February 2023

DATA CENTER OPTIMIZATION

Agencies Continue to Report Progress

Accessible Version

GAO-23-105946

DRAFT

GAO Highlights

DATA CENTER OPTIMIZATION

Agencies Continue to Report Progress

Why GAO Did This Study

In 2010, OMB established a government-wide effort to reduce the number of duplicative or outdated federal data centers. In December 2014, Congress enacted federal IT acquisition reform legislation known as FITARA, which included provisions related to ongoing federal data center consolidation efforts. Less than two years later, OMB's Federal Chief Information Officer launched DCOI to build on prior efforts. Specifically, it required, among other things, that agencies consolidate and optimize existing facilities.

FITARA included a provision for GAO to annually review agencies' data center inventories and strategies. This report addresses (1) agencies' progress on data center closures and the related savings and agencies' plans for future closures and savings; and (2) agencies' progress against OMB's data center optimization targets.

GAO reviewed the 24 DCOI agencies' data center inventories as of March and August 2022, including their reported cost savings and data center optimization strategic plans, and interviewed relevant agency officials.

What GAO Recommends

GAO reiterates that agencies need to address the 16 recommendations previously made to them that have not yet been implemented. These include agencies taking action to meet optimization targets. Of the 24 agencies and OMB, six agreed with the report, two agencies provided technical comments, and 17 stated they had no comments.
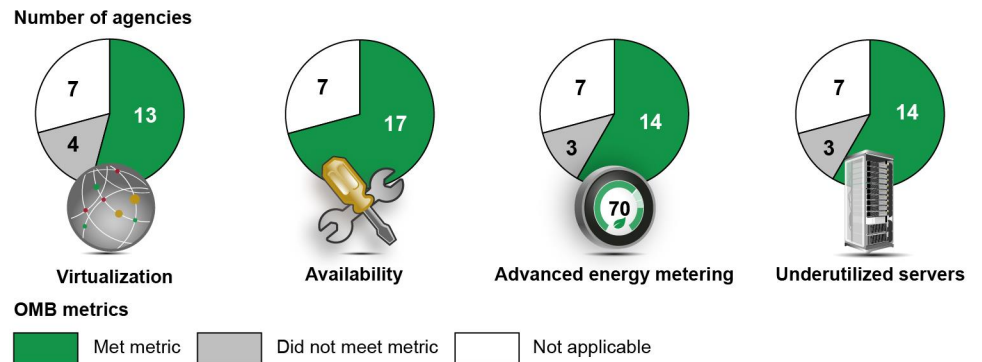
What GAO Found

Federal agencies continue to close data centers and report related cost savings under the Data Center Optimization Initiative (DCOI). In fiscal year 2021, federal agencies closed 58 data centers. In fiscal year 2022, agencies closed 20 data centers by August 2022, and planned to close 58 additional data centers through the end of the fiscal year. Moreover, 22 of the 24 agencies met their related cost savings goals for fiscal year 2021, identifying a total of $612.326 million in cost savings. Agencies also planned to meet their cost savings goals for fiscal year 2022; as of August 2022, they had identified $334.324 million in cost savings. Agencies have a cumulative total of $6.6 billion in cost savings and avoidances from fiscal years 2012 through 2021.

In fiscal year 2022, federal agencies reported mixed progress in meeting the Office of Management and Budget's (OMB) data center optimization targets. These targets consist of virtualization, data center availability, advance energy metering, and underutilized servers. As of September 2022, 13 agencies reported meeting the virtualization target, 17 met the availability target, and 14 met the metering and utilization targets. In addition, seven agencies do not have any agency-owned data centers or their remaining centers are exempted from optimization by OMB; therefore, reporting on optimization metrics for these agencies was not applicable. (See figure)

24 Agencies Reported Progress towards Meeting Office of Management and Budget (OMB) Data Center Optimization Targets, as of September 2022

Number of agencies

| Virtualization | Availability | Advanced energy metering | Underutilized servers |
| 7 / 4 / 13 | 7 / 17 | 7 / 3 / 14 / 70 | 7 / 3 / 14 |

OMB metrics

■ Met metric   ☐ Did not meet metric   □ Not applicable

Source: GAO analysis of data from OMB's Information Technology Dashboard. | GAO-23-105946

Note: A metric is not applicable if an agency does not have any agency-owned data centers or if its remaining centers are exempted from optimization by OMB.

United States Government Accountability Office

Data table for 24 Agencies Reported Progress towards Meeting Office of Management and Budget (OMB) Data Center Optimization Targets, as of September 2022

Virtualization		Availability		Advanced Energy Metering		Underutilized Servers	
Met	13	Met	17	Met	14	Met	14
Not Met	4	Not Met	0	Not Met	3	Not Met	3
N/A	7	N/A	7	N/A	7	N/A	7
No basis	0	No basis	0	No basis	0	No basis	0

Source: GAO analysis of date from OMB's Information Technology Dashboard. | GAO-23-105946.

GAO has made 126 recommendations since 2016 to help agencies meet their DCOI targets, and the agencies have implemented 110 of them. Once agencies fully address all previous GAO recommendations to meet their optimization performance targets, they should fully realize the expected benefits, including cost savings from DCOI.

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As federal agencies had increased their use of data processing and storage resources, the costs for maintaining the data centers that provide those resources have also increased. To reduce data center duplication and costs, the Office of Management and Budget's (OMB) Federal Chief Information Officer (CIO) launched two initiatives. The first initiative—the Federal Data Center Consolidation Initiative (FDCCI)—started in 2010 and aimed to reduce the number of data centers that were outdated or duplicative. The second initiative—the Data Center Optimization Initiative (DCOI)—was announced in August 2016 and superseded the previous initiative.[1] DCOI shifted the focus to optimizing agencies' remaining data centers by requiring, among other things, that agencies consolidate inefficient infrastructure, optimize existing facilities, and transition to more efficient infrastructure, such as cloud services.[2]

Congress had emphasized the importance of reforming the government-wide management of IT and, in December 2014, enacted federal information technology acquisition reform provisions (commonly referred to as the Federal Information Technology Acquisition Reform Act or FITARA as a part of the Carl Levin and Howard P. 'Buck' McKeon National Defense Authorization Act for Fiscal Year 2015).[3] Among the requirements related to federal data center consolidation, the act required:[4]

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[1]Office of Management and Budget, Data Center Optimization Initiative (DCOI), Memorandum M-16-19 (Washington, D.C.: Aug. 1, 2016).

[2]According to the National Institute of Standards and Technology, cloud services provide one or more capabilities via the cloud computing model. The cloud computing model enables ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services).

[3]Pub. L. No. 113-291, division A, title VIII, subtitle D, 128 Stat. 3292, 3438 (Dec. 19, 2014). The original sunset date for the data center provisions of FITARA has been extended to Oct. 1, 2022. 44 U.S.C. 3601 note.

[4]Pub. L. No. 113-291 § 834, 128 Stat. 3444–48 (44 U.S.C. 3601 note). Unless otherwise noted, these requirements apply to the 24 agencies specified in section 834 (corresponding to those agencies covered by the Chief Financial Officers Act of 1990. 31 U.S.C. § 901(b)).

- Covered departments and agencies[5] to report annually to OMB about their federal data center inventories and strategies to achieve consolidation, including yearly calculations of investments and cost savings.[6]

- OMB to develop goals for the amount of planned cost savings and optimization improvements that agencies are to achieve through FDCCI. OMB is to make the goals publicly available and compare progress against the goals.

In addition to these requirements, FITARA included a provision for GAO to annually review and verify the quality and completeness of federal data center inventories and consolidation strategies submitted by covered agencies. The statutory authorization in FITARA for the data center optimization initiative lapsed on October 1, 2022. Our specific objectives for this review were to (1) determine federal agencies' progress on data center closures and the related savings, and describe agencies' plans for future closures and savings; and (2) assess agencies' progress against OMB's data center optimization targets.

To address the first objective, we analyzed data center inventory documentation from the 24 DCOI agencies available as of March and August 2022.[7] We used these analyses to identify the agencies' reported data center closures for fiscal year 2021 and from the start of fiscal year 2022 through August 2022. We also identified the agencies' planned future closures from September 2022 through the end of fiscal year 2025. We compared the agencies' completed and planned closures to their

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[5]The 24 agencies that are required to participate in the Data Center Optimization Initiative 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; and the Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Small Business Administration, Social Security Administration, and U.S. Agency for International Development. These are the same agencies covered by FITARA's data center consolidation provisions.

[6]In lieu of submitting a data center inventory and strategy, the Department of Defense could submit this information as part of a defense-wide plan and report on cost savings, as required under §§ 2867(b)(2) and 2867(d) of the *National Defense Authorization Act for Fiscal Year 2012*.

[7]OMB collects agencies' data center inventory and cost savings on a quarterly basis, at the end of February, May, August, and November of each year. The November 2022 update was expected to include data for the full fiscal year but was not available in time to be included in our review.

fiscal year 2022 consolidation goals, as documented in their DCOI strategic plans.

To verify the quality, completeness, and reliability of the agencies' data center inventories, we compared the information from our analysis on completed and planned data center closures to similar information OMB reported on its Federal IT Dashboard (IT Dashboard) and in agencies' DCOI strategic plans.[8] We determined that the inventory data were sufficiently reliable to report on agencies' consolidation progress and planned closures.

To evaluate agencies' progress in, and plans for, achieving data center cost savings, we reviewed March and August 2022 cost savings and avoidance[9] documentation that the 24 DCOI agencies submitted in response to OMB's March 2013 PortfolioStat[10] and June 2019 data center initiative memorandums.[11] This documentation included the agencies' quarterly reports of cost savings and avoidances posted to their websites and discussed in their DCOI strategic plans.[12]

We determined cost savings achieved for fiscal year 2021 by adding agencies' reported savings and avoidances, as reported by March 2022.[13] To determine cost savings achieved for fiscal year 2022 and for the initiative overall, we used the August 2022 cost savings documentation.

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[8]We did not physically visit agencies' data center locations to verify their inventory totals.

[9]Beginning in March 2013, OMB required agencies to report on both cost savings and cost avoidances. OMB defined cost savings as a reduction in actual expenditures below the projected level of costs to achieve a specific objective and defined a cost avoidance as the result of an action taken in the immediate time frame that will decrease costs in the future.

[10]Launched by OMB in 2012, PortfolioStat requires agencies to conduct an annual agency-wide IT portfolio review to, among other things, reduce commodity IT spending and demonstrate how their IT investments align with the agency's mission and business functions.

[11]Office of Management and Budget, *Update to Data Center Optimization Initiative (DCOI)*, Memorandum M-19-19 (Washington, D.C.: June 25, 2019); Memorandum M-16-19 (Washington, D.C.: Aug. 1, 2016); and, *Fiscal Year 2013 PortfolioStat Guidance: Strengthening Federal IT Portfolio Management*, Memorandum M-13-09 (Washington, D.C.: Mar. 27, 2013).

