



Testimony

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INFORMATION TECHNOLOGY

Additional Actions and Oversight Urgently Needed to Reduce Waste and Improve Performance in Acquisitions and Operations

Statement of David A. Powner, Director
Information Technology Management Issues

Accessible Version

GAO Highlights

Highlights of [GAO-15-675T](#), a testimony before the Subcommittees on Government Operations and Information Technology, Committee on Oversight and Government Reform, House of Representatives

Why GAO Did This Study

The federal government invests more than \$80 billion annually in IT. However, these investments frequently fail, incur cost overruns and schedule slippages, or contribute little to mission-related outcomes. This underperformance of federal IT projects can be traced to a lack of disciplined and effective management and inadequate executive-level oversight. Accordingly, in February 2015, GAO added improving the management of IT acquisitions and operations to its high-risk list—a list of agencies and program areas that are high risk due to their vulnerabilities to fraud, waste, abuse, and mismanagement, or are most in need of transformation.

GAO was asked to testify on its designation of the management of IT acquisitions and operations as a federal high-risk area and the impact of recent legislation on IT acquisition reform. In preparing this statement, GAO relied on its previously published work in these areas.

What GAO Recommends

From October 2009 through December 2014, GAO made 737 recommendations to OMB and agencies to improve the management and oversight of IT. As of January 2015, only about 23 percent of these had been fully implemented.

View [GAO-15-675T](#). For more information, contact David A. Powner at (202) 512-9286 or pownerd@gao.gov, Carol Cha at (202) 512-4456 or chac@gao.gov, or Valerie Melvin at (202) 512-6304 or melvinv@gao.gov.

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What GAO Found

Federal investments in information technology (IT) have often resulted in multimillion dollar cost overruns and years-long schedule delays, with questionable mission-related achievements. Further, the implementation of initiatives to improve IT acquisitions has been inconsistent. For example, the Office of Management and Budget (OMB) established a process for holding face-to-face investment performance reviews between agencies and OMB (referred to as “TechStats”). However, as of 2013 less than 20 percent of at-risk investments across the government had undergone such reviews, even though GAO has identified a number of ongoing IT investments with significant issues that require attention. OMB also requires investments to deliver capabilities every 6 months, but as GAO reported in 2014, less than half of selected investments at five major agencies planned to deliver capabilities in 12-month cycles.

To facilitate transparency across the government in acquiring and managing IT investments, OMB established a public website—the IT Dashboard—to provide detailed information on major investments at federal agencies. As of May 2015, the Dashboard showed that 178 of the government’s 738 major investments—totaling \$8.7 billion—were in need of management attention due to their risk. Moreover, OMB does not update the public version of the Dashboard while the President’s budget request is being formulated, most recently for more than 6 months. GAO has made multiple recommendations to improve the Dashboard.

Further opportunities for savings and efficiency exist in agencies’ spending on “commodity” IT (e.g., IT infrastructure, enterprise systems such as e-mail, and systems that perform administrative functions) and the consolidation of federal data centers. The table below shows savings realized or planned from the consolidation of federal data centers.

Estimated, Actual, or Planned Savings from Data Center Consolidation (Dollars in Millions)								
Fiscal year	Estimated/Actual (\$1,143 total)			Planned (\$6,306 total)				
	2011	2012	2013	2014	2015	2016	2017	Beyond 2017
Total savings and avoidances (\$7,449 total)	\$192	\$268	\$683	\$895	\$1,250	\$917	\$1,144	\$2,100

Source: GAO analysis of agency data. | GAO-15-675T

However, limitations exist in how agencies report savings in these areas: better tracking them would provide for greater transparency and oversight.

Recognizing the importance of these issues, a law was recently enacted aimed at reforming federal IT acquisition. This legislation should help address the key issue areas identified in GAO’s high-risk designation. OMB has released proposed guidance for agencies to implement provisions of this law, to include implementing roles and responsibilities for senior agency officials. To improve the management of IT acquisitions and operations, it is also critical for agencies to implement GAO’s prior recommendations and demonstrate measurable government-wide progress in key areas such as delivering IT systems incrementally and realizing planned data center savings.

Chairmen Hurd and Meadows, Ranking Members Kelly and Connolly, and Members of the Subcommittees:

I am pleased to be here today to discuss our recent designation of information technology (IT) acquisitions and operations as a government-wide high-risk area, as well as the impact of recently enacted federal IT acquisition reform legislation (commonly referred to as the Federal Information Technology Acquisition Reform Act or FITARA).¹ As you know, the effective and efficient acquisition and management of IT investments has been a long-standing challenge in the federal government.

The federal government has spent billions of dollars on failed and poorly performing IT investments, which often suffered from ineffective management, and spending on IT operations is inefficient. From October 2009 through December 2014, we made 737 recommendations to address weaknesses in agencies' IT management. In light of these ongoing challenges, we recently added improving the management of IT acquisitions and operations to our list of high-risk areas for the federal government.²

My statement today will discuss this high-risk designation, as well as plans for implementing FITARA and those plans' impact on IT acquisition reform. We conducted the work on which this statement is based 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. A more detailed discussion of the objectives, scope, and methodology of this work is included in each of the reports on which this testimony is based.³

¹Federal Information Technology Reform provisions of the Carl Levin and Howard P. 'Buck' McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291, div. A, title VIII, subtitle D, 128 Stat. 3292, 3438-3450 (Dec. 19, 2014).

²GAO, *High-Risk Series: An Update*, [GAO-15-290](#) (Washington, D.C.: Feb. 11, 2015).

³See the related GAO products page at the end of this statement for a list of the reports on which this testimony is based.

