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The Current State of Federal Information Technology Acquisition Reform and Management

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Summary

The Government Accountability Office (GAO) has reported that the federal government budgets more than $80 billion each year on information technology (IT) investments and in FY2017, GAO estimates that this investment will increase to more than $89 billion. Historically, the projects supported by these investments have often incurred "multi-million dollar cost overruns and years-long schedule delays." In addition, GAO has reported that these projects may contribute little to mission-related outcomes and, in some cases, may fail altogether. These undesirable results, according to GAO, "can be traced to a lack of disciplined and effective management and inadequate executive-level oversight."

The Federal Information Technology Acquisition Reform Act (FITARA) was enacted on December 19, 2014, to establish a long-term framework through which federal IT investments could be tracked, assessed, and managed, to significantly reduce wasteful spending and improve project outcomes. These requirements of FITARA are carried out by the Federal Chief Information Officer (CIO). The position of the Federal CIO was created by the E-Government Act of 2002 as the "Administrator, Office of Electronic Government."

Congress and GAO have actively monitored the activities of the Federal CIO and the initiatives carried out by the office. Both have been especially attentive to the topics of data center use and cloud deployment as they relate to achieving the goals of FITARA. The 115th Congress has held two hearings and introduced two bills related to FITARA.

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Federal Information Technology Management

The federal government spends more than $80 billion each year on information technology (IT) investments; in FY2017 that investment is expected to increase to more than $89 billion.[1] The Government Accountability Office (GAO) has found that, historically, the projects supported by these investments have often incurred "multi-million dollar cost overruns and years-long schedule delays." In addition, they may contribute little to mission-related outcomes and, in some cases, may fail altogether.[2]

These undesirable results, according to GAO, "can be traced to a lack of disciplined and effective management and inadequate executive-level oversight."[3] The Federal Information Technology Acquisition Reform Act (FITARA) was enacted in December 2014 to address these issues.[4] The law also codified existing initiatives managed by the Federal Chief Information Officer (CIO).[5]

The Federal CIO and the CIO Council

The position of the Federal CIO and the CIO Council were created within the Office of Management and Budget (OMB) by the E-Government Act of 2002.[6] The role of the Federal CIO is to provide leadership and direction to the executive branch on IT implementation throughout the federal government. Specific responsibilities include—

[1] Testimony of David A. Powner, Director, Information Technology Management Issues, before the Subcommittees on Government Operations and Information Technology, Committee on Oversight and Government Reform, *OMB and Agencies Need to Focus Continued Attention on Implementing Reform Law*, House of Representatives, May 18, 2016, https://oversight.house.gov/wp-content/uploads/2016/05/2016-05-18-Powner-Testimony-GAO-1.pdf.

[2] For example, the Department of Defense (DOD) canceled its Expeditionary Combat Support System in December 2012 after it had spent more than a billion dollars, but had not deployed the system within five years of initially obligating funds; the Department of Homeland Security's (DHS) Secure Border Initiative Network program was canceled in January 2011 after DHS had spent more than $1 billion because the program 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, was terminated in October 2011 due to challenges in managing the program; the Farm Service Agency's Modernize and Innovate the Delivery of Agricultural Systems program, which was to replace aging hardware and software applications that process benefits to farmers, was canceled after 10 years at a cost of at least $423 million, while delivering only about 20% of the functionality that was originally planned; and the Office of Personnel Management's Retirement System Modernization program was canceled in February 2011 after the agency had spent approximately $231 million on its third attempt to automate the processing of federal employee retirement claims. U.S. Government Accountability Office, *Additional Actions and Oversight Urgently Needed*, GAO-15-675T, June 10, 2015 (hereinafter *Additional Actions and Oversight Urgently Needed*, GAO).

[3] *Additional Actions and Oversight Urgently Needed*, GAO.

[4] Title VIII, Subtitle D of the National Defense Authorization Act (NDAA) for Fiscal Year 2015, P.L. 113-291. See also See H.Rept. 113-359. Not all federal agencies are subject to the requirements of FITARA. Generally, agencies identified in the Chief Financial Officers (CFO) Act of 1990, as well as their subordinate divisions and offices, are subject to the requirements of FITARA. The DOD, the Intelligence Community, and portions of other agencies that operate systems related to national security are subject to only certain portions of FITARA. Additionally, executive branch agencies not named in the CFO Act are encouraged, but not required, to follow FITARA guidelines.

[5] This position was originally called the "Administrator for the Office of Electronic Government." It is now also sometimes referred to as the "U.S. CIO."

[6] P.L. 107-347; 44 U.S.C. §§3601-3606. CIO.gov is the website of the U.S. Chief Information Officer and the Federal CIO Council.

- directing the activities of the CIO Council, which consists of federal agency chief information officers, advising on the appointments of agency CIOs, and monitoring and consulting on agency technology efforts;
- advising the Director of OMB on the performance of IT investments; and
- overseeing specific IT reform initiatives and activities.[7]

The CIO Council is the principal interagency forum on federal agency practices for IT management. Originally established by Executive Order 13011 (Federal Information Technology) and later codified by the E-Government Act of 2002, the CIO Council's mission is to help improve practices related to the design, acquisition, development, modernization, use, sharing, and performance of federal government information resources.[8] CIO.gov is the website of the U.S. Chief Information Officer and the Federal CIO Council.

The Impact of FITARA on Federal IT Management

Among other provisions, FITARA codified elements of existing Federal CIO initiatives. In addition, FITARA requires the Federal CIO, in conjunction with federal agencies, to—

- refocus the Federal Data Center Consolidation Initiative (FDCCI) from consolidation to optimization, to include adoption of cloud services;[9]
- set forth a process for agency IT portfolio review and oversight;
- improve transparency and risk management of IT investments;
- identify and publish cost savings and optimization improvements;
- provide public updates on cumulative cost savings and optimization improvements; and
- review agencies' data center inventories and management strategies.

FITARA requires federal agencies to submit annual reports that include—

- comprehensive data center inventories,
- multiyear strategies to consolidate and optimize data centers,
- performance metrics and a timeline for agency action, and
- yearly calculations of investment and cost savings related to FITARA implementation.

On June 10, 2015, OMB published guidance[10] to implement the requirements of FITARA and harmonize existing policy and guidance[11] with the new law.

