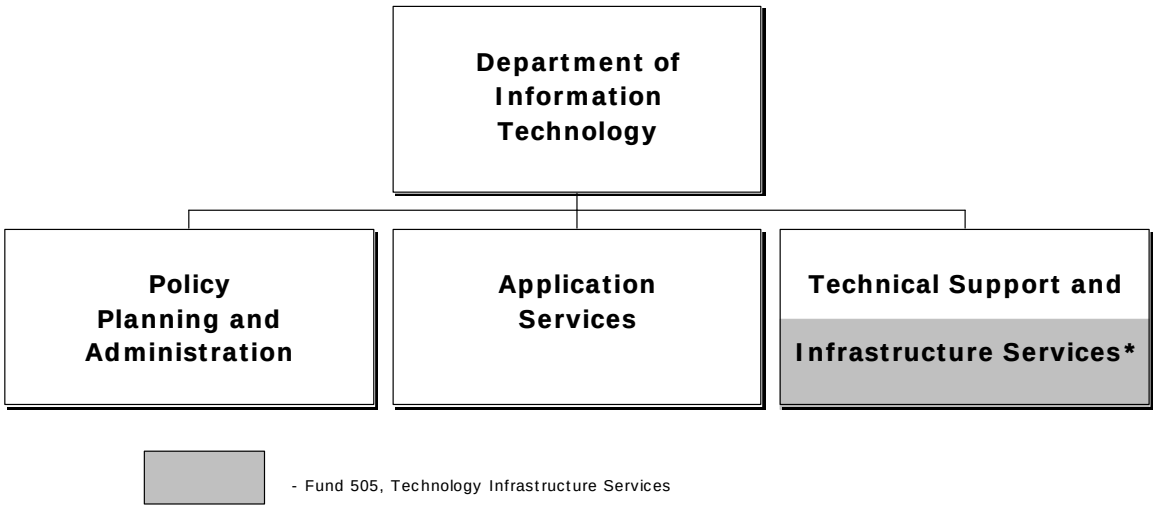
Fund 505
Technology Infrastructure Services



* All staffing and operating support for Infrastructure Services is found in Volume 2, Fund 505.

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 505, Technology Infrastructure Services, provides the underlying technology foundation supporting information systems and communications for Fairfax County Government. This consists of the enterprise portfolio of computers, telecommunications equipment, and infrastructure providing the essential foundational technology that supports Fairfax County government. The Department of Information Technology (DIT) coordinates all aspects of information technology for the County and plays an enabling role in advancing the strategic value of technology to transform work processes and provide quality services to customers. DIT manages technology as an enterprise asset and is responsible for direction and execution of information technology and communications systems by supporting and managing services and Fund 505.

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 information technology (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. Fund 505, Technology Infrastructure Services, includes technology activities and communication services that support systems and operations for County agencies, including the management of County desktop computers (PCs and mobiles), servers, enterprise office-productivity software, e-mail and messaging system (Microsoft suite) and databases (Oracle, SQL, and Access). Fund 505 also supports the operations of the County's primary data center (the Enterprise Technology Operation Center, or ETOC), monitoring and maintenance of enterprise data communications networks, and the Public Service Radio System and Radio Center services. One of the County's major assets is the fiber Institutional Network (I-Net) which provides a private secure network infrastructure connecting 400 County and Fairfax County Public Schools buildings serving data, voice and video transport. DIT manages the I-Net infrastructure and services. I-Net equipment and related maintenance is directly supported from the I-Net program funds within Fund

105, Cable Communications. New IT projects are implemented through Fund 104, IT Projects, while some other IT systems are implemented by agencies; however, all new IT systems require infrastructure services, thus increasing supporting infrastructure service obligations and depending on requirements, there may be resulting upward pressure on costs.

Fund 505 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 utility, software licenses, data center operations, computer equipment refresh, PC replacement program, network carrier services and support staff.