Background

The federal government invests more than \$80 billion annually in IT, but many of these investments fail to meet cost and schedule expectations or make significant contributions to mission-related outcomes. We have previously testified that the federal government has spent billions of dollars on failed IT investments, such as

- the Department of Defense's (DOD) Expeditionary Combat Support System, which was canceled in December 2012, after spending more than a billion dollars and failing to deploy within 5 years of initially obligating funds;
- the Department of Homeland Security's Secure Border Initiative Network program, which was ended in January 2011, after the department obligated more than \$1 billion to the program, because it did not meet cost-effectiveness and viability standards;
- the Department of Veterans Affairs' (VA) Financial and Logistics Integrated Technology Enterprise program, which was intended to be delivered by 2014 at a total estimated cost of \$609 million, but was terminated in October 2011 due to challenges in managing the program;
- the Office of Personnel Management's Retirement Systems Modernization program, which was canceled in February 2011, after spending approximately \$231 million on the agency's third attempt to automate the processing of federal employee retirement claims;
- the National Oceanic and Atmospheric Administration, DOD, and the National Aeronautics and Space Administration's National Polar-orbiting Operational Environmental Satellite System, which was a tri-agency weather satellite program that the White House Office of Science and Technology stopped in February 2010 after the program spent 16 years and almost \$5 billion; and
- the VA Scheduling Replacement Project, which was terminated in September 2009 after spending an estimated \$127 million over 9 years.

These and other failed IT projects often suffered from a lack of disciplined and effective management, such as project planning, requirements definition, and program oversight and governance. In many instances, agencies have not consistently applied best practices that are critical to successfully acquiring IT investments.

Federal IT projects have also failed due to a lack of oversight and governance. Executive-level governance and oversight across the government has often been ineffective, specifically from chief information officers (CIO). For example, we have reported that not all CIOs have the authority to review and approve the entire agency IT portfolio and that CIOs' authority was limited.⁴ This has also been highlighted by Congress—the recently enacted law reforming federal IT acquisition is intended to, among other things, strengthen CIO authority and provide the oversight IT projects need.⁵

Improving the Management of IT Acquisitions and Operations

Although the executive branch has undertaken numerous initiatives to better manage the more than \$80 billion that is annually invested in IT, federal IT investments too frequently fail or incur cost overruns and schedule slippages, while contributing little to mission-related outcomes. In light of these challenges, we recently introduced a new government-wide high-risk area, *Improving the Management of IT Acquisitions and Operations*. This area highlights several critical IT initiatives in need of additional congressional oversight, including reviews of troubled projects, an emphasis on incremental development, a key transparency website, reviews of agencies' operational investments, and efforts to streamline agencies' portfolios of IT investments. Implementation of these initiatives has been inconsistent, and more work remains to demonstrate progress in achieving IT acquisition outcomes. The recent IT reform legislation holds promise for improving agencies' acquisition of IT, and the Office of Management and Budget (OMB) is developing guidance for agencies to implement its provisions. Implementing these provisions, along with our outstanding recommendations, is necessary for agencies to demonstrate progress in addressing this high-risk area.

Reviews of Troubled Projects

In January 2010, the Federal CIO began leading TechStat sessions—face-to-face meetings to terminate or turn around IT investments that are failing or are not producing results. These meetings involve OMB and agency leadership and are intended to increase accountability and transparency and improve performance. OMB reported that federal

⁴GAO, *Federal Chief Information Officers: Opportunities Exist to Improve Role in Information Technology Management*, [GAO-11-634](#) (Washington, D.C.: Sept. 15, 2011).

⁵Pub. L. No. 113-291, Div. A, title VIII, subtitle D, § 831(a) (Dec. 19, 2014).

agencies achieved over \$3 billion in cost savings or avoidances as a result of these sessions in 2010. Subsequently, OMB empowered agency CIOs to hold their own TechStat sessions within their respective agencies.

We have since reported that OMB and selected agencies held multiple TechStats, but additional OMB oversight was needed to ensure that these meetings were having the appropriate impact on underperforming projects and that resulting cost savings were valid.⁶ Specifically, OMB reported conducting TechStats at 23 federal agencies covering 55 investments, 30 of which were considered medium or high risk at the time of the TechStat. However, these reviews accounted for less than 20 percent of medium- or high-risk investments government-wide. As of August 2012, there were 162 such at-risk investments across the government. Further, we reviewed four selected agencies and found they had held TechStats on 28 investments. While these reviews were generally conducted in accordance with OMB guidance, areas for improvement existed. We concluded that until OMB and agencies develop plans to address these investments, the investments would likely remain at risk. Among other things, we recommended that OMB require agencies to address high-risk investments. OMB generally agreed with this recommendation.

However, over the last 2 years, OMB has not conducted any TechStat reviews. In particular, as of March 2015, the last TechStat was held in March 2013 and OMB has not listed any savings from TechStats in any of its required quarterly reporting to Congress since June 2012.

Highlighting the importance of focusing more oversight on high-risk initiatives, in our most recent high-risk report we identified a number of ongoing investments with significant issues requiring attention:⁷

- The Department of Health and Human Services' HealthCare.gov website and its supporting systems, which were to facilitate the establishment of a health insurance marketplace by January 2014, encountered significant cost increases, schedule slips, and delayed

⁶GAO, *Information Technology: Additional Executive Review Sessions Needed to Address Troubled Projects*, [GAO-13-524](#) (Washington, D.C.: June 13, 2013).

⁷[GAO-15-290](#).

functionality. In a series of reports we identified numerous planning, oversight, security, and system development challenges faced by this program and made recommendations to address them.⁸

- The Department of Agriculture’s Farm Program Modernization, which is intended to modernize the IT systems supporting the Farm Service Agency’s 37 farm programs, had not implemented a number of key management and oversight practices to ensure its successful completion. In July 2011, we reported on issues with the reliability of the program’s cost estimate, weaknesses in its management approach, and a lack of clarity in its governance structure.⁹ In our report, we recommended that the agency take action to address these issues.
- The Department of Commerce’s Census Enterprise Data Collection and Processing investment was initiated in fiscal year 2015 and is expected to be the backbone of the Census Bureau’s target IT architecture. Particular attention to this area is warranted in order to avoid repeating the mistakes of the 2010 Decennial Census, in which the bureau had to abandon its plans for the use of handheld data collection devices, due in part to fundamental weaknesses in its implementation of key IT management practices.
- DOD’s Defense Enterprise Accounting and Management System (DEAMS), which is the agency’s planned accounting system designed to provide accurate, reliable, and timely financial information, has experienced significant delays and cost increases. In March 2012, we reported that DEAMS faced a 2-year deployment delay and an estimated cost increase of about \$500 million from its original life-cycle cost estimate of \$1.1 billion, an increase of approximately 45

⁸See GAO, *Healthcare.gov: CMS Has Taken Steps to Address Problems, but Needs to Further Implement Systems Development Best Practices*, [GAO-15-238](#) (Washington, D.C.: Mar. 4, 2015); *Healthcare.gov: Actions Needed to Address Weaknesses in Information Security and Privacy Controls*, [GAO-14-730](#) (Washington, D.C.: Sept. 16, 2014); and *Healthcare.gov: Ineffective Planning and Oversight Practices Underscore the Need for Improved Contract Management*, [GAO-14-694](#) (Washington, D.C.: July 30, 2014).

