



Report to the Subcommittee on  
Financial Services and General  
Government, Committee on  
Appropriations, U.S. Senate

---

June 2016

# INFORMATION TECHNOLOGY

## IRS Needs to Improve Its Processes for Prioritizing and Reporting Performance of Investments

# GAO Highlights

Highlights of [GAO-16-545](#), a report to the Subcommittee on Financial Services and General Government, Committee on Appropriations, U.S. Senate

## Why GAO Did This Study

IRS relies extensively on IT systems to annually collect more than \$2 trillion in taxes, distribute more than \$300 billion in refunds, and carry out its mission of providing service to America's taxpayers in meeting their tax obligations. For fiscal year 2016, IRS planned to spend approximately \$2.7 billion for IT investments. Given the size and significance of these expenditures, it is important that Congress be provided information on agency funding priorities, the process for determining these priorities, and progress in completing key IT investments.

Accordingly, GAO's objectives were to (1) describe IRS's current IT investment priorities and assess IRS's process for determining these priorities, and (2) determine IRS's progress in implementing key IT investments.

To do so, GAO analyzed IRS's process for determining its fiscal year 2016 funding priorities, interviewed program officials, and analyzed performance information for six selected investments for fiscal year 2015 and the first quarter of 2016.

## What GAO Recommends

GAO is recommending that IRS develop and document its processes for prioritizing IT funding and improve the calculation and reporting of investment performance information. IRS agreed with two recommendations regarding its prioritization processes, disagreed with one related to the calculation of performance information, and did not comment on one recommendation. GAO maintains all of the recommendations are warranted.

View [GAO-16-545](#). For more information, contact David A. Powner at (202) 512-9286 or [pownerd@gao.gov](mailto:pownerd@gao.gov).

June 2016

## INFORMATION TECHNOLOGY

### IRS Needs to Improve Its Processes for Prioritizing and Reporting Performance of Investments

## What GAO Found

The Internal Revenue Service (IRS) has developed information technology (IT) investment priorities for fiscal year 2016, which support two types of activities—operations and modernization. For example, it has developed priority groups for operations such as: (1) critical business operations, infrastructure operations, and maintenance; and (2) delivery of essential tax administration/taxpayer services. It has identified priorities for modernization, such as web applications, to help reach IRS's future state vision. However, while IRS has developed a structured process for allocating funding to its operations activities consistent with best practices, it has not fully documented this process. IRS officials stated this is because the process is relatively new and not yet stabilized. In addition, IRS does not have a structured process for its modernization activities, because, according to officials, there are fewer competing activities than for operations activities. Fully documenting a process for both operations support and modernization activities that is consistent with best practices would provide transparency and greater assurance it is consistently applied.

Of the six investments GAO reviewed, two investments—Foreign Account Tax Compliance Act and Return Review Program—provided complete and timely performance information for GAO's analyses. These investments performed under cost, with varying schedule performance, and delivered most planned scope (see table). However, IRS did not always use best practices for determining scope delivered. Specifically, IRS used a method inconsistent with best practices for determining the amount of work completed by its own staff.

#### Performance of Foreign Account Tax Compliance Act and Return Review Program during Fiscal Year 2015 and the First Quarter of Fiscal Year 2016

Investment name	Total budgeted costs (in millions)	Total actual costs (in millions)	Cost variance (in millions)	Schedule status	Percentage of planned scope delivered
Foreign Account Tax Compliance Act	\$64.1	\$51.7	\$12.4 (19.4%)	Late (-8.3%)	91.7%
Return Review Program	\$182.2	\$157.7	\$24.5 (13.4%)	On-Time (-0.1%)	99.9%

Source: GAO analysis of performance information from IRS's Investment Performance Tool. | GAO-16-545

Two other investments reported completing portions of their work on time and \$1.7 million under planned costs (for the Customer Account Data Engine 2), and on time and \$10.3 million under planned costs (for Affordable Care Act Administration). However, neither investment reported information on planned versus actual delivery of scope in accordance with best practices. The remaining two investments—Mainframes and Servers Services and Support and Telecommunications Systems and Support—generally met performance goals.

---

# Contents

---

Letter		1
	Background	2
	IRS Has Identified IT Priorities for Fiscal Year 2016, but Does Not Have a Process for Prioritizing Modernization Efforts	9
	Performance Varied for Selected Investments	15
	Conclusions	21
	Recommendations for Executive Action	21
	Agency Comments and Our Evaluation	22
Appendix I	Objectives, Scope, and Methodology	24
Appendix II	Performance Evaluation for Selected Investments in Development	26
Appendix III	Comments from the Internal Revenue Service	30
Appendix IV	GAO Contact and Staff Acknowledgments	32
Tables		
	Table 1: Telecommunications Systems and Support Investment Funding Allocation for Fiscal Year 2016	5
	Table 2: Mainframes and Servers Services and Support Investment Funding Allocation for Fiscal Year 2016	6
	Table 3: Internal Revenue Service's Fiscal Year 2016 Information Technology (IT) Operations Support Priorities, Descriptions, and Funding Allocations	10
	Table 4: Internal Revenue Service's Fiscal Year 2016 Modernization Projects, Descriptions, and Funding Allocations	11
	Table 5: Example of Internal Revenue Service Criteria for Prioritizing Activities within the Priority Group Legislative Provisions for Foreign Account Tax Compliance Act (FATCA) and Affordable Care Act Administration (ACA)	13

---

Table 6: Performance of Foreign Account Tax Compliance Act (FATCA) and Return Review Program (RRP) Investments during Fiscal Year 2015 and the First Quarter of Fiscal Year 2016	16
Table 7: Partial Performance Information for Customer Account Data Engine 2 (CADE 2) and Affordable Care Act Administration (ACA) during Fiscal Year 2015 and the First Quarter of Fiscal Year 2016	17
Table 8: Performance of Selected Operational Investments during Fiscal Year 2015	19
Table 9: Mainframes and Servers Services and Support Performance Metrics, their Descriptions, and Actual Performance	19
Table 10: Telecommunications Systems and Support Performance Metrics, their Descriptions, and Actual Performance	20
Table 11: Transition State 1 Earned Value Performance	26
Table 12: Filing Season 2016 Earned Value Performance	26
Table 13: Withholding and Refund Release 2 Earned Value Performance	27
Table 14: Withholding and Refund Release 1	27
Table 15: International Compliance Management Model	27
Table 16: R2.1 International Compliance Management Model R1 D2	28
Table 17: International Data Exchange Service Release 1	28
Table 18: R3 International Compliance Management Model R2 Reciprocal Exchange	28
Table 19: R3 International Data Exchange Service R1 D2 Outbound	28
Table 20: R3 Withholding and Refund Release 2	29
Table 21: R3 F1 Registration 2.0	29
Table 22: Foreign Account Tax Compliance Act 4.0	29
Table 23: Foreign Account Tax Compliance Act 4.1	29

---

Figure

Figure 1: Internal Revenue Service's Information Technology Organization	3
--	---

---

---

## Abbreviations

ACA	Affordable Care Act Administration
CADE 2	Customer Account Data Engine 2
FATCA	Foreign Account Tax Compliance Act
IRS	Internal Revenue Service
IT	information technology
MSSS	Mainframes and Servers Services and Support
OMB	Office of Management and Budget
RRP	Return Review Program
TSS	Telecommunications Systems and Support

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



June 29, 2016

The Honorable John Boozman  
Chairman  
The Honorable Chris Coons  
Ranking Member  
Subcommittee on Financial Services and General Government  
Committee on Appropriations  
United States Senate

The Internal Revenue Service (IRS) relies extensively on information technology (IT) systems to annually collect more than \$2 trillion in taxes, distribute more than \$300 billion in refunds, and carry out its mission of providing service to America's taxpayers in meeting their tax obligations. For fiscal year 2016, IRS planned to spend approximately \$2.7 billion for IT investments.