DIT also provides intra-governmental services including the operation and maintenance of the County data center, mainframe, servers and data storage and back-up 24 hours a day, seven days per week; the safeguarding of County software license obligations, data repositories and information assets; and the on-going maintenance of County data and radio communication networks. The County's enterprise network provides bandwidth securely connecting County agencies to the vast array of business applications available on the County mainframe or server platforms (over 16,000 end-user PC devices, over 600 servers and 400 production databases). Based on energy efficiency initiatives, DIT was able to achieve major goals in server consolidation, which provided cost efficiencies in supporting applications and databases. The data center charge-back also supports the legacy corporate systems on the current mainframe used by County and schools. A transfer from Fund 105, Cable Communications, is provided to offset I-Net costs for General Fund and General Fund-supported agencies.

Another activity within Fund 505 is the management of the PC Replacement Reserve, which ensures that funding is available for scheduled desktop device technology refreshes. The regularly scheduled replacement of this equipment helps County agencies remain current with advancements in technology that could affect their services. The PC Replacement schedule was deferred for one year in FY 2010 to allow for necessary budget reductions. Beginning in FY 2011, the program moved from a four-year to a five-year replacement cycle in order to achieve additional annual savings, and DIT continually reviews various service options to try to identify efficiencies in the acquisition and deployment of equipment. The cost per PC in the program includes PC hardware, required software licenses, IT security agent, protected disposal, and desk-side staff support of County PCs. The County's program has been recognized as a cost-effective value, best-practice model in both the governmental and commercial sectors, fully optimizing the allocation of IT assets and providing efficient and predictable desktop maintenance and support. DIT staff is studying several options for future restructuring of the PC Replacement Program, such as separate replacement charges and schedules to accommodate desktop and laptop PCs, with possible implementation as early as the FY 2014 budget process.

In addition to the areas mentioned above, Fund 505 also supports the staff positions dedicated to coordinating radio repair and providing radio engineering services to County agencies and the FCPS system. Operational maintenance of the radio network is of primary importance to the County public safety agencies, public works agencies, FCPS and other County agencies. In addition to overseeing the operations of the public safety and public service radio systems, the Radio Center staff members also work with regional counterparts on interoperability initiatives so as to ensure 24/7 communication with other jurisdictions. To support the operational and maintenance requirements of the systems, costs are recovered from the County user agencies, FCPS and Fairfax Water.

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Budget and Staff Resources

Agency Summary					
Category	FY 2011 Actual	FY 2012 Adopted Budget Plan	FY 2012 Revised Budget Plan	FY 2013 Advertised Budget Plan	FY 2013 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	73 / 73	73 / 73	73 / 73	73 / 73	73 / 73
Expenditures:					
Personnel Services	$6,166,530	$6,524,403	$6,597,845	$6,755,675	$6,817,539
Operating Expenses	20,587,248	21,509,761	22,563,513	23,041,427	23,041,427
Capital Equipment	1,589,108	1,449,400	1,785,100	4,255,600	4,255,600
Total Expenditures	**$28,342,886**	**$29,483,564**	**$30,946,458**	**$34,052,702**	**$34,114,566**

Position Summary

Communication/Infrastructure Program Management
1 Info. Tech. Program Director III
2 Network/Telecom Analysts IV
1 Management Analyst I

Server/SAN Infrastructure
2 Network/Telecom Analysts IV
2 Network/Telecom Analysts I

Desktop Support/ PC Replacement
1 Network/Telecom Analyst III
23 Enterprise IT Technicians

Data Center Services
1 Info. Tech. Program Manager II
1 IT Systems Architect
1 Systems Programmer III
5 Systems Programmers II
1 System Programmer I
1 Programmer Analyst III
1 Programmer Analyst II
1 Database Administrator II
1 Business Analyst I
1 IT Technician II
1 Network/Telecom Analyst III