⁹GAO, *USDA Systems Modernization: Management and Oversight Improvements Are Needed*, [GAO-11-586](#) (Washington, D.C.: July 20, 2011).

percent.¹⁰ Further, we reported that assessments by DOD users had identified operational problems with the system, such as data accuracy issues, an inability to generate auditable financial reports, and the need for manual workarounds.¹¹ We recommended that DOD take actions to ensure the correction of system problems prior to further system deployment, including user training. DOD generally concurred with our recommendations and described its efforts to address them.

- DOD's and VA's initiatives to modernize their electronic health records systems are intended to address sharing data among the departments' health information systems, but achieving this has been a challenge for these agencies over the last 15 years. In February 2013, the two departments' Secretaries announced that instead of developing a new common, integrated electronic health record system, the departments would focus on achieving interoperability between separate DOD and VA systems.¹² The departments' change and history of challenges in improving their health information systems heighten concern about whether they will be successful.
- The Department of Homeland Security's United States Citizenship and Immigration Services (USCIS) Transformation program is to transition USCIS from a fragmented, paper-based filing environment to a consolidated, paperless environment using electronic case management tools, but it is unclear whether the department is positioned to successfully deliver these capabilities. For example, it has not yet demonstrated the extent to which it can meet six key capability requirements using its new system architecture. Further, between July 2011 and September 2014, the program's life-cycle cost estimate increased from approximately \$2.1 billion to approximately

¹⁰GAO, *DOD Financial Management: Reported Status of Department of Defense's Enterprise Resource Planning Systems*, [GAO-12-565R](#) (Washington, D.C.: Mar. 30, 2012).

¹¹GAO, *DOD Financial Management: Implementation Weaknesses in Army and Air Force Business Systems Could Jeopardize DOD's Auditability Goals*, [GAO-12-134](#) (Washington, D.C.: Feb. 28, 2012).

¹²GAO, *Electronic Health Records: Long History of Management Challenges Raises Concerns about VA's and DOD's New Approach to Sharing Health Information*, [GAO-13-413T](#) (Washington, D.C.: Feb. 27, 2013).

\$2.6 billion.

- The Department of Homeland Security’s Human Resources IT investment is to consolidate, integrate, and modernize the department’s human resources IT infrastructure, but it has experienced a long history of issues. As of May 2015, this investment was rated as “moderately high risk” by the department’s CIO. According to the CIO, this investment has experienced significant challenges that have inhibited delivered capabilities from being accepted by users, but the department is working to address them.
- The Department of Transportation’s Next Generation Air Transportation System (NextGen) is an advanced technology air-traffic management system that the Federal Aviation Administration (FAA) anticipates will replace the current ground-radar-based system, at an expected cost of \$15 billion to \$22 billion through fiscal year 2025. However, NextGen has significantly increased the number, cost, and complexity of FAA’s acquisition programs. The interdependencies among these programs heighten the importance of remaining on time and within budget. Accordingly, we recommended that FAA, among other things, require cost and schedule risk analysis, independent cost estimates, and integrated master schedules.¹³
- VA has invested significant resources into developing a system for outpatient appointment scheduling, but these efforts have faced major setbacks. After failing to implement a new solution, in October 2009, VA began a new initiative that it refers to as HealtheVet Scheduling. In May 2010, we recommended that, as the department proceeded with future development, it take actions to improve key processes, including acquisition management, system testing, and progress reporting, which are essential to the department’s second outpatient scheduling system effort.¹⁴

¹³GAO, *Air Traffic Control Modernization: Management Challenges Associated with Program Costs and Schedules Could Hinder NextGen Implementation*, [GAO-12-223](#) (Washington, D.C.: Feb. 16, 2012).

¹⁴GAO, *Information Technology: Management Improvements Are Essential to VA’s Second Effort to Replace Its Outpatient Scheduling System*, [GAO-10-579](#) (Washington, D.C.: May 27, 2010).

Incremental Development

Beyond focusing attention on individual high-risk investments, an additional key reform initiated by OMB emphasizes incremental development in order to reduce investment risk. In 2010, it called for agencies' major investments to deliver functionality every 12 months and, since 2012, every 6 months.

However, we recently reported that less than half of selected investments at five major agencies planned to deliver capabilities in 12-month cycles.¹⁵ Accordingly, we recommended that OMB develop and issue clearer guidance on incremental development and that selected agencies update and implement their associated policies. Most agencies agreed with our recommendations or had no comment. Table 1 shows how many of the total selected investments at each agency planned to deliver functionality every 12 months during fiscal years 2013 and 2014.

Table 1: Number of Selected Investments Planning to Incrementally Deliver Functionality

Agency	Total number of selected investments	Investments planning to deliver functionality every 12 months
Department of Defense	37	11
Department of Health and Human Services	14	11
Department of Homeland Security	12	6
Department of Transportation	20	7
Department of Veterans Affairs	6	6
Total	89	41

