of information systems for all County business areas, including the enterprise-wide financial and GIS platforms integrated to many agencies' business systems and strategic and tactical operations.

Category	FY 2021 Actual	FY 2022 Adopted	FY 2022 Revised	FY 2023 Advertised
EXPENDITURES				
Total Expenditures	$10,801,168	$7,201,620	$7,389,029	$7,562,787
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	108 / 108	108 / 108	108 / 108	108 / 108

Infrastructure Services

The Infrastructure Services cost center functions include management of the County's local area network (LAN) environments, server and data storage platforms, database administration, telephony services and end-user desk-top support. This cost center also provides operational and contingency services for the McConnell Public Safety and Transportation Operations Center (MPSTOC).

Category	FY 2021 Actual	FY 2022 Adopted	FY 2022 Revised	FY 2023 Advertised
EXPENDITURES				
Total Expenditures	$8,979,250	$13,443,242	$13,565,578	$14,489,232
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	81 / 81	81 / 81	81 / 81	81 / 81

Position Detail

The FY 2023 Advertised Budget Plan includes the following positions:

IT STRATEGIC PROGRAMS AND MANAGEMENT – 68 Positions			
Policy, Planning & Admin			
1	Director of Information Technology	1	Human Resources Generalist III
3	Deputy Directors	1	Human Resources Generalist I
2	IT Program Directors I	1	Programmer Analyst III
1	Business Analyst IV	1	Management Analyst IV
2	Business Analysts II	1	Management Analyst I
1	Business Analyst I	2	Administrative Assistants V
2	Financial Specialists III	4	Administrative Assistants IV
3	Financial Specialists II	1	Administrative Assistant II
1	Financial Specialist I		
E-Gov. & Enterprise Architecture			
1	IT Program Director I	1	IT Systems Architect
1	IT Program Manager I	1	Internet/Intranet Architect IV
1	Data Analyst III	5	Internet/Intranet Architects III
1	Data Analyst II	1	Internet/Intranet Architect II
IT Security Office			
1	IT Security Program Director	3	Info. Security Analysts II
1	IT Program Director III	1	Info. Security Analyst I
2	Info. Security Analysts IV	1	Network/Telecom Analyst IV
2	Info. Security Analysts III	1	Network/Telecom Analyst II

Courtroom Technology			
1	Courts IT Program Director	1	Programmer Analyst IV
2	Network/Telecom Analysts IV	2	Programmer Analysts III
1	Network/Telecom Analyst III	1	IT Systems Architect
3	Network/Telecom Analysts II	1	Info. Tech. Technician I
4	Network/Telecom Analysts I		
APPLICATION SERVICES – 108 Positions			
Business Systems			
2	Info Tech. Program Directors I	6	Programmer Analysts IV
3	Info. Tech. Program Managers II	18	Programmer Analysts III
2	Info. Tech. Program Managers I	1	Business Analyst IV
1	HHS Integration / Analytics Manager	1	Business Analyst II
12	IT Systems Architects	1	Internet/Intranet Architect III
Geographic Information Systems			
1	Info. Tech. Program Director I	3	Geo. Info. Spatial Analysts II
1	Info. Tech. Program Manager II	3	Geo. Info. Spatial Analysts I
7	Geo. Info. Spatial Analysts III	3	IT Systems Architects
Enterprise Systems			
1	Info. Tech. Program Director II	7	Programmer Analysts IV
2	Info. Tech. Program Directors I	21	Programmer Analysts III
1	Info. Tech. Program Manager II	2	Programmer Analysts II
1	Business Analyst III	8	IT Systems Architects
INFRASTRUCTURE SERVICES – 81 Positions			
Platform Technologies			
1	IT Program Director II	1	Business Analyst III
3	Info. Tech. Program Managers II	2	Network/Telecom Analysts I
3	Systems Engineers III	4	Enterprise IT Technicians
14	Systems Engineers II	1	Info. Tech. Technician I
8	Systems Engineers I		
Communications Systems			
2	Info. Tech. Program Managers II	2	Network/Telecom Analysts IV
1	Info. Tech. Program Manager I	2	Network/Telecom Analysts III
1	Systems Engineer III	4	Network/Telecom Analysts II
2	Systems Engineers II		
Data Center Operations			
1	IT Program Manager II	2	Info. Tech. Technicians III
2	Systems Engineers III	1	Info. Tech. Technician II
5	Systems Engineers I	1	Info. Tech. Technician I
4	Database Administrators III	13	Enterprise IT Technicians
1	Network/Telecom Analyst II		

