



December 2023

TECHNOLOGY MODERNIZATION FUND

Although Planned
Amounts Are
Substantial, Projects
Have Thus Far
Achieved Minimal
Savings

GAO Highlights

Highlights of [GAO-24-106575](#), a report to congressional committees

Why GAO Did This Study

Though agencies spend more than \$100 billion annually on IT, the federal government has faced longstanding problems in its IT management. The statutory provisions commonly referred to as the Modernizing Government Technology Act established TMF to help address key challenges in modernizing federal information systems.

The act includes a provision for GAO to report biennially on TMF. This third report (1) identifies the approved TMF projects, amounts of funds awarded, and estimated and actual cost savings; (2) determines the extent to which agencies' completed projects met their cost savings estimates; and (3) determines the extent to which agencies have used full and open competition for projects involving acquisitions of custom-developed IT.

GAO analyzed and summarized TMF financial data and documentation associated with 37 projects awarded funds. In addition, GAO analyzed cost estimate documentation for these projects. For applicable completed projects, GAO compared the difference between estimated and realized cost savings to OMB's variance threshold of 10 percent.

GAO also analyzed contract documentation for the 22 projects that issued contracts between September 2021 and February 2023. GAO determined whether each contract was awarded using full and open competition or exceptions were appropriately documented, in accordance with the Competition in Contracting Act of 1984 and the Federal Acquisition Regulation. GAO also interviewed relevant agency officials.

View [GAO-24-106575](#). For more information, contact Carol C. Harris at (202) 512-4456 or harriscc@gao.gov

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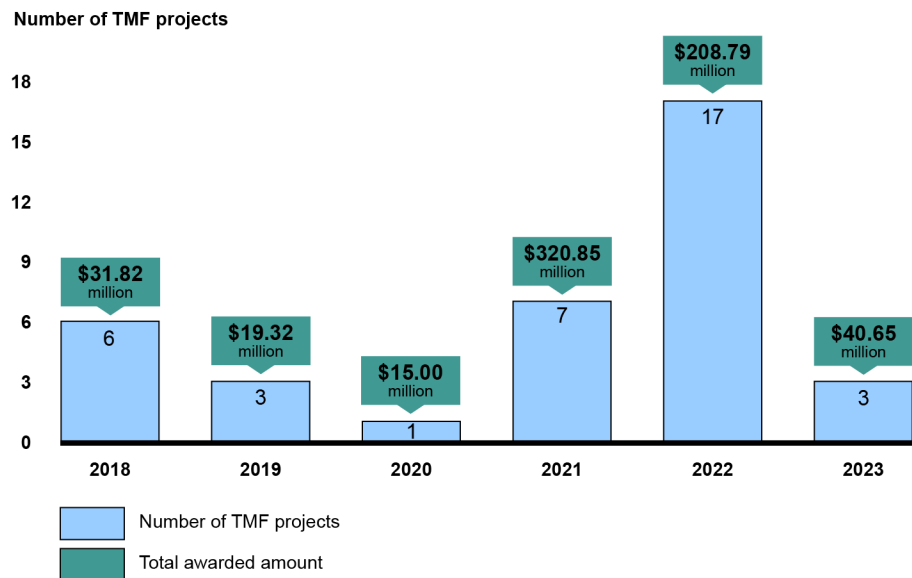
TECHNOLOGY MODERNIZATION FUND

Although Planned Amounts Are Substantial, Projects Have Thus Far Achieved Minimal Savings

What GAO Found

The Technology Modernization Fund (TMF) awards funding to agencies to, among other things, modernize aging federal information systems. As of February 2023, TMF had received approximately \$1.23 billion in appropriations, of which the Technology Modernization Board had awarded \$636 million to 37 projects (see figure). Of the 37 awarded projects, eight have realized cost savings totaling \$14.8 million; five of these anticipate further savings totaling \$2.6 million. An additional 16 projects anticipate \$738.6 million in combined savings. Thirteen projects neither anticipate nor have realized any cost savings.

Technology Modernization Fund (TMF) Project Awards as of February 2023



Source: GAO analysis of General Services Administration documentation. | GAO-24-106575

Of the seven projects that agencies had completed, two were on track with their savings (within the Office of Management and Budget's (OMB) 10 percent threshold), one was not on track, and one was anticipating cost avoidance rather than cost savings. For the remaining three projects, completion had not occurred within the prior 12 months. GAO determined that it would allow a full year of operations to occur before assessing savings.

As required under the Competition in Contracting Act of 1984, all procurements, with certain exceptions, must use full and open competition so that any qualified entity can submit an offer. From September 2021 through February 2023, 45 of 52 (87 percent) contracts used competitive procedures that are considered as achieving full and open competition. The remaining seven contracts were not competed using full and open competition, but appropriately documented authorized exceptions.

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Abbreviations

CBP	Customs and Border Protection
CIO	chief information officer
COBOL	common business-oriented language
DHS	Department of Homeland Security
Energy	Department of Energy
FPDS	Federal Procurement Data System
GSA	General Services Administration
HUD	Department of Housing and Urban Development
MGT	Modernizing Government Technology
OMB	Office of Management and Budget
TMF	Technology Modernization Fund
USAID	U.S. Agency for International Development
USDA	U.S. Department of Agriculture
VA	Department of Veterans Affairs

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December 12, 2023

Congressional Committees

Although agencies spend more than \$100 billion annually on IT, the federal government has faced longstanding problems in its IT management. Accordingly, in 2015 we added improving the management of IT acquisitions and operations to GAO's High-Risk List as a government-wide challenge.¹ In our April 2023 High-Risk Series update, we reported that the management of IT acquisitions and operations continued to face challenges and required significant attention to address outstanding issues.²

Recognizing the challenges in modernizing government IT systems, the President and Congress enacted legislation in December 2017 that established a new funding mechanism to improve, retire, or replace existing systems. The provisions of the National Defense Authorization Act for Fiscal Year 2018, commonly referred to as the Modernizing Government Technology (MGT) Act,³ established the Technology Modernization Fund (TMF) within the Department of the Treasury.⁴ The fund is intended to improve the efficiency and effectiveness of federal IT systems, especially aging legacy systems.

The Office of Management and Budget (OMB) and a program management office within the General Services Administration (GSA), in consultation with the Chief Information Officers Council, administer the

¹GAO, *High-Risk Series: An Update*, [GAO-15-290](#) (Washington, D.C.: Feb. 11, 2015).

²GAO, *High-Risk Series: Efforts Made to Achieve Progress Need to Be Maintained and Expanded to Fully Address All Areas*, [GAO-23-106203](#) (Washington, D.C.: Apr. 20, 2023).

³*Modernizing Government Technology Act* provisions of the *National Defense Authorization Act for Fiscal Year 2018*, Pub. L. No. 115-91, div. A, title X, subtitle G, 131 Stat. 1283, 1586-94 (2017).

⁴The act established a fund in the Department of the Treasury to provide transfers of amounts to agencies to help them improve, retire, or replace existing federal information technology systems.

TMF. The act also established a Technology Modernization Board,⁵ which is chaired by the Federal Chief Information Officer (CIO).⁶ The board evaluates the proposals submitted by agencies seeking funding to replace legacy systems or acquire new systems, recommends the funding of modernization projects to the Administrator of General Services, and monitors the progress and performance of approved projects. The GSA TMF Program Management Office began administering fund operations on March 5, 2018, and the board made its initial awards to projects on June 7, 2018.

The MGT Act included a provision for GAO to report biennially on the TMF and the projects receiving these funds. We issued our first report in December 2019 and our second report in 2021.⁷ For this report, our objectives were to (1) identify the approved projects, amounts of TMF funds awarded, and estimated and actual cost savings; (2) determine the extent to which agencies' completed projects met their cost savings estimates; and (3) determine the extent to which agencies have used full and open competition for projects involving acquisitions of custom-developed IT.

The scope of our review included OMB and GSA's TMF Program Management Office. Both agencies are responsible for TMF

⁵According to the MGT Act, the board shall be comprised of seven voting members, including the Federal CIO; a senior official from GSA with technical expertise in information technology development; an employee of the National Protection and Programs Directorate (now the Cybersecurity and Infrastructure Security Agency) of the Department of Homeland Security; and four employees of the federal government primarily having technical expertise in information technology development, financial management, cybersecurity and privacy, and acquisition.

⁶The Federal CIO is formally known as the Administrator of the Office of Electronic Government. The Office of the Federal CIO is part of OMB within the Executive Office of the President.

⁷GAO, *Technology Modernization Fund: Implementation of Recommendations Can Improve Fee Collection and Proposal Cost Estimates*, [GAO-22-105117](#) (Washington, D.C.: Dec. 10, 2021); and *Technology Modernization Fund: OMB and GSA Need to Improve Fee Collection and Clarify Cost Estimating Guidance for Awarded Projects*, [GAO-20-3](#) (Washington, D.C.: Dec. 12, 2019).

administration. We also performed work at the 23 agencies⁸ that had received the 37 awards from the fund as of February 28, 2023.⁹

For our first objective, we assessed the reported costs and cost savings for the 37 projects that were awarded funds during the period from June 7, 2018 (when projects first began to receive awards) through February 28, 2023. In particular, we obtained awarded fund information from the TMF Investment website and the GSA Congressional Justification for fiscal year 2024. We also reviewed documentation from the 37 projects, including proposal documentation, status briefings, cost savings estimates, and supporting documentation. The cost savings data was obtained from agencies' project savings estimates and documentation of actual savings. We compared the funding awarded with the projects' actual and planned cost savings. We did this for each project and for all projects combined.