[12]We did not independently validate agencies' reported cost savings figures.

[13]We used the data agencies reported to OMB by March 2022 to ensure they had adequate time to identify their cost savings through the end of fiscal year 2021.

We added agencies' reported savings and avoidances from the start of fiscal year 2012 through August 2022, as found in the August 2022 quarterly reports posted to the agencies' digital strategy websites.[14] We identified planned savings by totaling the agencies' projected savings and avoidances for fiscal year 2022, as reported in their DCOI strategic plans.

To assess the quality, completeness, and reliability of each agency's data center consolidation cost savings information, we reviewed each agency's August 2022 quarterly cost savings report and DCOI strategic plan for errors and missing data, such as missing cost savings information. In addition, we compared agencies' reported cost savings and avoidances with data from our most recently issued report on data center consolidation.[15] Further, we obtained written responses from agency officials regarding the steps they took to ensure the accuracy and reliability of their cost savings data. Based on these actions, we determined that the data were sufficiently reliable to report on agencies' data center consolidation cost savings information.

To address the second objective, we assessed information on data center optimization efforts—both planned and achieved—for 17 of the 24 DCOI agencies,[16] as reported on OMB's IT dashboard as of March and September 2022.[17] Specifically, we used the IT Dashboard information to identify how agencies' performed for fiscal year 2021 in achieving their optimization goals. We then compared the agencies' current optimization

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[14]Under FDCCI, which OMB launched in February 2010, agencies were required to begin immediately consolidating and closing data centers. However, current OMB guidance only requires agencies to report historical cost savings and avoidances realized since fiscal year 2012.

[15]GAO, *Data Center Optimization: Agencies Report Progress, but Oversight and Cybersecurity Risks Need to Be Addressed,* GAO-20-279 (Washington, D.C.: Mar. 5, 2020).

[16]Seven agencies—the Departments of Education, Agriculture, and Homeland Security, the Environmental Protection Agency, Housing and Urban Development, and the General Services Administration and the U.S. Agency for International Development—reported that they did not own any data centers or completed their optimization efforts. Therefore, reporting on optimization metrics for these agencies is not applicable.

[17]The IT Dashboard is a public dashboard to display government-wide and agency-specific progress in areas such as planned and achieved data center closures, consolidation-related cost savings, and data center optimization performance information. The September 2022 update reported information collected from the agencies in August 2022.

progress information to the agencies' fiscal year 2022 optimization targets, as documented on the IT Dashboard.[18]

To assess the reliability of the agencies' information about their progress in optimizing their data centers, as shown on OMB's IT Dashboard, we reviewed the information for errors or missing data. We also compared agencies' optimization progress information across multiple reporting quarters to identify any inconsistencies in their reported progress. In addition, we discussed with agency DCOI program officials the steps they took to ensure the accuracy and reliability of their reported progress. We determined the data were sufficiently complete and reliable to report on agencies' progress information. In addition, we interviewed officials from the 24 agencies to gather information about how they benefitted from DCOI. Appendix I provides a more detailed discussion of the objectives, scope, and methodology for our review.

We conducted this performance audit from March 2022 to February 2023 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.

Background

According to data submitted to OMB, federal agencies operated over 5900 data centers by 2018. As previously mentioned, operating such a large number of centers has been, and continues to be, a significant cost to the agencies.[19] For example, in 2007, the Environmental Protection Agency (EPA) estimated that the annual cost for electricity to operate federal servers and data centers across the federal government was about $450 million. Further, according to the Department of Energy, a

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[18]In June 2019, OMB announced four new optimization performance metrics: virtualization, data center availability, advanced energy metering, and server utilization.

[19]Costs include hardware, software, real estate, electricity, and heating and cooling.

typical government data center can use 100 to 200 times as much energy as a commercial building.[20]

However, in 2009, OMB reported server utilization rates as low as 5 percent across the federal government's estimated 150,000 servers housed in these centers.[21] These factors contributed to OMB recognizing the need to establish a coordinated, government-wide effort to improve the efficiency, performance, and environmental footprint of federal data center activities.

OMB subsequently launched FDCCI in 2010 to reduce the growing number of federal data centers. Among other things, under the initiative, OMB required agencies to consolidate inefficient infrastructure, optimize existing facilities, improve their security posture, and achieve cost savings. For example, each agency was required to maintain a complete inventory of all data center facilities owned, operated, or maintained by or on its behalf. Each agency also was to measure progress toward defined optimization performance metrics on a quarterly basis, as part of its data center inventory submission.

IT Acquisition Reform Law Enhanced Data Center Consolidation and Optimization Efforts

Recognizing the importance of reforming the government-wide management of IT, Congress and the President enacted FITARA in December 2014. Among other things, FITARA required federal agencies to:[22]

- Submit to OMB a comprehensive inventory of the data centers owned, operated, or maintained by or on behalf of the agency.

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[20]GAO, *Data Center Consolidation: Agencies Need to Complete Inventories and Plans to Achieve Expected Savings,* GAO-11-565 (Washington, D.C.: July 19, 2011).

[21]Office of Management and Budget, *Inventory of Federal Data Center Activity*, Budget Data Request No. 09-41 (Washington, D.C.: Aug. 10, 2009).

[22]Pub. L. No. 113-291 § 834, 128 Stat. 3444–48 (44 U.S.C. 3601 note). Unless otherwise noted, these requirements apply to the 24 agencies specified in section 834 (corresponding to those agencies covered by the *Chief Financial Officers Act of 1990*. 31 U.S.C. § 901(b)).

- Submit a multi-year strategy to achieve the consolidation and optimization of the agency's data centers.[23] The strategy was to include performance metrics that were consistent with the government-wide data center consolidation and optimization metrics.

- Report to OMB, on a quarterly basis, progress toward meeting government-wide data center consolidation and optimization metrics.

In addition, according to FITARA, the Administrator of the Office of Electronic Government (currently designated as the Federal CIO) within OMB was to, among other things:

- Establish metrics applicable to the consolidation and optimization of data centers (including server efficiency) and ensure that information related to agencies' progress toward meeting government-wide data center consolidation and optimization metrics was made available to the public in a timely manner.

- Develop and make publicly available, not later than December 19, 2015, a goal (broken down by year) for the amount of planned cost savings and optimization improvements that were to be achieved through FDCCI; and, for each year thereafter until October 1, 2022, compare reported cost savings and optimization improvements against those goals.[24]

OMB Established DCOI to Provide Oversight of FITARA Data Center Consolidation and Optimization Requirements

In August 2016, OMB issued Memorandum M-16-19, which established DCOI and included guidance on how to implement the data center consolidation and optimization provisions of FITARA.[25] In June 2019, OMB issued Memorandum M-19-19, which updated DCOI and redefined a data center as a purpose-built, physically separate, dedicated space

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[23]In lieu of submitting a data center inventory and strategy, the Department of Defense could submit this information as part of a defense-wide plan and report on cost savings, as required under §§ 2867(b)(2) and 2867(d) of the *National Defense Authorization Act for Fiscal Year 2012*.

[24]The sunset date for the data center provisions of FITARA was extended to October 1, 2022, and the statutory authorization for the provision has now lapsed. 44 U.S.C. 3601 note.

[25]OMB, Memorandum M-16-19.

that meets certain criteria.[26] The memorandum also directed agencies to focus their efforts on their tiered data centers and to stop reporting on spaces not designed to be data centers (i.e., non-tiered data centers) as part of their inventory.[27] The guidance outlined a process by which agencies could request, and OMB would approve, that these facilities no longer be reported.

Since 2016, we have reported on OMB's DCOI requirements for agencies and have made recommendations to improve OMB's oversight of DCOI.[28] In addition, since the enactment of FITARA, we have annually reviewed agencies' efforts to implement the data center provisions of FITARA and have published reports documenting the findings from each of these reviews.[29] We noted that, while agencies were reporting progress towards DCOI data center closure, cost savings, and optimization goals, many agencies had incomplete optimization plans and were not meeting those goals.

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[26]OMB, Memorandum M-19-19. According to OMB Memorandum M-19-19 and related reporting instructions, a data center generally is a purpose-built, physically separate, and dedicated space that contains one or more racks of servers, mainframes, and/or high-performance computers; has a dedicated uninterruptable power supply and/or backup generator for prolonged power outages; and/or has a dedicated cooling system or zone. Agencies are to report facilities matching these criteria as tiered data centers.

[27]OMB derived the term "tiered" and its definition from the Uptime Institute's Tier Classification System. However, OMB notes that no specific certification is required in order for a data center to be considered tiered by OMB. According to OMB M-16-19, all data centers not marked as tiered should be considered non-tiered.

[28]GAO, *Data Center Consolidation: Agencies Making Progress, but Planned Savings Goals Need to Be Established [Reissued on March 4, 2016],* GAO-16-323 (Washington, D.C.: Mar. 3, 2016); *Data Center Consolidation: Reporting Can Be Improved to Reflect Substantial Planned Savings,* GAO-14-713 (Washington, D.C.: Sept. 25, 2014); *Data Center Consolidation: Strengthened Oversight Needed to Achieve Cost Savings Goal,* GAO-13-378 (Washington, D.C.: Apr. 23, 2013); *Data Center Consolidation: Agencies Making Progress on Efforts, but Inventories and Plans Need to Be Completed,* GAO-12-742 (Washington, D.C.: July 19, 2012); and GAO-11-565.

[29]GAO, *Data Center Optimization: Agencies Continue to Report Mixed Progress Against OMB's Targets,* GAO-22-105118 (Washington, D.C.: Mar. 8, 2022); GAO-20-279; *Data Center Optimization: Additional Agency Actions Needed to Meet OMB Goals,* GAO-19-241 (Washington, D.C.: Apr. 11, 2019); *Data Center Optimization: Continued Agency Actions Needed to Meet Goals and Address Prior Recommendations,* GAO-18-264 (Washington, D.C.: May 23, 2018); *Data Center Optimization: Agencies Need to Address Challenges and Improve Progress to Achieve Cost Savings Goal,* GAO-17-448 (Washington, D.C.: Aug. 15, 2017); *Data Center Optimization: Agencies Need to Complete Plans to Address Inconsistencies in Reported Savings,* GAO-17-388 (Washington, D.C.: May 18, 2017); and GAO-16-323.

Accordingly, we have made 126 recommendations that span fiscal years 2016 through 2022, to improve agencies' optimization plans and help them meet DCOI goals. As of December 2022, agencies had implemented 110 of the 126 recommendations.

However, 16 recommendations had not yet been fully implemented. These recommendations include agencies taking action to meet the data center optimization metric targets established under DCOI by OMB.