[7] 44 U.S.C. §360x. U.S. Office of Management and Budget, *Implementation Guidance for the E-Government Act of 2002*, August 1, 2003, http://www.prim.osd.mil/Documents/E-Government_Act_Section%20208_Implementation_Guidance.pdf.

[8] 44 U.S.C. §3603(d).

[9] For additional background on the FDCCI, see the "25-Point Implementation Plan to Reform Federal IT Management." This plan was one of the original policy documents developed as part of a comprehensive effort to increase the operational efficiency of federal technology assets. Office of the U.S. Chief Information Officer, "A 25-Point Implementation Plan to Reform Federal IT Management," December 9, 2010, https://cio.gov/wp-content/uploads/2012/09/25-Point-Implementation-Plan-to-Reform-FederalIT.pdf.

[10] U.S. Office of Management and Budget, *Management and Oversight of Federal Information Technology*, OMB-M-15-14, June 10, 2015, https://obamawhitehouse.archives.gov/sites/default/files/omb/memoranda/2015/m-15-14.pdf (continued...)

The Data Center Optimization Initiative

On August 1, 2016, OMB released a new Data Center Optimization Initiative (DCOI)[12] to supersede the Federal Data Center Consolidation Initiative (DCCI)[13] established in 2010. The DCOI requires agencies to develop and report on data center strategies to—

- consolidate inefficient federal IT infrastructure;
- optimize existing facilities;
- improve security posture;
- achieve cost savings; and
- transition to more efficient infrastructure, such as cloud services and interagency shared services.

One of the most significant elements of the DCOI is that, beginning in February 2017, agencies are prohibited from budgeting funds or committing resources to establish any new data centers or significantly expand existing data centers without approval from the Federal CIO.[14]

The DCOI maintains the previous DCCI requirement that agencies increase the use of pooling of storage, network and computer resources, and of on-demand dynamic allocation (“virtualization”). Additionally, agencies will be required to evaluate their options and priorities for the consolidation and closure of existing data centers by transitioning to—

- cloud-based services to the extent possible;[15]
- interagency shared services or colocated data centers; and
- optimized data centers within an agency’s data center inventory.

The initiative also requires that agencies automate the tools used to measure power efficiency and manage their data center infrastructure, as well as classify their data centers as either “tiered” or “non-tiered.” Tiered data centers are defined as those using—

- a separate physical space for IT infrastructure,

(...continued)

(hereinafter “Management and Oversight of Federal Information Technology”).

[11] In addition to implementing FITARA, OMB Memorandum M-15-14, “Management and Oversight of Federal Information Technology” also harmonizes the requirements of FITARA with existing law, primarily the Clinger-Cohen Act of 1996 and the E-Government Act of 2002. Those laws require OMB to issue management guidance for information technology and electronic government activities across the government, respectively. FITARA also contains provisions that required OMB interpretation before implementation.

[12] U.S. Office of Management and Budget, “Memorandum for Heads of Executive Departments and Agencies: Data Center Optimization Initiative,” August 1, 2016, https://obamawhitehouse.archives.gov/sites/default/files/omb/memoranda/2016/m_16_19_1.pdf.

[13] The FDCCI was established by the U.S Office of Management and Budget memorandum, “Memo for CIOs: Federal Data Center Consolidation Initiative,” February 26, 2010, https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/egov_docs/federal_data_center_consolidation_initiative_02-26-2010.pdf.

[14] To request approval, agencies must submit a written justification that includes an analysis of alternatives (including opportunities for cloud services, interagency shared services, and third party colocation) and an explanation of the net reduction in the agency’s data center inventory that will be facilitated by the new or expanded data center (such as through consolidation of multiple existing data centers into a single new data center).

[15] U.S. Office of Management and Budget, *Federal Cloud Computing Strategy*, February 8, 2011, https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/egov_docs/federal-cloud-computing-strategy.pdf (hereinafter, *Federal Cloud Computing Strategy*).

- an uninterruptible power supply,
- a dedicated cooling system or zone, and
- a back-up power generator for prolonged power outages.

All other data centers will be considered non-tiered data centers.[16] Non-tiered data centers are considered less secure than tiered data centers.

Under the new DCOI guidance, by the end of FY2018, agencies will be required to close at least 25% of their tiered data centers (excluding interagency shared services data centers) and at least 60% of non-tiered data centers. The DCOI guidance encourages agencies to prioritize closing those data centers that cannot achieve the required energy consumption optimization targets and/or present security challenges due to age.

To measure compliance with the DCOI, agencies are required to report on a quarterly basis—

- inventories of all data center facilities, closure/consolidation plans, and properties of each facility owned, operated, or maintained by or on behalf of the agency;
- progress toward meeting all optimization metric target values; and
- evaluation of the costs of operating and maintaining current facilities, to include yearly targets for cost savings and cost avoidance due to consolidation and optimization through FY2018.

The Cloud First Initiative

In addition to providing updated guidance to agencies regarding their data centers, the DCOI has also provided new guidance for cloud investment and shared services adoption. This new guidance complements guidance provided in the Federal Cloud Computing Strategy, which was published in February 2011.[17] The strategy instituted the Cloud First policy, requiring agencies to evaluate cloud computing options before making new investments in physical IT infrastructure. It is intended to accelerate the adoption of cloud computing services by federal agencies and, therefore, the pace at which the government may realize the benefits of cloud adoption (**Table 1**).

In April 2016, GAO reported an assessment of how well agencies have incorporated 10 key management elements into their cloud computing service level agreements (SLAs) (**Table 2**).[18] The SLA is part of a standardized service contract in which particular aspects of the service, such as scope, quality, and responsibilities, are defined and agreed upon between the service provider and the service user. With respect to SLA key practices, GAO analyzed 21 cloud service contracts and related documentation of the five agencies with the largest FY2015 IT budgets—the Departments of Defense (DOD), Health and Human Services (HHS), Homeland Security (DHS), the Treasury, and Veterans Affairs (VA).

GAO found that the contracts reviewed included a majority of the 10 key practices: 7 contracts fulfilled all key practices, 13 had incorporated five or more, and 1 did not include any (**Figure 1**). Agency officials gave several reasons why all elements of the key practices had not been included

[16] Private sector-provided cloud services are not considered data centers for the purposes of this memorandum, but must continue to be included in agencies' quarterly inventory data submissions to OMB.