Performance Measurement Results

A key program within the IT Strategic Programs and Management cost center is IT/Cyber Security. All County IT systems are connected and accessed through the enterprise-wide network, with strict policies and controls to safeguard County IT systems and data from threats and unauthorized access. As with all major organizations, the County IT systems receive millions of security threats per week. Fairfax County's Cyber Security profile and technical architecture has protections against unauthorized intrusions in the technology infrastructure, and threats reported on a daily basis have increased as new technology is better able to identify and isolate these threats. Final data on IT/Cyber security is not available at the time of publication for the Advertised Budget and will be included with the measures published along with the FY 2023 Adopted Budget Plan. Of note, the County enterprise network experienced an estimated 99.99 percent uptime, a sustained achievement due to the resilient network design and cyber security program.

The landscape of cyber security is dramatically changing with growth in the consumer markets for mobile devices such as smart phones and tablets, to network-enabled industrial control systems (HVAC, Physical Access Control, lighting systems, supervisory control, and data acquisition systems etc.) referred to as the "Internet-of-Things." "Clouds" present more complex risk and challenges as these solutions are adopted. As product development transforms the enterprise-enabled landscape, the Information Security Office (ISO) is constantly adapting to evolving threats targeting untraditional endpoints and data repositories. ISO continues to experience increases in malicious code detection and a continued increase in the collection of electronic records related to agency personnel investigations, legal requests, and Freedom of Information Act (FOIA) requests. DIT successfully identified and stopped all material security threats during FY 2021.

The County is a leader in the use of GIS technologies with the most gigabytes in the GIS database among large jurisdictions and other Virginia localities according to International City/County Management Association (ICMA) benchmarks. Service encounters consist of counter sales, internal work requests, GIS projects, zoning cases, right of way projects, parcel related work, server connections, and spatial database usage. Service encounters increased in FY 2021 by over 19 percent to a level surpassing years before the pandemic. Improvements to the GEM and the Jade applications drove more use and a large number of web applications were deployed. Five percent growth is projected in FY 2022 and FY 2023.

As a result of the organization-wide expansion of telework in response to the pandemic, end users were more reliant on digital solutions to conduct county business. The requests for service received by the IT Service Desk in FY 2021 remained largely consistent with the volume of requests in FY 2020, with an increased percentage of calls closed within 72 hours. In addition, the Service Desk was able to resolve 97 percent of customer requests at initial contact, exceeding the estimated target. Ongoing rapid development of new software and equipment to support a more mobile workforce will continue to present both opportunities and challenges in this area.

Indicator	FY 2019 Actual	FY 2020 Actual	FY 2021 Estimate	FY 2021 Actual	FY 2022 Estimate	FY 2023 Estimate
Management and Administration						
Percent risk of unauthorized network perimeter access including network security breaches and inbound network worm attacks	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Application Services						
Percent change in GIS service encounters	(14.95%)	14.59%	5.00%	19.18%	5.00%	5.00%
Percent of revenue collected on applicable E-Government platforms	10.00%	10.00%	10.00%	12.00%	10.00%	10.00%
Infrastructure Services						
Business days to fulfill service requests from initial call to completion of request for: Non-critical requests	5	5	6	5	5	5
Business days to fulfill service requests from initial call to completion of request for: Critical requests	2	3	4	2	2	2
Business days to fulfill service requests from initial call to completion of request for: Emergency requests	1	1	2	1	1	1
Infrastructure Services						
Percent of calls closed within 72 hours	70%	71%	72%	74%	73%	74%
Percent of first-contact problem resolution	97%	94%	95%	97%	96%	96%

A complete list of performance measures can be viewed at
https://www.fairfaxcounty.gov/budget/fy-2023-advertised-performance-measures-pm