We reiterate the importance of implementing those recommendations. A summary of our previous reports and recommendations is found in appendix II.

Agencies Report Progress in Data Center Closures and Related Savings for Fiscal Years 2021 and 2022

Nearly All 24 DCOI Agencies Reported Meeting Closure Goals for Fiscal Year 2021

In fiscal year 2021, 23 of 24 agencies reported that they had met or exceeded their DCOI closure goals by closing a total of 58 data centers. This surpasses their planned goal of 43 closures. Figure 1 summarizes agencies fiscal year 2021 data center goals.

Figure 1: Agency-Reported Office of Management and Budget (OMB) Status of Fiscal Year 2021 Data Center Closure Goals
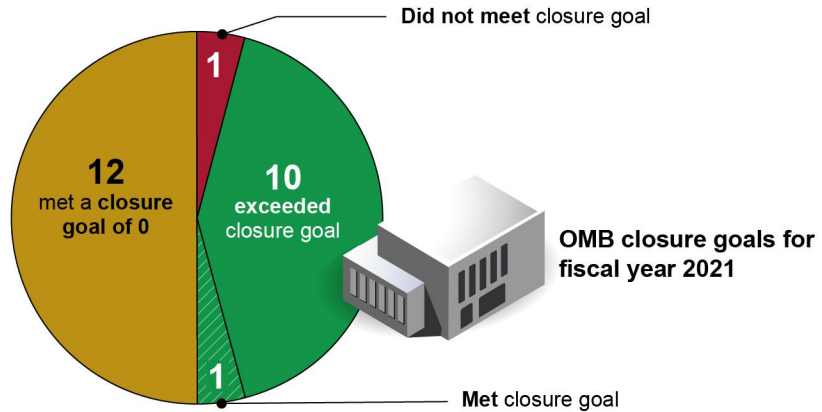
Source: GAO analysis of data from OMB's Information Technology Dashboard. | GAO-23-105946

Data table for Figure 1: Agency-Reported Office of Management and Budget (OMB) Status of Fiscal Year 2021 Data Center Closure Goals

Did not meet closure goal	Exceeded closure goal	Met closure goal	Met a closure goal of zero
1	10	1	12

Source: GAO analysis of date from OMB's Information Technology Dashboard. | GAO-23-105946.

- Twelve agencies reported that they did not plan to close any data centers and closed no data centers.

- Ten reported that they had exceeded their closure goals for the fiscal year. This included three agencies that had not planned to close any data centers.[30]

- One, the Environmental Protection Agency, met their closure goals.

- One, the Department of Justice (Justice), had not achieved their planned data center closure goals for fiscal year 2021.

Justice did not achieve their planned data center closure goal for fiscal year 2021 due to migrating one closing data center to a service cloud provider. The migration began in fiscal year 2021; however, Justice

[30]Those agencies were the Departments of Commerce, Defense, Energy, Labor, State, Treasury, Interior, and the National Aeronautics and Space Administration, Social Security Administration and Veterans Affairs. Labor, and the National Aeronautics and Space Administration and Social Security Administration had a goal of zero closures for fiscal year 2021.

delayed the final migration step into fiscal year 2022 to avoid conflict between final migration activities and the agency's fiscal year-end closeout activities.

DCOI Agencies Have Met or Plan to Meet OMB's Fiscal Year 2022 Closure Goals

As of August 2022, agencies participating in the fiscal year 2022 DCOI reported that they met or plan to meet their data center closure targets. Overall, the agencies have yet to achieve their cumulative data center closure goal during fiscal year 2022. Specifically, as of August 2022, the agencies had closed 20 data centers, with 58 additional closures remaining.

Of the 24 agencies:

- Three reported that they had exceeded their closure goals for the fiscal year. This included one agency that had not planned to close any data centers.[31]

- Two departments—Homeland Security and Interior—met their closure goals for the fiscal year.

- Four agencies reported that they had not yet met their closure goals but plan to do so.[32]

- Fifteen reported that they did not plan to close any data centers in 2022 and closed no data centers during the fiscal year.[33]

Table 1 details, for each of the 24 agencies, the number of data centers open at the start of fiscal year 2022. It includes the agency's fiscal year 2022 closure goal, the number of data centers closed, and the number planned for closure during the remainder of fiscal year 2022. It also

[31]The agencies that had exceeded their closure goals for fiscal year 2022 are Departments of Commerce, State, and Veteran Affairs.

[32]The agencies that did not met their target goal closures for fiscal year 2022, but planned to meet their goal are the Departments of Defense, Energy, Justice, and Labor.

[33]The agencies that had a goal of zero closures for fiscal year 2022 were the Departments of Agriculture, Education, Health and Human Services, Housing and Urban Development, Transportation, and Treasury; and the Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Small Business Administration, Social Security Administration, and the U.S. Agency for International Development.

includes data center closures planned for fiscal years 2023 through 2025, as of August 2022.

Table 1: Agency-Reported Data Center Optimization Initiative (DCOI) Strategic Plan Fiscal Year (FY) 2022 Closure Goals and the Number of Data Centers Reported as Closed in FY 2022, as of August 2022

Agency	Open at the start of FY22	DCOI FY22 closure goal	Closed as of August 2022	Additional planned FY22 closures	Additional planned FY23-FY25 closures	Met or plans to meet FY22 closure goal?
Department of Agriculture	2	0	0	0	0	Yes
Department of Commerce	61	0	1	1	0	Yes
Department of Defense	638	12	8	40	31	Yes
Department of Education	0	0	0	0	0	Yes
Department of Energy	96	2	1	2	2	Yes
Department of Health and Human Services	88	0	0	2	2	Yes
Department of Homeland Security	20	1	1	1	1	Yes
Department of Housing and Urban Development	2	0	0	0	0	Yes
Department of the Interior	50	1	1	0	0	Yes
Department of Justice	11	1	0	0	6	Yes
Department of Labor	6	1	0	1	0	Yes
Department of State	141	1	3	5	0	Yes
Department of Transportation	211	0	0	0	0	Yes
Department of the Treasury	103	0	0	0	0	Yes
Department of Veterans Affairs	274	3	5	0	0	Yes
Environmental Protection Agency	2	0	0	0	0	Yes
General Services Administration	4	0	0	0	0	Yes
National Aeronautics and Space Administration	18	0	0	0	0	Yes
National Science Foundation	1	0	0	0	0	Yes
Nuclear Regulatory Commission	3	0	0	0	0	Yes
Office of Personnel Management	2	0	0	0	1	Yes
Small Business Administration	2	0	0	0	0	Yes
Social Security Administration	11	0	0	6	1	Yes
U.S. Agency for International Development	0	0	0	0	0	Yes
Total	**1746**	**22**	**20**	**58**	**44**	

Source: GAO analysis of agency data. | GAO-23-105946

Agencies Continue to Report Cost Savings for Fiscal Year 2021

In fiscal year 2021, 22 of the 24 agencies participating in DCOI reported meeting their cost saving goals with a total of $612.326 million in savings.[34] Figure 2 provides a summary of the number of agencies that exceeded, met, or did not meet their data center-related cost savings goals for fiscal year 2021.

Figure 2: Agency-Reported Office of Management and Budget (OMB) Status of Fiscal Year 2021 Data Center-Related Cost Savings Goals
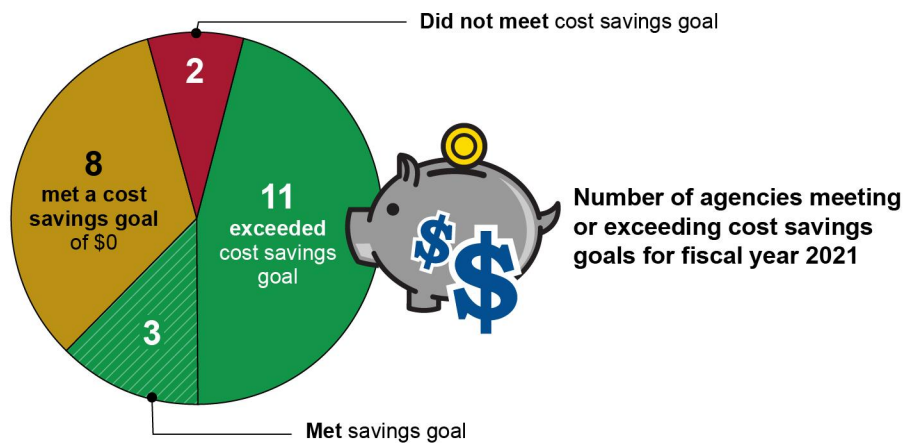
Source: GAO analysis of data from OMB's Information Technology Dashboard. | GAO-23-105946

Data table for Figure 2: Agency-Reported Office of Management and Budget (OMB) Status of Fiscal Year 2021 Data Center-Related Cost Savings Goals

Did not meet closure goal	Exceeded closure goal	Met closure goal	Met a closure goal of zero
2	11	3	8

Source: GAO analysis of date from OMB's Information Technology Dashboard. | GAO-23-105946.

Of the 24 agencies:

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[34]OMB Memorandum M-13-09 defines cost savings as a reduction in actual expenditures below the projected level of costs to achieve a specific objective and defines cost avoidances as results from an action taken in the immediate time frame that will decrease costs in the future.

- Eleven agencies exceeded their cost savings goals for fiscal year 2021. Among those agencies two—the Department of Labor and U.S. Agency for International Development (USAID)—had a cost savings goal of $0. The combined savings from these 11 agencies was $339.37 million.[35]

- Eight agencies did not have a cost savings goal.[36]

- Three agencies, the National Aeronautics and Space Administration and the Departments of Treasury and Veterans Affairs met their cost savings goal of $25.86 million.

- Two agencies—Department of State and the Social Security Administration did not met their target goals.

Department of State officials stated that the department added two planned data center closures for fiscal year 2021 that should have been for fiscal year 2022. This reporting error resulted in $1.4 million in cost savings instead of the $1.8 million originally projected. Department officials stated that measures have been put in place to ensure that there are no reporting discrepancies in the future. These measures include robust communications with the data center and facility management specialists to ensure accurate reporting for the established fiscal year schedule.

Social Security Administration officials stated that the administration did not meet its cost savings goal due in part to savings from a cloud initiative and data center energy use being lower than expected.

Almost All Agencies Met or Exceeded Cost Savings Goals for Fiscal Year 2022

Agencies that participate in DCOI cumulatively identified a total of $131.47 million in planned data center-related savings for fiscal year 2022. As of August 2022, agencies had realized a total of $334.324

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[35]The agencies that have exceeded their fiscal year 2021 cost savings goal were the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, Justice, Labor, and Transportation; and the Agency for U.S. International Development.