We also analyzed financial data from the GSA program office on actual and planned TMF operating costs for fiscal years 2018 through 2029. Specifically, we analyzed GSA's actual operating costs from March 5, 2018 through February 28, 2023 from USASpending.gov.¹⁰ We reviewed the program office's planned operating costs for overseeing the fund through the end of fiscal year 2023. We also interviewed staff at OMB regarding its administrative responsibilities for the fund.

For our second objective, we reviewed the 37 projects awarded by the TMF to determine which had been completed. For each completed project, we compared the estimated fiscal year cost savings to the actual achieved savings calculated over the same fiscal year. We considered a variance of more than 10 percent as a potential concern and assessed

⁸The 23 agencies awarded TMF funding as of February 2023 were the Departments of Agriculture, Defense (Army), Education, Energy, Homeland Security, Housing and Urban Development, Labor, the Treasury, and Veterans Affairs; and the U.S. AbilityOne Commission, AmeriCorps, Customs and Border Protection, Equal Employment Opportunity Commission, Federal Trade Commission, GSA, National Archives and Records Administration, Office of Personnel Management, Postal Regulatory Commission, Railroad Retirement Board, Selective Service System, Social Security Administration, U.S. Agency for Global Media, and the U.S. Agency for International Development.

⁹This review assessed 37 unclassified TMF projects. GAO did not assess classified TMF projects during this review.

¹⁰USASpending.gov is a public-facing website that provides spending data from agencies within the federal government at <https://www.usaspending.gov/>.

the estimate further.¹¹ Our selection of a 10 percent variance as our threshold for assessing savings estimates was based on guidance described in previous GAO reports and OMB Circular A-11 guidance on breaches. We also interviewed the agencies' project officials responsible for developing the overall TMF cost savings estimate and associated cost savings regarding projects' estimation processes.

In addition, we assessed the reliability of the agencies' reported cost savings by reviewing the underlying data and identifying any errors or inaccuracies. We sought clarification from agency officials on any differences and assessed supporting documentation for any changes in anticipated cost savings. We also determined whether the agencies had processes and applications/tools in place to track and manage the cost savings data. We found these data to be sufficiently reliable for our purposes.

To address the third objective, we analyzed a list of contracts for the 22 projects that received awards between September 1, 2021, through February 28, 2023. We focused on 22 projects that awarded contracts or task orders (hereinafter referred to as contracts, unless otherwise specified) during this time period. In addition, we analyzed any updated contract documentation for the initial 11 projects that we previously reviewed in our report issued in December 2021.¹²

Using the agency-provided contract information, we obtained and analyzed data from the Federal Procurement Data System (FPDS)—a government contract award database—from September 1, 2021 through February 28, 2023.¹³ We analyzed FPDS data to identify whether each contract used full and open competition procedures. For those not identified as using full and open competition procedures, we reviewed contract documentation supporting exceptions to competition to determine whether the exceptions were appropriately documented.

¹¹GAO, *St. Lawrence Seaway: Estimates for the Asset Renewal Program Will Change, and Implementing Best Practices May Improve the Estimates' Reliability*, [GAO-10-541R](#) (Washington, D.C.: May 13, 2010).

¹²[GAO-22-105117](#).

¹³The Federal Procurement Data System (FPDS) is a web-based tool for agencies to report contract transactions. In addition, it is a searchable database of contract information that provides a capability to examine data across government agencies and provides managers a mechanism for determining where contract dollars are being spent.

Further details on our objectives, scope, and methodology are included in appendix I.

We conducted this performance audit from February 2023 to December 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

Federal agency IT systems provide essential services critical to the nation's health, economy, and defense. However, federal agencies increasingly rely on aging legacy systems, which can be costly. As we previously reported in May 2023, our review of federal legacy systems found that 10 federal agencies reported spending almost \$337 billion on operations and maintenance costs in fiscal year 2023.¹⁴ In addition, many of the government's IT investments used hardware parts that were unsupported and outdated software languages, such as the common business-oriented language (COBOL). This lack of vendor support sometimes created security vulnerabilities and additional costs because these known vulnerabilities were either technically difficult or prohibitively expensive to address.

Congress and the President enacted the MGT Act in December 2017 and established the TMF to provide funds to agencies to help them improve, retire, or replace existing systems.¹⁵ Congress appropriates money to the TMF, which is used to fund projects approved by the board.

Oversight of the Technology Modernization Fund

The MGT Act assigns specific responsibilities to OMB, GSA, and the Technology Modernization Board for the fund's administration and also assigns responsibilities to federal agencies that receive awarded funds.

- **OMB.** The act requires the Director of OMB to issue guidance on the administration of the fund and report the status of the awarded projects on a public website.¹⁶ OMB is required to report a description

¹⁴GAO, *Information Technology: Agencies Need to Continue Addressing Critical Legacy Systems*, [GAO-23-106821](#) (Washington, D.C.: May 10, 2023).

¹⁵Pub. L. No. 115-91 §1078(b)(3)(A), 131 Stat. at 1589 (2017).

¹⁶The Office of Management and Budget provides information on the status of awarded projects on the Technology Modernization Fund's website at <https://tmf.cio.gov/>.

of the project, project status (including any schedule delay and cost overruns), financial expenditure data related to the project, and the extent to which the project uses commercial products and services.

- **GSA.** The act designates the Administrator of General Services, in consultation with the Chief Information Officers Council and with the approval of the Director of OMB, responsibility for administering the fund. This includes, among other things: (1) providing direct technical support in the form of personnel services and other services; (2) assisting the Technology Modernization Board with the evaluation, prioritization, and development of agency modernization proposals; and (3) performing regular project oversight and monitoring of approved agency modernization projects.

In March 2018, GSA established a TMF Program Management Office within the agency to manage these functions. An executive director leads the office and reports to the Office of the Deputy Administrator within GSA. The act requires the Administrator of General Services, in consultation with the Director of OMB, to establish amounts to be paid at levels sufficient to ensure the solvency of the fund, including operating expenses.

- **Technology Modernization Board.** The act established a board, which is chaired by the Federal CIO, and is made up of seven federal government IT executives.¹⁷ The board is responsible for providing input to the Director of OMB to develop processes for agencies to submit proposals, making recommendations to the Administrator of General Services to help agencies refine their submitted proposals, and evaluating and approving submitted proposals.¹⁸ The board is also responsible for recommending the funding of modernization projects to the Administrator of General Services and monitoring the progress and performance of approved projects in consultation with

¹⁷As of September 2023, the Technology Modernization Board was comprised of the Federal CIO, GSA CIO, Director of Cybersecurity for the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency, CIO and Chief Privacy Officer of the Federal Deposit Insurance Corporation, National Archives and Records Administration CIO, United States Digital Service Administrator, and the National-Geospatial Intelligence Agency Chief Technology Officer.

¹⁸The MGT Act required the Technology Modernization Board to establish criteria for evaluating submitted proposals to address the greatest security, privacy, and operational risks; have the greatest government-wide impact; and have a high probability of success based on factors including a strong business case, technical design, consideration of commercial off-the-shelf products and services, procurement strategy (including adequate use of rapid, agile iterative software development practices), and program management.

the Administrator of General Services. In addition, the board is tasked with monitoring the operating costs of the fund.

As part of its oversight of awarded projects, the board requires each project to present a quarterly update and report on the status of milestones achieved to ensure the project is on schedule.

- **Other federal agencies.** The act states that any agency that submits an IT-related project proposal and receives a transfer of amounts from the TMF must reimburse the fund for the transfer, including any services of work performed in support of the transfer, in accordance with the terms established in the written agreement. After the board approves a project proposal (and before the transfer of funds to an agency), the Administrator of General Services, in consultation with the Director of OMB and the head of the agency, shall enter into a written agreement documenting how the funds will be used and the terms of repayment.

In July 2022, we issued a legal decision which found that TMF authorizing legislation leaves OMB and GSA the discretion to set rates at less than full reimbursement.¹⁹

OMB Issued Guidance on Applying for TMF Awards

In February 2018, OMB issued guidance on implementing the MGT Act that included instructions for agencies on submitting applications for TMF funding.²⁰ Agencies were allowed to begin submitting initial application proposals on February 27, 2018. The guidance included an initial application template that agencies were required to complete. As part of the template, agencies were required to provide an estimate of the TMF funding request and the agency's method used for cost estimation.

Subsequently, in March 2018, OMB issued funding guidelines for projects receiving awards. The guidelines stated that project proposals must include a reliable estimate of any project-related cost savings or avoidance relative to pre-modernization activities using the templates provided.²¹ In addition, the guidelines stated that estimates must undergo appropriate due diligence and concurrence from the requesting agency's

¹⁹B-333396, July 14, 2022.

²⁰Office of Management and Budget, *Implementation of the Modernizing Government Technology Act*, M-18-12 (Washington, D.C.: Feb. 27, 2018).

²¹Office of Management and Budget, *Funding Guidelines for Agencies Receiving Disbursements from the Technology Modernization Fund* (Washington, D.C.: Mar. 12, 2018).