Given the size and significance of these expenditures and the challenges inherent in successfully delivering complex systems, it is important that Congress be provided information on IRS's investment priorities and process for determining these priorities, as well as timely performance information for key IT investments. Accordingly, you have asked that we review IRS's IT investment priorities and key IT efforts. Specifically, our objectives were to (1) describe IRS's current IT investment priorities and assess IRS's process for determining these priorities, and (2) determine IRS's progress in implementing key IT investments.

To address our first objective, we reviewed documentation, including documents supporting IRS's Portfolio Investment Planning process used to allocate funding for operations support activities. Further, we interviewed officials in IRS's Office of Strategy and Planning who have primary responsibility for the IT funding allocation process, as well as officials from IRS business units who were involved in carrying the process out. We analyzed the process against relevant best practices in GAO's IT Investment Management Framework, as well as the Office of Management and Budget's Capital Programming Guide.

For our second objective, we analyzed the performance of six key investments—four development investments (Customer Account Data Engine 2 (CADE 2), Return Review Program (RRP), Foreign Account Tax Compliance Act (FATCA), and the Affordable Care Act Administration

---

(ACA)) and two key operational investments (Telecommunications Systems and Support (TSS) and Mainframes and Servers Services and Support (MSSS)). We chose these investments because they represented a large portion of IRS's development and operations expenditures for fiscal year 2015. For the development investments, we obtained and analyzed information relative to expected and actual cost, schedule, and scope for the work IRS was performing for fiscal year 2015 and the first quarter of fiscal year 2016. For the operational investments, we analyzed reported operational performance information from October 2014 to September 2015 to determine the extent to which the investments met operational performance goals.

We conducted this performance audit from September 2015 to June 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Details on our objectives, scope, and methodology can be found in appendix I.

---

## Background

The mission of IRS, a bureau within the Department of the Treasury, is to provide America's taxpayers top quality service by helping them understand and meet their tax responsibilities and by applying the federal tax laws with integrity and fairness to all. In carrying out its mission, IRS annually collects over \$2 trillion in taxes from millions of individual taxpayers and numerous other types of taxpayers and manages the distribution of over \$300 billion in refunds. To guide its future direction, the agency has two strategic goals: (1) deliver high quality and timely service to reduce taxpayer burden and encourage voluntary compliance; and (2) effectively enforce the law to ensure compliance with tax responsibilities and combat fraud.

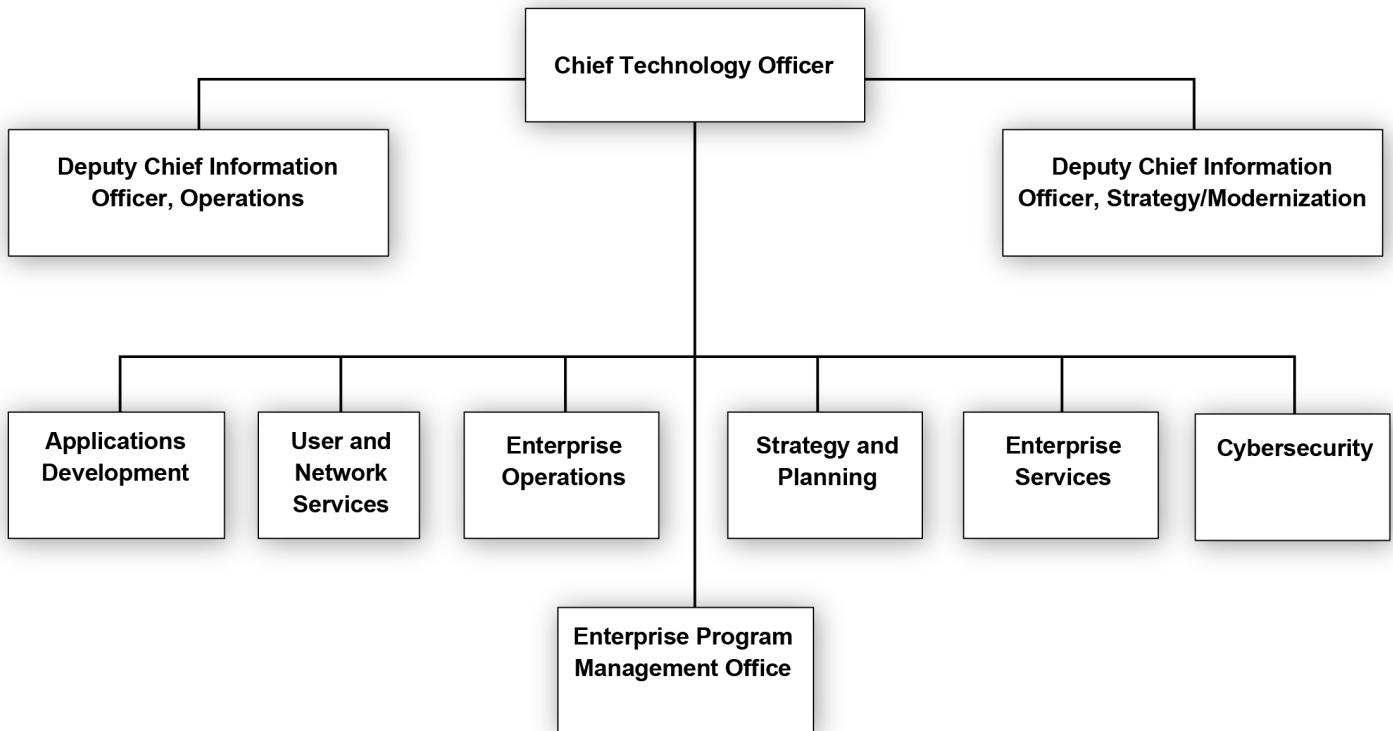
IRS has established seven overarching priorities to accomplish its mission:

- facilitate voluntary compliance by empowering taxpayers with secure and innovative services, tools, and support;
- understand non-compliant taxpayer behavior, and develop approaches to deter and change it;
- leverage and collaborate with external stakeholders;
- cultivate a well-equipped, diverse, skilled, and flexible workforce;

- select highest value work using data analytics and a robust feedback loop;
- drive more agility, efficiency, and effectiveness in IRS operations; and
- strengthen cyber defense and prevent identity theft.

The mission of IRS's Information Technology organization is to deliver IT services and solutions that drive effective tax administration to ensure public confidence. It is led by the Chief Technology Officer, who reports to the Deputy Commissioner for Operations Support of the IRS. Several subordinate offices report to the Chief Technology Officer. Figure 1 shows the structure of IRS's Information Technology organization.

**Figure 1: Internal Revenue Service's Information Technology Organization**



Source: Internal Revenue Service. | GAO-16-545



---

## IRS Relies on IT to Carry Out Its Mission

IT plays a critical role in enabling IRS to carry out its mission and responsibilities. For example, the agency relies on information systems to process tax returns, account for tax revenues collected, send bills for taxes owed, issue refunds, assist in the selection of tax returns for audit, and provide telecommunications services for all business activities, including the public's toll-free access to tax information.

For fiscal year 2016, IRS is pursuing 23 major<sup>1</sup> and 114 non-major IT investments to carry out its mission. These investments generally support (1) day-to-day operations (which include operations and maintenance, as well as development, modernization, and enhancements to existing systems), and (2) modernization efforts in support of IRS's future goals. The day-to-day operations are primarily funded via the operations support appropriation account, user fees and other supplemental funding. The modernization efforts are funded via the business systems modernization appropriation account. IRS expects to spend about \$2.7 billion for IT, including \$2.2 billion in appropriated funds, \$391.9 million in user fees,<sup>2</sup> and \$108.2 million in other supplemental funding.<sup>3</sup>

Approximately \$1.4 billion of IRS's IT funding for fiscal year 2016 supports the two operational investments (TSS and MSSS), and four development investments (FATCA, ACA, CADE 2, and RRP) that we selected for review.