[36]The agencies that had a savings goal of $0 for fiscal year 2021 were the Departments of Education and Housing and Urban Development, the Environmental Protection Agency, General Services Administration, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, and the Small Business Administration.

million in data center-related savings for fiscal year 2022.[37] Specifically, eight[38] agencies have exceeded their target goal, and twelve[39] agencies did not have a goal and reported $0 for cost savings in fiscal year 2022. As of August 2022, two agencies had not met their cost savings goals for fiscal year 2022, but plan to meet their goals with an additional $0.87 million in savings by the end of the fiscal year.[40]

Table 2 provides a breakdown of agencies' planned and achieved data center-related cost savings for fiscal year 2022, as of August 2022. It also shows the agencies' additional planned savings for fiscal year 2022, as reflected in their DCOI strategic plans and quarterly reporting.

Table 2: Agency-Reported Data Center Optimization Initiative (DCOI) Planned and Achieved Cost Savings for Fiscal Year (FY) 2022, as of August 2022

(dollars in millions)

Agency	DCOI planned savings	Achieved savings for FY 2022	Difference between planned and achieved
Department of Agriculture	1	2.95	1.95
Department of Commerce	0	0	0
Department of Defense	90	118.3	28.3
Department of Education	0	0	0
Department of Energy	0.2	1.417	1.217
Department of Health and Human Services	12.612	18.514	5.902
Department of Homeland Security	0	0	0
Department of Housing and Urban Development	0	0	0

[37]The agencies that have achieved a total of $334.324 million were the Departments of Agriculture, Defense, Energy, Health and Human Services, the Interior, Justice, State, Labor, Transportation, the Veterans Affairs and the Treasury; National Aeronautics and Space Administration and the Social Security Administration.

[38]The agencies that have exceeded their target goal were the Departments of Agriculture, Defense, Energy, the Interior, Justice, State, Labor, and Health and Human Services.

[39]The twelve agencies that had a goal of $0 and reported $0 for cost saving in fiscal 2022, were the Departments of Commerce, Education, Homeland Security, Housing and Urban and Development, and the Environmental Protection Agency, General Services Administration, U.S. Agency for International Development, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, and the Small Business Administration.

[40]The agencies that have not met their goal for fiscal year 2022 but plan to meet them were the Department of Veterans Affairs and the National Aeronautics and Space Administration.

Agency	DCOI planned savings	Achieved savings for FY 2022	Difference between planned and achieved
Department of the Interior	1.5	3.71	2.21
Department of Justice	1.3	1.963	0.663
Department of Labor	0	17.168	17.168
Department of State	1.4	3.7	2.3
Department of Transportation	0.73	0.73	0
Department of the Treasury	17.5	17.5	0
Department of Veterans Affairs	5.02	4.17	(0.85)
Environmental Protection Agency	0	0	0
General Services Administration	0	0	0
National Aeronautics and Space Administration	0.212	0.19	(0.022)
National Science Foundation	0	0	0
Nuclear Regulatory Commission	0	0	0
Office of Personnel Management	0	0	0
Small Business Administration	0	0	0
Social Security Administration	150	144.012	5.988
U.S. Agency for International Development	0	0	0
Total	**$281.474**	**$334.324**	**$57.481**

Source: GAO analysis of agency data. | GAO-23-105946

Note: Sums may not add due to rounding.

Agencies that have achieved cost savings but have yet to meet targeted goals provided various reasons for why they had not done so:

- As of October 2022, National Aeronautics and Space Administration (NASA) officials stated that NASA had now met the planned FY22 cost savings goal of $0.212 million. They added that this will be reported to OMB during the FY22 Quarter 4 reporting period.

- A Department of Veterans Affairs (VA) official from the Office of Information and Technology (OIT) stated that their National Data Center Operations & Logistics (NDCOL) still had data centers to close. In addition, the official stated that the NDCOL will help meet VA's goal by reporting its FY22 Quarter 4 OMB submission. This submission of $1.39 million in cost avoidance for fiscal year 2022 will total $5.6 million in achieved cost savings.

Agencies Continue to Report Data Center Optimization Metrics

FITARA required OMB to establish metrics to measure the optimization of agencies' use of their data centers, including, at a minimum, server efficiency. The act also required OMB to ensure that agencies' progress toward meeting those metrics is made available to the public.

Pursuant to this requirement, OMB developed performance measures that have been revised over time and reported agencies' progress against those measures on the IT Dashboard. Most recently, in 2019, OMB issued revised DCOI guidance that defined a set of four (three revised and one new) data center optimization metrics to replace the five previous metrics.

According to the OMB memorandum that announced these changes, the new metrics were intended to focus optimization efforts in key areas where agencies can make meaningful improvements and achieve further cost savings through optimization.[41] Table 3 provides a description of the four current data center optimization metrics and how each metric is to be calculated.

Table 3: The Office of Management and Budget's (OMB) Four Data Center Optimization Initiative Metrics

Metric	Description	Applicable agency-owned data centers	How the metric is calculated
Virtualization	The number of servers and mainframes serving as a virtual host in an agency-managed data center.	Tiered data centers	Count of agency-reported servers and mainframes serving as virtual hosts.
Advanced energy metering	The number of data centers with advanced energy metering covering the majority of their floor space.	Tiered data centers	Count of agency-reported data centers with advanced energy metering in place.
Underutilized servers	The number of underutilized production servers in federal data centers.	Tiered data centers	Count of agency-reported underutilized servers.
Data center availability	Ratio of uptime to downtime in data centers.	Tiered data centers	Expected number of available hours minus unplanned downtime, divided by the expected available hours.

Source: OMB | GAO-23-105946

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[41]OMB, Memorandum M-19-19.

According to OMB's June 2019 revised DCOI guidance, agencies are to focus their optimization efforts on their remaining open agency-owned, tiered data centers. OMB also included in the guidance its plans to work with the agencies to set agency-specific optimization performance targets for each fiscal year. According to staff in OMB's Office of the Federal CIO, these targets are to be established by fiscal year and progress toward meeting them is shown on the IT Dashboard.

Agencies Reported Mixed Progress in Optimization for Fiscal Year 2021

The 17 DCOI agencies with applicable data centers reported mixed progress in meeting OMB's fiscal year 2021 data center optimization targets. In fiscal year 2021, 16 agencies reported that they had met OMB's target for availability, 14 agencies reported that they had met the targets for advanced energy metering and server utilization, and 11 agencies reported that they had met the targets for virtualization.[42] Also, two agencies reported that they had met two targets—the Departments of Energy and Health and Human Services (HHS).

The remaining seven agencies—the Departments of Agriculture, Education, Homeland Security, Housing and Urban Development; and EPA, the General Services Administration, and USAID—reported that they do not have any agency-owned data centers or their remaining data centers are exempted from optimization by OMB. Figure 3 summarizes the DCOI agencies' progress in meeting fiscal year 2021 optimization targets.

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[42]The Departments of Commerce, Defense, the Interior, Justice, Labor, State, Transportation, the Treasury, and the Veterans Affairs; and NASA, the National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Small Business Administration, and the Social Security Administration reported meeting three or more of the four optimization targets.

Figure 3: Number of Agencies Meeting Each Fiscal Year 2021 Optimization Target

Number of agencies

Virtualization

Availability

Advanced energy metering

Underutilized servers
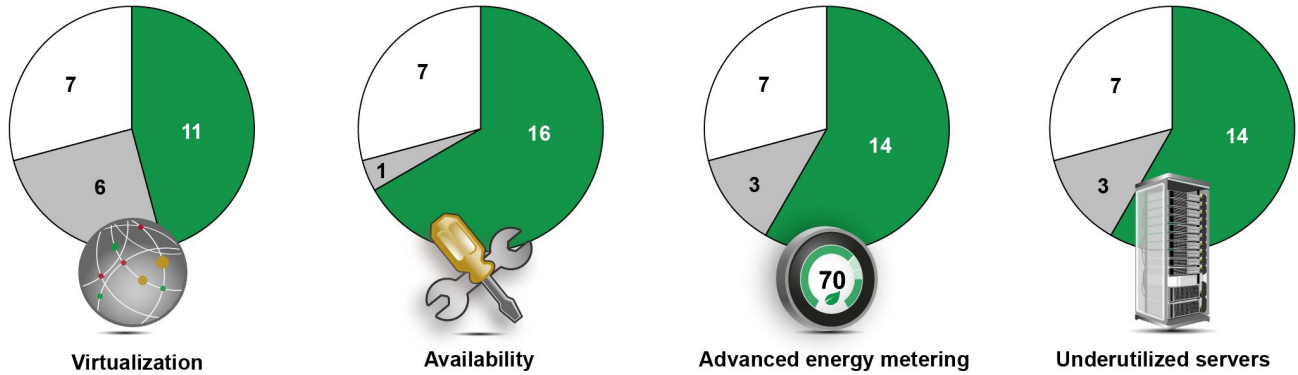
Office of Management and Budget (OMB) metrics
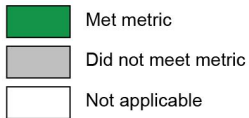
Met metric

Did not meet metric

Not applicable

Source: GAO analysis of data from OMB's Information Technology Dashboard. | GAO-23-105946

Data table for Figure 3: Number of Agencies Meeting Each Fiscal Year 2021 Optimization Target

Virtualization		Availability		Advanced Energy Metering		Underutilized Servers	
Met	11	Met	16	Met	14	Met	14
Not Met	6	Not Met	1	Not Met	3	Not Met	3
N/A	7	N/A	7	N/A	7	N/A	7
No basis	0	No basis	0	No basis	0	No basis	0

Source: GAO analysis of date from OMB's Information Technology Dashboard. | GAO-23-105946.

Nevertheless, a number of the agencies did not meet their optimization targets. The reasons agencies provided for not meeting their targets varied.

- Department of the Interior explained that they did not meet their metering goal because one of their data centers is going into migration execution status within the inventory and will be reported closed in Quarter 4 of the inventory. They plan on updating their strategic plan to reflect a change in their metering goal, given it's in line with their overall goal of consolidation.

- The National Science Foundation (NSF) explained that they did not meet their virtualization goal due to how they determined what constitutes a virtual system, which required them to adjust their

servers. NSF restructured their formulas to ensure consistent accounting of production, non-production, and virtual servers.

Agencies Reported Optimization Progress in Fiscal Year 2022

Overall, agencies continued to report mixed progress in meeting their fiscal year 2022 optimization metrics as of September 2022. With regard to the data center optimization targets, in fiscal year 2022, 17 agencies reported that they had met OMB's target for availability, 14 agencies reported that they had met the targets for advance energy metering and server utilization, and 13 agencies reported that they had met the targets for virtualization. Figure 4 summarizes the 24 agencies' progress in meeting each optimization target as of September 2022.