Office of the Chief Financial Officer before submission to the board in consultation with OMB's Resource Management Office. The guidelines also stated that GSA's TMF Program Management Office could assist with completing the project proposal templates.

For agencies receiving a TMF award, the guidelines stated that agencies were required to reimburse amounts transferred from the fund and a fee, which was determined based on the amount of awarded funding. As part of the process, agencies were required to establish a written agreement with GSA that set forth the terms for reimbursing the transferred funds and the fee. Agencies were required to start making payments no more than one year after the initial amount of award funding was transferred and complete repayment within five years unless otherwise approved by OMB. While the guidelines noted that reimbursement was not contingent upon achieving project-related savings, agencies could use the project's generated cost savings to repay the award.

Additionally, on December 31, 2020, OMB updated its guidelines (in consultation with the TMF program office) to include a provision that project teams should follow their agency's implementation of OMB Circular A-11²² concerning cost estimating, and OMB Circular A-131²³ concerning value engineering.²⁴ The guidelines further instructed the project proposals to include a reliable estimate of project-related costs and any cost savings or avoidance relative to pre-modernization activities. Moreover, in March 2021, the GSA TMF Program Management Office began sending a memo to each agency awarded TMF funds. This memo reiterates that agencies are to follow their own agency's implementation of OMB Circular A-11 concerning cost-estimating policies and processes.

Agencies Follow a Two-Phase Proposal Process When Applying for a TMF Award

As of February 28, 2023, the TMF application process occurs in two phases, each requiring agencies to submit specific documents.

Phase 1

²²Office of Management and Budget, *Preparation, Submission, and Execution of the Budget*, Circular A-11 (Washington, D.C.: Aug. 6, 2021).

²³Office of Management and Budget, *Value Engineering*, Circular A-131 (Washington, D.C.: Dec. 26, 2013).

²⁴Office of Management and Budget, *Funding Guidelines for Agencies Receiving Disbursements from the Technology Modernization Fund* (Washington, D.C.: Dec. 31, 2020).

During Phase 1, agencies must submit an initial proposal providing preliminary information about the project, its purpose, and its anticipated benefits. Within this documentation, agencies must confirm that funding for this project has never explicitly been denied or restricted by Congress in accordance with the MGT Act.

Also, during this phase, the Technology Modernization Board evaluates proposals and decides whether to accept the initial proposal for project funding based on how well the project documentation demonstrates a strong execution strategy and technical approach and includes a strong team with an illustrated history of successful modernization efforts.

The board encourages agencies to consider adopting commercial technology solutions in their proposals and present a solid technical approach and acquisition strategy to implement those solutions. In addition, agencies are encouraged to provide information on the potential impact of the modernization effort on the agency's mission, feasibility, opportunity enablement (e.g., cost savings), and standard solutions. If the board approves the Phase 1 initial project proposal, the project team will move on to Phase 2.

Phase 2

In Phase 2, the agency must submit a financial plan showing a cost estimate and estimated savings from implementing the proposed project. Agencies must provide a more comprehensive project description than that provided in Phase 1, including discrete milestones, impact on agency mission or public-facing services, funding schedule, project plan, delivery approach, and financial plan. These documents are to be approved by each agency's chief financial officer and CIO. Phase 2 proposals must also address any other areas identified by the board in the initial project review. Further, the agency proposal team may be asked to prepare an in-person presentation for the board.

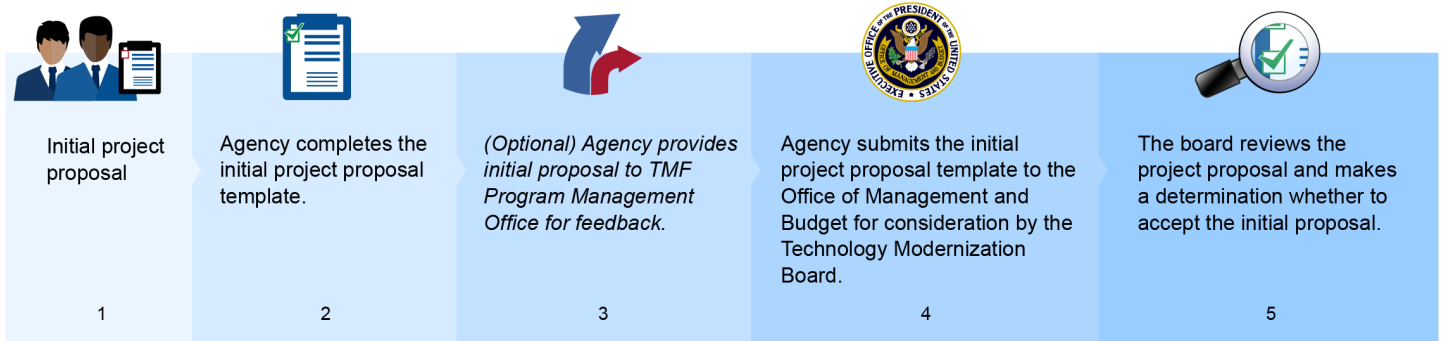
OMB's Resource Management Office also is to review the proposal documentation to ensure that the proposed project aligns with the requesting agency's mission. The office's review is intended to ensure that the proposal does not duplicate funding provided through existing appropriations, or has not previously been expressly denied funding or restricted by Congress. The review includes assessing the proposed project's information on reimbursing the transferred funds and the project's planned schedule. OMB also reported that GSA sends

information on the proposed projects to congressional appropriations committees before listing the information on the TMF's website.

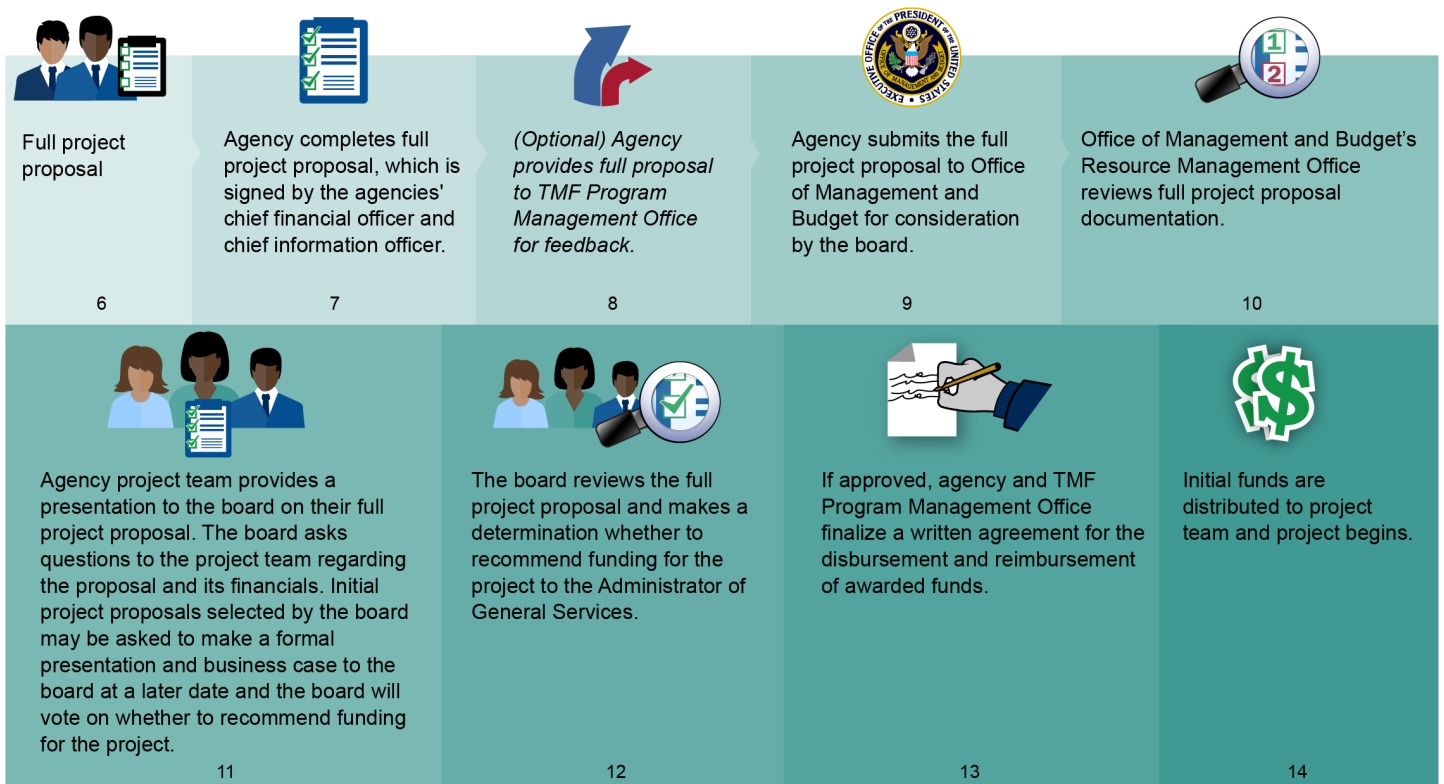
Agencies with projects that the board recommends for TMF funding must sign a written agreement outlining the reimbursement terms. In addition, projects receive incremental funding contingent on the successful execution of milestones outlined in the written agreement to transfer funds. Figure 1 describes the steps in both phases of the TMF proposal process.