Radio Center Services
1 Info. Tech. Program Manager II
1 Network/Telecom Analyst IV
3 Network/Telecom Analysts III
2 Network/Telecom Analysts II
1 Communications Engineer
2 Communications Technicians
1 IT Technician II

Network/I-Net
1 Info. Tech. Program Director I
1 Info. Tech. Program Manager I
1 Network/Telecom Analyst IV
7 Network/Telecom Analysts III
4 Network/Telecom Analysts II
1 Info. Security Analyst IV

TOTAL POSITIONS
73 Positions / 73.0 Staff Years

FY 2013 Funding Adjustments

The following funding adjustments from the FY 2012 Adopted Budget Plan are necessary to support the FY 2013 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 1, 2012.

- **Employee Compensation** **$196,901**
  An increase of $196,901 in Personnel Services reflects $135,037 for a 2.18 percent market rate adjustment (MRA) in FY 2013, effective July 2012, and $61,864 for a 2.50 percent performance-based scale and salary increase for non-uniformed merit employees, effective January 2013.

- **Full Year Impact of FY 2012 Market Rate Adjustment** **$96,235**
  As part of the *FY 2011 Carryover Review*, the Board of Supervisors approved an increase of $96,235 in Personnel Services for a 2.0 percent market rate adjustment (MRA), effective September 24, 2011.

- **PC Replacement** **$429,666**
  An increase of $429,666 is included for PC Replacement-related costs, of which $247,500 is due primarily to an increase in the total number of units programmed for replacement in FY 2013

compared to FY 2012. The remaining increase of $182,166 reflects higher maintenance expenses for the Microsoft enterprise software agreement, which was recently renegotiated. Available balance in the PC Replacement Reserve will be used to cover these expenses.

- **Software Maintenance Requirements** **$634,000**
  An increase of $634,000 is included for software maintenance requirements for programs that securely provide online services to the County's citizens, businesses and visitors. Of this total, $312,000 is required for identity management and user authentication software maintenance. This software permits individual user accounts to be created automatically and in accordance with predetermined rules. Online services that are particularly reliant upon user authentication include those that collect taxes, fines and fees. An additional $160,000 is included for maintenance of Business Intelligence (BI) software products used to consolidate and streamline agency, citizen and industry access to land-use data and other business systems, while the remaining $162,000 is required for maintenance of third-party supplemental operational software in support of FOCUS including Oracle database licensing adjustments, an on-site system monitoring tool for SAP, and a specialized tool for testing and reporting for Human Resources payroll transactions and data.

- **24-Hour Monitoring of SAP Environment** **$468,000**
  An increase of $468,000 is required for 24-7-365 remote monitoring and support of the SAP virtual and physical environments and after-hours BASIS support performed off site by a managed services provider. BASIS is the underlying infrastructure, hardware, and system configuration activity for SAP systems – it is the backbone of the SAP system – it comprises hardware, software configuration and integration of all the SAP systems implemented to date. If not provided, system errors would go undetected and the ability to perform required maintenance to keep the system properly performing would be compromised.

- **Capital Equipment** **$4,255,600**
  Funding of $4,255,600 is included for Capital Equipment. Of this total, $2,806,200, fully supported by a transfer from Fund 105, Cable Communications, reflects funding to support the first year of a multi-year refresh plan of core elements of the Institutional Network (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. An additional $1,200,000 is included for capitalized lease payments primarily associated with network equipment, server replacement, and Storage Area Network capacity, while the remaining $249,400 reflects funding for capitalized software licenses.

Changes to FY 2012 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2012 Revised Budget Plan since passage of the FY 2012 Adopted Budget Plan. Included are all adjustments made as part of the FY 2011 Carryover Review, FY 2012 Third Quarter Review, and all other approved changes through April 24, 2012.