Figure 4: Progress toward Meeting Office of Management and Budget (OMB) Data Center Optimization Targets, as Reported by Federal Agencies as of September 2022

Number of agencies (as of September 2022)
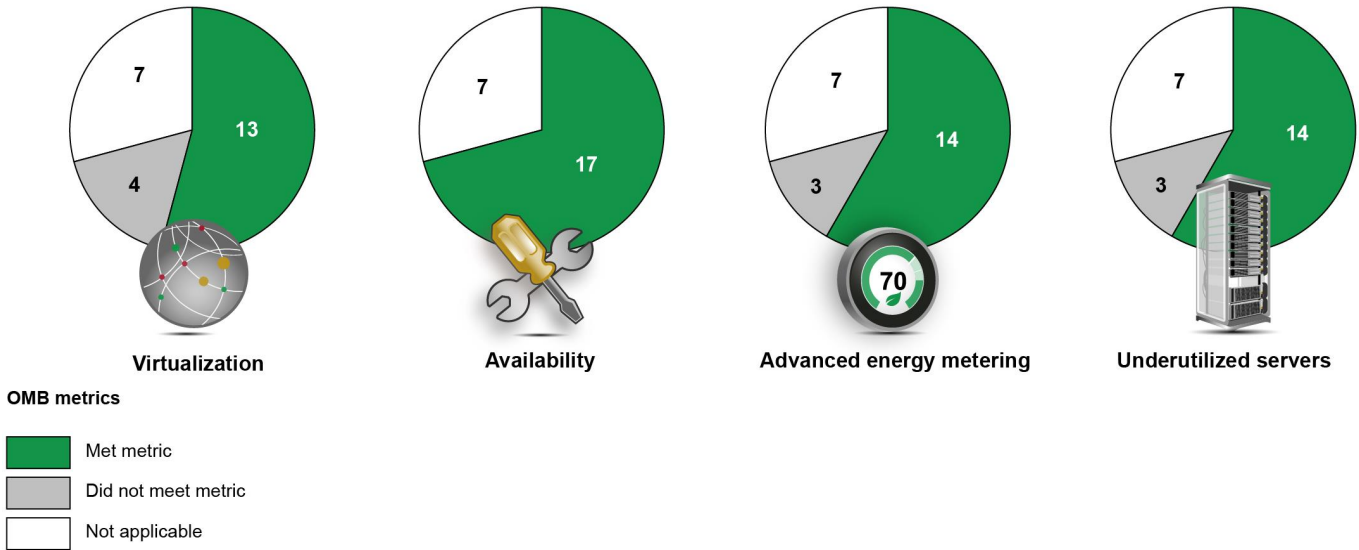
| Virtualization | Availability | Advanced energy metering | Underutilized servers |

OMB metrics

- Met metric
- Did not meet metric
- Not applicable

Source: GAO analysis of data from OMB's Information Technology Dashboard. | GAO-23-105946

Data table for Figure 4: Progress toward Meeting Office of Management and Budget (OMB) Data Center Optimization Targets, as Reported by Federal Agencies as of September 2022

Virtualization		Availability		Advanced Energy Metering		Underutilized Servers	
Met	13	Met	17	Met	14	Met	14
Not Met	4	Not Met	0	Not Met	3	Not Met	3
N/A	7	N/A	7	N/A	7	N/A	7
No basis	0	No basis	0	No basis	0	No basis	0

Source: GAO analysis of date from OMB's Information Technology Dashboard. | GAO-23-105946.

For the fiscal year 2022 DCOI metrics, agencies reported mixed progress toward meeting their agency-specific optimization targets. Of the 17 agencies with a basis to report against OMB's optimization targets:[43]

- Eight agencies reported that they met all four of their optimization targets.[44]

- Eight agencies reported that they met three of four targets.[45]

- One agencies reported that they met two targets.[46]

Table 4 summarizes the progress of DCOI agencies in meeting each optimization target as of September 2022.

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[43]As of September 2022, the IT Dashboard and agencies strategic plans reported that the Departments of Agriculture, Education, Homeland Security, and Housing and Urban Development; and the Environmental Protection Agency, General Services Administration, and the U.S. Agency for International Development had completed their optimization efforts. Therefore, reporting on optimization metrics for these agencies is not applicable.

[44]As of September 2022, the IT Dashboard reported that the Departments of Commerce, Defense, Justice, and Labor; and the National Aeronautics and Space Administration, Nuclear Regulatory Commission, Office of Personnel Management, and the Social Security Administration met all four of their optimization targets.

[45]As of September 2022, the IT Dashboard reported that the Departments of Energy, Health and Human Services, Interior, State, and Transportation, the Treasury, and Veterans Affairs; and the Small Business Administration met three of four optimization targets.

[46]As of September 2022, the IT Dashboard reported that the National Science Foundation met two optimization targets.

Table 4: Agency-Reported Progress in Meeting Data Center Optimization Performance Targets Set by the Office of Management and Budget (OMB), as of September 2022

Agency	Virtualization	Availability	Advanced energy metering	Server utilization
Department of Agriculture[a]	N/A	N/A	N/A	N/A
Department of Commerce	fully met	fully met	fully met	fully met
Department of Defense	fully met	fully met	fully met	fully met
Department of Education[a]	N/A	N/A	N/A	N/A
Department of Energy	not met	fully met	fully met	fully met
Department of Health and Human Services	not met	fully met	fully met	fully met
Department of Homeland Security[b]	N/A	N/A	N/A	N/A
Department of Housing and Urban Development[a]	N/A	N/A	N/A	N/A
Department of the Interior	fully met	fully met	not met	fully met
Department of Justice	fully met	fully met	fully met	fully met
Department of Labor	fully met	fully met	fully met	fully met
Department of State	fully met	fully met	fully met	not met
Department of Transportation	not met	fully met	fully met	fully met
Department of the Treasury	fully met	fully met	not met	fully met
Department of Veterans Affairs	fully met	fully met	not met	fully met
Environmental Protection Agency[a]	N/A	N/A	N/A	N/A
General Services Administration[a]	N/A	N/A	N/A	N/A
National Aeronautics and Space Administration	fully met	fully met	fully met	fully met
National Science Foundation	not met	fully met	fully met	not met
Nuclear Regulatory Commission	fully met	fully met	fully met	fully met
Office of Personnel Management	fully met	fully met	fully met	fully met
Small Business Administration	fully met	fully met	fully met	not met
Social Security Administration	fully met	fully met	fully met	fully met
U.S. Agency for International Development[a]	N/A	N/A	N/A	N/A

Legend:

● = fully met—the agency's reported progress met or exceeded OMB's fiscal year 2022 target for the related metric.

○ = not met—the agency's reported progress did not meet OMB's fiscal year 2022 target for the related metric.

N/A = not applicable—the agency did not have any agency-owned data centers or its remaining centers are exempted from optimization by OMB.

Source: GAO analysis of agency data. | GAO-23-105946

[a]For the optimization metrics, this agency's progress against these metrics was being completed and no further work will be required in this area.

[b]All remaining agency-owned data centers have been granted optimization exemptions by OMB.

Multiple agencies continue reporting meeting more optimization targets in fiscal year 2022 as compared to 2021. For example:

- Department of Health and Human Services met three of its fiscal year 2022 optimization targets compared to two out of four targets at the end of fiscal year 2021.

- Social Security Administration (SSA) met all four of its fiscal year 2022 optimization targets compared to three out of four targets at the end of fiscal year 2021.

- Nuclear Regulatory Commission (NRC) met all four of its fiscal year 2022 targets compared to three out of four targets at the end of fiscal year 2021.

However, some agencies have not yet met all of their targets for fiscal year 2022. The reasons agency officials provided for not meeting the target varied. For example:

- Department of Energy explained that they did not meet their virtualization goal due to the closing of data centers with virtual servers. Closing data centers with virtual servers resulted in a reduction of the number of reported virtual hosts. They explained that the actual metric would continue to fluctuate.

- Officials at the Department of Veterans Affairs reported that the department did not meet its advance energy metering target due to contractual issues with certain data center vendors. Supply chain issues have prolonged the installation of power metering tools in data centers and have slowed the process of collecting power metering data. The department plans to meet this target by the end of fiscal year 2022.

Agencies Reported Benefits from the Data Center Optimization Initiative

As noted earlier, the statutory authorization in FITARA for the data center optimization initiative lapsed on October 1, 2022. Congress has emphasized the importance of reforming the government-wide management of information technology, and all the covered agencies took the initiative to reduce their data center footprint and costs associated with data centers.

Twenty-three of the 24 DCOI agencies reported a variety of benefits that DCOI has given their agencies.[47] For example:

- Agriculture benefitted significantly from DCOI. From fiscal year 2018 to fiscal year 2020 the department closed its remaining four data centers and met the Deputy Secretary's goal. Agriculture closures provided additional cost savings and avoidances of approximately $25.2 million. The department also reported an additional $16.4 million in cost avoidances as of Quarter 2 FY2022.

- HHS officials explained that DCOI helped raise awareness of energy efficiency requirements and IT modernization. They added that HHS will continue to use strategies to change servers from physical locations to virtualize throughout the agency. The department will also continue to prioritize virtualization and cloud migration, leveraging the existing IT acquisition review process to ensure continued progress. The increased visibility of data center optimization efforts and virtual infrastructure modernization confirmed their efforts toward moving to cloud services rather than relying on physical locations.

- Nuclear Regulatory Commission (NRC) stated that DCOI they helped focus on modernizing, consolidating, and better managing its physical data center footprint, as well as driving a more cost-reliable cloud and data center co-location model. It also provided the Office of the Chief Information Officer the ability to leverage the mandate to garner agency support for resources and activities needed to get to their current state. NRC stated that they would continue to consolidate their remaining data center footprint. Additionally, the same approach to modernization and efficiency will be used for IT services that are, or will eventually be, hosted in co-location areas or the cloud.

Implementing Remaining GAO Recommendations Should Yield Additional Benefits

While the initiative to optimize federal data centers ended in October 2022, there are still remaining actions that could yield benefits. Over the years, we have made 126 recommendations to help agencies realize the benefits from data center consolidation and optimization. As of December 2022, agencies had implemented 110 of the 126 recommendations.

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[47]Education closed its last agency-owned data center in fiscal year 2017 and does not have any remaining data centers. The department did not state whether they benefitted from the Data Center Optimization Initiative.

However, 16 recommendations had not yet been fully implemented. These recommendations include agencies needing to take action to meet the data center optimization metric targets established under DCOI by OMB.[48] Until agencies address these recommendations, they are unlikely to fully realize the expected benefits.

Agency Comments

We provided a draft of this report to OMB and DCOI agencies for their review and comment. We received responses from OMB and the 24 agencies. Six of the agencies stated that they agreed with the information presented in the report and 17 agencies stated that they had no comments. Further, two agencies provided technical comments on the report, which we incorporated, as appropriate.