- TSS supports IRS's network infrastructure services such as network equipment, video conference service, enterprise fax service, and voice service for over 85,000 IRS employees at about 1,000 IRS locations. According to IRS, the investment continues delivery of services and products to employees which translates into service to taxpayers. IRS allocated approximately \$366.6 million to activities supporting the TSS investment. Table 1 identifies the fiscal year 2016

---

<sup>1</sup>IRS defines a major investment as one that costs \$10 million in either current year or budget year, or \$50 million over the 5-year period extending from the prior year through the budget year +2.

<sup>2</sup>User fees are collected to help offset the costs of providing services to specific beneficiaries, including services that help taxpayers meet their tax obligations.

<sup>3</sup>The numbers in this report that reflect IRS allocation of funding for IT were provided in an IRS daily status of funds report as well as in IRS operating plans.

funding allocation for the TSS investment, as well as the types of activities being funded.

**Table 1: Telecommunications Systems and Support Investment Funding Allocation for Fiscal Year 2016**

<b>Amount of funds allocated (in millions)</b>	<b>Activities supported with this funding</b>
\$146.3	<ul style="list-style-type: none"> <li>• Payment to the Department of the Treasury for use of its network</li> <li>• Telephone services</li> <li>• Emergency communications systems</li> </ul>
\$61.2	<ul style="list-style-type: none"> <li>• Labor costs for supporting the TSS investment</li> </ul>
\$57.7	<ul style="list-style-type: none"> <li>• Toll free telephone service</li> <li>• Enterprise remote access services</li> <li>• Support for telephone tax services</li> </ul>
\$42.3	<ul style="list-style-type: none"> <li>• Support for network operations</li> <li>• Encryption</li> </ul>
\$36.3	<ul style="list-style-type: none"> <li>• Internet Protocol Version 6</li> <li>• Network security</li> <li>• Trusted Internet Connection</li> <li>• Firewall maintenance</li> </ul>
\$21.1	<ul style="list-style-type: none"> <li>• Network support</li> <li>• Deployment to IRS sites with combined voice, video, and data technologies</li> </ul>
\$1.6	<ul style="list-style-type: none"> <li>• Enterprise electronic fax services</li> <li>• Wireless local area network</li> </ul>
<b>Total: \$366.6</b>	

Source: GAO analysis of Internal Revenue Service financial reporting. | GAO-16-545

Note: The activities identified in the table are not intended to be an exhaustive listing of all activities funded for the investment. Figures do not sum due to rounding.

- MSSS provides for the design, development, and deployment of server, middleware, and large systems as well as enterprise storage infrastructures, including systems software products, databases, and operating systems for these platforms. For fiscal year 2016, IRS allocated approximately \$454.2 million for activities supporting the MSSS investment. Table 2 identifies the fiscal year 2016 funding allocation for the MSSS investment, as well as the types of activities being funded.

**Table 2: Mainframes and Servers Services and Support Investment Funding Allocation for Fiscal Year 2016**

<b>Amount of funds allocated (in millions)</b>	<b>Activities supported with this funding</b>
\$217.6	<ul style="list-style-type: none"> <li>Labor costs for supporting the MSSS investment</li> </ul>
\$157.4	<ul style="list-style-type: none"> <li>Mainframe operations</li> <li>Computer operating systems</li> <li>Information technology servers</li> </ul>
\$30.7	<ul style="list-style-type: none"> <li>Operating systems to include Microsoft Windows 8</li> </ul>
\$29.0	<ul style="list-style-type: none"> <li>Monitoring systems and processes for information technology activities</li> <li>Interface for database systems</li> <li>Microsoft SharePoint</li> </ul>
\$16.2	<ul style="list-style-type: none"> <li>Security for International Business Machines mainframes</li> </ul>
\$2.8	<ul style="list-style-type: none"> <li>Integration and testing environment</li> </ul>
\$0.3	<ul style="list-style-type: none"> <li>Middleware for IRS financial systems<sup>a</sup></li> </ul>
\$0.2	<ul style="list-style-type: none"> <li>Development, modernization, and enhancements related to the Microsoft Windows operating system</li> </ul>
<b>Total: \$454.2</b>	

Source: GAO analysis of Internal Revenue Service financial reporting. | GAO-16-545

Note: The activities identified in the table are not intended to be an exhaustive listing of all activities funded for the investment.

<sup>a</sup>Middleware is software that provides services to distributed applications beyond those available from the operating system in an enterprise environment.

- FATCA is intended to improve tax compliance by identifying U.S. taxpayers that attempt to shield or divert assets by depositing funds in foreign accounts. A law enacted in 2010 requires foreign financial institutions to report to the IRS information regarding financial accounts held by U.S. taxpayers or foreign entities in which U.S. taxpayers have a substantial ownership interest.<sup>4</sup> IRS allocated \$89.1 million to FATCA for fiscal year 2016.
- ACA encompasses the planning, development, and implementation of IT systems needed to support IRS's tax administration responsibilities

<sup>4</sup>26 U.S.C. § 1471. The Foreign Account Tax Compliance provisions of the Hiring Incentives to Restore Employment Act are commonly referred to as the Foreign Account Tax Compliance Act, Pub. L. No. 111-147, title V, subtitle A, 124 Stat. 71, 97-117 (Mar. 18, 2010).

---

associated with parts of the Patient Protection and Affordable Care Act. IRS allocated \$311.2 million to ACA for fiscal year 2016.

- CADE 2 is intended to provide daily processing of taxpayer accounts. A major component of the program is a modernized database for all individual taxpayers that is intended to provide the foundation for more efficient and effective tax administration. In Transition State 2 of the initiative, the modernized database will become IRS's authoritative source for taxpayer account data, as it begins to address core financial material weakness requirements for individual taxpayer accounts. Existing financial reports will be modified to take into account the increased level of detail and accuracy of data in the database. CADE 2 data will also be made available for access by downstream systems such as the Integrated Data Retrieval System for online transaction processing by IRS customer service representatives. IRS allocated \$129.9 million to CADE 2 for fiscal year 2016.
- RRP is intended to deliver an integrated and unified system that enhances IRS's capabilities to detect, resolve, and prevent criminal and civil tax noncompliance. In addition, it is intended to allow analysis and support of complex case processing requirements for compliance and criminal investigation programs during prosecution, revenue protection, accounts management, and taxpayer communications processes. IRS allocated \$91.7 million to RRP for fiscal year 2016.

---

## GAO Has Reported on IRS's Major IT Investments and Identified Needed Improvements

Over the past several years, we have issued a series of reports which have identified opportunities for IRS to improve the management of its major IT investments.

- We reported in June 2012 that while IRS reported on the cost and schedule of its major IT investments and provided chief information officer ratings for them, the agency did not have a quantitative measure of scope—a measure that shows functionality delivered.<sup>5</sup> We noted that having such a measure is a good practice as it provides

---

<sup>5</sup>GAO, *IRS 2013 Budget: Continuing to Improve Information on Program Costs and Results Could Aid in Resource Decision Making*, [GAO-12-603](#) (Washington, D.C.: June 8, 2012).

---

information about whether an investment has delivered the functionality that was paid for.

We recommended that IRS develop a quantitative measure of scope, at a minimum for its major IT investments, to have more complete information on the performance of these investments. In December 2015, IRS officials told us that they were exploring options to report scope and proposed an option in a December 2015 quarterly report on IT to Congress. We examined the suitability of proposed solutions for a quantitative measure of scope as part of this review.

- Further, in April 2013 we reported that the majority of IRS's major IT investments were reportedly within 10 percent of cost and schedule estimates and eight major IT investments reported significant cost and/or schedule variances. We also reported that weaknesses existed, to varying degrees, in the reliability of reported cost and schedule variances, and key risks and mitigation strategies were identified.<sup>6</sup> As a result, we made recommendations for IRS to improve the reliability of reported cost and schedule information by addressing the identified weaknesses in future updates of estimates. We also recommended that IRS ensure projects consistently follow guidance for updating performance information 60 days after completion of an activity and develop and implement guidance that specifies best practices to consider when determining projected amounts.