Figure 1: Technology Modernization Fund (TMF) Process for Awarding Funds to Proposed Projects

Phase 1



Phase 2



Sources: GAO (analysis of TMF documentation, and icons); agency (logos). | GAO-24-106575

OMB and GSA Updated Reimbursement Guidelines

In March 2021, as part of the American Rescue Plan Act of 2021,²⁵ the TMF was appropriated \$1 billion. Subsequently, in May 2021, OMB updated its funding guidelines to agencies for reimbursing the Technology Modernization Fund, including criteria on project prioritization, reimbursement flexibility, and project fees. Specifically, as of June 2021, the new guidelines prioritize projects that cut across agencies and address immediate cybersecurity gaps, improve the public's ability to access government services, and modernize and support priority agency assets and services.

Additionally, the guidelines allowed agencies to apply for either a partial or minimal reimbursement of their awards. According to GSA TMF program officials, the partial reimbursement option is a reimbursement to the TMF of an amount greater than or equal to 25 percent and less than 100 percent of the project's award. According to the same officials, the minimal reimbursement option refers to a reimbursement to the TMF of greater than zero percent and less than 25 percent of the award. Further, OMB staff in the Office of E-Government and Information Technology stated that the default level of the minimal reimbursement option had been established at 5 percent of the TMF award amounts.

Agencies' Planned Cost Savings Are Substantial, but Actual Savings Thus Far Are Minimal

The Technology Modernization Board stated that an agency is encouraged (though not required) to demonstrate in its proposal how the proposed project would generate cost savings or how the modernization of the system would dramatically improve the quality of service provided.²⁶ In addition, OMB's funding guidelines state that the project proposal must include a reliable estimate of any project-related cost savings or avoidance using the templates provided.²⁷

As of February 2023, TMF had received approximately \$1.23 billion²⁸ in appropriations, of which the Technology Modernization Board had awarded \$636 million to 37 projects. Figure 2 provides an overview of the

²⁵American Rescue Plan Act of 2021, Pub. L. No. 117-2, Title IV, § 4011, 135 Stat. 4, 80 (2021).

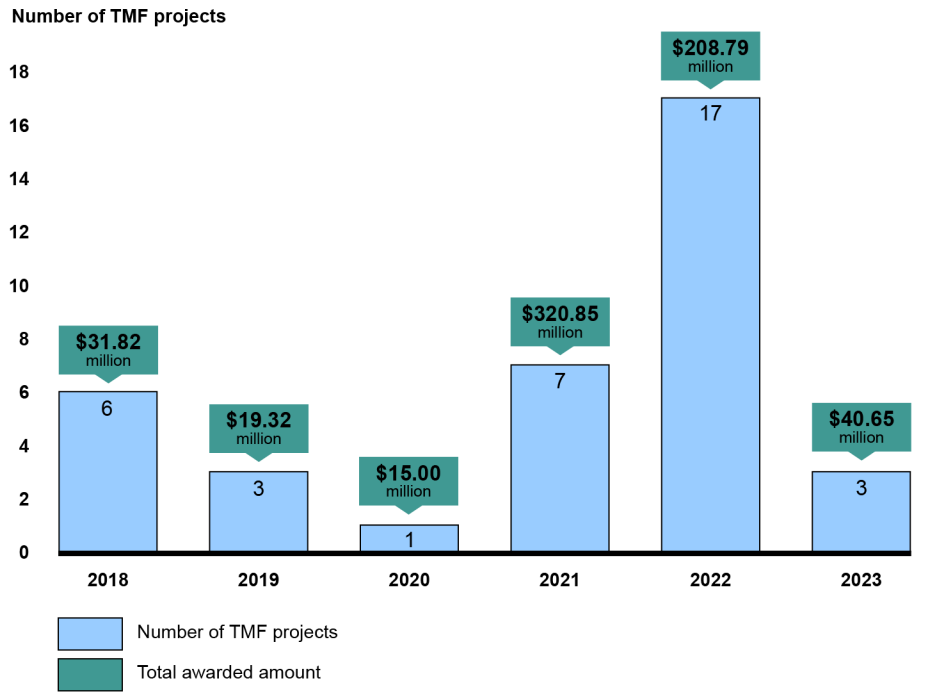
²⁶TMF.cio.gov is a public-facing website that provides proposal criteria for agencies within the federal government at: <https://tmf.cio.gov/criteria/>.

²⁷Office of Management and Budget, *Funding Guidelines for Agencies Receiving Disbursements from the Technology Modernization Fund* (Washington, D.C.: Dec. 31, 2020).

²⁸The cost for establishing and overseeing the TMF includes \$7.43 million for GSA to operate the fund.

number of projects announced and the total amount invested by year. See appendix III for a description of each project.

Figure 2: Technology Modernization Fund (TMF) Project Awards as of February 2023



Source: GAO analysis of General Services Administration documentation. | GAO-24-106575

While projects were awarded \$636 million, these awards have not yet been offset by savings. As of February 2023, eight projects have realized cost savings totaling \$14.8 million, five of which anticipate further savings of at least \$2.6 million. An additional 16 projects anticipate \$738.6 million in combined savings. Finally, 13 projects neither anticipate nor have realized any cost savings. Table 1 summarizes project costs and savings as of February 2023.

Table 1: TMF Project Costs and Savings^a, as of February 2023 (In Millions)

Agency	Project	Funds awarded ^b	Realized savings	Planned savings ^c
Department of Education	Zero Trust Architecture	\$20.000	\$3.645	Cost avoidance ^d
Equal Employment Opportunity Commission	Charge and Case Management System Modernization	\$4.000	\$0.336	\$1.004

Agency	Project	Funds awarded ^b	Realized savings	Planned savings ^c
Department of Homeland Security	Southwest Border Technology Integration Program	\$50.000	\$0.750	\$0.000
Department of Housing and Urban Development	Unisys Migration	\$13.850	\$7.382	\$0.618
Department of Labor	Certificate Processing Modernization	\$3.500	\$1.805	\$0.095
General Services Administration	Application Modernization	\$7.809	\$0.556	\$0.144
Selective Service System	Registration and Verification Modernization	\$5.989	\$0.193	\$0.000
U.S. Agency for International Development	Zero Trust Architecture	\$5.688	\$0.135	\$0.770
16 Projects with additional anticipated savings		\$227.742	\$0.000	\$738.560 ^e
Remaining 13 Projects		\$297.840	\$0.000	\$0.000
Total		\$636.418	\$14.803	\$741.192

Source: GAO analysis of the Technology Modernization Fund (TMF) Program Management Office and TMF project documentation. | GAO-24-106575

^aFor agencies that reported savings on an annual basis, we only looked at the first year of projected savings.

^bFunds awarded refers to the funds approved by the TMF board, Office of Management and Budget, and General Services Administration.

^cPlanned savings for projects listed are the actual savings minus estimated savings.

^dCost avoidance is an action taken in the immediate time frame that will decrease costs in the future.

^eThe Department of Agriculture's Network Modernization project accounts for \$579 million of the \$738,560,103 in savings.

Two of Three Completed Projects Are on Track to Meet Their Cost Savings Estimates

GSA's TMF project submission guidance advises agencies submitting project proposals to include estimates of project-related savings²⁹ and any anticipated cost avoidance³⁰ agencies plan to achieve through the

²⁹OMB defines cost savings as a reduction in actual expenditures below the projected level of costs to achieve a specific objective.

³⁰OMB defines cost avoidance as an action taken in the immediate time frame that will decrease costs in the future. For example, an engineering improvement that increases the mean time between failures and thereby decreases operation and maintenance costs is a cost avoidance action. Cost avoidance may be considered an additional benefit to quality or other non-quantifiable value engineering improvement.

new proposed project.³¹ GSA further directs agencies to calculate cost and savings estimates, as applicable, in accordance with the agency's implementation of OMB's circulars.

Pursuant to OMB's *Preparation, Submission, and Execution of the Budget*, as a part of monitoring investments' progress, agencies are encouraged to establish cost and schedule estimates that will require a formal explanation to the agency when breached.³² OMB's guidance states that a variance of 10 percent or more is a concern and should trigger formal reporting.

Agencies' TMF project cost savings and avoidance estimates are based on a set number of fiscal years. Planned project cost savings projection estimates can vary each fiscal year. For example, Customs and Border Protection's (CBP) Automated Commercial Environment (ACE) Collections Module project plans to avoid an estimated \$17.32 million in annual mainframe contract costs once ACE is moved to the cloud in the fall of 2023. These funds are to enable CBP to further its cloud migration efforts, and to offset recurring cloud utility costs.

In addition, agencies' schedules for achieving savings can change if the project undergoes scope or schedule changes. For example, GSA's Application Modernization Integrating Flexible Architectures project's initial fiscal year 2021 completion date was delayed to the first quarter of fiscal year 2023 due to project scope change in May of 2020. This caused a delay in the realized cost savings expectation initially set for fiscal year 2022.

As of February 2023, seven of the 37 TMF projects were completed. Three of the seven completed projects had at least a full fiscal year to realize cost savings. Another three did not have a full fiscal year to realize cost savings and one is anticipating cost avoidance rather than cost savings. Table 2 summarizes the status of the seven completed projects.

³¹Office of Management and Budget, *Implementation of the Modernizing Government Technology Act*, M-18-12 (Washington, D.C.: Feb. 27, 2018).