Specifically, six agencies agreed with the information presented in the report, as follows:

- Via email, an audit liaison officer in the Office of the CIO at Agriculture stated that the agency generally agreed with the findings in the draft report and had no comments.

- Via email, an audit liaison responsible for overseeing GAO audits at Justice concurs with the draft report and had no comments.

- Via email, an official responsible for overseeing GAO audits at NASA generally agreed with the findings in the draft report and had no comments.

- Via email, an official in the Office of Congressional and Legislative Affairs at SBA stated that the agency agreed with the report and had no comments.

- In written comments, USAID noted that we had accurately reflected USAID's program status and successful compliance. USAID's comments are reprinted in appendix III.

- In written comments, VA stated that it generally concurred with the information and findings in the draft report. VA's comments are reprinted in appendix IV.

Finally, officials of 17 agencies stated that they had no comments on the report. Fifteen of these agencies provided emails. These agencies were

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[48]GAO-20-279 and GAO-19-241.

Education, Energy, DHS, HHS, HUD, Interior, State, EPA, GSA, NSF, OPM, NRC, Commerce, Treasury, and Transportation. Two agencies, Defense and SSA, provided letters indicating they had no comments, which are reprinted in appendix V and appendix VI.

Finally, via email, an audit liaison from Labor in the Office of the Assistant Secretary for Policy and an official from OMB provided technical comments, which we incorporated, as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Director of OMB, the Secretaries and heads of the departments and agencies addressed in this report, and other interested parties. In addition, the report will be available at no charge on GAO's website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-4456 or harriscc@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix VII.

Carol C. Harris
Director, Information Technology
Acquisition Management Issues

List of Committees

The Honorable Jack Reed
Chairman
The Honorable Roger Wicker
Ranking Member
Committee on Armed Services
United States Senate

The Honorable Gary C. Peters
Chairman
The Honorable Rand Paul
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Mike Rogers
Chairman
The Honorable Adam Smith
Ranking Member
Committee on Armed Services
House of Representatives

The Honorable James Comer
Chairman
The Honorable Jamie B. Raskin
Ranking Member
Committee on Oversight and Accountability
House of Representatives

Appendix I: Objectives, Scope, and Methodology

Our objectives were to determine (1) agencies' progress on data center closures and the related savings that have been achieved, and agencies' plans for future closures and savings; and (2) agencies' progress against Office of Management and Budget (OMB) data center optimization targets.

To address our first objective on data center closures, we obtained and analyzed June and August 2022 data center inventory documentation from the 24 departments and agencies[1] that participate in OMB's Data Center Optimization Initiative (DCOI).[2] Using the August 2022 inventory data, we identified the agencies' reported closures for fiscal year 2022.[3] Using the August 2022 inventory data, we also identified the agencies' reported closures for fiscal year 2021 through August 2022, and we identified the agencies' planned future closures from September 2022 through the end of fiscal year 2025. We also compared agencies' completed and planned closures to their planned fiscal year 2022 consolidation goals, as documented in their DCOI strategic plans. OMB's guidance for developing agencies' DCOI strategic plans required agencies to report cumulative numbers for their planned and achieved data center closures; as a result, we calculated agencies' fiscal year 2022 goals from the data reported in DCOI plans.

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[1]The 24 agencies that are required to participate in the Data Center Optimization Initiative 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; and the Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Small Business Administration, Social Security Administration, and the U.S. Agency for International Development.

[2]Agencies' data center optimization progress information displayed on OMB's IT Dashboard is updated by OMB on a quarterly basis based on data center inventory data collected from agencies at the end of February, May, August, and November of each year.

[3]We used the data agencies reported to OMB by September 2022 to ensure they had adequate time to identify their end-of-fiscal year closures.

To verify the quality, completeness, and reliability of each agency's data
center inventory, we compared information on completed and planned
data center closures to similar information reported on OMB's Federal IT
Dashboard (IT Dashboard)—a public website that provides information on
federal agencies' major IT investments.[4] We also checked for missing
data and other errors, such as missing closure status information. In
some of the cases identified, we followed up with agency officials to
obtain further information. We determined that the data were sufficiently
complete and reliable to report on agencies' consolidation progress and
planned closures.

For cost savings and avoidances,[5] we obtained and analyzed September
and August 2022 documentation from the 24 DCOI agencies. This
documentation is required by OMB's March 2013 and June 2019
memorandums and included the agencies' quarterly reports of cost
savings and avoidances posted to their digital strategy websites and their
DCOI strategic plans.[6] To determine cost savings achieved for fiscal year
2022, we used the September 2022 cost savings documentation and
totaled agencies' reported savings and avoidances.[7] To determine cost
savings achieved for fiscal year 2022 and for the initiative overall, we
used the August 2022 cost savings documentation and totaled agencies'
reported savings and avoidances from the start of fiscal year 2012[8]
through August 2022, as found in the August 2022 quarterly reports
posted to the agencies' digital strategy websites.[9] To identify future

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[4]We did not physically visit agencies' data center locations to verify their inventory totals.

[5]Beginning in March 2013, OMB required agencies to report on both cost savings and
cost avoidances. OMB defines cost savings as a reduction in actual expenditures below
the projected level of costs to achieve a specific objective and defines a cost avoidance as
the result of an action taken in the immediate time frame that will decrease costs in the
future.

[6]Office of Management and Budget, *Update to Data Center Optimization Initiative (DCOI)*,
Memorandum M-19-19 (Washington, D.C.: June 25, 2019); *Fiscal Year 2013 PortfolioStat
Guidance: Strengthening Federal IT Portfolio Management*, Memorandum M-13-09
(Washington, D.C.: Mar. 27, 2013).

[7]We used the data agencies reported to OMB by March 2022 to ensure they had
adequate time to identify their cost savings through the end of fiscal year 2021.

[8]Under the Federal Data Center Consolidation Initiative, which OMB launched in February
2010, agencies were required to begin closing data centers. However, current OMB
guidance only requires agencies to report historical cost savings and avoidances realized
since fiscal year 2012.

[9]We did not independently validate agencies' reported cost savings figures.

planned savings, we totaled the agencies' projected savings and avoidances from fiscal years 2014 through 2022, as reported in their DCOI strategic plans.

To assess the quality, completeness, and reliability of each agency's data center consolidation cost savings information, we used the latest version of each agency's quarterly cost savings report and DCOI strategic plan as of August 2022. We also reviewed the quarterly reports and DCOI strategic plans for missing data and other errors, such as missing cost savings information. In addition, we compared agencies' cost savings and avoidances with data from our most recent data center consolidation report.[10] Further, we obtained written responses from agency officials regarding the steps they took to ensure the accuracy and reliability of their cost savings data. Based on the results of these steps, we determined that the data were sufficiently complete and reliable to report on agencies' data center consolidation cost savings information.

For our second objective, we analyzed the March 2022 and August 2022 data center optimization progress information of the 17 DCOI agencies.[11] This progress information was obtained from the IT Dashboard.[12] We then compared the agencies' current optimization progress information to agencies' fiscal year 2022 optimization targets, as documented on the IT Dashboard. In addition, we interviewed officials from the 24 agencies to gather information about how they benefitted from DCOI.

To assess the reliability of agencies' optimization progress information on OMB's IT Dashboard, we reviewed the information for errors or missing data, such as progress information that was not available for certain metrics. We also compared agencies' optimization progress information across two reporting quarters to identify any inconsistencies in agencies'

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[10]GAO, *Data Center Optimization: Agencies Report Progress, but Oversight and Cybersecurity Risks Need to Be Addressed,* GAO-20-279 (Washington, D.C.: Mar. 5, 2020).

[11]Four agencies—the Departments of Education and Housing and Urban Development, the General Services Administration, and the U.S. Agency for International Development—reported that they do not own any data centers and, therefore, do not have a basis to measure and report on optimization progress. In addition, OMB's IT Dashboard indicated, as of September 2021, that the Departments of Agriculture and Homeland Security and the Environmental Protection Agency had completed their optimization efforts. Therefore, reporting on optimization metrics for these agencies is not applicable.

[12]Although the IT Dashboard shows that it was updated as of September 16, 2022, the data were collected from agencies through the August 2022 integrated data collection. Therefore, we report the progress information as of August 2022.

reported progress. We also followed up with the agencies to understand the steps they took to ensure that what they reported to OMB was accurate and reliable. As a result, we determined that the data were sufficiently complete and reliable to report on agencies' progress information for virtualization, availability, advanced energy metering, and server utilization.

We conducted this performance audit from March 2022 to February 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: GAO's Prior Reports on Agencies' DCOI-Related Efforts

Since the enactment of the legislative provisions commonly known as FITARA, we have reviewed and verified the quality and completeness of each covered agency's inventory and Data Center Optimization Initiative (DCOI) strategy annually.[1] Accordingly, we have published six reports documenting the findings and recommendations from each of these reviews.[2] In addition, we have examined and reported on agencies' efforts to optimize their data centers, as well as the challenges encountered and successes achieved.[3] As of December 2022, agencies had implemented 110 of the 126 recommendations from these reports. However, the agencies had not yet fully implemented the other 16 recommendations.

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[1]The 24 agencies that are required to participate in the Data Center Optimization Initiative 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; and the Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Small Business Administration, Social Security Administration, and U.S. Agency for International Development. These are the same agencies covered by FITARA's data center consolidation provisions.

[2]GAO, *Data Center Optimization: Agencies Continue to Report Mixed Progress Against OMB's Targets,* GAO-22-105118 (Washington, D.C.: Mar.4,2022); *Data Center Optimization: Agencies Report Progress and Billions Saved*, but OMB Needs to Improve Its Utilization Guidance, GAO-21-212 (Washington, D.C.: Mar. 4, 2021); *Data Center Optimization: Agencies Report Progress, but Oversight and Cybersecurity Risks Need to Be Addressed*, GAO-20-279 (Washington, D.C.: Mar. 5, 2020); *Data Center Optimization: Additional Agency Actions Needed to Meet OMB Goals*, GAO-19-241 (Washington, D.C.: Apr. 11, 2019); *Data Center Optimization: Continued Agency Actions Needed to Meet Goals and Address Prior Recommendations*, GAO-18-264 (Washington, D.C.: May 23, 2018); *Data Center Optimization: Agencies Need to Complete Plans to Address Inconsistencies in Reported Savings*, GAO-17-388 (Washington, D.C.: May 18, 2017); and *Data Center Consolidation: Agencies Making Progress, but Planned Savings Goals Need to Be Established* [Reissued on March 4, 2016], GAO-16-323 (Washington, D.C.: Mar. 3, 2016).

[3]GAO, *Data Center Optimization: Agencies Need to Address Challenges and Improve Progress to Achieve Cost Savings Goal*, GAO-17-448 (Washington, D.C.: Aug. 15, 2017).