IRS agreed with three of our four recommendations and partially disagreed with the fourth recommendation. The agency specifically disagreed with the use of earned value management data as a best practice to determine projected cost and schedule amounts, stating that the technique was not part of IRS's current program management processes and the cost and burden to use it outweighed the value added. While we disagreed with IRS's view of earned value management because best practices have found that the value generally outweighs the cost and burden of implementing it, we provided it as one of several examples of practices that could be used to determine projected amounts. We also noted that implementing our recommendation would help improve the reliability of reported cost and schedule variance information, and that IRS had flexibility in

---

<sup>6</sup>GAO, *Information Technology: Consistently Applying Best Practices Could Help IRS Improve the Reliability of Reported Cost and Schedule Information*, [GAO-13-401](#) (Washington, D.C.: Apr. 17, 2013).

---

determining which best practices to use to calculate projected amounts.

- Finally, our February 2015 report found that most of IRS's major IT investments reported meeting cost and schedule goals; however, selected investments experienced variances from initial cost, schedule, and scope plans that were not transparent in reports to Congress because IRS had yet to address our prior recommendations.<sup>7</sup> Specifically, IRS had not addressed our recommendation to report on how delivered scope compares to what was planned, and also did not address guidance for determining projected cost and schedule amounts, or the reporting of cumulative cost and schedule performance information.

---

## IRS Has Identified IT Priorities for Fiscal Year 2016, but Does Not Have a Process for Prioritizing Modernization Efforts

IRS has identified priorities for operations and modernization but does not have a structured process for prioritizing among modernization efforts. Specifically, IRS has developed eight priority groups for operations, such as the delivering essential tax administration and taxpayer services group, and identified eight priority projects for modernization, including CADE 2 and RRP, to help reach IRS's future state vision. In addition, IRS has developed a structured process for allocating funding to its operations support activities which is consistent with best practices. However, IRS has not fully documented this process. In addition, IRS does not have a similar structured process for prioritizing funding among its modernization activities, stating it does not have such a process because there are fewer competing activities than for operations support. A documented process for both operations support and modernization activities that is consistent with best practices would provide transparency into the process and provide greater assurance it is consistently applied.

---

## IRS Has Identified Priorities for Operations Support and Modernization

IRS has identified eight priorities—referred to as repeatable priority groupings—for its operations support activities. Officials told us that these priorities evolved from lessons learned in using priorities established the prior year and noted that they will continue to be refined over time. For example, in fiscal year 2015, activities associated with the tax filing

---

<sup>7</sup>GAO, *Information Technology: Management Needs to Address Reporting of IRS Investments' Cost, Schedule, and Scope Information*, [GAO-15-297](#) (Washington, D.C.: Feb. 25, 2015).

season were identified as IRS’s top priority; however, in fiscal year 2016, IRS decided that infrastructure (i.e., telephones and computer servers) was essential in supporting tax processing and should thus be classified as IRS’s top priority. Each of the priority groupings includes several supporting business activities associated with major and non-major investments that IRS allocates funding to. Examples of such business activities include enterprise video conferencing service, and print support for taxpayer notices. These priorities and information related to these priorities are identified in order of importance, as determined by IRS, in table 3.

**Table 3: Internal Revenue Service’s Fiscal Year 2016 Information Technology (IT) Operations Support Priorities, Descriptions, and Funding Allocations**

Priority group (by order of importance)	Description	Fiscal year 2016 funding allocated to this priority (dollars in millions)
1. Critical business operations, infrastructure operations, and maintenance	Supporting telecommunications, telecommuting, e-mail, and servers/software	\$204.1
2. Delivery of essential tax administration/taxpayer services	Receipt and processing of tax returns, including submission processing and management of taxpayer accounts	\$459.7
3. Security	Protecting IRS IT systems and data from cyber security breaches	\$158.7
4. Legislative provisions for Foreign Account Tax Compliance Act and Affordable Care Act Administration	Addressing laws mandated by Congress	\$337.4
5. Financial systems	Providing the critical controls necessary to safeguard the integrity of financial information and ensure that the IRS can sustain an unqualified opinion of its annual financial statements; includes IRS’s procurement system and time keeping system	\$28.1
6. Remaining operations and maintenance	Providing operations and maintenance needs required to maintain the service that have not been classified under any other priority grouping	\$134.7
7. Infrastructure currency and refresh non filing season	Supporting hardware and software upgrades and replacement	\$159.2
8. Remaining development, modernization, and enhancements	Addressing development, modernization, and enhancements which have not been classified under any other priority grouping	\$19.0
<b>Total</b>		<b>\$2,438.1</b>

Source: GAO analysis of Internal Revenue Service data. | GAO-16-545

Note: Total includes \$937.2 million allocated to labor.

IRS has also identified eight priority projects for modernization. These projects, as well as their descriptions and associated funding allocations are identified in table 4.

**Table 4: Internal Revenue Service’s Fiscal Year 2016 Modernization Projects, Descriptions, and Funding Allocations**

<b>Project</b>	<b>Description</b>	<b>Allocated funding for fiscal year 2016 (dollars in millions)<sup>a</sup></b>
Customer Account Data Engine 2	Program for processing individual taxpayer returns that is intended to eventually replace the Individual Master File. The initial phase, which IRS began using in January 2012, modified the Individual Master File processing cycle to allow for daily (rather than weekly) processing and posting of taxpayer returns and established the database that will serve as the authoritative source for all individual taxpayer data. In the second phase, IRS expects to, among other things, re-engineer the Individual Master File.	\$124.3
Return Review Program	Intended to advance the IRS’s effectiveness in detecting, addressing, and preventing tax refund fraud and protecting U.S. Treasury revenue.	\$41.3
Architecture, Integration, and Management	Provides enterprise architecture support for investments including consultation on various architectural aspects, such as business, performance, and service component reference models.	\$32.0
Enterprise Case Management	Intended to provide an enterprise-wide solution that uses commercial off-the-shelf products, common services, and custom code to perform case management functions.	\$30.0
Core Infrastructure	Includes, among other things, infrastructure shared services.	\$26.5
Web Applications	Intended to provide a digital-first approach that enhances the taxpayer’s online experience, provides secure digital communications, and adds more interactive capabilities to existing web self-service products.	\$19.1
Modernized e-File	Intended to provide a secure, web platform for electronically filing tax and information returns. This system uses a browser-based and application-to-application solution to provide end users with optimized return filing and is becoming the primary system for electronic filing of business and individual tax returns and forms.	\$10.0
Event Driven Architecture	Refers to software architecture patterns and components that produce, consume, detect, and react to events associated with individual transactions, such as returns, payments, account updates, and other common transaction types. It is intended to enable IRS’s strategic goals of improving taxpayer service, enhancing enforcement of the tax law, and modernization of the agency through its people, processes, and technology.	\$4.3
<b>Total</b>		<b>\$287.5</b>

Source: Internal Revenue Service. | GAO-16-545

<sup>a</sup>Numbers do not equal \$290.0 due to the allocation of \$2.5 million in management reserve.



---

## IRS Has a Structured Process for Prioritizing Funding for Its Operations Support Activities, but Lacks a Similar Process for Modernization Activities

According to GAO's Information Technology Investment Management Framework, an organization should document policies and procedures for selecting new and reselecting ongoing IT investments.<sup>8</sup> These policies and procedures should include criteria for making selection and prioritization decisions. A policy-driven, structured method for reselecting ongoing projects provides the organization's investment board with a common understanding of how ongoing projects will be reselected for continued funding. In addition, executives funding decisions should be aligned with the selection decision. Specifically, the organization's executives have discretion in making the final funding decisions on IT proposals. However, their decisions should be based upon the analysis that has taken place in the previous activities.

Further, the Office of Management and Budget's (OMB) Capital Programming Guide requires, among other things, that agencies have a disciplined capital programming process that addresses project prioritization and comparison of assets against one another to create a prioritized portfolio.<sup>9</sup>

In 2015, IRS developed and implemented a process known as the Portfolio Investment Planning process to prioritize its operations support activities. This process addresses (1) prioritization and comparison of IT assets against each other and (2) criteria for making selection and prioritization decisions. Further, senior IRS executives stated that the final funding decisions on IT proposals are based on IRS's prioritization process.