Source: GAO analysis of agency data. | GAO-15-675T

Key Transparency Website

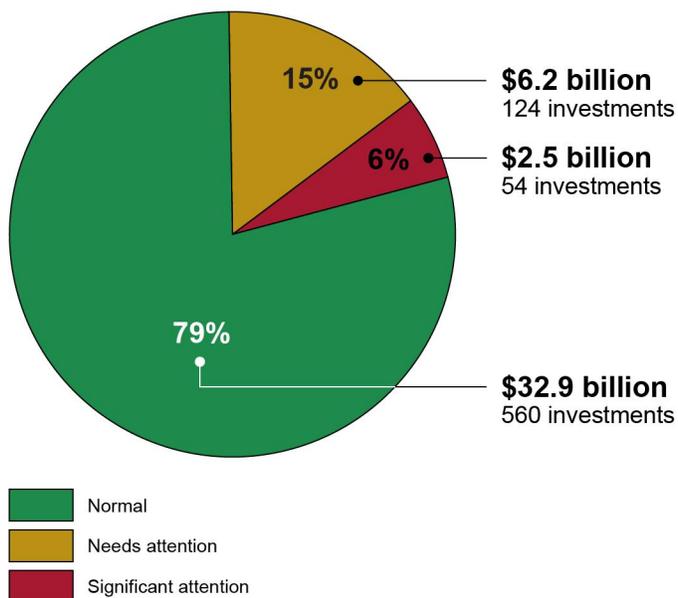
Given these issues, it is important for the federal government to be transparent both when it is acquiring new investments and when it is managing legacy investments. To help the government achieve such transparency, in June 2009, OMB established a public website (referred to as the IT Dashboard) that provides detailed information on major IT investments at 27 federal agencies, including ratings of their performance

¹⁵GAO, *Information Technology: Agencies Need to Establish and Implement Incremental Development Policies*, [GAO-14-361](#) (Washington, D.C.: May 1, 2014).

against cost and schedule targets.¹⁶ The public dissemination of this information is intended to allow OMB; other oversight bodies, including Congress; and the general public to hold agencies accountable for results and performance. Among other things, agencies are to submit ratings from their CIOs, which, according to OMB's instructions, should reflect the level of risk facing an investment relative to that investment's ability to accomplish its goals.

As of May 2015, according to the IT Dashboard, 178 of the federal government's 738 major IT investments—totaling \$8.7 billion—were in need of management attention (rated “yellow” to indicate the need for attention or “red” to indicate significant concerns). (See fig. 1.)

Figure 1: Overall Performance Ratings of Major Investments on the IT Dashboard, as of May 2015



Source: Office of Management and Budget's IT Dashboard. | GAO-15-675T

¹⁶GAO, *IT Dashboard: Agencies Are Managing Investment Risk, but Related Ratings Need to Be More Accurate and Available*, [GAO-14-64](#) (Washington, D.C.: Dec. 12, 2013).

Although the accuracy of Dashboard cost and schedule data has improved over time,¹⁷ in December 2013, we reported that agencies had removed major investments from the site, representing a troubling trend toward decreased transparency.¹⁸ For example, several of the Department of Energy's supercomputer investments had been classified as facilities, rather than IT, thus removing those investments from the Dashboard, and OMB staff stated that they had no control over such decisions.

Further reducing transparency, OMB does not update the public version of the Dashboard as it and the agencies work to assist in the formulation of the President's annual budget request. According to an OMB Office of E-Government and Information Technology staff member, OMB considers information submitted during the budget process to be pre-decisional and will only release it to the public in tandem with the President's budget. However, the information submitted as part of an investment's CIO rating does not meet OMB's own definition of "pre-decisional,"¹⁹ meaning that the CIO risk ratings could be updated independent of the budget process without disclosing information that might compromise that process. Moreover, as of December 2013, the public version of the IT Dashboard had not been updated for 15 of the previous 24 months. More recently, OMB stopped updating the public version of the Dashboard on August 31, 2014, and did not update it until March 10, 2015, a span of more than 6 months. Over the past several years, we have made over 20 recommendations to help improve the accuracy and reliability of the information on the IT Dashboard and to increase its availability.

Reviews of Operational Systems

In addition to spending money on new IT development, agencies also plan to spend a significant amount of their fiscal year 2015 IT budgets on the operations and maintenance (O&M) of legacy (i.e., steady-state) systems. Over the past 6 fiscal years, this amount has increased, while

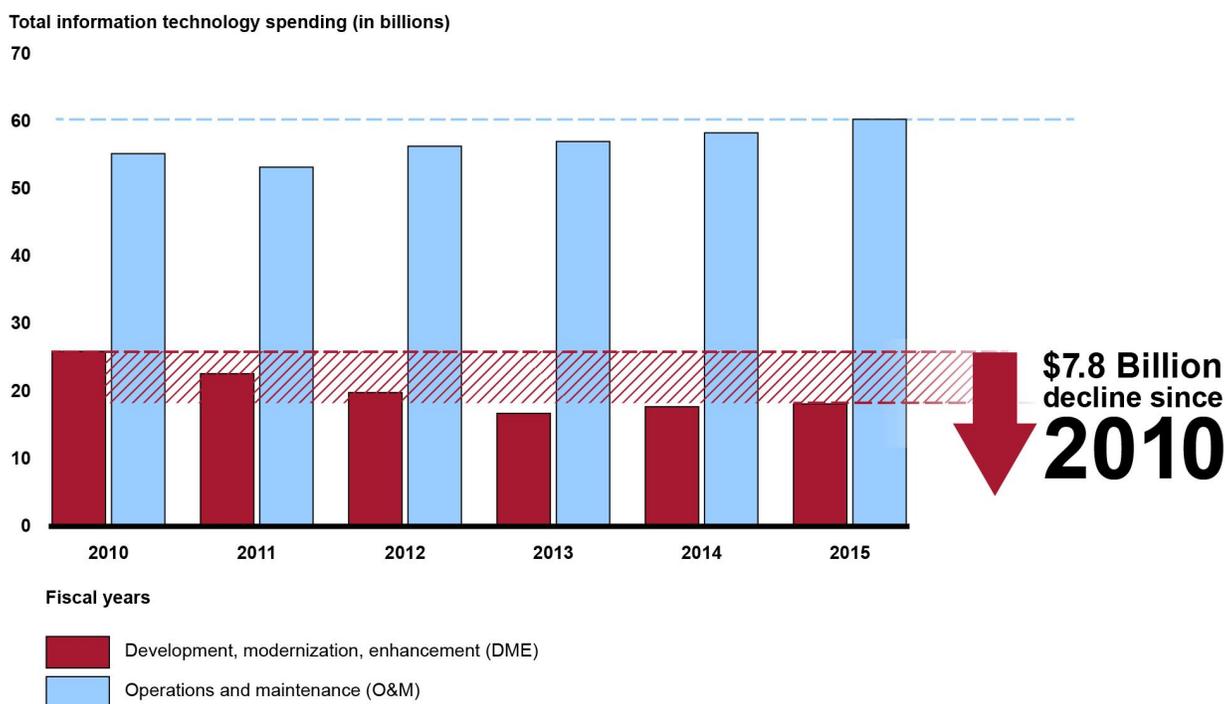
¹⁷GAO, *IT Dashboard: Accuracy Has Improved, and Additional Efforts Are Under Way to Better Inform Decision Making*, [GAO-12-210](#) (Washington, D.C.: Nov. 7, 2011).