³²Office of Management and Budget, *Preparation, Submission, and Execution of the Budget*, Circular A-11 (Washington, D.C.: Aug. 6, 2021).

Table 2: Completed TMF Projects as of February 28, 2023

Agency	Project	Status
Department of Agriculture	Agricultural Marketing Service Specialty Crops System Modernization	Has not yet had a full year to realize cost savings
Department of Agriculture	Infrastructure Optimization and Cloud Adoption	Has realized cost savings outside the 10% threshold
Department of Energy	Enterprise Cloud Email	Has anticipated cost avoidance
Department of Housing and Urban Development	Unisys Mainframe Migration	Has realized first year of cost savings within 10% threshold
Department of Labor	Certificate Processing Modernization	Has realized first year of cost savings within 10% threshold
Customs and Border Protection	Automated Commercial Environment Collections Module	Has not yet had a full year to realize cost savings
General Services Administration	Application Modernization	Has not yet had a full year to realize cost savings

Source: Data submitted to the Technology Modernization Fund. | GAO-24-106575

Of the three projects that had at least a full year to realize cost savings, two were on track with their savings (within OMB’s 10 percent threshold) and one was not. Specifically, Labor estimated that the Certificate Processing Modernization project would save \$1,900,000 in the first fiscal year after project completion in November 2020. Labor realized savings of \$1,804,623 (a 5 percent variance). Similarly, the Department of Housing and Urban Development (HUD) estimated that its Unisys Mainframe Migration project would save \$8,000,000 in the first year after project completion. HUD realized savings of \$7,382,430 (a 7.7 percent variance).

However, the U.S. Department of Agriculture’s (USDA) Infrastructure Optimization and Cloud Adoption project’s saving estimate is not on track because its savings were not within the 10 percent threshold of its estimate. The agency expected to achieve a savings of \$573,119 from fiscal year 2019 to 2023. This estimate already represented a decrease in savings of \$14.6 million as the agency reduced the project scope in 2019. However, since project completion, USDA no longer anticipates savings from the initiative.

The status of the three projects that were completed but had not yet had a full year to realize cost savings as of February 2023 are as follows:

- USDA’s Agricultural Marketing Service Specialty Crops System Modernization project was completed in the fourth quarter of fiscal year 2022. USDA reported an estimated cost savings of \$1.69 million for the first fiscal year but has not yet reported actual cost savings.
- GSA’s Application Modernization Integrating Flexible Architectures project was completed in the first quarter of fiscal year 2023. GSA reported an estimated cost savings of \$700,000 for the first fiscal year and has reported achieving \$556,000 in savings as of February 28, 2023.
- CBP’s Automated Commercial Environment Collections Module releases four through six were completed in the fourth quarter of fiscal year 2022. CBP reported a total estimated cost savings of \$51.6 million and plans to realize savings in fiscal year 2024.

Finally, the Department of Energy’s (Energy) Enterprise Cloud Email project was completed in fiscal year 2022 and reported cost avoidance instead of cost savings. According to Energy’s Office of the Chief Information Officer, the Enterprise Cloud Email Project leverages M365 licensing not only to support Energy’s email requirements but also its collaboration using capabilities such as Microsoft Teams and One Drive for Business.

All TMF Project Acquisitions Used Full and Open Competition or Appropriately Documented Authorized Exceptions

The MGT Act requires the Administrator of GSA to ensure that the use of commercial off-the-shelf products and services are incorporated to the greatest extent practicable in agency projects awarded funding through TMF. As required under the Competition in Contracting Act of 1984, all procurements, with certain exceptions,³³ must be competed on a full and open basis so that all responsible sources are permitted to compete.³⁴

Agencies are also required to publicly report their contract transactions in FPDS, including information on the type of award made and whether competitive procedures were used. In addition, if an agency issues orders under an existing contract where multiple vendors can compete, then the agency is required to identify whether competitive procedures were used. Further, if the contract did not use competitive procedures, then the

³³Exceptions to competition are documented in appropriate agency justifications and approvals, an example of which includes circumstances when the contractor is the only responsible source and no other supplies or services will satisfy agency requirements.

³⁴Competition in Contracting Act of 1984, Pub. L. No. 98-369, div. B, title VII, §§ 2711(a) (1) (civilian), 2712 (military), 98 Stat. 1175, 1184 (1984), codified at 41 U.S.C. § 3301 and 10 U.S.C. § 2304.

agency is required to report the reason that the contract was not competed.

According to FPDS data, the majority of TMF-funded projects used competitive procedures. As of February 2023, 22 of the 37 TMF-funded projects had awarded new contracts for work on the projects.³⁵ Specifically, from September 1, 2021, through February 28, 2023, 45 of 52 contracts awarded in support of the 22 projects used full and open competitive procedures.³⁶

In competing the 45 contracts, agency officials responsible for the management of the 22 funded projects reported that these awards relied on existing IT service contracts—such as federal supply schedule and government-wide acquisition contracts, and blanket purchase agreements—or were otherwise competitively awarded.³⁷ By using existing contracts and blanket purchase agreements that had originally followed full and open competitive procedures, the agencies complied with the requirements for using competitive procedures. In those cases where the agencies used existing blanket purchase agreements, these orders were coded as competitive based on data reported in FPDS.

The remaining seven of the 52 new contracts were not competed. However, each project appropriately documented use of authorized exceptions to full and open competition. For example,

- CBP completed a justification and approval for other than full and open competition on an order to, among other things, sustain critical application software development and testing under the Automated Commercial Environment system. Contract documents stated that only one responsible source can perform required services and that competition would result in unacceptable risk to the government.
- The Department of Homeland Security (DHS) completed a justification and approval for other than full and open competition on an order to prevent a break in service while migrating to a new governance, risk,

³⁵Six of the 37 TMF-funded projects did not report any new contracts from September 2021 to February 2023. In addition, nine of the 37 projects have not yet awarded any contracts, as of February 2023.

³⁶We reviewed all task orders that were issued during this period and those task orders complied with the requirements for full and open competition.

³⁷A blanket purchase agreement is a simplified method of filling anticipated repetitive needs for supplies or services. See Federal Acquisition Regulation 48 C.F.R. § 8.405-3.

and compliance platform. Contract documents stated that the agency's need for contractor services was so urgent that providing a fair opportunity would result in unacceptable delays.³⁸

- GSA completed a justification and approval for other than full and open competition on an order for agile software development services. Contract documents cited the justification that the work is a logical follow-on to an original order and fair opportunity was not provided in the interest of economy and efficiency.

Competition is a cornerstone of the acquisition system and a critical tool for achieving the best possible return on investment for taxpayers. Agencies' adherence to federal acquisition requirements for TMF-funded investments should help ensure that these funds are used appropriately to benefit both the agencies and the public.

Agency Comments

We provided a draft of this report to GSA, OMB, and the 21 agencies that had received awards from the fund as of February 2023 for their review and comment.³⁹ GSA and OMB did not agree or disagree with the information presented in this report. Both agencies provided technical comments, which we incorporated as appropriate.

In addition, we received responses from the 21 agencies. Two of the agencies stated that they agreed with the information presented in the report, and 19 agencies did not state whether they agreed or disagreed with the report.

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

- Via email, an audit liaison responsible for overseeing GAO audits in the Department of Defense Office of CIO stated that the agency concurred with the findings in the draft report and had no comments.
- Via email, an audit liaison responsible for overseeing GAO audits in USDA's Office of the CIO stated that the agency concurred with the findings in the draft report and had no comments.

³⁸The Federal Acquisition Regulation requires that, with certain exceptions, the contracting officer provide each awardee a fair opportunity to be considered for each order exceeding the micro-purchase threshold issued under multiple delivery-order contracts or multiple task order contracts. See FAR 48 C.F.R. § 16.505(b).

³⁹While GSA and 22 other agencies had received awards from the fund as of February 2023, DHS provided comments on behalf of CBP.

Of the 19 agencies that did not agree or disagree with the draft report, three agencies (U.S. AbilityOne Commission, Social Security Administration, and U.S. Agency for International Development) provided letters indicating they had no comments, which are reprinted in appendices IV, V, and VI. The remaining 16 agencies provided emails indicating that they had no comments. These agencies were AmeriCorps, Department of Education, Department of Energy, DHS, Department of Labor, Department of Treasury, Department of Veterans Affairs, Equal Employment Opportunity Commission, Federal Trade Commission, HUD, National Archives and Records Administration, Office of Personnel Management, Postal Regulatory Commission, Railroad Retirement Board, Selective Service System, and U.S. Agency for Global Media. Three agencies (DHS, Social Security Administration, Selective Service System) provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to 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 is available at no charge on GAO's website at <https://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, M.D.
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Martin Heinrich
Chair
The Honorable John Hoeven
Ranking Member
Subcommittee on Agriculture, Rural Development, Food and Drug
Administration, and Related Agencies
Committee on Appropriations
United States Senate

The Honorable Jeanne Shaheen
Chair
The Honorable Jerry Moran
Ranking Member
Subcommittee on Commerce, Justice, Science, and Related Agencies
Committee on Appropriations
United States Senate

The Honorable Chris Van Hollen
Chair
The Honorable Bill Hagerty
Ranking Member
Subcommittee on Financial Services and General Government
Committee on Appropriations
United States Senate