[17] U.S. Office of Management and Budget, *Federal Cloud Computing Strategy* February 8, 2011, https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/egov_docs/federal-cloud-computing-strategy.pdf.

[18] U.S. Government Accountability Office, *Cloud Computing: Agencies Need to Incorporate Key Practices to Ensure Effective Performance*, GAO-16-325, April 2016, http://www.gao.gov/assets/680/676395.pdf.

into their cloud service contracts, including that guidance directing the use of the practices had not been created when the cloud services were acquired. GAO noted that until agencies fully incorporate the SLA key practices into their contracts, they may be unable to adequately measure the performance of the services provided, and thus be unable to hold service providers accountable for poor performance.

Table 1. Potential Cloud Benefits: Efficiency, Agility, and Innovation

Efficiency	
Cloud Benefits	**Legacy Environment**
• Improved asset utilization (server utilization > 60-70%) • Aggregated demand and accelerated system consolidation (e.g., Federal Data Center Consolidation Initiative) • Improved productivity in application development, application management, network, and end-user	• Low asset utilization (server utilization < 30% typical) • Fragmented demand and duplicative systems • Difficult-to-manage systems
Agility	
Cloud Benefits	**Legacy Environment**
• Purchase "as-a-service" from trusted cloud providers • Near-instantaneous increases and reductions in capacity • More responsive to urgent agency needs	• Years required to build data centers for new services • Months required to increase capacity of existing services
Innovation	
Cloud Benefits	**Legacy Environment**
• Shift focus from asset ownership to service management • Tap into private sector innovation • Encourages entrepreneurial culture • Better linked to emerging technologies (e.g., devices)	• Burdened by asset management • Decoupled from private sector innovation engines • Risk-adverse culture

Source: U.S. Office of Management and Budget, *Federal Cloud Computing Strategy* February 8, 2011, https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/egov_docs/federal-cloud-computing-strategy.pdf.

In accordance with the Cloud First policy, FITARA, and guidance from the National Institute for Standards and Technology, the new DCOI requires agencies to use cloud infrastructure where possible when planning new applications or consolidating existing applications. Agencies are encouraged to take into consideration the cost, security requirements, and application needs when evaluating cloud services.

In light of its findings, GAO recommended that—

- OMB include the 10 key practices in future guidance to agencies, and
- the Departments of Defense, Health and Human Services, Homeland Security, the Treasury, and Veterans Affairs incorporate the key practices into their SLAs.

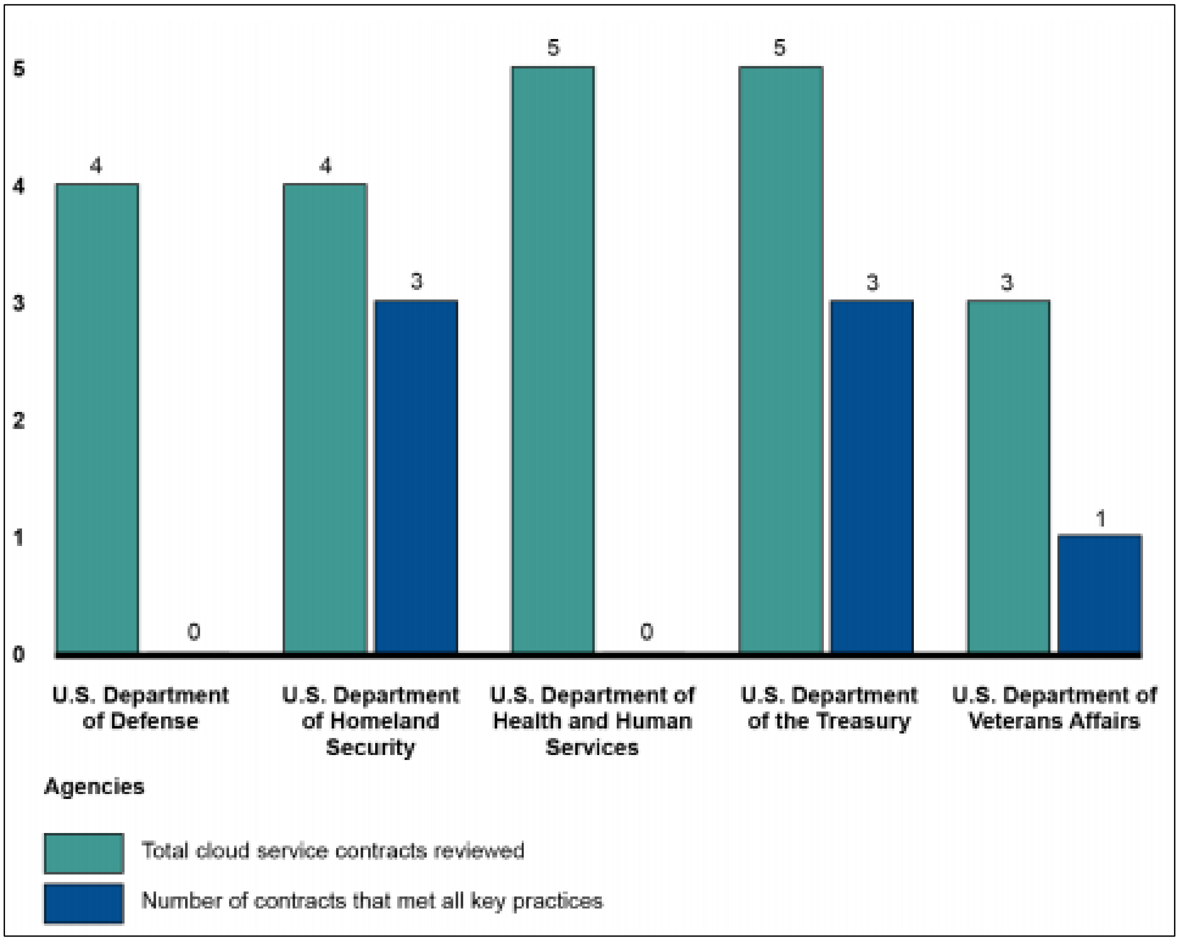
Four of the agencies—DOD, DHS, HHS, and VA—agreed with the recommendations and Treasury did not comment.