¹⁸[GAO-14-64](#).

¹⁹The Dashboard's web page for frequently asked questions defines pre-decisional information as "new" investments, planned IT spending levels in the budget year, costs of projects and activities that were completed during or after the budget year, and eliminated or downgraded investments. See <http://www.itdashboard.gov/faq>.

the amount invested in developing new systems has decreased by about \$7.8 billion since fiscal year 2010. (See figure 2.) This raises concerns about agencies' ability to replace systems that are no longer cost-effective or that fail to meet user needs.

Figure 2: Summary of IT Spending by Fiscal Year from 2010 through 2015 (Dollars in Billions)



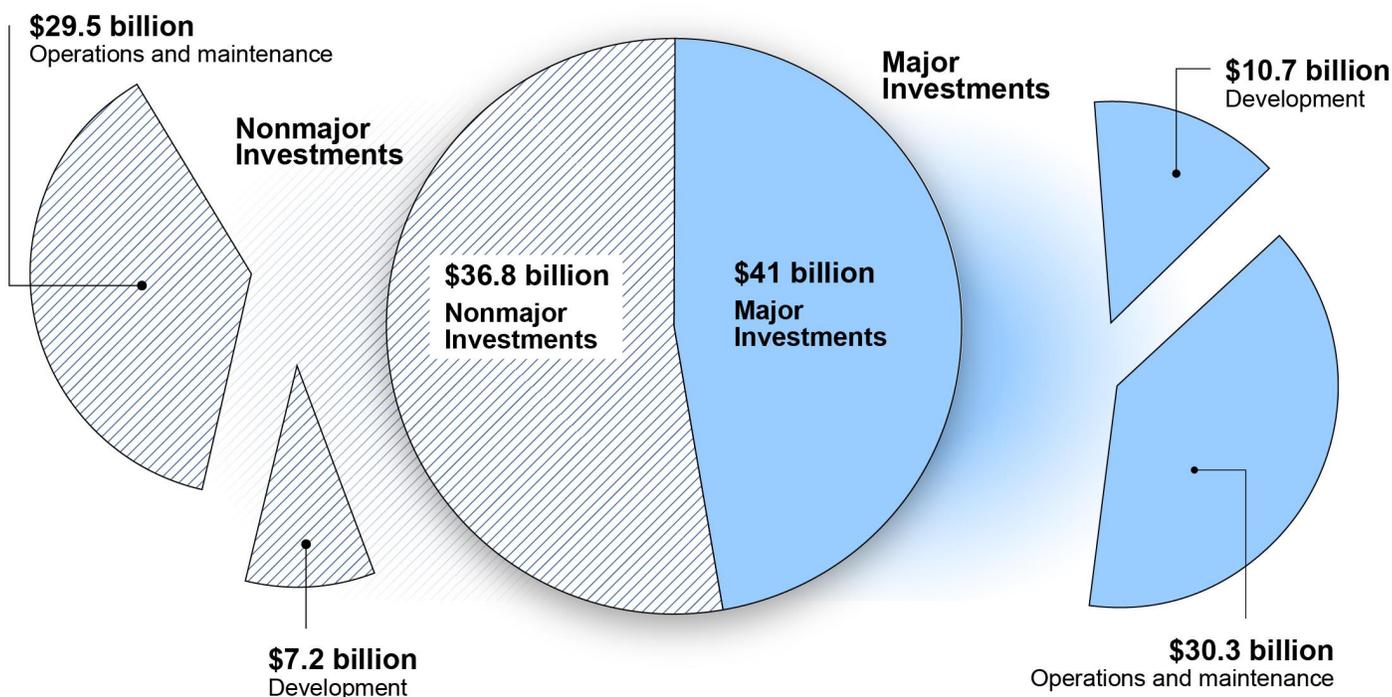
Source: GAO analysis of agency data. | GAO-15-675T

Of the more than \$78 billion budgeted for federal IT in fiscal year 2015,²⁰

²⁰This \$78 billion represents what agencies reported to OMB on how much they plan to spend on IT and how these funds are to be allocated. This figure does not include spending for DOD classified IT systems, details of which are not included on the IT Dashboard. Moreover, this \$78 billion figure is understated. Specifically, it does not include IT investments by 58 independent executive branch agencies, including the Central Intelligence Agency, or by the legislative or judicial branches. Additionally, not all executive branch IT investments are included in this estimate because agencies have differed on what they considered an IT investment. For example, some have considered research and development systems as IT investments, while others have not.

26 federal agencies²¹ plan to spend about \$60 billion, more than three-quarters of the total budgeted, on the O&M of legacy investments. Figure 3 provides a visual summary of the relative cost of major and nonmajor investments, both in development and O&M.

Figure 3: Summary of Planned Fiscal Year 2015 Major and Nonmajor Investments in Development and Operations and Maintenance (Dollars in Billions)



Source: GAO analysis of agency data. | GAO-15-675T

Given the size and magnitude of these investments, it is important that agencies effectively manage the O&M of existing investments to ensure that they (1) continue to meet agency needs, (2) deliver value, and (3) do

²¹The 26 agencies are the Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security, Housing and Urban Development, the Interior, Justice, Labor, State, Transportation, the Treasury, and Veterans Affairs; U.S. Army Corps of Engineers; Environmental Protection Agency; General Services Administration; National Aeronautics and Space Administration; National Archives and Records Administration; National Science Foundation; Nuclear Regulatory Commission; Office of Personnel Management; Small Business Administration; Social Security Administration; and U.S. Agency for International Development.

not unnecessarily duplicate or overlap with other investments. To accomplish this, agencies are required by OMB to perform annual operational analyses of these investments, which are intended to serve as periodic examination of an investment's performance against, among other things, established cost, schedule, and performance goals.