The Honorable Chris Murphy
Chair
The Honorable Katie Britt
Ranking Member
Subcommittee on Homeland Security
Committee on Appropriations
United States Senate

The Honorable Tammy Baldwin
Chair
The Honorable Shelley Moore Capito
Ranking Member
Subcommittee on Labor, Health and Human Services, Education, and
Related Agencies
Committee on Appropriations
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

The Honorable Andy Harris
Chairman
The Honorable Sanford Bishop
Ranking Member
Subcommittee on Agriculture, Rural Development, Food and Drug
Administration, and Related Agencies
Committee on Appropriations
House of Representatives

The Honorable Dave Joyce
Chairman
The Honorable Henry Cuellar
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Subcommittee on Homeland Security
Committee on Appropriations
House of Representatives

The Honorable Hal Rogers
Chair
The Honorable Matt Cartwright
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Subcommittee on Commerce, Justice, Science, and Related Agencies
Committee on Appropriations
House of Representatives

The Honorable Steve Womack
Chair
The Honorable Steny Hoyer
Ranking Member
Subcommittee on Financial Services and General Government
Committee on Appropriations
House of Representatives

The Honorable Robert Aderholt
Chair
The Honorable Rosa DeLauro
Ranking Member
Subcommittee on Labor, Health and Human Services, Education, and
Related Agencies
Committee on Appropriations
House of Representatives

Appendix I: Objectives, Scope, and Methodology

Our objectives were to: (1) identify the approved projects, amounts of TMF funds awarded, and estimated and actual cost savings; (2) determine the extent to which agencies' completed projects met their cost savings estimates; and (3) determine the extent to which agencies have used full and open competition for projects involving acquisitions of custom-developed IT.

The scope of our review included the Office of Management and Budget (OMB) and the General Services Administration's (GSA) Technology Modernization Fund (TMF) Program Management Office—the two organizations responsible for TMF administration. We also performed work at the 23 agencies¹ that had received the 37 awards from the fund as of February 28, 2023.

For our first objective, we obtained and analyzed financial data from the GSA program office on actual and planned TMF operating costs for fiscal years 2018 through 2029 (fiscal year 2018 was the first year that the fund was in operation and fiscal year 2029 is the last year during which agencies plan to make reimbursements to the fund).² Specifically, we analyzed GSA's actual operating costs from March 5, 2018 through February 28, 2023 from USASpending.gov³ and reviewed the program office's planned operating costs for overseeing the fund through the end of fiscal year 2023. We also reviewed documentation from the 37 projects, including proposal documentation, status briefings, cost savings estimates, and supporting documentation.

To determine the accuracy and completeness of GSA's financial data on the operating costs for TMF administration, we compared the information on the operating costs provided by the agency to the spending amounts reported by GSA on USASpending.gov for obvious errors and

¹The 23 agencies awarded TMF funding as of February 2023 were the Departments of Agriculture, Defense (Army), Education, Energy, Homeland Security, Housing and Urban Development, Labor, the Treasury, and Veterans Affairs; and the U.S. AbilityOne Commission, AmeriCorps, Customs and Border Protection, Equal Employment Opportunity Commission, Federal Trade Commission, GSA, National Archives and Records Administration, Office of Personnel Management, Postal Regulatory Commission, Railroad Retirement Board, Selective Service System, Social Security Administration, U.S. Agency for Global Media, and U.S. Agency for International Development.

²We previously reported that GSA is the only federal agency obligating funds from the TMF to cover operating costs.

³USASpending.gov is a public-facing website that provides spending data from agencies within the federal government at <https://www.usaspending.gov/>.

inconsistencies. Based on these steps, we did not identify any significant errors related to the accuracy or completeness of the data. Additionally, we previously reported on steps taken to ensure the accuracy and completeness of GSA's financial data on the operating costs for TMF administration. Based on these steps, we determined that these data were sufficiently reliable for us to be able to report on GSA's operating costs for TMF administration.⁴

We also obtained and analyzed agency documentation from, and interviewed officials within GSA's TMF Program Management Office regarding the fund's actual and planned operating expenses as of February 28, 2023. Further, we obtained and analyzed project proposal documentation and signed written agreements and interviewed officials in charge of TMF-funded projects within the Office of the Chief Information Officer (CIO) and other appropriate offices at each of the 23 agencies that received awards from September 1, 2021 through February 28, 2023. In addition, we obtained and analyzed any updated proposal documentation or additional signed written agreements for the initial 11 projects that we had previously reviewed in December 2021 (that had received awards from June 7, 2018 through August 31, 2021).

For our second objective, we reviewed the 37 projects awarded by the TMF to determine which had been completed. For each completed project that had at least a full fiscal year of cost savings, we compared the estimated fiscal year cost savings to the actual achieved savings calculated over the same fiscal year. We considered a variance of more than 10 percent as a potential concern and assessed the estimate further. Our selection of a 10 percent variance as our threshold for assessing savings estimates was based on guidance described in previous GAO reports and OMB Circular A-11⁵ guidance on breaches.⁶ We also interviewed the agencies' project officials responsible for developing the overall TMF cost savings estimates regarding projects' estimation processes.

⁴GAO, *Technology Modernization Fund: OMB and GSA Need to Improve Fee Collection and Clarify Cost Estimating Guidance for Awarded Projects*, [GAO-20-3](#) (Washington, D.C.: Dec. 12, 2019).

⁵Office of Management and Budget, Preparation, Submission, and Execution of the Budget, Circular A-11 (Washington, D.C.: Aug. 6, 2021).

⁶GAO, *St. Lawrence Seaway: Estimates for the Asset Renewal Program Will Change, and Implementing Best Practices May Improve the Estimates' Reliability*, [GAO-10-541R](#) (Washington, D.C.: May 13, 2010).

We assessed the agencies' proposed cost savings by comparing initial project proposals to current estimates. We sought clarification from agency officials on any differences and assessed supporting documentation for any changes in anticipated cost savings. In addition, we assessed the reliability of agencies' reported cost savings by reviewing the underlying data and identifying any errors or inaccuracies. We also determined whether the agencies had processes and applications/tools in place to track and manage the cost savings data. We found this data to be sufficiently reliable for our purposes.

To address the third objective, we obtained and analyzed a list of contracts for each of the projects awarded funds through February 28, 2023. Specifically, we obtained and analyzed a list of contract identifiers for the 22 projects awarded funds between September 1, 2021 and February 28, 2023. In addition, we obtained and analyzed any updated contract documentation for the initial 11 projects awarded that we previously reviewed in our report issued in December 2021.⁷

Using the agency-provided contract information, we obtained and analyzed data from the Federal Procurement Data System (FPDS)—a government contract award database—from September 1, 2021 through February 28, 2023.⁸ We analyzed FPDS data to identify whether each contract used full and open competition procedures in accordance with the Competition in Contracting Act of 1984⁹ and the Federal Acquisition

⁷GAO, *Technology Modernization Fund: Implementation of Recommendations Can Improve Fee Collection and Proposal Cost Estimates*, [GAO-22-105117](#) (Washington, D.C.: Dec. 10, 2021); and *Technology Modernization Fund: OMB and GSA Need to Improve Fee Collection and Clarify Cost Estimating Guidance for Awarded Projects*, [GAO-20-3](#) (Washington, D.C.: Dec. 12, 2019).

⁸The Federal Procurement Data System (FPDS) is a web-based tool for agencies to report contract transactions. In addition, it is a searchable database of contract information that provides a capability to examine data across government agencies and provides managers a mechanism for determining where contract dollars are being spent.

⁹The *Competition in Contracting Act of 1984* requires agencies to obtain full and open competition through the use of competitive procedures in their procurement activities unless otherwise authorized in law. See Pub. L. No. 98-369, div. B, title VII, §§ 2711(a)(1) (civilian), 2712 (military), 98 Stat. 1175, 1184 (1984), codified at 41 U.S.C. § 3301 and 10 U.S.C. § 2304.

Regulation.¹⁰ For those not identified as using full and open competition procedures, we reviewed contract documentation supporting exceptions to competition to determine whether the exceptions were appropriately documented. To ensure the accuracy and completeness of the awarded projects' contract information related to the use of full and open competition, we presented the results of our analysis to officials in charge of project acquisitions at each agency and asked these officials to verify the completeness and accuracy of the FPDS data and provide any updates, as appropriate. Officials in charge of all the awarded projects confirmed the contract information related to the use of full and open competition and provided additional contract acquisition data, as appropriate. Based on these steps, we determined that these data were sufficiently reliable to report on TMF-funded project acquisitions' use of full and open competition.

We conducted this performance audit from February 2023 to December 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.

¹⁰In implementing the *Competition in Contracting Act of 1984*, the Federal Acquisition Regulation (FAR) requires that contracting officers promote and provide for full and open competition in soliciting offers and awarding government contracts. Full and open competition, when used with respect to a contract action, means that all responsible sources are permitted to compete. See FAR 48 C.F.R. § 2.101 and subpart 6.1. Allowable exceptions to full and open competition include circumstances when the contractor is the only responsible source, and no other supplies or services will satisfy agency requirements. See FAR 48 C.F.R. subpart 6.3.