Table 2. Key Practices for a Cloud Computing Service Level Agreements

Roles and responsibilities 1. Specify roles and responsibilities of all parties with respect to the SLA and, at a minimum, include agency and cloud providers. 2. Define key terms, such as dates and performance.
Performance measures 3. Define clear measures for performance by the contractor. Include which party is responsible for measuring performance. Examples of such measures would include * Level of service (e.g., service availability—duration the service is to be available to the agency). * Capacity and capability of cloud service (e.g., maximum number of users that can access the cloud at one time and ability of provider to expand services to more users). * Response time (e.g., how quickly cloud service provider systems process a transaction entered by the customer, response time for responding to service outages). 4. Specify how and when the agency has access to its own data and networks. This includes how data and networks are to be managed and maintained throughout the duration of the SLA and transitioned back to the agency in case of exit/termination of service. 5. Specify the following service management requirements: * How the cloud service provider will monitor performance and report results to the agency. * When and how the agency, via an audit, is to confirm performance of the cloud service provider. 6. Provide for disaster recovery and continuity of operations planning and testing, including how and when the cloud service provider is to report such failures and outages to the agency. In addition, how the provider will remediate such situations and mitigate the risks of such problems from recurring. 7. Describe any applicable exception criteria when the cloud provider's performance measures do not apply (e.g., during scheduled maintenance or updates).
Security 8. Specify metrics the cloud provider must meet in order to show it is meeting the agency's security performance requirements for protecting data (e.g., clearly define who has access to the data and the protections in place to protect the agency's data). 9. Specifies performance requirements and attributes defining how and when the cloud service provider is to notify the agency when security requirements are not being met (e.g., when there is a data breach).
Consequences 10. Specify a range of enforceable consequences, such as penalties, for non-compliance with SLA performance measures.

Source: U.S. Government Accountability Office, *Cloud Computing: Agencies Need to Incorporate Key Practices to Ensure Effective Performance*, GAO-16-325, April 2016, http://www.gao.gov/assets/680/676395.pdf.

Figure 1. Number of Cloud Service Contracts That Met All 10 Key Practices at Selected Agencies



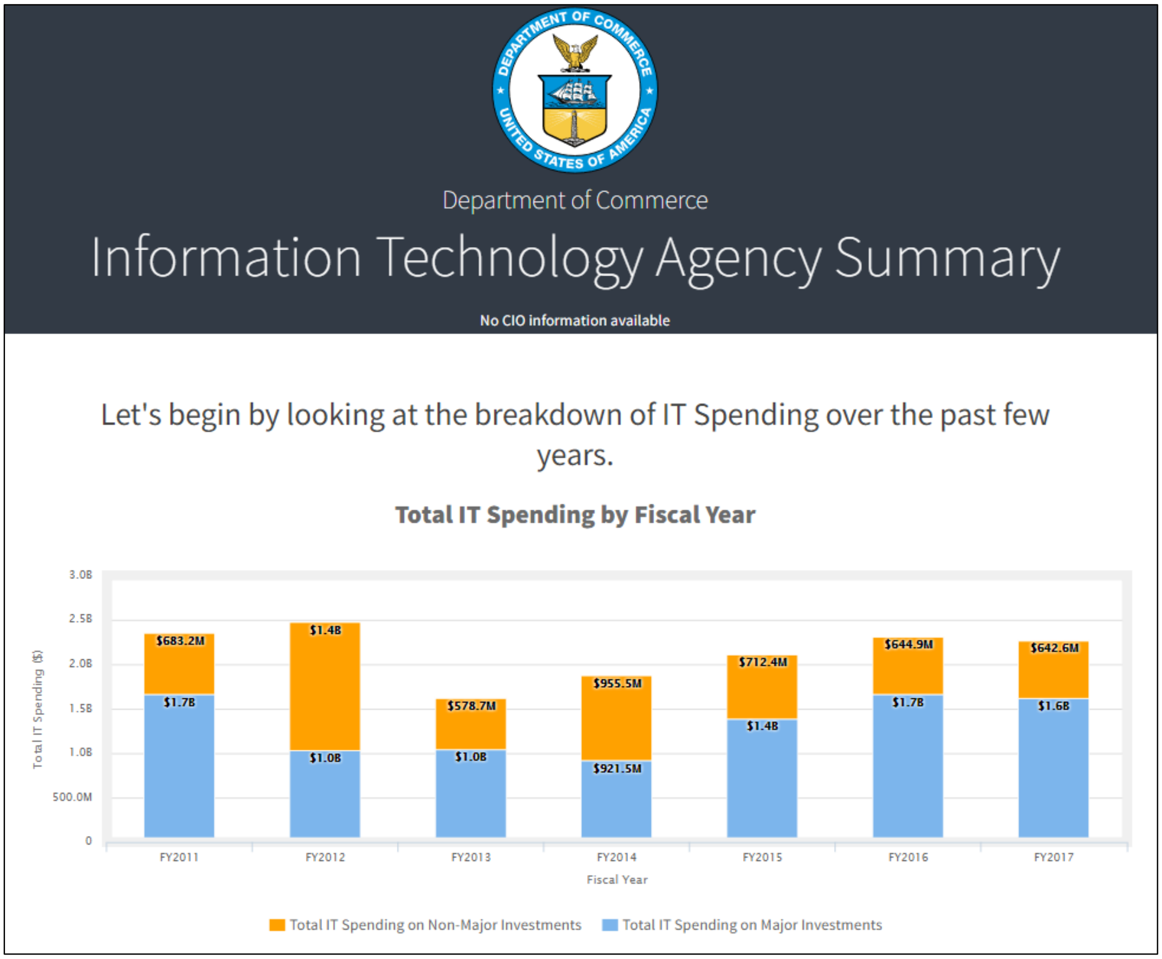
Source: Government Accountability Office, *Cloud Computing: Agencies Need to Incorporate Key Practices to Ensure Effective Performance*, April 2016, http://www.gao.gov/assets/680/676395.pdf.