However, we have reported that agencies were not consistently performing such analyses and that billions of dollars in O&M investments had not undergone needed analyses.²² Specifically, as detailed in our November 2013 report, only 1 of the government's 10 largest O&M investments underwent an OMB-required operational analysis. We recommended that operational analyses be completed on the remaining 9 investments. Most agencies generally agreed with our recommendations.

Portfolio Management

To better manage existing IT systems, OMB launched the PortfolioStat initiative, which requires agencies to conduct an annual, agency-wide IT portfolio review to, among other things, reduce commodity IT²³ spending and demonstrate how their IT investments align with the agency's mission and business functions. In November 2013, we reported that agencies continued to identify duplicative spending as part of PortfolioStat and that this initiative had the potential to save at least \$5.8 billion through fiscal year 2015; however, weaknesses existed in agencies' implementation of the initiative, such as limitations in the CIOs' authority.²⁴ We made more than 60 recommendations to improve OMB's and agencies' implementation of PortfolioStat. OMB partially agreed with our recommendations, and responses from 21 of the agencies varied.

²²GAO, *Information Technology: Agencies Need to Strengthen Oversight of Multibillion Dollar Investments in Operations and Maintenance*, [GAO-14-66](#) (Washington, D.C.: Nov. 6, 2013), and *Information Technology: Agencies Need to Strengthen Oversight of Billions of Dollars in Operations and Maintenance Investments*, [GAO-13-87](#) (Washington, D.C.: Oct. 16, 2012).

²³According to OMB, commodity IT includes services such as IT infrastructure (data centers, networks, desktop computers and mobile devices); enterprise IT systems (e-mail, collaboration tools, identity and access management, security, and web infrastructure); and business systems (finance, human resources, and other administrative functions).

²⁴GAO, *Information Technology: Additional OMB and Agency Actions Are Needed to Achieve Portfolio Savings*, [GAO-14-65](#) (Washington, D.C.: Nov. 6, 2013).

More recently, in April 2015, we reported that agencies decreased their planned PortfolioStat savings to approximately \$2 billion—a 68 percent reduction from the amount they reported to us in 2013.²⁵ Additionally, although agencies also reported having achieved approximately \$1.1 billion in PortfolioStat-related savings, inconsistencies in OMB’s and agencies’ reporting make it difficult to reliably measure progress in achieving savings. Among other things, we made recommendations to OMB aimed at improving the reporting of achieved savings. OMB agreed with the recommendations.

We have also recently reported on three key areas of agency’s IT spending portfolio: data center consolidation, software licensing, and mobile devices.

Data Center Consolidation: Concerned about the size of the federal data center inventory and recognizing the potential to improve the efficiency, performance, and environmental footprint of federal data center activities, OMB, under the leadership of the Federal CIO, established the federal data center consolidation initiative in February 2010. In a series of reports, we found that, while data center consolidation could potentially save the federal government billions of dollars, weaknesses existed in the execution and oversight of the initiative.

Most recently, we reported that, as of May 2014, agencies collectively reported that they had a total of 9,658 data centers;²⁶ as of February 2015, they had closed 1,236 data centers and were planning to close an additional 2,607—for a total of 3,843—by the end of September 2015. We also noted that between fiscal years 2011 and 2017, agencies reported planning a total of about \$5.3 billion in cost savings and avoidances due to the consolidation of federal data centers. In correspondence subsequent to the publication of our report, DOD’s Office of the CIO identified an additional \$2.1 billion in savings to be realized beyond fiscal year 2017, which increased the total savings across the federal government to about \$7.4 billion.

²⁵GAO, *Information Technology: Additional OMB and Agency Actions Needed to Ensure Portfolio Savings Are Realized and Effectively Tracked*, [GAO-15-296](#) (Washington, D.C.: Apr. 16, 2015).

²⁶GAO, *Data Center Consolidation: Reporting Can Be Improved to Reflect Substantial Planned Savings*, [GAO-14-713](#) (Washington, D.C.: Sept. 25, 2014).

Table 2 below provides a summary of agencies' total data center cost savings and cost avoidances between fiscal years 2011 and 2017, as well as DOD cost savings and cost avoidances to be realized beyond 2017.

Table 2: Agencies' Data Center Consolidation Cost Savings and Avoidances (Dollars in Millions)

	Fiscal year	Total savings and avoidances	Total
Estimated and actual	2011	\$192	\$1,143
	2012	\$268	
	2013	\$683	
Planned	2014	\$895	\$6,306
	2015	\$1,250	
	2016	\$917	
	2017	\$1,144	
	Beyond 2017	\$2,100	
Total		\$7,449	

Source: GAO analysis of agency data. | GAO-15-675T

Note: Totals may not add due to rounding.

However, we noted that planned savings may be understated because of difficulties agencies encountered when calculating savings and communicating their estimates to OMB. We concluded that it was important for OMB to continue to provide leadership and guidance on this initiative, and we made recommendations to ensure the initiative improves governmental efficiency and achieves cost savings. Most agencies agreed with our recommendations or had no comment.

Software Licensing: An additional area of concern is agencies' management of their software licenses. We recently reported on federal agencies' management of software licenses and determined that better management was needed to achieve significant savings government-wide.²⁷ In particular, 22 of the 24 major agencies identified in the Chief Financial Officers Act of 1990 did not have comprehensive license policies, and only 2 had comprehensive license inventories. As a result, agencies' oversight of software license spending was limited or lacking, and thus they may miss out on savings. The potential savings could be

²⁷GAO, *Federal Software Licenses: Better Management Needed to Achieve Significant Savings Government-Wide*, [GAO-14-413](#) (Washington, D.C.: May 22, 2014).

significant considering that, in fiscal year 2012, one major federal agency reported saving approximately \$181 million by consolidating its enterprise license agreements, even though its oversight process was ad hoc.

We recommended that OMB issue needed guidance to agencies and made more than 130 recommendations to the agencies to improve their policies and practices for managing software licenses. OMB disagreed with the need for guidance. However, without such guidance, agencies will likely continue to lack the visibility into what needs to be managed. Most agencies generally agreed with the recommendations or had no comments.