- IRS uses priority groupings it has defined as criteria for making prioritized selections. Specifically, a consideration in determining if an activity (i.e., request for funding) will be selected is to determine the extent to which it supports any of eight priority groupings. If the activity is found to support one of the eight priorities, it is further assigned one of four priority levels: must do, high, medium, or low. IRS has defined the criteria that must be met in order to classify a funding activity at a particular priority level. Table 5 provides an example of the criteria

---

<sup>8</sup>GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, GAO-04-394G (Washington, D.C.: Mar. 1, 2004).

<sup>9</sup>Office of Management and Budget, *Capital Programming Guide V 3.0: Supplement to Circular A-11, Planning, Budgeting, and Acquisition of Capital Assets* (Washington, D.C.: Executive Office of the President, 2015).

---

used to make these decisions for the legislative provisions for the FATCA and ACA priority group.

**Table 5: Example of Internal Revenue Service Criteria for Prioritizing Activities within the Priority Group Legislative Provisions for Foreign Account Tax Compliance Act (FATCA) and Affordable Care Act Administration (ACA)**

Priority level	Criteria
Must do	Required maintenance/licenses for existing IT support.
High	Development and enhancements for legislative requirements of FATCA and ACA.
Medium	Requirements associated with replacing/upgrading existing security infrastructure components and increasing capacity to meet forecasted demand.
Low	Costs associated with enabling improved business processes for FATCA/ACA.

Source: Internal Revenue Service. | GAO-16-545

- IRS prioritizes and compares IT assets against each other. Specifically, IRS business units identify line item activities for which they are requesting funding. For each activity, business units address, among other things, placement within IRS's established priorities; proposed high-level capabilities and a cost estimate; a 1-year usable segment; and the date funding is needed and subsequent mitigation strategy if funding is not received by the specified date. Further, several meetings are held to review requested funding activities. According to IRS, the purpose of these meetings is to provide a cross-organization review and evaluation of IT-related demands. Stakeholders include Associate Chief Information Officers, business unit representatives, and staff from IRS's IT Financial Management Service.
- Finally, IRS senior executives stated that its final funding decisions on IT proposals are based on IRS's prioritization process. According to these officials, when the agency receives its appropriation, it evaluates prioritized activities—starting with the highest priority demands—until the total estimate of appropriated funding is allocated. Officials have discussions relative to the items that will not be funded and then engage the Office of the Chief Financial Officer to determine the extent to which user fees and other sources of funding are available to support priorities that exceed the appropriated amount. Prioritized activities, which have been allocated funding for the upcoming fiscal year, are presented to the Chief Technology Officer for approval. IRS's Senior Executive Team approves the Chief

---

Technology Officer's funding recommendations and submits the recommendations to the Commissioner and Deputy Commissioners for final funding approval.

Despite these strengths, IRS has not fully documented its process for prioritizing operations support activities. Specifically, while several documents describe aspects of the operations support prioritization process, including the criteria used and the meetings to review and evaluate IT related demands, none fully describe the procedures associated with the process. IRS officials stated this is because it is relatively new and not yet stabilized. IRS officials who are stakeholders in this process stated that documentation would have reduced the uncertainty they faced during implementation and would have helped them to better prepare the required data for the process. IRS senior executives stated they plan to fully document this process; however, they did not identify a time frame for when this would be done. Fully documenting IRS's portfolio investment process for operational activities would help ensure consistent implementation of the process by all stakeholders and provide transparency regarding how such prioritization decisions are made.

In contrast with operations support, IRS does not have a structured process for prioritizing funding among its modernization investments. Specifically, IRS officials stated that discussions are held to determine the modernization efforts that are the highest priority to meet IRS's future state vision and technology roadmap. Officials reported that staffing resources and lifecycle stage are considered but there are no formal criteria for making final determinations.

Senior IRS officials stated that they do not have a structured process for selection and prioritization of business systems modernization activities because the projects are set and there are fewer competing activities than for operations support. While there may be fewer competing activities, a structured, albeit simpler, process that is documented and consistent with best practices would provide transparency into IRS's needs and priorities for appropriated funds. Such a process would better assist Congress and other decision makers in carrying out their oversight responsibilities.

---

## Performance Varied for Selected Investments

Of the six selected investments in our review, two development investments—FATCA and RRP—performed under cost, with varying schedule performance, and delivered most of the scope that was planned; however, performance information for these investments could be improved by implementing best practices for determining actual work performed. For portions of the two other development investments (CADE 2 and ACA) for which performance information was available, IRS reported completing work under planned cost and on time. However, neither investment reported information on planned versus actual delivery of scope, in accordance with best practices. Further, ACA did not report timely information on planned versus actual costs. Finally, one of the two investments in operations and maintenance (MSSS) met all operational performance goals, while the other investment in operations and maintenance (TSS) met six out of eight goals.

---

## Four Investments in Development Experienced Variances and Performance Reporting for These Investments Could Be Improved

Best practices highlight the importance of timely reporting on performance relative to cost, schedule, and scope (both planned and actual). According to these practices, one way to measure benefits of development work is to approximate by measuring a project's actual cost and schedule progression (i.e., evaluating earned value), which is a measure of the amount of planned work that is actually performed in relation to the funds expended.<sup>10</sup> IRS reported metrics for FATCA and RRP, which allowed us to determine these investments' performance. The agency did not use such metrics or consistently develop planned and actual cost, schedule, and scope information for all CADE 2 and ACA projects and activities that were completed or ongoing during fiscal year 2015 and the first quarter of fiscal year 2016. As a result, we could only determine the performance of portions of these investments.

**FATCA and RRP:** During fiscal year 2015 and the first quarter of fiscal year 2016, IRS reported quarterly cost, schedule, and scope performance information for each of the FATCA and RRP projects it was working on. Specifically, it reported metrics for these investments via its Investment Performance Tool. Table 6 summarizes the performance of the FATCA and RRP investments (see appendix II for detailed analyses).

---

<sup>10</sup>GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10, 2014); and [GAO-04-394G](#).

**Table 6: Performance of Foreign Account Tax Compliance Act (FATCA) and Return Review Program (RRP) Investments during Fiscal Year 2015 and the First Quarter of Fiscal Year 2016**

Investment name	Total budgeted costs (in millions)	Total actual costs (in millions)	Cost variance (in millions)	Schedule status	Percentage of planned scope delivered <sup>a</sup>
FATCA	\$64.1	\$51.7	\$12.4 (19.4%)	Late (-8.3%)	91.7%
RRP	\$182.2	\$157.7	\$24.5 (13.4%)	On-Time <sup>b</sup>	99.9%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

<sup>a</sup>Based on the ratio of earned value to planned value at the investment level.

<sup>b</sup>RRP reported a schedule variance of -0.1%.

As shown in table 6, FATCA and RRP performed under cost, with varying schedule performance, and delivered most of the scope that was planned. Specifically,

- IRS was developing 10 projects to support the FATCA investment during fiscal year 2015 and the first quarter of 2016. IRS reported completing work at \$12.4 million less than budgeted and delivering 91.7 percent of planned scope with an 8 percent schedule overrun for these projects. IRS stated that the reasons for these variances include, among other things, issues with the requirements management process; an overestimation of costs; and a reduction in the amount of work completed versus what was planned.
- IRS was developing three projects to support the RRP investment during fiscal year 2015 and the first quarter of 2016. IRS reported completing work at \$24.5 million less than budgeted and delivering 99.9 percent of planned scope with a minor schedule overrun for these projects. IRS stated that the reasons for these variances include, among other things, overestimation of costs (including IRS labor) and unplanned work that needed to be completed.

