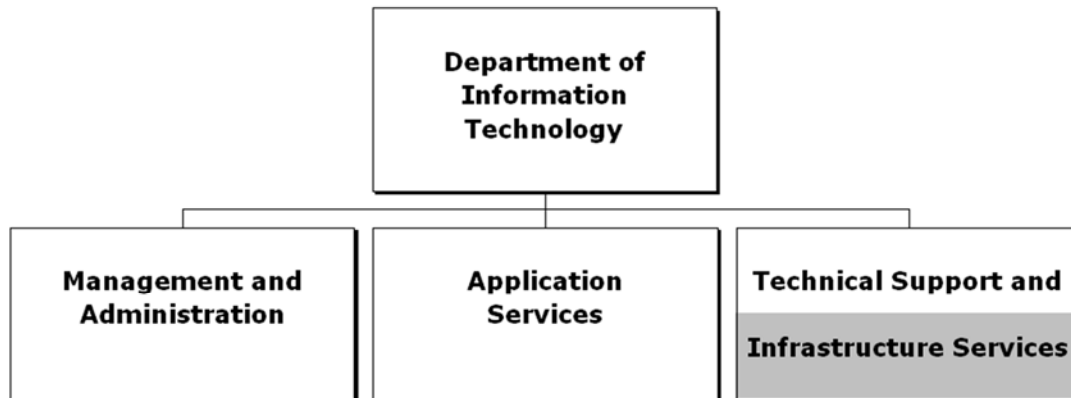


Fund 60030 Technology Infrastructure Services



- 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, voice communication systems 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, telecommunication 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

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infrastructure cost and operational efficiencies. New IT projects are implemented through Fund 10040, Information Technology, and some IT systems, applications, and data repositories may be implemented directly by agencies, however, all new IT systems require IT infrastructure, thus may incrementally increase supporting infrastructure service obligations that, may result in higher infrastructure costs. Growth in digitization, industrial systems automation and visual data are key contributors.

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), voice communication systems, servers, storage systems, enterprise office-productivity software, e-mail and messaging system (Microsoft Office Suite), and databases (Oracle and SQL). Fund 60030 also supports the operations of the County's primary data center, a disaster recovery capability hosted off-site, 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 communication 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 server hardware, software, database administration, data storage systems and other operational support—the other 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 1,000 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 review of the County PC inventory, which had expanded over the years, industry innovation and the replacement-

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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. The radio communications platform is evolving, and staff is looking to the next generation of solutions as appropriate for general County agency use. To support the operational and maintenance requirements of the systems, costs are recovered from the County user agencies and FCPS.
- In FY 2017, voice telecommunications utility costs were moved from the DIT agency general fund to Fund 60030. The telecommunications architecture uses 'voice over internet protocol' (VoIP). DIT continues to evaluate shifts in marketplace technology to include convergence of voice and data, and advancement in wireless and Wi-Fi. Activities include system installations and provisioning moves, adds and changes that result from reorganizations and new hiring. DIT recovers the expense for telecommunications via annual and quarterly chargebacks to user agencies.

Fund 60030

Technology Infrastructure Services

Budget and Staff Resources

Category	FY 2016 Actual	FY 2017 Adopted	FY 2017 Revised	FY 2018 Advertised	FY 2018 Adopted
FUNDING					
Expenditures:					
Personnel Services	\$6,651,561	\$7,821,570	\$7,821,570	\$7,931,704	\$7,931,704
Operating Expenses	25,180,807	31,766,438	32,480,485	30,535,138	30,535,138
Capital Equipment	4,183,375	3,231,288	3,523,912	2,592,340	2,592,340
Total Expenditures	\$36,015,743	\$42,819,296	\$43,825,967	\$41,059,182	\$41,059,182

AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)					
Regular	73 / 73	73 / 73	73 / 73	73 / 73	73 / 73

<u>Communication/Infrastructure Program Management</u>	<u>Data Center Services</u>	<u>Radio Center Services</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>		
2 Network/Telecom. Analysts IV	1 Programmer Analyst III	
2 Network/Telecom. Analysts I	1 Programmer Analyst II	
	1 IT Technician II	
	1 Network/Telecom. Analyst III	1 Info. Tech. Program Director I
	1 Network/Telecom. Analyst I	1 Info. Tech. Program Manager I
<u>Desktop Support/PC Replacement</u>		<u>Network/I-Net</u>
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 2018 Funding Adjustments

The following funding adjustments from the FY 2017 Adopted Budget Plan are necessary to support the FY 2018 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 May 2, 2017.

- ◆ **Employee Compensation** **\$110,134**
An increase of \$110,134 in Personnel Services includes \$110,134 for performance-based and longevity increases for non-uniformed merit employees effective July 2017.

- ◆ **Telecommunication Services** **(\$1,113,000)**
A decrease of \$1,113,000 in telecommunication related costs is based on lower than anticipated billings and various initiatives implemented by staff to reduce annual costs.

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- ◆ **Software Adjustments** **\$281,700**

An increase of \$281,700 is associated with revised software license agreements. Of this total, an increase of \$192,953 is associated with a renegotiated software license agreement with Microsoft that allows County employees to utilize Microsoft products on their PCs. The new agreement ensures that the County remains in compliance and that all County employees that utilize a PC have an appropriate license. In addition, funding of \$88,747 is associated with contract rate increases for software maintenance licenses related to data storage.

