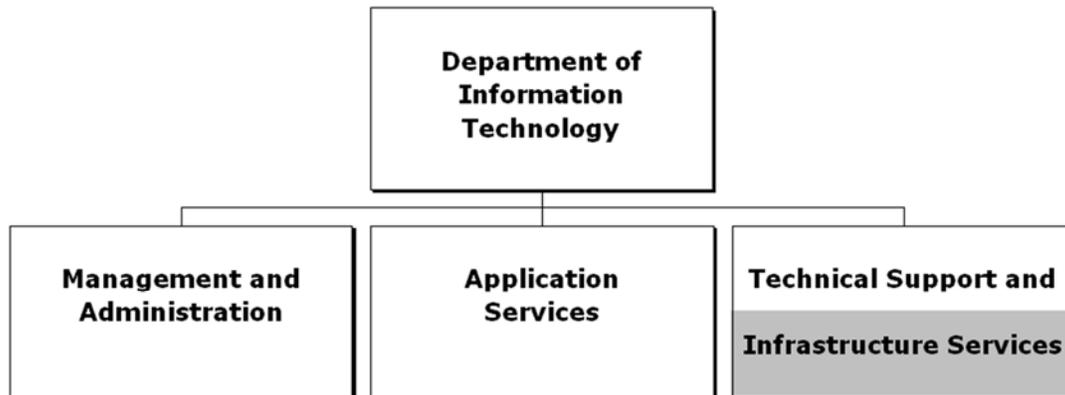


Fund 60030 Technology Infrastructure Services



- Department of Information Technology, General Fund. All staffing and operating support for the Department of Information Technology is found in Volume 1, Legislative/Executive/Central Services.
- Fund 60030, Technology Infrastructure Services. All staffing and operating support for the Infrastructure Services is found in Volume 2, Fund 60030.

Mission

To provide a reliable and secure technology infrastructure foundation required to support County business processes and systems that strengthen the public service commitment of Fairfax County.

Focus

Fund 60030, Technology Infrastructure Services, provides the underlying technology foundation supporting information technology (IT) applications, platforms, hardware, and communications systems for Fairfax County government. This consists of the enterprise portfolio of computers, data communications equipment, radio systems, data center operations, and other critical infrastructure. The Department of Information Technology (DIT) coordinates all aspects of IT for the County and plays an essential enabling role assisting County agencies in advancing the strategic value of technology to transform work processes and provide quality services. Technology infrastructure is managed as an enterprise asset, and this approach results in the delivery of technology infrastructure services that function 24 hours per day, seven days per week.

Fund 60030 is an internal service fund supported by revenues from County agencies and other entities such as the Fairfax County Public Schools (FCPS). Expenditures are primarily driven by the customer agencies' use of the IT infrastructure utility including software licenses, data center operations, computer equipment refresh, the PC Replacement Program, network carrier services, the Radio Center, and the staff support positions and outside services. In addition, the chargeback also includes enterprise-wide applications on the platforms in the data center, including the Fairfax County Unified System (FOCUS), which is a joint finance and procurement system for Fairfax County Government and FCPS, and a human resources system for the County. The technology backbone of FOCUS is a contemporary enterprise resource planning (ERP) application suite.

The County's centralized approach to common infrastructure systems and operations provides economies and efficiencies through consolidation and leveraging of resources. Optimum performance is achieved by automated IT support processes and enterprise-wide security tools, ensuring data integrity and system-use accountability. County IT architecture employs industry-standard products and best practices for efficient solution delivery and support. Through energy efficiency initiatives, DIT has achieved major goals in server platform consolidation, which provides significant technology

Fund 60030 Technology Infrastructure Services

infrastructure cost and operational efficiencies. The few remaining legacy mainframe systems are in the process of being converted to platforms that rely upon open systems, and this conversion is likely to result in additional data center operational efficiencies. New IT projects are implemented through Fund 10040, Information Technology, and some IT systems are implemented directly by agencies. However, all new IT systems require infrastructure services, and thus may incrementally increase supporting infrastructure service obligations that, depending on requirements, may result in higher infrastructure costs.