While the scope metric used for FATCA and RRP provides an indication of performance, this metric would be more reliable if it incorporated best practices for determining the amount of work completed for all activities. Specifically, IRS uses a level of effort method beyond the amount

generally accepted by best practices to determine the amount of work completed by its own staff.<sup>11</sup> Our Cost Estimating and Assessment Guide<sup>12</sup> states that the level of effort method should be used sparingly (15 percent of the budget or less); however, the work performed by IRS staff ranged from 22 to 100 percent of the work completed for the FATCA and RRP projects that were ongoing during the time frame of our review. IRS officials stated that measuring value for government work is a vague concept to pursue. Nevertheless, revising the method for determining the amount of work completed by IRS staff for these investments would improve the reliability of the performance information.

**CADE 2 and ACA:** For the CADE 2 projects that were completed during fiscal year 2015 and the first quarter of fiscal year 2016, IRS reported that CADE 2 performed on time and \$1.7 million under planned cost. According to IRS, the positive cost variance for the CADE 2 investment is the result of overestimation of costs and the ability to reuse existing code. For the ACA activities that reported actual costs during fiscal year 2015 and the first quarter of 2016, IRS reported that ACA performed on time and \$10.3 million under planned costs. IRS stated that this variance was primarily due to an overestimation of the labor needed to complete the planned work. Table 7 shows the reported cost and schedule performance for CADE 2 and ACA.

**Table 7: Partial Performance Information for Customer Account Data Engine 2 (CADE 2) and Affordable Care Act Administration (ACA) during Fiscal Year 2015 and the First Quarter of Fiscal Year 2016**

Investment name	Total planned costs (in millions)	Total actual costs (in millions)	Cost variance (in millions)	Schedule status	Percentage of planned scope delivered
CADE 2	\$24.4	\$22.7	\$1.7 (6.9%)	On-Time	n.d.
ACA	\$230.3	\$220.0	\$10.3 (4.46%)	On-Time <sup>a</sup>	n.d.

Source: GAO analysis of Internal Revenue Service data. | GAO-16-545

Note: n.d.—no data provided by the agency.

<sup>a</sup>ACA reported a schedule variance of -0.75%.

<sup>11</sup>The level of effort method assumes that work is always completed as planned.

<sup>12</sup>GAO, *GAO Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs*, [GAO-09-3SP](#) (Washington, D.C.: Mar. 2, 2009).

- 
- With respect to CADE 2, IRS does not report timely information on planned versus actual delivery of scope. Specifically, a senior CADE 2 program official stated that, due to the nature of the methodology being used to implement the projects, progress in delivering planned scope cannot be determined until the end—after the testing phase. For CADE 2, projects can be 16 to 60 months long. We requested information from IRS regarding delivery of planned scope for those projects that completed during the time frame of our review; however, IRS was unable to provide this information.
  - Regarding ACA, IRS does not report timely cost or scope information. A senior IRS official stated that the investment is being developed using an iterative approach,<sup>13</sup> the goal of which is to deliver functionality in short increments. However, the agency does not report actual costs for the activities comprising the projects until the activities are completed; this delay in reporting could be as long as 9 months. Instead, ACA calculates a cost projection, which provides an estimate of cost to complete rather than cost of work completed, with which we have previously identified weaknesses.<sup>14</sup> In addition, IRS only provided information on delivery of planned scope for one of the ACA projects it was developing during the timeframe of our review.

Reporting of performance for the CADE 2 and ACA investments could be improved by incorporating best practices for timely reporting of cost, schedule, and scope performance information. As a result of the lack of timely and complete performance information, Congress and other external parties do not have pertinent information about CADE 2 and ACA with which to make oversight decisions.

---

<sup>13</sup>Iterative software development supports the practice of shorter software delivery; specifically, the delivery of software in small, short increments rather than in the typically long, sequential phases of a traditional approach.

<sup>14</sup>[GAO-15-297](#).

**One Investment in Operations and Maintenance Met All Operational Performance Goals, the Other Met the Majority of Goals**

According to OMB's Fiscal Year 2016 Capital Planning Guidance, ongoing performance of operational investments is monitored to ensure the investments are meeting the needs of the agency, delivering expected value, and/or modernized and replaced consistent with the agency's enterprise architecture. To this end, OMB requires agencies to report on at least five operational metrics for major IT investments and agencies are specifically required to report on planned and actual operational performance.

The two operations and maintenance investments in our review reported on operational performance metrics, as required. MSSS met its five operational performance goals during fiscal year 2015; however, TSS consistently underperformed on two of its eight metrics.

**Table 8: Performance of Selected Operational Investments during Fiscal Year 2015**

Investment name	Number of metrics reported	Number of metrics met
Telecommunications Systems and Support	8	6
Mainframes and Servers Services and Support	5	5

Source: GAO analysis of Internal Revenue Service data. | GAO-16-545

Table 9 identifies the MSSS operational performance metrics, their descriptions, and the performance against these metrics during fiscal year 2015.

**Table 9: Mainframes and Servers Services and Support Performance Metrics, their Descriptions, and Actual Performance**

Metric name	Metric description	Metric condition for fiscal year 2015
Success rate percentage for automated deployment to production	Success rate percentage for automated deployment of infrastructure component packages to production by using the package based promotion tool	Met
Real-time database availability	Percentage of time the databases are available per the service level agreement, providing maximum uptime to thousands of customers allowing them to perform their jobs more efficiently	Met
Full-time equivalent elevated access	An integer that shows the number of full-time equivalent with elevated access granted	Met
Tickets resolved by the IT operations command center	Show the percentage of priority tickets resolved by the IT operations command center	Met
Environment virtualized	Percentage of virtual computers within all of the campus and computing centers	Met

Source: GAO analysis of Internal Revenue Service data. | GAO-16-545



IRS reported planned and actual performance for eight operational performance metrics for TSS during fiscal year 2015. However, as previously mentioned, TSS consistently missed operational performance goals for two of the eight metrics. The two TSS metrics that were not met illustrate pervasive challenges meeting its goals in deploying new telecommunications capabilities. Specifically, IRS missed every monthly target in fiscal year 2015 for deploying voice, video, and data technologies. As a result, TSS did not deploy such technologies to approximately 4,300 users that were originally included in the planned deployment.

According to IRS officials, the operational performance goals for the two metrics that were not met should have been updated to better reflect the limited funding the agency intended to allocate to these activities.

Table 10 identifies the TSS operational performance metrics, their descriptions, and the performance against these metrics during fiscal year 2015.

**Table 10: Telecommunications Systems and Support Performance Metrics, their Descriptions, and Actual Performance**

<b>Metric name</b>	<b>Metric description</b>	<b>Metric condition for fiscal year 2015</b>
Guidelines, standards, and procedures compliance (network rules)	Measures the percentage of network rules that meet “guidelines standards and procedures” standards.	Met
Local area network availability	Measures the percentage of availability of local area network services.	Met
Wide area network availability	Measures the percentage of availability of wide area network services.	Met
Guidelines, standards, and procedures compliance (network devices)	Measures the percentage of network devices that meet “guidelines standards and procedures” standards.	Met
Internet access availability	Measures the percentage of internet availability through the three Common Communication Gateways.	Met
EEFax deployment	Measures the IT provisioning of EEFax to the production environment.	Met
Network convergence: sites deployed	Measures the number of convergence sites deployed fiscal year to date. Convergence sites are sites with combined voice, video, and data technologies into one integrated, cohesive data stream.	Not met
Network convergence: users with deployed capabilities	Measures the number of users added with deployed capabilities fiscal year to date. Users with deployed capabilities are users with voice over internet protocol capabilities utilizing an internet protocol desk phone or softphone. A softphone is a computer application that allows employees to access their office phones and voicemail on their desktops or laptops anywhere they have connectivity.	Not met

Source: GAO analysis of Internal Revenue Service data. | GAO-16-545

---

## Conclusions

While IRS has developed a process for prioritizing funding for operations support activities that adheres to best practices, it is not fully documented. Further, IRS has not developed a priority setting process for modernization activities for which the agency allocated nearly \$300 million to for fiscal year 2016. Until IRS documents its process for operations support activities and develops a process for modernization activities, the agency will lack the transparency needed by Congress and others to assist in carrying out their oversight responsibilities.