IT Dashboard[19]

The Office of the Federal CIO launched the IT Dashboard on June 1, 2009, to improve the transparency and oversight of agency IT investments. To accomplish this, OMB directed agencies to report, via the Dashboard, the performance of their IT investments. The IT Dashboard now displays data from 26 agencies on the cost, schedule, and performance of more than 7,000 IT investments, with detailed data for more than 700 investments classified as "major." These 700 investments accounted for $38.7 billion of the agencies' planned $82 billion budget in FY2014. Agency CIOs are responsible for regularly evaluating and updating the data on the IT Dashboard. The data are publically available, allowing not just OMB and other oversight bodies to review them, but also the general public. **Figure 2** provides an example of an agency's portfolio page.

[19] The IT Dashboard website is https://www.itdashboard.gov/.

Figure 2. Example of an Agency Portfolio Page on OMB's IT Dashboard



Department of Commerce

Information Technology Agency Summary

No CIO information available

Let's begin by looking at the breakdown of IT Spending over the past few years.

Total IT Spending by Fiscal Year

Source: OMB.

GAO has made a number of recommendations to improve the reliability and consistency of the data in the IT Dashboard,[20] including that the Director of OMB direct the Federal CIO to make available regularly updated portions of the public version of the Dashboard.

Portfolio Review

On December 9, 2010, the Federal CIO issued the "25 Point Implementation Plan to Reform Federal Information Technology Management." Among other goals and requirements, the plan requires agencies to establish TechStat Accountability Sessions (TechStat). Subsequently, the OMB created the PortfolioStat process in March 2012. These processes, described below, are intended to set forth a process for agency IT portfolio review and improve risk management of IT investments.

[20] U.S. Government Accountability Office, *IT Dashboard: Agencies Are Managing Investment Risk, but Related Ratings Need to Be More Accurate and Available*, GAO-14-64, December 2013, http://www.gao.gov/assets/660/659666.pdf.

TechStat

Using the data in the Federal IT Dashboard, OMB launched TechStat Accountability Sessions ("TechStat") as a "face-to-face, evidence-based review" designed to identify and turn around underperforming IT investments. The majority of OMB-led TechStat sessions were conducted in 2010, and led to $3 billion in total cost savings or avoidances ("implications") and an average acceleration of project deliverables from more than 24 months to 8 months.[21] In 2010-2011, OMB shifted the leadership of TechStat reviews to agency CIOs, and agencies then identified an additional $930 million in cost implications by the end of 2011.[22]

Additionally, the Federal CIO has reported that agency CIOs have held more than 300 agency-led TechStats, resulting in more than $900 million in cost implications. However, in 2014, GAO reported that while TechStat sessions were very effective in identifying weaknesses within agencies, they ultimately had minimal impact on improving risky projects because no mechanism was in place to make needed changes. The GAO also found that—

- the number of TechStat sessions conducted was relatively small compared to the number of medium- and higher-risk IT investments with only 19% of at-risk investments receiving a TechStat session; and
- disparity existed among agencies in the percentage of at-risk programs examined through a TechStat (for instance, the Department of Commerce reviewed 58% of their at-risk projects, while the Department of Health and Human Services reviewed only 13% of their at-risk projects).[23]

Overall, GAO recommended that agencies increase the number of TechStat sessions they conduct, as well as more thoroughly track the outcomes of those sessions.

More recently, researchers at the Brookings Institution examined agency efforts to improve their IT planning assessments. The researchers found that, while there were shortcomings in how many agencies conducted TechStats, some agencies had "taken TechStat a few steps further." For example:

> The U.S. Department of the Interior (DOI) implemented their version of TechStat called iStat. iStat takes a 360-degree approach, not just the IT investment but provides a comprehensive view of the project's functionality, accountability, and performance issues. The iStat process consists of two bodies: the iStat Performance Review Board and the iStat Executive Committee (IEC). The review board assesses the investment for performance, compliance, and to recommend corrective actions. The review board's assessments and recommendations are then forwarded to the IEC for actions. The DOI has accomplished $50 million in cost avoidance through the termination of two projects and other structural reforms for other investments through the iStat process. [24]

[21] OMB reported conducting a total of 79 TechStat reviews: 59 in 2010, 8 in 2011, 11 in 2012, and 1 in the first half of 2013. OMB stated that it conducted fewer TechStats in recent years because it expected agencies to increase the number of agency-led TechStats. U.S. Government Accountability Office, *Additional Executive Review Sessions Needed to Address Troubled Projects*, GAO-13-524, June 13, 2013, http://www.gao.gov/products/GAO-13-524.

[22] Federal Chief Information Officers Council, *The State of Federal Information Technology*, January 2017, https://cio.gov/wp-content/uploads/2017/01/CIO-Council-State-of-Federal-IT-Report-January-2017.pdf (hereinafter *The State of Federal Information Technology*).

[23] U.S. Government Accountability Office, *Additional Executive Review Sessions Needed to Address Troubled Projects*, GAO-13-524, June 13, 2013, http://www.gao.gov/products/GAO-13-524.

[24] The Brookings Institution, "Government Efforts to Assess Agency IT Planning Need to Improve," February 10, 2015, https://www.brookings.edu/blog/techtank/2015/02/10/government-efforts-to-assess-agency-it-planning-need-to- (continued...)

Under FITARA, OMB is required to continue TechStat sessions, but as of November 2016, OMB had not incorporated TechStat results into the current version of the IT Dashboard.[25]

PortfolioStat

A PortfolioStat session is a yearly face-to-face assessment of an agency's IT portfolio, including a review of—

- commodity IT investments,
- potential duplications of IT investments within the agency, and
- investments that do not appear to support agency missions or business functions.

PortfolioStat provides a process by which an agency can assess its IT portfolio management process, make decisions on eliminating duplication, augment current CIO-led capital planning and investment control processes, and move to shared solutions to maximize the return on IT investments across the portfolio. While TechStat is focused on IT performance at the specific project or investment-level, PortfolioStat is focused on an agency's IT portfolio as a whole.