Technology Infrastructure Services supports the following County Vision Elements:



Maintaining Safe and Caring Communities



Connecting People and Places



Practicing Environmental Stewardship



Exercising Corporate Stewardship

Technology infrastructure activities in Fund 60030 support systems and operations for County agencies and include the management of County end-user computers (PCs, laptops and tablets), servers, storage systems, enterprise office-productivity software, e-mail and messaging system (Microsoft Suite), and databases (Oracle and SQL). Fund 60030 also supports the operations of the County's primary data center, an off-site disaster recovery capability, the management of the Public Safety and Public Service Radio Systems, Radio Center services, administration of authorized County software license obligations for certain applications, data repositories, the safeguarding of stored data assets, and the enterprise-wide data communications networks. Protective measures such as network security and user access tools are typically incorporated into the infrastructure portfolio. In addition to the Data Center—including the associated hardware, software, database administration, data storage systems and other operational support—three major infrastructure activities of note are:

- The County's enterprise-wide data communications network which incorporates both commercial networks and the fiber-optic Institutional Network (I-Net) infrastructure providing bandwidth and access security connecting County agencies to the vast array of business applications available on the County's server platforms (over 16,000 end-user end-point devices and over 900 virtual servers and 600 production databases on consolidated virtual server farms). The I-Net provides a private and secure network infrastructure connecting over 400 County and FCPS buildings and serving data, voice and video transport.
- The PC Replacement Program provides a funding mechanism for scheduled PC, laptop, tablets, etc., device technology refreshes. The cost per PC in the program includes PC hardware, required software licenses, security requirements, protected disposal, service desk and desk-side staff support. This program has been recognized as a cost-effective and best-practice model in the governmental and commercial sectors, fully optimizing the allocation of IT assets and providing efficient and predictable desktop maintenance and support. DIT continually reviews various service options for efficiencies in the acquisition and deployment of devices, while ensuring that the program remains cost effective and competitive against other options. In FY 2015, the PC Replacement Program underwent a comprehensive review that included a

Fund 60030 Technology Infrastructure Services

review of the County PC inventory, which had expanded over the years, industry innovation and the replacement-cycle structure. The new program, which began in FY 2015, reflects a five-year replacement cycle and includes 14,000 PCs (up from 11,481), of which 11,500 are desktops and 2,500 are laptops or tablets. One of the critical points of this review was to ensure that the County updated the number of software licenses it possesses. The County previously had approximately 11,000 device-based licenses, but in the new PC Replacement Program, the County shifted to individual-based licenses (estimated at 12,500 standard and 1,500 academic/library), with each individual being able to have up to five devices per user. This approach ensures long-term compliance and provides much greater flexibility going forward. The updated program strategy takes into consideration a more fluid evolutionary process of industry innovation, as well as agencies and worker requirements, including mobility and COOP plans.

- The County's radio systems, devices and support services are used by public safety, public works, other County agencies, the Fastran and Connector bus fleets, and FCPS. Radio communications operate over dedicated critical infrastructure systems relied upon by public safety organizations worldwide, and as is the case with the County, they are managed locally. These systems have proven through many emergency events to be optimally reliable, surviving and sustaining operational integrity through extreme weather such as hurricanes and the Derecho, as well as other regional emergency and high security events while commercial telecommunications carrier networks were jammed or compromised. The Radio Center staff also work on regional interoperability initiatives and on the Department of Homeland Security national strategy to ensure effective communication between local, state and federal partners for responders. To support the operational and maintenance requirements of the systems, costs are recovered from the County user agencies and FCPS.

As part of the FY 2017 Adopted Budget Plan, staff reviewed the telecommunication billing process to determine if efficiencies could be generated. Based on this review, the task of performing telecommunication related billings was transferred to Fund 60030 from Agency 70, Department of Information Technology. Fund 60030 already performs similar countywide billings and the consolidation of similar activities in a single agency should reduce overall staff workload and result in other efficiencies.

Budget and Staff Resources

Category	FY 2015 Actual	FY 2016 Adopted	FY 2016 Revised	FY 2017 Advertised	FY 2017 Adopted
FUNDING					
Expenditures:					
Personnel Services	\$6,827,484	\$7,603,172	\$7,603,172	\$7,821,570	\$7,821,570
Operating Expenses	25,646,538	24,146,784	25,399,720	31,766,438	31,766,438
Capital Equipment	4,778,355	4,007,322	5,326,948	3,231,288	3,231,288
Total Expenditures	\$37,252,377	\$35,757,278	\$38,329,840	\$42,819,296	\$42,819,296
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)					
Regular	73 / 73	73 / 73	73 / 73	73 / 73	73 / 73

Fund 60030

Technology Infrastructure Services

<u>Communication/Infrastructure</u>	<u>Data Center Services</u>	<u>Radio Center Services</u>
<u>Program Management</u>		
1 Info. Tech. Program Director III	1 Info. Tech. Program Manager II	1 Info. Tech. Program Manager II
2 Network/Telecom. Analysts IV	1 IT Systems Architect	1 Network/Telecom. Analyst IV
	1 Systems Programmer III	3 Network/Telecom. Analysts III
	5 Systems Programmers II	4 Network/Telecom. Analysts II
	1 Systems Programmer I	2 Network/Telecom. Analysts I
<u>Server/SAN Infrastructure</u>	1 Programmer Analyst III	
2 Network/Telecom. Analysts IV	1 Programmer Analyst II	
2 Network/Telecom. Analysts I	1 IT Technician II	
	1 Network/Telecom. Analyst III	<u>Network/I-Net</u>
	1 Network/Telecom. Analyst I	1 Info. Tech. Program Director I
<u>Desktop Support/PC Replacement</u>		1 Info. Tech. Program Manager I
1 Network/Telecom. Analyst III		1 Network/Telecom. Analyst IV
24 Enterprise IT Technicians		8 Network/Telecom. Analysts III
		4 Network/Telecom. Analysts II
		1 Info. Security Analyst IV
TOTAL POSITIONS		
73 Positions / 73.0 FTE		