Mobile Devices: We have also identified weaknesses in agencies' management of their mobile devices. Both a 2011 executive order and OMB's 2012 Digital Government Strategy call for agencies to, among other things, take steps to ensure they are not paying for unused or underused mobile devices and services and to move toward an enterprise-wide model for purchasing these devices and services in order to reduce costs. However, in May of this year we reported that agencies need to implement more effective controls on their mobile devices and services in order to realize potential cost savings.²⁸ Specifically, most of the 15 agencies we reviewed did not have an inventory of mobile devices and associated services that can be used to assess device usage, and only 1 of the 15 agencies had documented procedures for monitoring spending by reviewing devices and associated service plans for overuse, underuse, or zero use. A key reason for these weaknesses was that agencies took a decentralized approach to managing mobile device spending. We also noted that OMB had not measured progress toward its stated goal of achieving financial savings related to mobile devices and services.

Highlighting the potential for savings in this area, agencies reported paying a range of rates per line for various service combinations, from \$21 for 200 voice minutes, unlimited data, and 200 text messages, to \$122 for unlimited voice, data, and text messages. Agencies also paid different rates for the same bundle of services. For example, for the

²⁸GAO, *Telecommunications: Agencies Need Better Controls to Achieve Significant Savings on Mobile Devices and Services*, [GAO-15-431](#) (Washington, D.C.: May 21, 2015).

unlimited voice, text, and data bundles, agencies paid between \$69 and \$122 per month.

Accordingly, we recommended that the agencies in our review take actions to improve their inventories and control processes and that OMB measure and report progress in achieving mobile cost savings. OMB and 14 of the agencies generally agreed with the recommendations or had no comment. One agency, the Department of Defense, partially agreed, but we maintained that actions are still needed.

Recent Legislation Can Help Improve Agencies' Management of IT

Recognizing the severity of issues related to government-wide management of IT, in December 2014, Congress led the enactment of FITARA. Among other things, the law includes the following requirements:²⁹

- Agencies, except for DOD, shall ensure that CIOs have a significant role in, among other things, programming and budgeting decisions, as well as management, governance, and oversight processes related to IT.³⁰ For example, agencies (other than DOD) may only enter into contracts for IT and IT services that are reviewed and approved by the agency CIO.
- OMB shall provide guidance that requires CIOs to certify that IT acquisitions are adequately implementing incremental development.
- OMB shall issue guidance that requires the CIO to adequately reflect each major IT investment's cost, schedule, and performance in the investment evaluation.
- OMB shall make available to the public a list of all major IT investments, including data on cost, schedule, and performance, and report to Congress on any investment that is evaluated as high risk for 4 consecutive quarters.

²⁹Pub. L. No. 113-291, div. A, title VIII, subtitle D (Dec. 19, 2014). Unless otherwise noted, the provisions apply to the agencies covered by the Chief Financial Officers Act of 1990. 31 U.S.C. § 901(b).

³⁰For DOD, the law requires that the DOD CIO review and provide recommendations to the Secretary of Defense on the department's IT budget request.

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- The General Services Administration shall identify and develop a government-wide program for the acquisition, dissemination, and shared use of software licenses.
 - OMB, in consultation with agency CIOs, shall implement a process to assist agencies in managing their IT portfolios.
 - Agencies shall annually report to OMB's Administrator of the Office of Electronic Government specific information, to include progress in consolidating federal data centers and the associated savings.

The new IT acquisition reform requirements codified in the law, when fully implemented, should help address key issue areas identified in our high-risk report related to the management of IT investments.

In April 2015, OMB released proposed guidance for public comment on how agencies are to implement the law.³¹ OMB's proposed guidance states that it is intended to, among other things, assist agencies in aligning their IT resources to statutory requirements; establish government-wide IT management controls that will meet the law's requirements, while providing agencies with flexibility to adapt to unique agency processes and requirements; clarify the CIO's role and strengthen the relationship with agency CIOs and bureau CIOs; and strengthen CIO accountability for IT cost, schedule, and performance.

The proposed guidance includes several actions agencies are to take within specified time frames to implement a basic set of roles and responsibilities for CIOs and other senior agency officials (referred to as the "common baseline") needed for the management of IT and to implement the specific authorities described in the law. Such roles and responsibilities described include those related to budget formulation and planning, acquisition and execution, and organization and workforce. To implement the common baseline, the proposed guidance includes the following more specific requirements:

- By August 15, 2015, each agency is to conduct a self-assessment and articulate a plan describing the changes it will make to ensure

³¹OMB, *Management and Oversight of Information Technology Resources, Proposed Guidance from OMB*, accessed June 3, 2015, <https://management.cio.gov>. OMB sought feedback and suggestions on the proposed guidance through May 30, 2015.

that all common baseline responsibilities are implemented by December 31, 2015. Agencies are to submit their plans to OMB's Office of E-Government for review and acceptance and make the plans publicly available on agency websites no later than 30 days after OMB acceptance.

- By December 31, 2015, agencies are to implement specific responsibilities and processes for the management of IT from the common baseline.
- By April 30, 2016, agencies are to update their self-assessment to identify any obstacles or incomplete implementation of common baseline responsibilities over the preceding 12 months. The self-assessment is to be updated on an annual basis thereafter.

Additionally, the proposed guidance reiterates OMB's existing guidance on PortfolioStat, the IT Dashboard, and the federal data center consolidation initiative, and expands its existing guidance on TechStat sessions. In particular, with respect to TechStat sessions, the proposed guidance calls for agencies to hold these sessions for investments that for 3 consecutive months have a "red" risk rating, which indicates that the CIO has significant concerns with the investment. If the CIO continues to give a "red" rating for 1 year following the TechStat session, the guidance states that OMB may intervene with appropriate performance and budgetary actions until the agency has addressed the root cause of the problems and ensured that the investment will complete remaining activities within its planned cost and schedule.