- **Carryover Adjustments** **$1,462,894**
  As part of the *FY 2011 Carryover Review*, the Board of Supervisors approved funding of $73,442 in Personnel Services for a 2.0 percent market rate adjustment, effective September 24, 2011. In addition, the Board approved encumbered funding of $1,319,452 in Operating Expenses. The remaining increase of $70,000 was included to upgrade the agency's ability to provide necessary communications support to incident commanders.

Key Performance Measures

Objectives

- To maintain the number of business days to fulfill Telecommunications service requests for a) non-critical requests at a standard of 4 days; b) critical requests at a standard of next business day; and c) emergency requests at a standard of the same day.

- To close 82 percent of end-user calls to Technical Support Services within 72 hours.

- To achieve a resolution rate for the average first-call problem for the Technical Support Center (TSC), DIT Help Desk of 81 percent.

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2009 Actual	FY 2010 Actual	FY 2011 Estimate/Actual	FY 2012	FY 2013
Output:					
Responses to calls for repairs on voice devices	1,691	1,778	1,700 / 1,932	2,000	2,050
Moves, adds or changes (voice and data)	8,711	2,575	3,000 / 4,357	4,560	4,600
LAN/PC calls resolved within 72 hours	15,184	14,892	15,400 / 15,368	15,800	16,000
Customer requests for service fulfilled by Technical Support Center (TSC)	77,186	86,402	87,500 / 87,102	89,250	91,700
Efficiency:					
Cost per call	$110	$110	$110 / $110	$110	$110
Average number of hours annually spent per staff member to resolve calls	1,240	1,280	1,280 / 1,282	1,350	1,525
Customer requests for service per TSC staff member	6,223	7,200	7,200 / 8,685	8,825	8,975
Service Quality:					
Customer satisfaction with telecommunication services	95.0%	95.0%	95.0% / 95.0%	95.0%	95.0%
Percent of customers reporting satisfaction with resolution of LAN/PC workstation calls	91%	91%	92% / 93%	94%	95%
Percent satisfaction of County employees with support from Technical Support Center	92%	97%	97% / 96%	96%	97%
Outcome:					
Business days to fulfill service requests from initial call to completion of request for non-critical requests	4	4	4 / 4	4	4
Business days to fulfill service requests from initial call to completion of request for critical calls	1	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	83%	86%	87% / 75%	70%	82%
Percent of first-contact problem resolution	70%	85%	86% / 68%	75%	81%

Performance Measurement Results

This cost center provides IT infrastructure and communication services to all County agencies and other government customers, response to help desk service requests and maintenance of the County data communication networks. Prior implementation of the modern enterprise-wide voice communication platform resulted in the reduction of telephone system repairs. However, the growth of the number of calls for end-user services between FY 2010 and FY 2011 is largely in response to user requests for feature changes, password resets, and enhanced capabilities that are represented in the 'repair' category. After a significant decline in FY 2010, MACDs (Moves, Adds, Changes and Deletions) stabilized in FY 2011 due to a slowdown in demand by County agencies. The FY 2013 estimate forecasts a slight increase in MACDs due to anticipated agency relocations, realignments and operational efficiencies. Customer satisfaction levels remained steady. The voice system infrastructure will transition to the county's fiber I-Net backbone for greater cost and operational efficiencies.

The Technical Support Center Help Desk (IT Service Desk) requests for service increased in FY 2011, with much of this increase resulting from the provision of additional services in support of the FOCUS project. Additionally, FOCUS project-related calls tended to be more challenging and time consuming than routine calls to the IT Service Desk. Additional time and effort for first and second tier resolution is required for responding to the more complex inquiries. This reduced the percentage of calls that could be resolved upon first contact and closed within 72 hours. Strengthened enterprise-wide management and image control processes have reduced the time required for resolving end-user workstation requests. The agency is hopeful that newly adopted management strategies will help to manage and decrease the time needed to resolve such user requests in future years. Customer satisfaction generally continues to be strong due to internal quality control measures and remote resolution capabilities. Efforts in FY 2012 and FY 2013 will focus on enhanced remote resolution and IT Service desk system-workflow services to streamline routine processes. With the implementation of Windows 7 and Office 2010, DIT anticipates a short-term increase in call volume as users adjust to the new operating system and application. The implementation of the FOCUS project is anticipated to cause an increase in support calls to the IT Service Desk in FY 2013, and in future years, as future phases go live for County operations.