FY 2017 Funding Adjustments

The following funding adjustments from the *FY 2016 Adopted Budget Plan* are necessary to support the FY 2017 program. Included are all adjustments recommended by the County Executive that were approved by the Board of Supervisors, as well as any additional Board of Supervisors' actions, as approved in the adoption of the budget on April 26, 2016.

- ◆ **Employee Compensation** **\$218,398**
 An increase of \$218,398 in Personnel Services includes \$98,046 for a 1.33 percent market rate adjustment (MRA) for all employees and \$120,352 for performance-based and longevity increases for non-uniformed merit employees, both effective July 2016.
- ◆ **Telecommunication Related Billings** **\$6,113,000**
 An increase of \$6,113,000 in Operating Expenses is required as the agency will assume the responsibility of performing telecommunication related billings from Agency 70, Department of Information Technology. This responsibility is being transferred as a review of the telecommunication billing process was conducted and it was determined that Fund 60030 could perform these billings in a more efficient manner as similar countywide billings are already being performed. It is important to note that an offsetting revenue adjustment has also been included resulting in a net impact of \$0.
- ◆ **Other Operating Expenses** **\$1,076,034**
 An increase of \$1,076,034 is included for various operating adjustments. Of this total, \$999,495 is required for critical cyber-security mitigation and monitoring tools, database optimization and securing additional data storage capacity and \$76,539 is required to cover costs associated with the maintenance of firewall equipment purchased for security requirements related to social media.

Fund 60030 Technology Infrastructure Services

- ◆ **Software Maintenance** **\$430,620**

An increase of \$430,620 is included for ongoing software maintenance costs related to the County's Talent Management System which includes five distinct modules: Applicant Management (Insight/E-Recruit), the Learning Management System (LMS), Onboarding, Performance Management, and the Employee Management System (EMS). These integrated modules are designed to maximize operational efficiencies by consolidating independent talent management business processes, streamline work functions by increasing self service capabilities, eliminate work-around systems used to provide functionality, increase capabilities for real-time data analysis and provide greater flexibility in transparency and reporting capabilities.

- ◆ **Capital Equipment** **\$3,231,288**

Funding of \$3,231,288 is included for Capital Equipment. Of this total, \$1,731,288 is fully supported by a transfer from Fund 40030, Cable Communications, and reflects funding to support the fifth year of a multi-year refresh plan of core elements of the I-Net in alignment with the County's approved IT principles for sustaining a secure and supportable technology infrastructure and to ensure the I-Net remains a functional IT asset for both the County and FCPS. In addition, funding of \$900,000 is required to purchase replacement equipment, primarily servers and storage systems, to be installed within the datacenter and elsewhere and \$600,000 is required to replace aging switching infrastructure at numerous sites, including the Government Center, which will support tablets (mobile users) and new desktop and laptop features; expand WiFi at numerous sites and upgrade the data center to 10-Gigabit port density

Changes to FY 2016 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2016 Revised Budget Plan since passage of the FY 2016 Adopted Budget Plan. Included are all adjustments made as part of the FY 2015 Carryover Review, FY 2016 Third Quarter Review, and all other approved changes through April 30, 2016.

- ◆ **Carryover Adjustments** **\$2,572,562**

As part of the *FY 2015 Carryover Review*, the Board of Supervisors approved encumbered funding of \$1,194,562 primarily for data center operations, computer equipment, and various maintenance requirements. In addition, unencumbered funding of \$1,378,000 was approved for core technology infrastructure requirements whose purchase was delayed due in part to new contracts becoming available in FY 2016 that included more favorable pricing.