Appendix II: GAO Previously Reported on TMF-Related Efforts

Since the enactment of the provisions commonly referred to as the Modernizing Government Technology (MGT) Act in fiscal year 2018, GAO has reported biennially on the Technology Modernization Fund (TMF) and projects that received awards from TMF.¹ Accordingly, we have published two reports documenting the findings from each of these reviews,² which included five recommendations to the General Services Administration (GSA) and the Office of Management and Budget (OMB). As of October 2023, agencies had implemented two of the five recommendations; one is not yet fully implemented, and the remaining two are no longer applicable.

December 2021 Report Addressed the Implementation of Fee Collection and Cost Estimates

In December 2021, we reported that TMF operating expenses continued to outpace fee collection.³ As of August 2021, GSA had received fee payments totaling about \$810,000, or about 29 percent of its operating expenses of \$2.8 million. However, beginning in fiscal year 2022, GSA ended the collection of fees and planned to set aside available balances within the fund to cover expenses. Therefore, our prior recommendations to OMB and GSA to develop and implement a plan to fully recover operating expenses with fee collection is no longer applicable.

Furthermore, we reported that most of the TMF projects' reported savings estimates derived from cost estimates were unreliable. Specifically, three of the four projects awarded funds between September 2019 and August 2021 did not fully incorporate best practices for a reliable cost estimate, as defined in OMB Circular A-11⁴ (which references GAO's Cost Estimating and Assessment Guide).⁵ As of October 2023, GSA has not yet implemented GAO's prior recommendation to improve the instructions for the TMF cost estimate template required of each proposal. Such

¹Modernizing Government Technology Act provisions of the National Defense Authorization Act for Fiscal Year 2018, Pub. L. No. 115-91, div. A, title X, subtitle G, 131 Stat. 1283, 1586-94 (2017).

²GAO, *Technology Modernization Fund: Implementation of Recommendations Can Improve Fee Collection and Proposal Cost Estimates*, [GAO-22-105117](#) (Washington, D.C.: Dec. 10, 2021); and *Technology Modernization Fund: OMB and GSA Need to Improve Fee Collection and Clarify Cost Estimating Guidance for Awarded Projects*, [GAO-20-3](#) (Washington, D.C.: Dec. 12, 2019).

³[GAO-22-105117](#).

⁴Office of Management and Budget, *Preparation, Submission, and Execution of the Budget*, Circular A-11 (Washington, D.C.: Aug. 6, 2021).

⁵GAO, *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs*, [GAO-20-195G](#) (Washington, D.C.: Mar. 12, 2020).

action would help ensure that the TMF board is reviewing documentation that is complete, accurate, and reliable.

**December 2019 Report
Addressed the Need for
OMB and GSA to Improve
Fee Collection and Clarify
Cost Estimating Guidance
for Awarded Projects**

In December 2019, we reported that OMB and GSA needed to improve fee collection and clarify cost estimating guidance for the initial seven awarded projects.⁶ Specifically, we noted that GSA had obligated about \$1.2 million to cover TMF operating expenses but had recovered only about 3 percent of those expenses through fee payments.

We reported that due to several factors, GSA had collected fewer fees than planned to offset costs. These factors were: (1) no fees were collected in the first year of operation, (2) projects chose longer periods to make payments, (3) projects made payments based on funds transferred, (4) fee rates were determined based on assumptions regarding appropriations that were not met, and (5) project changes may affect fee collection.

We also reported that these initial seven projects' reported savings estimates derived from cost estimates were not reliable. None of the projects incorporated all of the best practices for a reliable cost estimate, as defined in OMB and GAO guidance.

In the December 2019 report, we made the following recommendations to OMB and GSA:

- OMB and GSA should clarify the requirement in the TMF guidance that agencies follow the cost estimating process outlined in OMB Circular A-11 when developing the proposal cost estimate.
- OMB and GSA should develop and implement a plan that outlines the actions needed to fully recover the TMF Program Management Office's operating expenses with fee collection in a timely manner.
- GSA should develop detailed guidance for completing the TMF project cost estimate template, including information on the data elements and the fields required to be completed, in order to help ensure the accuracy and completeness of the provided information.

OMB and GSA implemented our recommendation on clarifying cost estimating guidance. Specifically, in December 2020, OMB and GSA updated their guidance to clarify the requirement in the TMF guidance

⁶[GAO-20-3](#).

**Appendix II: GAO Previously Reported on TMF-
Related Efforts**

that agencies follow the cost estimating process outlined in OMB Circular A-11, when developing the proposal cost estimate.

Appendix III: Agency Projects That Received Awards from the Technology Modernization Fund (TMF), as of February 2023

Table 3 includes a detailed description of the 37 projects for the Technology Modernization Fund.¹

Table 3: Agency Project Awards from the Technology Modernization Fund (TMF), as of February 2023

Agency	Project description	Date of award announcement	Total funds awarded ^a (Rounded to the nearest thousand)
Department of Agriculture	The Farmers.Gov Portal project developed tools to help reduce manual data entry and developed a proof of concept for the system. The project was closed out prior to implementation.	June 7, 2018	\$4,000,000
Department of Energy	The Enterprise Cloud Email project migrated approximately 16,000 email mailboxes to cloud services and decommissioned approximately 2,200 email mailboxes.	June 7, 2018	\$2,436,000
Department of Housing and Urban Development	The Unisys Migration project migrated four critical mission systems to the cloud.	June 7, 2018	\$13,850,000
Department of Agriculture	The Infrastructure Optimization project migrated critical applications to the cloud, conducted additional application rationalization efforts using established best practices, and set an example of how cloud migration could be tackled successfully across the agency.	October 29, 2018	\$220,000
Department of Labor	The Visa Application Transformation project transitioned the agency's paper-based certification process for certain types of visas to a digital E-Certification process.	October 29, 2018	\$3,500,000
General Services Administration	The Application Modernization project modernized 12 legacy applications.	October 29, 2018	\$7,809,000
General Services Administration	The NewPay project was originally intended to modernize the agency's payroll system and replace it with a cloud-based software as a service solution. This project was also intended to lay the foundation for modernizing federal legacy payroll systems to a cloud-based solution for the federal government. After the General Services Administration (GSA) and other agencies (that serve as payroll providers for federal civilian employees) did not receive funding for the migration of legacy payroll systems to NewPay by fiscal year 2020, the scope of the project was updated in July 2020. The revised project scope was to focus on standing up initial payroll capabilities and configuring 65 of the most common pay plans within the federal government to create a tool that agency payroll providers could use in the future if funding was secured. In September 2020, the agency completed the configuration and testing of the payroll solution for the planned 65 pay plans, and the project was closed.	February 11, 2019	\$7,731,000

¹Classified investment details are not shown within the table.

Appendix III: Agency Projects That Received Awards from the Technology Modernization Fund (TMF), as of February 2023

Agency	Project description	Date of award announcement	Total funds awarded^a (Rounded to the nearest thousand)
Department of Agriculture	The Specialty Crops System Modernization project is intended to accelerate the modernization of Agricultural Marketing Service Specialty Crops Program billing, inspection, and certificate generation and issuance processes that support the inspection and certification of 10.7 billion pounds of processed fruit and vegetable products and 49.9 billion pounds of fresh fruits and vegetables.	October 21, 2019	\$8,000,000
Equal Employment Opportunity Commission	The Charge and Case Management System Modernization project is intended to accelerate the modernization of the commission's charge and case management system, allowing for faster, more efficient review of cases and will reduce the costs of operating the system.	October 21, 2019	\$4,000,000
Customs and Border Protection	The Automated Commercial Environment Collections Module project is intended to modernize the outdated Automated Commercial System platform to improve customs enforcement, revenue collections, trade protections, and user experience through improved features and business capabilities, which in the long run reduces the operations and maintenance costs associated with the existing system. The agency expects to complete the project in fiscal year 2024.	July 27, 2020	\$15,000,000
Department of Labor	The Data Modernization project is intended to modernize enterprise data management and analytics capabilities to help improve availability and accessibility of critical data to all consumers of that data, including developers, journalists, researchers, and other federal agencies.	March 12, 2021	\$9,600,000
Office of Personnel Management	The Zero Trust Networking project is intended to accelerate the agency's adoption of a zero trust cybersecurity architecture ^b strategy.	September 30, 2021	\$9,900,000
General Services Administration	The Login.Gov project is intended to allow GSA to further scale the Login.Gov shared service with more advanced cybersecurity capabilities, expand identity verification coverage, and expand integrations with agency public-facing digital services.	September 30, 2021	\$187,050,000
Department of Homeland Security	The Southwest Border Technology Integration Program is intended to allow the Department of Homeland Security (DHS) to use data and technology to more efficiently, effectively, and humanely process noncitizens encountered at our Southwest border.	September 30, 2021	\$50,000,000
General Services Administration	The Advancing Zero Trust project will allow GSA to modernize legacy network systems and implement an advanced zero trust architecture.	September 30, 2021	\$29,802,000
Department of Education	The Zero Trust Architecture project will allow the Department of Education to create and fully implement a zero trust architecture plan across the enterprise to increase the security of the citizen data that the department maintains.	September 30, 2021	\$20,000,000
General Services Administration	The MAX.Gov Transition project will allow GSA to enhance MAX.Gov to provide a modernized, secure, cloud-based solution for cross-agency collaboration, authentication, and other shared services capabilities.	September 30, 2021	\$14,500,000
Selective Service System	The Registration and Verification Modernization project aims to modernize Selective Service System's Registration, Compliance, and Verification software to improve the resiliency of the application and enable the agency to rapidly scale their technical operations to meet the nation's needs.	March 7, 2022	\$5,989,000