Finally, OMB's proposed guidance also includes requirements to help support agency implementation of the roles and responsibilities for CIOs and other senior agency officials (i.e., the common baseline). For example, through the end of fiscal year 2016, the Federal CIO Council³² is to meet quarterly to discuss topics related to the implementation of the common baseline and to assist agencies by, for example, sharing examples of agency governance processes and IT policies. Additionally,

³²The Federal CIO Council is the principal interagency forum to improve agency practices on such matters as the design, modernization, use, sharing, and performance of agency information resources.

by June 30, 2015, the President's Management Council³³ is to select three members from the council to provide an update on government-wide implementation of FITARA on a quarterly basis through September 2016. The updates are to improve the agencies' awareness of policies and procedures that have worked well in other agencies.

Key to effectively implementing CIOs' and other officials' responsibilities in this area is ensuring consistent reporting on their IT reform efforts. In April 2015 we reported that, although OMB uses the information reported by CIOs to help it oversee the federal government's use of IT, the majority of CIOs at the 24 agencies covered by the Chief Financial Officers Act do not, for the most part, use this information for their own IT management efforts.³⁴ We recommended, among other things, that OMB, in collaboration with CIOs, ensure a common understanding of priority IT reform initiatives and their reporting requirements. OMB neither agreed nor disagreed with our recommendations.

Actions Needed to Address This High-Risk Area

In our February 2015 high-risk report, we identified actions that OMB and the agencies need to take to make progress in this area.³⁵ These include implementing the recently enacted statutory requirements promoting IT acquisition reform, as well as implementing GAO's previous recommendations, such as updating the public version of the IT Dashboard throughout the year. As noted in that report, from October 2009 through December 2014, we made 737 recommendations to improve agencies' management of their IT acquisitions; however, as of January 2015, only about 23 percent of these had been fully implemented.

³³The President's Management Council is chartered to ensure that management reforms are implemented across the executive branch. It is composed of a senior official responsible for organizational management from each cabinet-level department and selected agencies.

³⁴GAO, *Federal Chief Information Officers: Reporting to OMB Can Be Improved by Further Streamlining and Better Focusing on Priorities*, [GAO-15-106](#) (Washington, D.C.: Apr. 2, 2015).

³⁵[GAO-15-290](#).

Also in our high-risk report, we stated that OMB and agencies should demonstrate measurable government-wide progress in the following key areas:

- OMB and agencies should, within 4 years, implement at least 80 percent of GAO's recommendations related to the management of IT acquisitions and operations.
- Agencies should ensure that a minimum of 80 percent of the government's major acquisitions deliver functionality every 12 months.
- Agencies should achieve no less than 80 percent of the planned PortfolioStat savings and 80 percent of the savings planned for data center consolidation.

In summary, with the recent passage of IT reform legislation, the federal government has an opportunity to improve the transparency and management of IT acquisition and operations, and strengthen the authority of CIOs to provide needed direction and oversight. OMB and federal agencies should expeditiously implement the requirements of the legislation and continue to implement our previous recommendations. To help ensure that these improvements are achieved, continued congressional oversight of OMB's and agencies' implementation efforts is essential.

Chairmen Hurd and Meadows, Ranking Members Kelly and Connolly, and Members of the Subcommittees, this completes my prepared statement. I would be pleased to respond to any questions that you may have at this time.

GAO Contacts and Staff Acknowledgments

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Appendix: Accessible Data

Data Tables

Data Table for Figure 1: Overall Performance Ratings of Major Investments on the IT Dashboard, as of May 2015

	Billions of dollars	Investments	Percentage
Normal	32.9	560	79
Needs attention	6.2	124	15
Significant attention	2.5	54	6

Source: Office of Management and Budget's IT Dashboard. | GAO-15-675T

Data Table for Figure 2: Summary of IT Spending by Fiscal Year from 2010 through 2015 (Dollars in Billions)

Fiscal years	Development, modernization, enhancement (DME) [Note A]	Operations and maintenance (O&M)
2010	25.7	55
2011	22.4	53
2012	19.6	56.1
2013	16.5	56.8
2014	17.5	58.1
2015	17.9	60.1

Source: GAO analysis of agency data. | GAO-15-675T

Note A: \$7.8 billion decline since 2010.

Data Tables for Figure 3: Summary of Planned Fiscal Year 2015 Major and Nonmajor Investments in Development and Operations and Maintenance (Dollars in Billions)

Major investments

Total	Operations and maintenance	Development
41	30.3	10.7

Nonmajor investments

Total	Operations and maintenance	Development
36.8	29.5	7.2

Source: GAO analysis of agency data. | GAO-15-675T

Related GAO Products

Telecommunications: Agencies Need Better Controls to Achieve Significant Savings on Mobile Devices and Services. [GAO-15-431](#). May 21, 2015.

Information Technology: Additional OMB and Agency Actions Needed to Ensure Portfolio Savings Are Realized and Effectively Tracked. [GAO-15-296](#). April 16, 2015.

Federal Chief Information Officers: Reporting to OMB Can Be Improved by Further Streamlining and Better Focusing on Priorities. [GAO-15-106](#). April 2, 2015.

High-Risk Series: An Update. [GAO-15-290](#). February 11, 2015.

Data Center Consolidation: Reporting Can be Improved to Reflect Substantial Planned Savings. [GAO-14-713](#). September 25, 2014.

Federal Software Licenses: Better Management Needed to Achieve Significant Savings Government-Wide. [GAO-14-413](#). May 22, 2014.

Information Technology: Agencies Need to Establish and Implement Incremental Development Policies. [GAO-14-361](#). May 1, 2014.

IT Dashboard: Agencies Are Managing Investment Risk, but Related Ratings Need to Be More Accurate and Available. [GAO-14-64](#). December 12, 2013.

Information Technology: Agencies Need to Strengthen Oversight of Multibillion Dollar Investments in Operations and Maintenance. [GAO-14-66](#). November 6, 2013.

Information Technology: Additional OMB and Agency Actions Are Needed to Achieve Portfolio Savings. [GAO-14-65](#). November 6, 2013.

Information Technology: Additional Executive Review Sessions Needed to Address Troubled Projects. [GAO-13-524](#). June 13, 2013.

Information Technology: Agencies Need to Strengthen Oversight of Billions of Dollars in Operations and Maintenance Investments. [GAO-13-87](#). October 16, 2012.

IT Dashboard: Accuracy Has Improved, and Additional Efforts Are Under Way to Better Inform Decision Making. [GAO-12-210](#). November 7, 2011.

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