Fund 60030 Technology Infrastructure Services

Key Performance Measures

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2013 Actual	FY 2014 Actual	FY 2015 Estimate/Actual	FY 2016	FY 2017
Business days to fulfill service requests from initial call to completion of request for non-critical requests	4	3	4 / 4	4	4
Business days to fulfill service requests from initial call to completion of request for critical calls	2	2	2 / 2	2	2
Business days to fulfill Telecommunications service requests for emergencies	1	1	1 / 1	1	1
Percent of calls closed within 72 hours	86%	86%	86% / 83%	86%	85%
Percent of first-contact problem resolution at IT Service Desk	95%	95%	95% / 94%	95%	94%

A complete list of performance measures can be viewed at www.fairfaxcounty.gov/dmb/fy2017/adopted/pm/60030.pdf

Performance Measurement Results

The Technical Support Center Help Desk (IT Service Desk) requests for service increased in FY 2015, with much of this increase attributed to additional requests for service calls in support of rolling out next generation Microsoft platforms Windows 8.1 and 10, Office 2013, unified messaging, and increased deployment of mobile devices. Strengthened enterprise-wide management and image control processes have allowed resolution of end-user desktop requests quickly. Customer satisfaction generally continues to be strong due to internal quality control measures and remote resolution capabilities. Efforts in FY 2017 will focus on enhanced remote resolution, new mobile devices/apps, and IT Service desk system-workflow services to streamline routine processes.

Fund 60030 Technology Infrastructure Services

FUND STATEMENT

Fund 60030, Technology Infrastructure Services

	FY 2015 Actual	FY 2016 Adopted Budget Plan	FY 2016 Revised Budget Plan	FY 2017 Advertised Budget Plan	FY 2017 Adopted Budget Plan
Beginning Balance	\$8,347,175	\$2,492,174	\$6,699,099	\$2,974,004	\$2,974,004
Revenue:					
Telecommunication Charges ¹	\$0	\$0	\$0	\$6,113,000	\$6,113,000
Radio Services Charges	881,450	940,000	940,000	940,000	940,000
PC Replacement Charges	6,225,252	6,243,148	6,243,148	6,255,648	6,255,648
DIT Infrastructure Charges					
County Agencies and Funds	20,769,081	20,886,693	20,886,693	21,535,711	21,535,711
Fairfax County Public Schools	1,857,747	1,913,479	1,913,479	1,970,883	1,970,883
Subtotal DIT Infrastructure Charges	\$22,626,828	\$22,800,172	\$22,800,172	\$23,506,594	\$23,506,594
Total Revenue	\$29,733,530	\$29,983,320	\$29,983,320	\$36,815,242	\$36,815,242
Transfers In:					
Cable Communications (40030) ²	\$5,870,771	\$4,621,425	\$4,621,425	\$3,545,391	\$3,545,391
Total Transfers In	\$5,870,771	\$4,621,425	\$4,621,425	\$3,545,391	\$3,545,391
Total Available	\$43,951,476	\$37,096,919	\$41,303,844	\$43,334,637	\$43,334,637
Expenditures:					
Telecommunication Services ¹	\$0	\$0	\$0	\$6,113,000	\$6,113,000
Infrastructure Services	28,981,411	26,618,248	27,707,524	27,508,714	27,508,714
Radio Center Services	1,347,598	1,334,496	1,349,167	1,366,663	1,366,663
Computer Replacement Program	6,563,391	6,904,534	7,332,234	6,930,919	6,930,919
Technology Infrastructure Equipment	359,977	900,000	1,940,915	900,000	900,000
Total Expenditures	\$37,252,377	\$35,757,278	\$38,329,840	\$42,819,296	\$42,819,296
Total Disbursements	\$37,252,377	\$35,757,278	\$38,329,840	\$42,819,296	\$42,819,296
Ending Balance³	\$6,699,099	\$1,339,641	\$2,974,004	\$515,341	\$515,341
Infrastructure Replacement Reserve ⁴	\$4,642,083	\$372,125	\$2,006,074	\$222,682	\$222,682
PC Replacement Reserve ⁵	2,057,016	967,516	967,930	292,659	292,659
Unreserved Balance	\$0	\$0	\$0	\$0	\$0

¹ Beginning in FY 2017, the task of performing telecommunication related billings has been transferred from Agency 70, Department of Information Technology, to Fund 60030, Technology Infrastructure Services.

² Funding of \$1,814,103 reflects a direct transfer from Fund 40030, Cable Communications, to support staff and equipment costs related to construction of the I-Net. In addition, in FY 2017 an amount of \$1,731,288 is included reflecting the fifth year of a multi-year commitment to replace and refresh core elements of the I-Net.

³ The fluctuation in ending balance is primarily due to the operation of the PC Replacement and Computer Equipment Reserve Programs. The programs collect funding each year, hold it in reserve until needed, and then expend the funds for replacement equipment. The time period for this action varies based on the needs of the programs.

⁴ This reserve is designed to assist in the scheduled replacement of enterprise computer and network assets.

⁵ The balance in the PC Replacement Reserve fluctuates annually based on scheduled PC replacements which permanently moved to a five-year replacement cycle in FY 2015 as part of a long-term PC replacement strategy.