The PortfolioStat process is intended to allow agencies to develop a clearer picture of where duplication exists across their bureaus and components and to allow them to shift to intra- and interagency IT shared services. In assessments conducted in 2013 and 2015, GAO reported that the PortfolioStat initiative had the potential to save at least $3.8 billion, but found weaknesses in agency implementation.[26]

Oversight of Federal CIO Initiatives

Through hearings and GAO investigations, Congress has been active in monitoring the activities of the Federal CIO and the initiatives carried out by the office. Congress has been especially attentive to the topics of data center use and cloud adoption as they relate to achieving the goals of FITARA.

Congressional Oversight, 115th Congress

The 115th Congress has thus far held two hearings and introduced two bills related to Federal CIO initiatives.

Legislation

There are two companion bills currently under consideration in the 115th Congress, both called the Modernizing Government Technology Act of 2017 (MGT Act)

- H.R. 2227 was introduced April 28, 2017, by Representative Will Hurd. It passed the House on May 17, 2017, and was reported to the Senate.

(...continued)

improve/.

[25] *The State of Federal Information Technology*.

[26] U.S. Government Accountability Office, *Additional OMB and Agency Actions Are Needed to Achieve Portfolio Savings*, GAO-14-65, November 6, 2013, http://www.gao.gov/products/GAO-14-65; and U.S. Government Accountability Office, *Additional OMB and Agency Actions Needed to Ensure Portfolio Savings Are Realized and Effectively Tracked*, GAO-15-296, April 16, 2015, http://www.gao.gov/products/GAO-15-296.

- S. 990 was also introduced on April 28, 2017, by Senator Jerry Moran. It is substantially identical to H.R. 2227. The bill was referred to the Committee on Homeland Security and Governmental Affairs. No further action has been tken.

Among other provisions, both bills would establish at specified agencies an information technology system modernization and working capital fund to

- improve, retire, or replace existing information technology systems to enhance cybersecurity and to improve efficiency and effectiveness; and
- transition legacy information technology to cloud computing and other innovative platforms and technologies.

Hearings

The House has held two hearings related to FITARA:

- **The Federal Information Technology Reform Act Scorecard 4.0**[27]
  Joint Hearing: House Committee on Oversight and Government Reform
  (Subcommittees on Information Technology and Government Operations)
  June 15, 2017
- **GAO'S 2017 High-Risk Report: 34 Programs in Peril**[28]
  House Committee on Oversight and Government Reform
  February 15, 2017

Government Accountability Office Reports and Testimony, 2016-2017

The GAO has conducted numerous investigations into the initiatives being carried out under the auspices of the U.S. CIO. The agency has also testified at congressional hearings and held one forum.

- **Sustained Management Attention to the Implementation of FITARA Is Needed to Better Manage Acquisitions and Operations**[29]
  GAO-17-686T
  June 13, 2017
- **Data Center Optimization: Agencies Need to Complete Plans to Address Inconsistencies in Reported Savings**
  GAO-17-388
  May 18, 2017
- **High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others**[30]
  GAO-17-375T
  February 15, 2017

[27] https://oversight.house.gov/hearing/federal-information-technology-acquisition-reform-act-fitara-scorecard-4-0/.

[28] https://oversight.house.gov/hearing/gaos-2017-high-risk-report-34-programs-peril/.

[29] https://www.gao.gov/products/GAO-17-686T.

[30] This report is available online at http://www.gao.gov/products/GAO-17-375t.

- **Opportunities for Improving Acquisitions and Operations (Forum)**[31]
  GAO-17-251SP
  April 11, 2017.
- **Implementation of IT Reform Law and Related Initiatives Can Help Improve Acquisitions**[32]
  GAO-17-494T
  March 28, 2017.
- **IT Dashboard: Agencies Need to Fully Consider Risks When Rating Their Major Investments**[33]
  GAO-16-494
  June 2, 2016.
- **Information Technology: Federal Agencies Need to Address Aging Legacy Systems**[34]
  GAO-16-468
  May 25, 2016.
- **Managing for Results: OMB Improved Implementation of Cross-Agency Priority Goals, but Could Be More Transparent About Measuring Progress**[35]
  GAO-16-509
  May 20, 2016.
- **Information Technology: OMB and Agencies Need to Focus Continued Attention on Implementing Reform Law**[36]
  GAO-16-672T
  May 18, 2016.
- **Data Center Consolidation: Agencies Making Progress, but Planned Savings Goals Need to Be Established**[37]
  GAO-16-323
  March 3, 2016.

Recent Activity: FITARA Scorecard 4

On June 13, 2017, GAO presented its "FITARA Scorecard 4" at a House hearing (**Figure 3**).[38]

[31] This report is available online at https://www.gao.gov/products/GAO-17-251SP.

[32] This report is available online at http://www.gao.gov/products/GAO-17-494T.

[33] This report is available online at http://www.gao.gov/products/GAO-16-494.

[34] This report is available online at http://www.gao.gov/products/GAO-16-468.

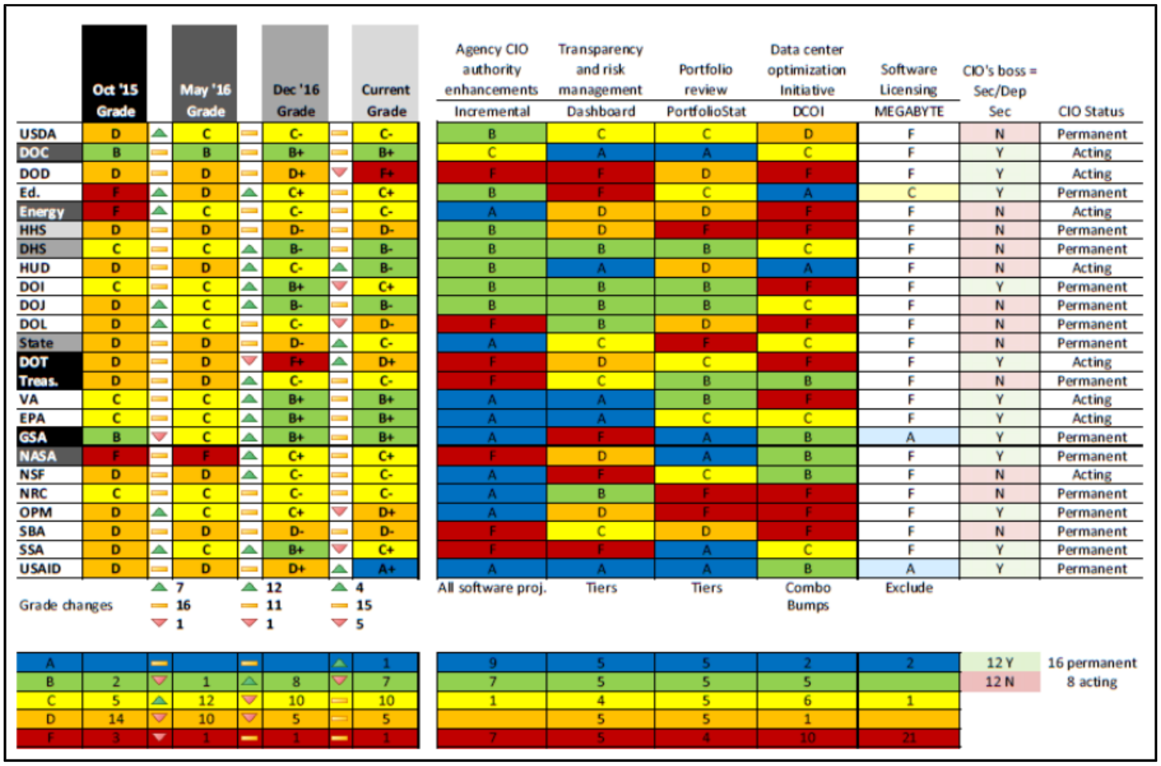
[35] This report is available online at http://www.gao.gov/products/GAO-16-509.