- ◆ **Other Operating Adjustments** **(\$400,000)**

A decrease of \$400,000 is included for various operating adjustments. Of this total, a decrease of \$1,100,000 is associated with a reduction in consultant services. This decrease is partially offset by increases of \$400,000 to cover additional data storage requirements, \$200,000 to support remote access initiatives and \$100,000 to cover the maintenance and support costs associated with implementing a solution that allows agencies to accept digital signatures and to issue digitally signed documents in electronic form.

- ◆ **Capital Equipment** **\$2,592,340**

Funding of \$2,592,340 is included for Capital Equipment. Of this total, \$692,340 is supported by a transfer from Fund 40030, Cable Communications, and reflects financial support for the final 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 Schools. It is anticipated that a new refresh cycle will begin in FY 2019. In addition, funding of \$1,100,000 is required to purchase replacement equipment, primarily servers and storage systems, to be installed within the datacenter and elsewhere; \$400,000 is required for the Judicial Center and MPSTOC local area network (LAN) equipment refresh; and \$400,000 is required to replace aging switching infrastructure at numerous sites, including the Government Center.

Changes to FY 2017 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2017 Revised Budget Plan since passage of the FY 2017 Adopted Budget Plan. Included are all adjustments made as part of the FY 2016 Carryover Review, FY 2017 Third Quarter Review, and all other approved changes through April 30, 2017.

- ◆ **Carryover Adjustments** **\$1,006,671**

As part of the *FY 2016 Carryover Review*, the Board of Supervisors approved encumbered funding of \$1,006,671, primarily for data center operations, disaster recovery, computer equipment, and various maintenance requirements.

Fund 60030 Technology Infrastructure Services

Key Performance Measures

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate/Actual	FY 2017	FY 2018
Business days to fulfill service requests from initial call to completion of request for non-critical requests	3	4	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%	83%	86%/82%	83%	84%
Percent of first-contact problem resolution at IT Service Desk	95%	94%	95%/94%	94%	94%

A complete list of performance measures can be viewed at www.fairfaxcounty.gov/dmb/fy2018/adopted/pm/60030.pdf

Performance Measurement Results

The Technical Support Center Help Desk (IT Service Desk) requests for service decreased slightly in FY 2016. The number of calls remained relatively high based on a significant number of service calls related to rolling out the latest generations of Microsoft Windows and Office, 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 2018 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 2016 Actual	FY 2017 Adopted Budget Plan	FY 2017 Revised Budget Plan	FY 2018 Advertised Budget Plan	FY 2018 Adopted Budget Plan
Beginning Balance	\$6,699,099	\$2,974,004	\$5,306,532	\$1,841,198	\$1,841,198
Revenue:					
Telecommunication Charges ¹	\$0	\$6,113,000	\$6,113,000	\$5,000,000	\$5,000,000
Radio Services Charges	883,994	940,000	940,000	850,000	850,000
PC Replacement Charges	6,289,648	6,255,648	6,255,648	6,276,810	6,276,810
DIT Infrastructure Charges					
County Agencies and Funds	20,914,630	21,535,711	21,535,711	22,758,845	22,758,845
Fairfax County Public Schools	1,913,479	1,970,883	1,970,883	2,030,009	2,030,009
Subtotal DIT Infrastructure Charges	\$22,828,109	\$23,506,594	\$23,506,594	\$24,788,854	\$24,788,854
Total Revenue	\$30,001,751	\$36,815,242	\$36,815,242	\$36,915,664	\$36,915,664
Transfers In:					
Cable Communications (40030) ²	\$4,621,425	\$3,545,391	\$3,545,391	\$2,506,443	\$2,506,443
Total Transfers In	\$4,621,425	\$3,545,391	\$3,545,391	\$2,506,443	\$2,506,443
Total Available	\$41,322,275	\$43,334,637	\$45,667,165	\$41,263,305	\$41,263,305
Expenditures:					
Telecommunication Services ¹	\$0	\$6,113,000	\$6,113,000	\$5,000,000	\$5,000,000
Infrastructure Services	25,634,243	27,508,714	28,377,736	26,438,991	26,438,991
Radio Center Services	1,338,620	1,366,663	1,368,057	1,382,895	1,382,895
Computer Replacement Program	7,239,761	6,930,919	6,930,919	7,137,296	7,137,296
Technology Infrastructure Equipment	1,803,119	900,000	1,036,255	1,100,000	1,100,000
Total Expenditures	\$36,015,743	\$42,819,296	\$43,825,967	\$41,059,182	\$41,059,182
Total Disbursements	\$36,015,743	\$42,819,296	\$43,825,967	\$41,059,182	\$41,059,182
Ending Balance³					
Infrastructure Replacement Reserve ⁴	\$4,199,629	\$222,682	\$1,409,566	\$204,123	\$204,123
PC Replacement Reserve ⁵	1,106,903	292,659	431,632	0	0
Unreserved Balance	\$0	\$0	\$0	\$0	\$0

¹ In FY 2017, the task of performing telecommunication related billings was 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 2018 an amount of \$692,340 is included reflecting the final year of a multi-year commitment to replace and refresh core elements of the I-Net. A new refresh cycle will begin in FY 2019 to ensure the I-Net continues to operate effectively.

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.