Fund 505
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FUND STATEMENT

Fund Type G50, Internal Service Funds **Fund 505, Technology Infrastructure Services**

	FY 2011 Actual	FY 2012 Adopted Budget Plan	FY 2012 Revised Budget Plan	FY 2013 Advertised Budget Plan	FY 2013 Adopted Budget Plan
Beginning Balance	**$5,641,038**	**$3,051,065**	**$5,583,372**	**$4,029,705**	**$4,029,705**
Revenue:					
Radio Services Charges	$766,422	$576,350	$576,350	$618,363	$618,363
PC Replacement Charges	5,877,182	5,884,782	5,884,782	5,884,782	5,884,782
DIT Infrastructure Charges					
County Agencies and Funds	18,239,503	19,369,961	19,369,961	19,504,998	19,504,998
Fairfax County Public Schools	1,588,010	1,651,530	1,651,530	1,717,591	1,717,591
Outside Customers	0	96,065	96,065	0	0
Subtotal DIT Infrastructure Charges	$19,827,513	$21,117,556	$21,117,556	$21,222,589	$21,222,589
Total Revenue	$26,471,117	$27,578,688	$27,578,688	$27,725,734	$27,725,734
Transfers In:					
Cable Communications (105)[1]	$1,814,103	$1,814,103	$1,814,103	$4,620,303	$4,620,303
Total Transfers In	$1,814,103	$1,814,103	$1,814,103	$4,620,303	$4,620,303
Total Available	**$33,926,258**	**$32,443,856**	**$34,976,163**	**$36,375,742**	**$36,375,742**
Expenditures:					
Infrastructure Services	$20,590,397	$21,999,593	$23,062,196	$26,087,662	$26,135,605
Radio Center Services	1,033,863	1,004,020	1,092,073	1,034,790	1,043,130
Computer Equipment Replacement Program	6,120,715	5,779,951	5,950,695	6,230,250	6,235,831
Upgrade/Replacement of Technology Infrastructure Equipment	597,911	700,000	841,494	700,000	700,000
Total Expenditures	$28,342,886	$29,483,564	$30,946,458	$34,052,702	$34,114,566
Total Disbursements	**$28,342,886**	**$29,483,564**	**$30,946,458**	**$34,052,702**	**$34,114,566**
Ending Balance[2]	**$5,583,372**	**$2,960,292**	**$4,029,705**	**$2,323,040**	**$2,261,176**
Infrastructure Replacement Reserve (CERF)[3]	$3,534,593	$500,621	$2,040,302	$778,619	$716,755
PC Replacement Reserve[4]	1,949,265	2,204,714	1,889,889	1,544,421	1,544,421
Unreserved Balance	**$99,514**	**$254,957**	**$99,514**	**$0**	**$0**

[1] The base Transfer In from Fund 105, Cable Communications, of $1,814,103 is used to offset costs related to the I-Net for General Fund and General Fund supported agencies. This funding supports the system wide charges of the new Public Safety and Public Service radio program, as well as maintains funding for the replacement and upgrade of enterprise computer equipment. In FY 2013, an increase of $2,806,200 is included reflecting the first year of a multi-year commitment to replace and refresh core elements of the I-Net.

[2] 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.

[3] This reserve is designed to assist in the scheduled replacement of enterprise computer and network assets. The funds are held in this Computer Equipment Replacement Fund (CERF).

[4] The balance in the PC Replacement Reserve fluctuates annually based on scheduled PC replacements which were previously on a four-year replacement cycle. PC Replacement was deferred in FY 2010, effectively extending the program to a five-year cycle.