[36] This report is available online at http://www.gao.gov/products/GAO-16-672T.

[37] This report is available online at http://www.gao.gov/products/GAO-16-323.

[38] https://oversight.house.gov/hearing/federal-information-technology-acquisition-reform-act-fitara-scorecard-4-0/.

Figure 3. FITARA 4.0 Scorecard, June 2017



	Oct '15 Grade		May '16 Grade		Dec '16 Grade		Current Grade	Agency CIO authority enhancements	Transparency and risk management	Portfolio review	Data center optimization Initiative	Software Licensing	CIO's boss = Sec/Dep	
								Incremental	Dashboard	PortfolioStat	DCOI	MEGABYTE	Sec	CIO Status
USDA	D	▲	C	▬	C-	▬	C-	B	C	C	D	F	N	Permanent
DOC	B	▬	B	▬	B+	▬	B+	C	A	A	C	F	Y	Acting
DOD	D	▬	D	▬	D+	▼	F+	F	F	D	F	F	Y	Acting
Ed.	F	▲	D	▲	C+	▬	C+	B	F	C	A	C	Y	Permanent
Energy	F	▲	C	▬	C-	▬	C-	A	D	D	F	F	N	Acting
HHS	D	▬	D	▬	D-	▬	D-	B	D	F	F	F	N	Permanent
DHS	C	▬	C	▲	B-	▬	B-	B	B	B	C	F	N	Permanent
HUD	D	▬	D	▲	C-	▲	B-	B	A	D	A	F	N	Acting
DOI	C	▬	C	▲	B+	▼	C+	B	B	B	F	F	Y	Permanent
DOJ	D	▲	C	▲	B-	▬	B-	B	B	B	C	F	N	Permanent
DOL	D	▲	C	▬	C-	▼	D-	F	B	D	F	F	N	Permanent
State	D	▬	D	▬	D-	▲	C-	A	C	F	C	F	N	Permanent
DOT	D	▬	D	▼	F+	▲	D+	F	D	C	F	F	Y	Acting
Treas.	D	▬	D	▲	C-	▬	C-	F	C	B	B	F	N	Permanent
VA	C	▬	C	▲	B+	▬	B+	A	A	B	F	F	Y	Acting
EPA	C	▬	C	▲	B+	▬	B+	A	A	C	C	F	Y	Acting
GSA	B	▼	C	▲	B+	▬	B+	A	F	A	B	A	Y	Permanent
NASA	F	▬	F	▲	C+	▬	C+	F	D	A	B	F	Y	Permanent
NSF	D	▬	D	▲	C-	▬	C-	A	F	C	B	F	N	Acting
NRC	C	▬	C	▬	C-	▬	C-	A	B	F	F	F	N	Permanent
OPM	D	▲	C	▬	C+	▼	D+	A	D	F	F	F	Y	Permanent
SBA	D	▬	D	▬	D-	▬	D-	F	C	D	F	F	N	Permanent
SSA	D	▲	C	▲	B+	▼	C+	F	F	A	C	F	Y	Permanent
USAID	D	▬	D	▬	D+	▲	A+	A	A	A	B	A	Y	Permanent
		▲ 7		▲ 12		▲ 4		All software proj.	Tiers	Tiers	Combo Bumps	Exclude		
Grade changes		▬ 16		▬ 11		▬ 15								
		▼ 1		▼ 1		▼ 5								

A		▬		▬		▲	1	9	5	5	2	2	12 Y	16 permanent
B	2	▼	1	▲	8	▼	7	7	5	5	5		12 N	8 acting
C	5	▲	12	▼	10	▬	10	1	4	5	6	1		
D	14	▼	10	▼	5	▬	5		5	5	1			
F	3	▼	1	▬	1	▬	1	7	5	4	10	21		

Source: U.S. House of Representatives, Committee on Oversight and Government Reform, available at http://www.nextgov.com/media/gbc/docs/pdfs_edit/061317fitara1.pdf.

This biennial scorecard showed significant improvement by most agencies over four areas, but the final scores ranged from F+ to B+ (most scored in the C- to C+ range). About 47% of approximately 800 GAO recommendations have been fully achieved. However, GAO called for additional actions in four areas.

Consolidating Data Centers

OMB launched an initiative in 2010 to reduce data centers, which was reinforced by FITARA in 2014. GAO reported in May 2017 that agencies had closed 4,388 of the 9,995 total data centers, and had plans to close a total of 5,597 through FY2019. As a result, agencies reportedly saved or avoided about $2.3 billion through August 2016. However, out of the 23 agencies that submitted required strategic plans, only 7 had addressed all required elements. GAO recommended that agencies complete their plans to optimize their data centers and achieve cost savings and ensure reported cost savings are consistent across reporting mechanisms. Most agencies agreed with the recommendations.