IRS has developed performance metrics for two investments—FATCA and RRP—which include a measure of progress in delivering scope, a measure we have been reporting on and recommending IRS address since 2012. While these metrics represent an important step, their reliability could be improved by incorporating best practices for measuring the work performed by IRS staff by using the level of effort measure sparingly. In addition, only partial performance information was available for CADE 2 and ACA because IRS did not use the metrics it is positioned to develop for these investments or consistently have cost, schedule, and scope information for these investments. Continued efforts in this area would substantially improve the performance reporting for the CADE 2 and ACA investments, and potentially for all major development efforts.

---

## Recommendations for Executive Action

To help IRS improve its process for determining IT funding priorities and to provide timely information on the progress of its investments, we recommend that the Commissioner of IRS direct the Chief Technology Officer to take the following four actions:

- document IRS's process for selecting and prioritizing operations support activities;
- establish, document, and implement policies and procedures for selecting new and reselecting ongoing business systems modernization activities, consistent with IRS's process for prioritizing operations support priorities, which addresses (1) prioritization and comparison of IT assets against each other, (2) criteria for making selection and prioritization decisions, and (3) ensuring IRS executives' final funding decisions on IT proposals are based on IRS's prioritization process;
- modify existing processes for FATCA and RRP for measuring work performed by IRS staff to incorporate best practices, including

---

accounting for actual work performed and using the level of effort measure sparingly; and

- report on actual costs and scope delivery at least quarterly for CADE 2 and ACA. For these investments, IRS should develop metrics similar to FATCA and RRP.

---

## Agency Comments and Our Evaluation

We provided a draft of this product to IRS for comment. In its written comments, reproduced in appendix III, IRS agreed with two recommendations, did not agree nor disagree with one, and disagreed with one. Specifically,

- IRS agreed with our recommendations to better document its prioritization process for operations support activities and extend that process to its business systems modernization activities.
- With respect to our recommendation to report on actual costs and scope delivery at least quarterly for CADE 2 and ACA, IRS did not agree nor disagree, but noted that IRS is continuing to try to improve its processes in reporting investment performance.
- Regarding our recommendation to modify existing processes for FATCA and RRP for measuring work performed by IRS staff to incorporate best practices, including accounting for actual work performed and using the level of effort measure sparingly, IRS disagreed and stated that modifying the use of the level of effort measure would equate to a certified earned value management system, which would add immense burden on IRS's programs on various fronts and would outweigh the value it provides. However, we did not specify the use of an earned value management system in our report and believe other methods could be used to more reliably measure work performed. As noted in our report, 22 to 100 percent of the work for selected projects was performed by IRS staff. As a result, we believe that it is a reasonable expectation for IRS to reliably determine the actual work completed, as opposed to assuming that work is always completed as planned. Accordingly, we maintain our recommendation is still warranted.

---

We are sending copies of this report to interested congressional committees, the Commissioner of IRS, and other interested parties. This report will also be available at no charge on our website at <http://www.gao.gov>.

---

If you or your staffs have any questions on matters discussed in this report, please contact me at (202) 512-9286 or [pownerd@gao.gov](mailto:pownerd@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix IV.



David A. Powner  
Director  
Information Technology Management Issues

---

# Appendix I: Objectives, Scope, and Methodology

---

Our objectives were to (1) describe the Internal Revenue Service's (IRS) current information technology (IT) investment priorities and assess IRS's process for determining these priorities, and (2) determine IRS's progress in implementing key IT investments.

To address our first objective, we reviewed documentation, such as IRS's fiscal year 2016 Business Systems Modernization Operating Plan, as well as financial reports to determine IRS's IT funding priorities and funding allocations.

In addition, we reviewed artifacts from IRS's Portfolio Investment Planning process, such as slide decks describing key stages of the process, memorandums distributed to stakeholders, prioritized listings of investment activities, and criteria for establishing priorities, to identify and describe IRS's process for determining its IT investment priorities. Further, we interviewed officials in IRS's Office of Strategy and Planning, as well as stakeholders of the Portfolio Investment Planning process from IRS business units. We then analyzed IRS's processes against best practices in our IT Investment Management Framework and the Office of Management and Budget's Capital Programming Guide to determine the extent to which the processes met best practices and requirements. Lastly, we met with officials at the Department of the Treasury who are responsible for IT capital planning, including the Treasury Chief Information Officer, to determine the department's role in IRS's process for prioritizing IT funding.

For our second objective, we analyzed the performance of four key development investments—Customer Account Data Engine 2 (CADE 2), Return Review Program (RRP), Foreign Account Tax Compliance Act (FATCA), and the Affordable Care Act Administration (ACA). Further, we analyzed two key operational investments—Telecommunications Systems and Support (TSS) and Mainframes and Servers Services and Support (MSSS). We chose these investments because they represented IRS's most significant expenditures on development and operations for fiscal year 2015 (\$496.5 million and \$777.8 million, respectively).

- A tailored approach was necessary for analyzing the development investments given the varying types and extent to which performance information was available for these investments. To determine the progress in implementing FATCA and RRP, we compiled and analyzed quarterly output from IRS's Investment Performance Tool for the period of fiscal year 2015 through the first quarter of 2016. IRS does not consider this tool to be a formal Earned Value Management

System. As a result, we did not evaluate the extent to which the tool was compliant with the American National Standards Institute's guidelines for an Earned Value Management System. For CADE 2, we analyzed IRS's quarterly reporting of planned and actual costs, as well as requirements reports and schedule reporting. For ACA, we analyzed IRS's financial reporting via the ACA business case submissions, as well as performance reporting to management and schedule reporting. In addition, we held multiple meetings with IRS officials, including officials in the CADE 2, FATCA, ACA, and RRP program offices.

- To determine the progress in implementing TSS and MSSS, we reviewed operational performance information reported for the selected investments from October 2014 to September 2015; this information included, where reported, the performance target and actual results for each metric. In addition, we reviewed documentation describing the performance metrics and interviewed IRS officials regarding the process for reporting such metrics.

To determine the reliability of data used for our review, we obtained and reviewed IRS's guidance for its Investment Performance Tool, which identifies, among other things, how data are to be entered within this tool, sources of such data, and explanations of the methods used to calculate performance metrics generated from the tool. Further, we held meetings with officials responsible for overseeing the use of IRS's Investment Performance Tool. In addition, we relied on extensive work we previously completed on IRS's financial management system for relevant data used for this review. In determining the reliability of the data supporting this review, we determined that data regarding the delivery of planned scope for the FATCA and RRP investments could be more reliable by incorporating best practices. While these data were sufficiently reliable for our purposes, we made recommendations to improve their reliability.

We conducted this performance audit from September 2015 to June 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

# Appendix II: Performance Evaluation for Selected Investments in Development

This appendix illustrates the potential for reporting complete performance information via IRS's Investment Performance Tool. Specifically, the following tables provide a detailed evaluation of cost, schedule, and scope performance for Return Review Program and Foreign Account Tax Compliance Act projects that were being developed by IRS during fiscal year 2015 and the first quarter of fiscal year 2016.

## Return Review Program

IRS reported working on three projects in support of Return Review Program during fiscal year 2015 and the first quarter of fiscal year 2016. The following tables identify the performance information reported via IRS's Investment Performance Tool; positive cost variances indicate that the project was performing under planned cost and positive schedule variances indicate that the project was performing ahead of schedule.

**Table 11: Transition State 1 Earned Value Performance**

Performance indicator	Result
Earned value	\$163.00 million
Actuals cost	\$143.69 million
Earned value cost variance	\$19.30 million (11.8%)
Earned value schedule variance	0.0% <sup>a</sup>
Percentage of planned scope delivered	100%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

<sup>a</sup>Due to rounding.