Agencies Continue to Report Mixed Progress against OMB's Targets

In March 2022, we reported that agencies met their related cost savings goals for fiscal year 2020, identifying $875.10 million in cost savings. Agencies also planned to meet their cost savings goals for fiscal year 2021, and in August 2021 had identified $335.88 million in cost savings.[4] Agencies had realized a cumulative total of $6.6 billion in cost savings and avoidances from fiscal years 2012 through 2021.

However, closures and savings were expected to slow in the future, according to agencies' DCOI strategic plans. For example, seven agencies reported that they plan to close 83 data centers in fiscals year 2022 through 2025, and save a total of $46.32 million. In addition, we reported that agencies closed 51 data centers in fiscal year 2021, with an additional 29 planned closures through the end of fiscal year 2021.

The 24 agencies reported mixed progress against the Office of Management and Budget's (OMB) four data center optimization targets for virtualization, data center availability, advance energy metering, and underutilized servers. Nine agencies reported that they met all four targets for the metrics GAO reviewed, three met three targets, three met two target, and two met one target.

Agencies Report Progress, but Oversight and Cybersecurity Risks Need to be Addressed

In March 2021, we reported that almost all 24 agencies met or planned to meet their closure and cost savings goals for fiscal years 2019 and 2020. The agencies reported that they expected to achieve 230 data center closures, resulting in $1.1 billion in savings, over the 2-year period. Agencies expected to realize a cumulative total of $6.24 billion in cost savings and avoidances from fiscal years 2012 through 2020.

Furthermore, all 24 agencies reported mixed progress against OMB's data center optimization targets for fiscal year 2020. In June 2019, OMB revised the server utilization metric to direct agencies to develop their own definitions of underutilization, and then count their underutilized servers. As a result, agencies adopted widely varying definitions and

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[4]GAO-22-105118.

were no longer required to report actual utilization, a key measure of server efficiency.

In addition, we reported that agencies had excluded approximately 4,500 data centers from their inventories due to a change in the definition of a data center. Specifically, in June 2019, OMB narrowed the definition of a data center to exclude certain facilities it had previously identified as having potential cybersecurity risks. We reported that each such facility provided a potential access point, and that unsecured access points could aid cyber-attacks. Accordingly, we recommended that OMB require agencies to report those facilities previously reported as data centers so that visibility of the risks of these facilities was retained. As of December 2022, OMB has not taken action to address the recommendation.

Additional Agency Actions Needed to Meet OMB Goals

In March 2020, we reported that the 24 DCOI agencies continued to report mixed progress toward achieving OMB's goals for closing data centers and realizing the associated savings by September 2019.[5] Specifically, 23 of the 24 reported that they had met, or planned to meet, their fiscal year closure goals, and would close 286 facilities in doing so.

We noted that OMB issued revised guidance in June 2019 that narrowed the scope of the type of facilities that would be defined as a data center. This revision eliminated the reporting of over 2,000 facilities government-wide. We concluded that, without a requirement to report on these, important visibility would be diminished, including oversight of security risks.

In addition, 23 DCOI agencies reported that they had met, or planned to meet, OMB's fiscal year 2019 savings goal of $241.5 million. One agency did not complete a plan, but planned to do so in the future. Collectively, the agencies reported a total of $4.7 billion in cost savings from fiscal years 2012 through 2019.

Regarding data center optimization, the agencies reported progress in meeting OMB's three revised optimization metrics. Eight agencies reported that they met all three targets for the metrics GAO reviewed, five met two targets, and six met one target. In addition, one agency had not

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[5]GAO-20-279.

established any targets, and four agencies reported that they no longer owned any data centers.

However, we noted that, the data were not sufficiently reliable to report on a new fourth metric (availability) because of unexpected variances in the information reported by the agencies. We also determined that, in defining the optimization metrics, OMB had not included statistical universe parameters to enable determinations of progress. These metrics called for counts of the actual numbers of (1) virtualized servers, (2) data centers with advanced energy metering, and (3) underutilized servers; but the metrics did not include a count of the universe of all servers and all data centers. Accordingly, percentages could not be calculated to determine progress.

As a result of these findings, we made four recommendations to OMB to address weaknesses in the revised DCOI guidance. We also made four recommendations to three selected agencies to meet the data center cost savings and optimization performance metrics targets, as appropriate. As of December 2022, three of the eight recommendations had been fully implemented.

Additional Agency Actions Needed to Meet OMB Goals

In April 2019, we reported that the 24 DCOI agencies continued to report mixed progress toward achieving OMB's goals for closing data centers and realizing the associated savings by September 2018.[6] Thirteen agencies reported that they had met, or had plans to meet, all of their OMB-assigned closure goals by the deadline. However, 11 agencies reported that they did not have plans to meet their goals.

In addition, 16 agencies reported that they had met, or planned to meet, their cost savings targets, for a total of $2.36 billion in cost savings for fiscal years 2016 through 2018. This is about $0.38 billion less than OMB's DCOI savings goal of $2.7 billion. This shortfall was the result of five agencies reporting less in planned cost savings and avoidances in their DCOI strategic plans compared to the savings goals established for them by OMB. Three agencies did not have a cost savings target and did not report any achieved savings.

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[6]GAO-19-241.

Regarding data center optimization, the 24 agencies reported limited progress in fiscal year 2018 against OMB's five optimization targets. In this regard, 12 agencies reported that they had met at least one target, while 10 reported that they had not met any of the targets. Two agencies stated that they did not have a basis to report on progress as they did not own any data centers.

Further, 20 agencies did not plan to meet all of OMB's fiscal year 2018 optimization goals. Specifically, two agencies reported plans to meet all applicable targets, while six reported that they did not plan to meet any of the targets.

As a result of these findings, we recommended that 22 agencies take actions to meet the data center closure, cost savings, and optimization performance metrics targets, as appropriate. As of December 2022, 30 of the 36 recommendations had been fully implemented.

Continued Agency Actions Needed to Meet Goals and Address Prior Recommendations

In May 2018, we noted that the 24 agencies participating in DCOI reported mixed progress toward achieving OMB's goals for closing data centers by September 2018.[7] Over half of the agencies reported that they had either already met, or planned to meet, all of their OMB-assigned closure goals by the deadline. However, four agencies reported that they did not have plans to meet all of their assigned goals and two agencies were working with OMB to establish revised targets. With regard to agencies' progress in achieving cost savings, 20 agencies reported planned and achieved savings that totaled $1.62 billion for fiscal years 2016 through 2018. However, this total was approximately $1.12 billion less than OMB's DCOI savings goal of $2.7 billion.

In addition, the 24 agencies continued to report limited progress against OMB's five data center optimization targets, with one agency meeting four targets, one meeting three targets, six meeting either one or two targets, and 14 meeting none of their targets. Further, as of August 2017, most agencies reported that they were not planning to meet OMB's fiscal year 2018 optimization targets.

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[7]GAO-18-264.

We had previously made a number of recommendations to OMB and the
24 DCOI agencies to help improve the reporting of data center-related
cost savings and to achieve optimization targets. Accordingly, we did not
make new recommendations in our May 2018 report, but indicated that
we would continue to monitor the agencies' progress toward meeting
OMB's DCOI goals.

Agencies Need to Complete Plans to Address Inconsistencies in Reported Savings

In May 2017, we reported that the agencies continued to report significant
data center closures—totaling more than 4,300 through August 2016—
with more than 1,200 additional centers planned for closure through fiscal
year 2019.[8] The agencies also reported achieving about $2.3 billion in
cost savings through August 2016. However, agencies' total planned cost
savings for fiscal years 2016 through 2018 were more than $2 billion less
than OMB's fiscal year 2018 cost savings goal of $2.7 billion.

In addition, our May 2017 report identified weaknesses in agencies' DCOI
strategic plans.[9] Of the 23 agencies that had submitted their strategic
plans at the time of our review, seven had addressed all of the five
required elements of a strategic plan, as identified by OMB (such as
providing information related to data center closures and cost savings
metrics). The remaining 16 agencies that submitted their plans either
partially met or did not meet the requirements.

Given these findings, we recommended that OMB improve its oversight of
agencies' DCOI strategic plans and their reporting of cost savings and
avoidances. We also recommended that 17 agencies complete the
missing elements in their strategic plans, and that 11 agencies ensure the
reporting of consistent cost savings and avoidance information to OMB.
As of December 2020, all 30 recommendations had been fully
implemented.

In a subsequent report that we issued in August 2017, we noted that 22 of
the 24 agencies required to participate in the OMB DCOI had collectively
reported limited progress against OMB's fiscal year 2018 performance

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[8]GAO-17-388.

[9]GAO-17-388.

targets for the five optimization metrics.[10] Specifically, for each of the five targets, no more than five agencies reported that they had met or exceeded that specific target.

In addition, we noted in the report that most agencies had not implemented automated monitoring tools to measure server utilization, as required by the end of fiscal year 2018. Specifically, four agencies reported that they had fully implemented such tools and 18 reported that they had not done so. Two agencies did not have a basis to report on progress because they did not have any agency-owned data centers.

Accordingly, we recommended that OMB formally document a requirement for agencies to include plans, as part of existing OMB reporting mechanisms, to implement automated monitoring tools at their agency-owned data centers. We also recommended that the 18 agencies without fully documented plans take action within existing OMB reporting mechanisms to complete plans describing how they intended to achieve OMB's requirement to implement automated monitoring tools at all agency-owned data centers by the end of fiscal year 2018. As of December 2022, the agencies had implemented 13 of the 19 recommendations.

Agencies Need to Complete Cost Savings Goals and Improve Data Center Optimization

In a report that we issued in March 2016, we noted that agencies had reported significant data center closures—totaling more than 3,100 through fiscal year 2015—but fell short of the Office of Management and Budget's (OMB) fiscal year 2015 consolidation goal.[11] Agencies also reported significant consolidation cost savings and avoidances—totaling about $2.8 billion through fiscal year 2015. However, we pointed out that many agencies lacked complete cost savings goals for the next several years despite having closures planned.

In addition, we reported that 22 agencies had made limited progress against OMB's fiscal year 2015 data center optimization performance metrics, such as the utilization of data center facilities. Accordingly, we recommended that the agencies take action to complete their cost

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[10]GAO-17-448.

[11] GAO-16-323.

savings targets and improve optimization progress. As of December 2020, all 32 recommendations from this report were closed.