Enhancing Transparency

OMB's IT Dashboard provides information on major investments at federal agencies, including ratings from CIOs that should reflect the risk level of an investment. GAO reported in June 2016 that agencies had not fully considered risks when rating their investments on the Dashboard. In particular, of the 95 investments reviewed, GAO's assessments of risks matched the ratings 22 times, showed more risk 60 times, and showed less risk 13 times. GAO recommended that agencies improve the quality and frequency of their ratings. Most agencies generally agreed with or did not comment on the recommendations.

Implementing Incremental Development

OMB has emphasized the need for agencies to deliver investments in smaller parts, or increments, to reduce risk and deliver capabilities more quickly. Since 2012, OMB has required investments to deliver functionality every six months. In August 2016, GAO reported that while 22 agencies had reported that about 64% of 469 active software development projects planned to deliver usable functionality every six months for FY2016, the other 36% of the projects did not. GAO made recommendations to agencies and OMB to improve the reporting of incremental data on the Dashboard. Most agencies agreed or did not comment on the recommendations.

Managing Software Licenses

Effective management of software licenses can help avoid purchasing too many licenses that result in unused software. In May 2014, GAO reported that better management of licenses was needed to achieve savings. Specifically, only two agencies had comprehensive license inventories. GAO recommended that agencies regularly track and maintain a comprehensive inventory and analyze those data to identify opportunities to reduce costs and better inform decisionmaking. Most agencies generally agreed with the recommendations or had no comments; as of May 2017, four agencies had made progress in implementing them.

Appendix A. Congressional Oversight, 114th Congress

Congress held seven hearings related to Federal CIO initiatives during the 114 Congress. No legislation was introduced related to FITARA or other Federal CIO initiatives.

- **The Federal Information Technology Reform Act Scorecard 3.0**[39]
  Joint Hearing: House Committee on Oversight and Government Reform
  (Subcommittees on Information Technology and Government Operations)
  December 6, 2016
- **Federal Agencies' Reliance on Outdated and Unsupported Information Technology**[40]
  House Committee on Oversight and Government Reform
  May 25, 2016
- **The Federal Information Technology Reform Act Scorecard 2.0**[41]
  Joint Hearing: House Committee on Oversight and Government Reform
  (Subcommittees on Information Technology and Government Operations)
  May 18, 2016
- **The Role of FITARA in Reducing IT Acquisition Risk, Part II—Measuring Agencies' FITARA Implementation**[42]
  Joint Hearing: House Committee on Oversight and Government Reform
  (Subcommittees on Information Technology and Government Operations)
  November 4, 2015
- **The Role of FITARA in Reducing IT Acquisition Risk**[43]
  Joint Hearing: House Committee on Oversight and Government Reform
  (Subcommittees on Information Technology and Government Operations)
  June 10, 2015
- **Reducing Unnecessary Duplication in Federal Programs: Billions More Could Be Saved**[44]
  Senate Committee on Homeland Security and Governmental Affairs
  April 14, 2015
- **Risky Business: Examining GAO's 2015 List of High Risk Government Programs**[45]

[39] Hearing information and webcast are available at https://oversight.house.gov/hearing/federal-information-technology-acquisition-reform-act-fitara-scorecard-3-0-measuring-agencies-implementation.

[40] Information about this hearing can be found at https://oversight.house.gov/hearing/federal-agencies-reliance-on-outdated-and-unsupported-information-technology-a-ticking-time-bomb/.

[41] Information about this hearing can be found at https://oversight.house.gov/hearing/the-federal-information-technology-reform-act-scorecard-2-0/.

[42] Information about this hearing can be found at http://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=104158.

[43] Information about this hearing can be found at http://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=103599.

[44] Information about this hearing can be found at http://www.hsgac.senate.gov/hearings/reducing-unnecessary-duplication-in-federal-programs-billions-more-could-be-saved.

[45] Information about this hearing can be found at http://www.hsgac.senate.gov/hearings/risky-business-examining-

(continued...)

Senate Committee on Homeland Security and Governmental Affairs
February 11, 2015

(...continued)

gaos-2015-list-of-high-risk-government-programs.

Appendix B. Government Accountability Office Reports, 2012-2015

The GAO has conducted numerous investigations into the initiatives being carried out under the auspices of the U.S. CIO. The agency has also testified at congressional hearings and held one forum.

- **Information Technology Reform: Billions of Dollars in Savings Have Been Realized, but Agencies Need to Complete Reinvestment Plans**[46]
  GAO-15-617
  September 15, 2015
- **Information Technology: Additional OMB and Agency Actions Needed to Ensure Portfolio Savings Are Realized and Effectively Tracked**[47]
  GAO-15-296
  April 16, 2015
- **Reporting to OMB Can Be Improved by Further Streamlining and Better Focusing on Priorities**[48]
  GAO-15-106
  April 2, 2015.
- **Data Center Consolidation: Reporting Can Be Improved to Reflect Substantial Planned Savings**[49]
  GAO-14-713
  September 25, 2014
- **Information Technology: OMB and Agencies Need to More Effectively Implement Major Initiatives to Save Billions of Dollars**[50]
  GAO-13-79
  July 25, 2013.
- **Information Technology: OMB and Agencies Need to Focus Continued Attention on Eliminating Duplicative Investments**[51]
  GAO-13-685T
  July 25, 2013
- **Data Center Consolidation: Strengthened Oversight Needed to Achieve Cost Savings Goal**[52]
  GAO-13-378
  May 14, 2013
- **Information Technology Reform: Progress Made but Future Cloud Computing Efforts Should Be Better Planned**[53]

[46] This report is available online at http://www.gao.gov/products/GAO-15-617.

[47] This report is available online at http://www.gao.gov/products/GAO-15-296.

[48] This report is available online at http://www.gao.gov/products/GAO-15-106.

[49] This report is available online at http://www.gao.gov/products/GAO-14-713.

[50] This report is available online at http://www.gao.gov/products/GAO-13-796T.

[51] This report is available online at http://www.gao.gov/products/GAO-13-685T.

[52] This report is available online at http://www.gao.gov/products/GAO-13-378.

[53] This report is available online at http://www.gao.gov/products/GAO-12-756.

GAO-12-756
July 11, 2012

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