**Table 12: Filing Season 2016 Earned Value Performance**

Performance indicator	Result
Earned value	\$7.37 million
Actuals cost	\$4.08 million
Earned value cost variance	\$3.29 million (44.6%)
Earned value schedule variance	-10.3%
Percentage of planned scope delivered	89.7%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

**Table 13: Withholding and Refund Release 2 Earned Value Performance**

Performance indicator	Result
Earned value	\$11.79 million
Actuals cost	\$9.92 million
Earned value cost variance	\$1.87 million (15.9%)
Earned value schedule variance	5.7%
Percentage of planned scope delivered	105.7%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

## Foreign Account Tax Compliance Act

IRS reported working on 10 projects in support of Foreign Account Tax Compliance Act during fiscal year 2015 and the first quarter of fiscal year 2016. The following tables identify the performance information reported via IRS's Investment Performance Tool; positive cost variances indicate that the project was performing under planned cost, and positive schedule variances indicate that the project was performing ahead of schedule.

**Table 14: Withholding and Refund Release 1**

Performance indicator	Result
Earned value	\$1.95 million
Actuals cost	\$0.83 million
Earned value cost variance	\$1.12 million (57.5%)
Earned value schedule variance	0.0%
Percentage of planned scope delivered	100%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

**Table 15: International Compliance Management Model**

Performance indicator	Result
Earned value	\$18.98 million
Actuals cost	\$14.60 million
Earned value cost variance	\$4.38 million (23.1%)
Earned value schedule variance	0.0%
Percentage of planned scope delivered	100%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545



**Table 16: R2.1 International Compliance Management Model R1 D2**

Performance indicator	Result
Earned value	\$6.13 million
Actuals cost	\$6.13 million
Earned value cost variance	\$-0.01 million (-0.1%)
Earned value schedule variance	6.9%
Percentage of planned scope delivered	106.9%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

**Table 17: International Data Exchange Service Release 1**

Performance indicator	Result
Earned value	\$7.42 million
Actuals cost	\$6.17 million
Earned value cost variance	\$1.25 million (16.8%)
Earned value schedule variance	-5.1%
Percentage of planned scope delivered	94.9%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

**Table 18: R3 International Compliance Management Model R2 Reciprocal Exchange**

Performance indicator	Result
Earned value	\$6.09 million
Actuals cost	\$4.76 million
Earned value cost variance	\$1.33 million (21.9%)
Earned value schedule variance	-25.3%
Percentage of planned scope delivered	74.7%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

**Table 19: R3 International Data Exchange Service R1 D2 Outbound**

Performance indicator	Result
Earned value	\$6.95 million
Actuals cost	\$5.32 million
Earned value cost variance	\$1.63 million (23.5%)
Earned value schedule variance	-15.6%
Percentage of planned scope delivered	84.4%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

**Appendix II: Performance Evaluation for Selected Investments in Development**

**Table 20: R3 Withholding and Refund Release 2**

<b>Performance indicator</b>	<b>Result</b>
Earned value	\$4.36 million
Actuals cost	\$0.72 million
Earned value cost variance	\$3.64 million (83.4%)
Earned value schedule variance	0.0%
Percentage of planned scope delivered	100%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

**Table 21: R3 F1 Registration 2.0**

<b>Performance indicator</b>	<b>Result</b>
Earned value	\$9.79 million
Actuals cost	\$11.36 million
Earned value cost variance	\$-1.57 million (-16.0%)
Earned value schedule variance	-12.6%
Percentage of planned scope delivered	87.4%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

**Table 22: Foreign Account Tax Compliance Act 4.0**

<b>Performance indicator</b>	<b>Result</b>
Earned value	\$1.54 million
Actuals cost	\$0.90 million
Earned value cost variance	\$0.65 million (41.9%)
Earned value schedule variance	-43.6%
Percentage of planned scope delivered	56.4%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

**Table 23: Foreign Account Tax Compliance Act 4.1**

<b>Performance indicator</b>	<b>Result</b>
Earned value	\$0.86 million
Actuals cost	\$0.87 million
Earned value cost variance	\$-0.01 million (-1.3%)
Earned value schedule variance	22.8%
Percentage of planned scope delivered	122.8%

Source: GAO analysis of performance information from Internal Revenue Service's Investment Performance Tool. | GAO-16-545

# Appendix III: Comments from the Internal Revenue Service



COMMISSIONER

DEPARTMENT OF THE TREASURY  
INTERNAL REVENUE SERVICE  
WASHINGTON, D.C. 20224

June 14, 2016

Mr. David A. Powner  
Director, Information Technology Management Issues  
U.S. Government Accountability Office  
441 G Street, N.W.  
Washington, D.C. 20548

Dear Mr. Powner:

Thank you for the opportunity to comment on the draft report titled *Information Technology: IRS Needs to Improve Its Processes for Prioritizing and Reporting Performance of Investments*, (GAO-16-545).

We appreciate acknowledgement in your report that we have developed a structured Portfolio Investment Planning process for allocating funding to our operations support activities, which is consistent with relevant best practices. Equally important, we appreciate you reporting performance results on the investments under your audit; in particular that Foreign Account Tax Compliance Act (FATCA) and Return Review Program (RRP) performed under cost, with varying schedule performance, and delivered planned scope of 91.7% and 99.9% respectively. We also appreciate you reporting that our mainframes and Servers Services and Support (MSSS) investment met all of its operational performance goals, and Affordable Care Act (ACA) and Customer Account Data Engine (CADE) 2 delivered on time in FY 2015 and Q1 FY 2016.

As you know, we are committed to continuously improving our investment management processes. We do appreciate your mention of recent efforts to improve reporting performance on our investments, in particular the option we proposed in our December 2015 quarterly report to Congress. Also, we provided you with metrics offering even more visibility into our performance for FATCA and RRP, using our Investment Performance Tool. This provided a new level of transparency beyond that which our standard practices used for our major investments could provide.

We agree with your recommendations to better document our prioritization process for our operations support activities and to extend that process to our business systems modernization activities. Also, we continue to try to improve our processes in reporting investment performance, such as the process we currently use for FATCA and RRP that you reflected in your report. This is an effective internal project management mechanism to provide insight for program and project leaders regarding project/activity performance according to SPIKE (Treasury SharePoint Investment Knowledge Exchange) baselines. We believe, however, that modifying the use of the level of effort measure in this internal project

2

management process to the extent GAO recommends would equate to an ANSI-certified Earned Value Management System (EVMS), which would add immense burden on our programs on various fronts, outweighing the value it provides.

We will provide a detailed corrective action plan addressing each of your recommendations with our response to the final report. If you have any questions, please contact me or Terence V. Milholland, Chief Technology Officer, at (202) 317-5000.

Sincerely,



John A. Koskinen  
Commissioner

---

# Appendix IV: GAO Contact and Staff Acknowledgments

---

## GAO Contact

David A. Powner, (202) 512-9286, or [pownerd@gao.gov](mailto:pownerd@gao.gov)

---

## Staff Acknowledgments

In addition to the individual named above, the following staff made key contributions to this report: Sabine Paul (Assistant Director), Bradley Roach (Analyst in Charge), Rebecca Eyler, Charles Hubbard III, Paul Middleton, Karl Seifert, and Marshall Williams, Jr.

---

---

## GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

---

## Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (<http://www.gao.gov>). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to <http://www.gao.gov> and select "E-mail Updates."

---

## Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

---

## Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#).  
Subscribe to our [RSS Feeds](#) or [E-mail Updates](#).  
Listen to our [Podcasts](#) and read [The Watchblog](#).  
Visit GAO on the web at [www.gao.gov](http://www.gao.gov).

---

## To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Website: <http://www.gao.gov/fraudnet/fraudnet.htm>

E-mail: [fraudnet@gao.gov](mailto:fraudnet@gao.gov)

Automated answering system: (800) 424-5454 or (202) 512-7470

---

## Congressional Relations

Katherine Siggerud, Managing Director, [siggerudk@gao.gov](mailto:siggerudk@gao.gov), (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

---

## Public Affairs

Chuck Young, Managing Director, [youngc1@gao.gov](mailto:youngc1@gao.gov), (202) 512-4800  
U.S. Government Accountability Office, 441 G Street NW, Room 7149  
Washington, DC 20548



Please Print on Recycled Paper.