Appendix III: Comments from the U.S. Agency for International Development

January 4, 2023

Carol C. Harris
Director, Information Technology Acquisition Management Issues
U.S. Government Accountability Office
441 G Street, N.W.
Washington, D.C. 20226

Re: *" Data Center Optimization: Agencies Continue to Report "*
GAO-23-105946 (Engagement Code 105946)

Dear Ms. Harris:

     I am pleased to provide the formal response of the U.S. Agency for International Development (USAID) to the draft report produced by the U.S. Government Accountability Office (GAO) titled, *″ Data Center Optimization: Agencies Continue to Report ″ GAO-23-105946 (Engagement Code 105946)*.

     The GAO report accurately acknowledges and reflects USAID's program's status and successful compliance. The report accordingly has no recommendations for USAID.

     Thank you for the opportunity to respond to the draft report, and for the courtesies extended by your staff while conducting this engagement. We appreciate the opportunity to participate in the complete and thorough evaluation of our successfully managed Data Center program.

Sincerely,

Samir Goswami

Samir Goswami
Deputy Assistant Administrator
Bureau for Management

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Text of Appendix III: Comments from the U.S. Agency for International Development

January 4, 2023

Carol C. Harris

Director, Information Technology Acquisition Management Issues

U.S. Government Accountability Office 441 G Street, N.W.

Washington, D.C. 20226

Re: " Data Center Optimization: Agencies Continue to Report " GAO-23-105946 (Engagement Code 105946)

Dear Ms. Harris:

I am pleased to provide the formal response of the U.S. Agency for International Development (USAID) to the draft report produced by the U.S. Government Accountability Office (GAO) titled, " Data Center Optimization: Agencies Continue to Report "

GAO-23-105946 (Engagement Code 105946).

The GAO report accurately acknowledges and reflects USAID's program's status and successful compliance. The report accordingly has no recommendations for USAID.

Thank you for the opportunity to respond to the draft report, and for the courtesies extended by your staff while conducting this engagement. We appreciate the opportunity to participate in the complete and thorough evaluation of our successfully managed Data Center program.

Sincerely, Samir Goswami

Deputy Assistant Administrator Bureau for Management

Appendix IV: Comments from the Department of Veterans Affairs

**DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON**

January 12, 2023

Ms. Carol C. Harris
Director
Information Technology and Cybersecurity Issues
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Harris:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office (GAO) draft report: *DATA CENTER OPTIMIZATION: Agencies Continue to Report Progress* (GAO-23-105946).

VA generally concurs with the information and findings contained in the draft report. Where VA is mentioned, GAO accurately describes the Department's efforts in fiscal year 2022 to optimize data centers in compliance with the Office of Management and Budget's (OMB) Data Center Optimization Initiative (DCOI) including: VA's progress toward achieving goals for data center closures, plans for future closures, cost savings and progress against targets for OMB's data center optimization metrics.

The Department remains committed to meeting data center closure and savings goals and to continuing progress optimizing VA's data centers in compliance with OMB's DCOI guidance. VA appreciates the opportunity to review the draft report.

Sincerely,

Tanya J. Bradsher
Chief of Staff

Text of Appendix IV: Comments from the Department of Veterans Affairs

January 12, 2023

Ms. Carol C. Harris Director

Information Technology and Cybersecurity Issues

U.S. Government Accountability Office 441 G Street, NW

Washington, DC 20548 Dear Ms. Harris:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office (GAO) draft report: DATA CENTER OPTIMIZATION: Agencies Continue to Report Progress (GAO-23-105946).
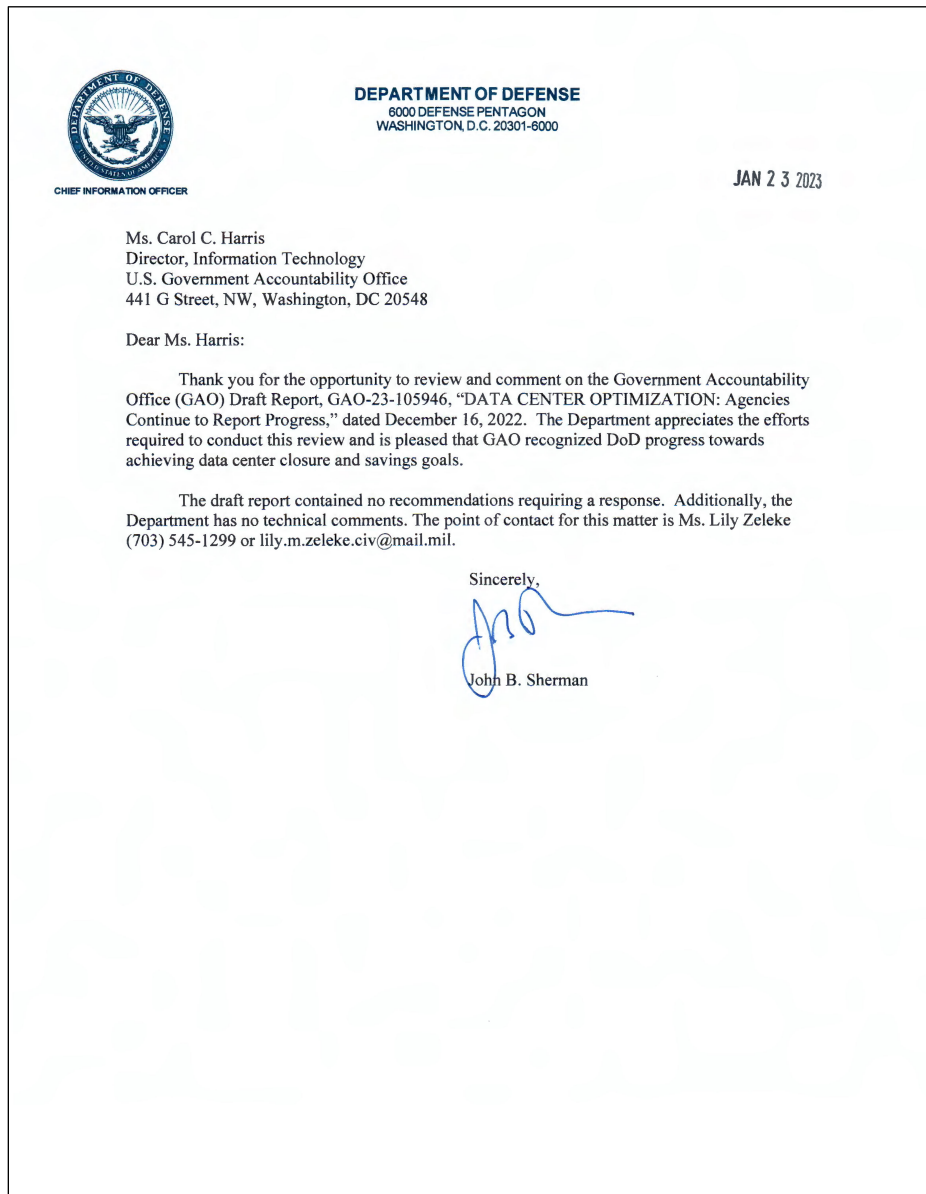
VA generally concurs with the information and findings contained in the draft report. Where VA is mentioned, GAO accurately describes the Department's efforts in fiscal year 2022 to optimize data centers in compliance with the Office of Management and Budget's (0MB) Data Center Optimization Initiative (DCOI) including: VA's progress toward achieving goals for data center closures, plans for future closures, cost savings and progress against targets for OMB's data center optimization metrics.

The Department remains committed to meeting data center closure and savings goals and to continuing progress optimizing VA's data centers in compliance with OMB's DCOI guidance. VA appreciates the opportunity to review the draft report.

Sincerely,

Tanya J. Bradsher Chief of Staff

Appendix V: Comments from the Department of Defense

DEPARTMENT OF DEFENSE
6000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-6000

CHIEF INFORMATION OFFICER

JAN 2 3 2023

Ms. Carol C. Harris
Director, Information Technology
U.S. Government Accountability Office
441 G Street, NW, Washington, DC 20548

Dear Ms. Harris:

Thank you for the opportunity to review and comment on the Government Accountability Office (GAO) Draft Report, GAO-23-105946, "DATA CENTER OPTIMIZATION: Agencies Continue to Report Progress," dated December 16, 2022. The Department appreciates the efforts required to conduct this review and is pleased that GAO recognized DoD progress towards achieving data center closure and savings goals.

The draft report contained no recommendations requiring a response. Additionally, the Department has no technical comments. The point of contact for this matter is Ms. Lily Zeleke (703) 545-1299 or lily.m.zeleke.civ@mail.mil.

Sincerely,

John B. Sherman

Text of Appendix V: Comments from the Department of Defense

Ms. Carol C. Harris

Director, Information Technology

U.S. Government Accountability Office 441 G Street, NW, Washington, DC 20548

Dear Ms. Harris:

Thank you for the opportunity to review and comment on the Government Accountability Office (GAO) Draft Report, GAO-23-105946, "DATA CENTER OPTIMIZATION: Agencies Continue to Report Progress," dated December 16, 2022. The Department appreciates the efforts required to conduct this review and is pleased that GAO recognized DoD progress towards achieving data center closure and savings goals.

The draft report contained no recommendations requiring a response. Additionally, the Department has no technical comments. The point of contact for this matter is Ms. Lily Zeleke (703) 545-1299 or lily.m.zeleke.civ@mail.mil.

Sincerely,

John B. Sherman

Appendix VI: Comments from the Social Security Administration

SOCIAL SECURITY
Office of the Commissioner

January 19, 2023

Carol C. Harris
Director, Information Technology and Cybersecurity
United States Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Director Harris:

Thank you for the opportunity to review the draft report "Data Center Optimization: Agencies
Continue to Report Progress" (GAO-23-105946). We have no comments.

Please contact me at (410) 965-2611 if I can be of further assistance. Your staff may contact
Trae Sommer, Director of the Audit Liaison Staff, at (410) 965-9102.

Sincerely,

Scott Frey
Chief of Staff

SOCIAL SECURITY ADMINISTRATION   BALTIMORE, MD 21235-0001

Text of Appendix VI: Comments from the Social Security Administration

January 19, 2023

Carol C. Harris

Director, Information Technology and Cybersecurity United States Government Accountability Office 441 G Street, NW

Washington, DC 20548 Dear Director Harris:

Thank you for the opportunity to review the draft report "Data Center Optimization: Agencies Continue to Report Progress" (GAO-23-105946). We have no comments.

Please contact me at (410) 965-2611 if I can be of further assistance. Your staff may contact Trae Sommer, Director of the Audit Liaison Staff, at (410) 965-9102.

Sincerely,

Scott Frey Chief of Staff

Appendix VII: GAO Contact and Staff Acknowledgments

GAO Contact

Carol C. Harris, (202) 512-4456 or harriscc@gao.gov

Staff Acknowledgments

In addition to the contact named above, individuals making contributions to this report included Eric Winter (Assistant Director), Jonathan Wall (Analyst-in-Charge), Lamis Alabed, Chris Businsky, and Donna Epler.

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