Appendix III: Agency Projects That Received Awards from the Technology Modernization Fund (TMF), as of February 2023

Agency	Project description	Date of award announcement	Total funds awarded^a (Rounded to the nearest thousand)
Postal Regulatory Commission	The IT Modernization project will modernize the Postal Regulatory Commission's website, docket, and data analysis tools, allowing the public to more easily access and participate in the commission's proceedings and equipping the Postal Regulatory Commission staff with the resources to more efficiently and effectively execute its goal of providing transparent and effective oversight of the U.S. Postal Service's operations.	March 7, 2022	\$4,045,000
Department of Veterans Affairs	The Veteran Identity Modernization project will make it faster, cheaper, and easier for veterans to access Department of Veterans Affairs (VA) services and benefits. Specifically, it will modernize the sign-in experience at VA, allowing eligible veterans to digitally access benefits and services more reliably and securely with Login.Gov.	April 19, 2022	\$10,550,000
National Archives and Records Administration	The High Value Asset Mission Essential Systems project will digitize and transform the National Archives and Records Administration's paper-based fulfillment processes for citizen records requests, allowing for rapid retrieval and delivery of electronic copies of records to the public and other government agencies through secure, accessible web portals.	May 23, 2022	\$9,133,000
Department of Agriculture	The Network Monitoring, Detection, and Response project will improve the Department of Agriculture's (USDA) threat monitoring, detection, and response capabilities.	May 23, 2022	\$4,407,000
Department of Agriculture	The Network Modernization (USDANet) project will deliver an updated network that enables USDA to better serve its customers over the next decade and beyond.	June 21, 2022	\$64,000,000
Department of Homeland Security	The Information Sharing Modernization project will help modernize DHS' Homeland Security Information Network service to develop an updated and more secure platform for information sharing among first responders, law enforcement, and government partners in the event of natural disasters, security events, and other crises.	June 21, 2022	\$26,950,000
Federal Trade Commission	The Multi-Cloud Security Operations Center project will keep sensitive law enforcement, corporate competition filing, and American consumer data more secure and resilient to attack.	June 21, 2022	\$3,990,000
AmeriCorps	The Grants Management Modernization project will deliver simple, secure, effective, and responsive digital solutions for more than 2,800 local, nonprofit, faith, and community-based organizations applying for funding or managing their existing federal national service grants.	August 3, 2022	\$14,000,000
Department of Labor	The PERM Visa Modernization project at the Department of Labor will make it easier, faster, and cheaper for employers to access permanent labor certification services and create a more seamless immigrant visa processing experience with the Departments of Homeland Security and State.	August 3, 2022	\$7,221,000

Appendix III: Agency Projects That Received Awards from the Technology Modernization Fund (TMF), as of February 2023

Agency	Project description	Date of award announcement	Total funds awarded^a (Rounded to the nearest thousand)
U.S. Agency for International Development	The Zero Trust Architecture project intends to give the U.S. Agency for International Development (USAID) a modern identity management system that addresses the business problem by providing sufficient artifacts to meet federal audit levels and compliance, as well as enhanced identity controls that permit USAID's cybersecurity teams to dynamically govern USAID user access to systems, applications, and networks uniformly, regardless of user location.	August 3, 2022	\$5,688,000
Department of Defense (Army)	The Critical Infrastructure Cyber Protection project will modernize and maintain operational technology of manufacturing arsenals, maintenance depots, and ammunition plants, referred to as Organic Industrial Bases, which support the Army's mission by manufacturing equipment, vehicles, and ammunition.	October 6, 2022	\$15,575,000
Department of Housing and Urban Development	The Identity Credential Access Management Modernization project for the Federal Housing Administration Connection will improve the user experience for more than 95,000 external Federal Housing Administration users and align its IT security posture with federal standards while also reducing costs.	October 6, 2022	\$14,800,000
Office of Personnel Management	The Website and Digital Modernization project will update both the technology behind and the content on the OPM.Gov website to improve and optimize the user experience for the site's 22 million unique annual visitors.	October 6, 2022	\$6,048,000
U.S. AbilityOne Commission	The Development of the Next Generation Procurement List Information Management System 2.0 project will enable the modernization of the commission's Procurement List Information Management System, the core software system responsible for connecting the commission with the program's nonprofit agency employers of people who are blind or have significant disabilities and their federal agency customers.	October 31, 2022	\$1,781,000
Railroad Retirement Board	The Citizen-Centric Online Self-Services project will move major services for railroad retirees from phone and paper to the internet, reducing staff and customer time spent accessing finances and government-administered benefits.	December 19, 2022	\$8,695,000
U.S. Agency for International Development	The Project Campfire investment will provide the startup capital necessary to develop and launch a new IT platform to coordinate USAID's work with U.S.-based businesses, foundations and philanthropic organizations, academic and research institutions, public interest organizations, and more.	December 19, 2022	\$5,917,000
Social Security Administration	The Personal Data Security for Public Benefits Processing project will bolster the secure operation of an agency that pays benefits to more than 70 million people, including retirement and disability beneficiaries and their families.	February 17, 2023	\$23,300,000
Department of the Treasury	The Secure Cloud National Intelligence Sharing project will allow the Department of the Treasury to improve the reliability of this critical network. It will prevent interruptions and outages while meeting the needs of its approximately 800 national security users.	February 17, 2023	\$11,145,000

Appendix III: Agency Projects That Received Awards from the Technology Modernization Fund (TMF), as of February 2023

Agency	Project description	Date of award announcement	Total funds awarded^a (Rounded to the nearest thousand)
U.S. Agency for Global Media	The Improving IT Security with Zero Trust Architecture project will support the agency’s mission and ultimately protect the lives of its journalists and their sources, safeguard the integrity of agency-funded news content frequently targeted by oppressive governments and on-state actors, and improve management of the agency’s devices for its decentralized and remote workforce.	February 17, 2023	\$6,200,000

Source: GAO analysis of agency TMF project documentation as of February 28, 2023. | GAO-24-106575

^aFunds awarded refers to the funds approved by the TMF board, Office of Management and Budget, and GSA.

^bZero trust architecture is a cybersecurity approach that authenticates and authorizes every interaction between a network and a user or device—in contrast to traditional cybersecurity models that allow users or devices to move freely within the network once they are granted access. Zero trust architecture works on the “never trust, always verify” principle and assumes that attacks will come from within and outside of the network.

Appendix IV: Comments from the U.S. AbilityOne Commission



U.S. ABILITYONE COMMISSION
355 E Street, SW, Suite 325
Washington, DC 20024

October 27, 2023

Ms. Carol C. Harris
Director
Information Technology Acquisition Management Issues
U.S. Government Accountability Office
441 G St. N.W.
Washington, DC 20548

Dear Ms. Harris:

Thank you for the opportunity to provide comments on the Government Accountability Office's (GAOs) draft Report to Congressional Committees, "Technology Modernization Fund (TMF) Although Planned Amounts Are Substantial, Projects Have Thus Far Achieved Minimal Savings."

The U.S. AbilityOne Commission (Commission) has reviewed the draft report. Based on the review, the draft report briefly mentions the Commission's 'Development of the Next Generation Procurement List Information Management System 2.0' investment. As this project is currently in the early pre-deployment stage, Analysis/Design phase, the Commission has no comments to submit.

The Commission looks forward to continuing to work with the TMF staff and executing the investment to fully realize the estimated cost savings.

Again, thank you for the opportunity to provide comments on your draft report.

Sincerely,

Kimberly Digitally signed by
Kimberly M. Zeich
M. Zeich Date: 2023.10.27
08:47:47 -04'00'
Kimberly M. Zeich
Executive Director



COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED
An Independent Federal Agency



Appendix V: Comments from the Social Security Administration



SOCIAL SECURITY
Office of the Commissioner

November 20, 2023

Carol C. Harris
Director, Information Technology Acquisition Management Issues
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 "Technology Modernization Fund: Although Planned Amounts Are Substantial, Projects Have Thus Far Achieved Minimal Savings" (106575). We have no comments.

Sincerely,

A handwritten signature in blue ink that reads "Scott Frey".

Scott Frey
Chief of Staff

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



November 8, 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: ***Technology Modernization Fund: Although Planned Amounts Are Substantial, Projects Have Thus Far Achieved Minimal Savings (GAO-24-106575)***

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, *Technology Modernization Fund: Although Planned Amounts Are Substantial, Projects Have Thus Far Achieved Minimal Savings (GAO-24-106575)*.

Although direct cost savings from implementation of USAID's Zero Trust Architecture (ZTA) project may pale in comparison to the funding provided by the TMF, these funds will enable the Agency to accelerate its ZTA initiative across an 'anytime-anywhere' organization of over 15,000 end users worldwide, improve customer experience, and reduce mission risks as it helps execute the Administration's foreign assistance and development priorities. The Agency is committed to ensuring the full impact of ZTA's cost savings and other benefits are realized as users are transitioned to a more modernized identity management system.

I am transmitting this letter from USAID for inclusion in the GAO's final report. 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 Technology Modernization Fund management.

Sincerely,

Colleen R. Allen

Colleen Allen
Assistant Administrator
Bureau for Management

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, Donna Epler, and Ash Harper.

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