

U.S. Department of Labor

Office of Inspector General—Office of Audit

REPORT TO THE CHIEF
INFORMATION OFFICER



**WITHOUT AN IT MODERNIZATION
FRAMEWORK, DOL IS VULNERABLE
TO INADEQUATE RESOURCE
PRIORITIZATION FOR ENSURING
SECURITY AND AVAILABILITY OF DOL
SYSTEMS**

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**U.S. Department of Labor
Office of Inspector General
Audit**



BRIEFLY...

WITHOUT AN IT MODERNIZATION FRAMEWORK, DOL IS VULNERABLE TO INADEQUATE RESOURCE PRIORITIZATION FOR ENSURING SECURITY AND AVAILABILITY OF DOL SYSTEMS

NOVEMBER 17, 2023

WHY OIG CONDUCTED THE AUDIT

Information technology (IT) modernization refers to an organization's efforts to prevent IT systems from becoming outdated, which can lead to poor performance and security concerns. DOL IT systems support DOL programs in ensuring the health and safety of American workers—including miners and unemployed workers—and provide timely economic indicators that are vital for the country.

DOL's Chief Information Officer (CIO) has responsibility and oversight for over 65 major information systems as well as enterprise IT initiatives across DOL. This responsibility includes overseeing the organization's efforts to upgrade IT systems and to ensure that existing IT systems do not become outdated due to lifecycle, technical, or business reasons. It is a tremendous responsibility to ensure the IT posture remains secure and technologically able to support DOL's mission.

WHAT OIG DID

Given these risks, the OIG conducted a performance audit to determine:

Has the Department developed an IT modernization framework and what is its current and future state?

To answer this question, we interviewed personnel and reviewed DOL's IT modernization activities from January 2022 through August 2022, including analysis of documentation and funding mechanisms.

WHAT OIG FOUND

We found the Department has not developed a formal, documented IT modernization framework. While the CIO has developed several elements that could become part of an IT modernization framework, we found those elements are not linked to one another nor documented as part of a larger, formalized process. The CIO's reason for lack of a documented framework was to keep the approach dynamic. However, a documented framework would ensure consistency going forward rather than leaving DOL's IT modernization efforts open to interpretation and subject to changes in personnel.

Also, we found that at least two of the elements could be improved. First, the agency update documents that the CIO uses to monitor IT modernization projects are incomplete and also agency-curated, instead of being based on the full picture. Second, the inventory of IT systems used to prioritize IT modernization efforts is a spreadsheet that has to be manually updated and does not link to the other elements.

These issues lead to gaps in the CIO's visibility of the current and future states of DOL's IT modernization. As a result, DOL is vulnerable to spending valuable time and resources on IT projects that are not the highest priorities for ensuring the security and availability of vital DOL systems.

WHAT OIG RECOMMENDED

We made three recommendations to the CIO to improve IT modernization, including documenting a framework. The CIO agreed with the three recommendations.

READ THE FULL REPORT

<https://www.oig.dol.gov/public/reports/oa/2023/23-24-002-07-725.pdf>

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INSPECTOR GENERAL'S REPORT

Gundeep Ahluwalia
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This report presents the results of the U.S. Department of Labor's (DOL or Department) Office of Inspector General's (OIG) audit of the Chief Information Officer (CIO)'s management of information technology (IT) modernization efforts across the Department.

IT systems that are outdated due to lifecycle, technical, or business reasons are commonly referred to as legacy IT systems. IT modernization refers to an organization's efforts to upgrade IT systems and to prevent existing IT systems from becoming legacy IT systems, which can lead to poor performance and security concerns. DOL IT systems support DOL programs in ensuring the health and safety of American workers—including miners and unemployed workers—and provide timely economic indicators that are vital for the country.

The Department's CIO has responsibility and oversight for over 65 major information systems as well as enterprise IT initiatives across the Department. This responsibility includes overseeing the organization's IT modernization efforts. It is a tremendous responsibility to ensure the IT posture remains secure and technologically able to support DOL's mission.

Given these risks, we conducted a performance audit to determine:

Has the Department developed an IT modernization framework and what is its current and future state?

Our audit covered ongoing IT modernization activities from January 2022 through August 2022, including analysis of documentation. We interviewed executives

and personnel from the Office of the Chief Information Officer (OCIO) and personnel from several DOL agencies to understand the approach to and execution of DOL’s IT modernization activities. We assessed how OCIO approached IT modernization. We also reviewed how the CIO is developing a method of IT modernization prioritization. Additional details regarding the scope and methodology of this performance audit are included in Appendix A.

We also examined the manner of funding IT modernization efforts and the method in which IT modernization requests occur. There were no findings in these areas; however, we have included information on them in Exhibits 1 and 2, respectively. Our audit examined IT modernization across the Department and did not evaluate specific projects for timeliness or budget.¹

RESULTS

We found the Department has not developed a formal, documented IT modernization framework. While the CIO has developed several elements that could become part of an IT modernization framework, we found those elements are not linked to one another nor documented as part of a larger, formalized process. When we inquired as to the lack of a formal, documented IT modernization framework, the CIO stated that he wanted to keep the approach dynamic. However, a documented IT modernization framework would ensure consistency going forward rather than leaving DOL’s IT modernization efforts open to interpretation and subject to changes in personnel.

Also, we found that at least two of the elements could be improved. First, the agency update documents that the CIO uses to monitor IT modernization projects—including 1-page documents known as “placemats”—are incomplete and also agency-curated, instead of being based on the full picture. Second, the inventory of IT systems used to prioritize IT modernization efforts is a spreadsheet that has to be manually updated and does not link to the other elements. A key element of IT modernization is planning for the future by identifying systems in need of IT modernization and monitoring the current progress of those being modernized.

¹ The projects and efforts of DOL’s Office of Unemployment Insurance Modernization, funded directly by the American Rescue Plan Act of 2021, were outside the scope of this audit. According to the OCIO, the Office of Unemployment Insurance Modernization would consult with OCIO on technical solutions as needed. However, at the time of our fieldwork, those efforts were not yet required.

These issues lead to gaps in the CIO's visibility of the current and future states of DOL's IT modernization. As a result, DOL is vulnerable to spending valuable time and resources on IT projects that are not the highest priorities for ensuring the security and availability of vital DOL systems. In addition, operating without a full picture of DOL's current IT modernization efforts means OCIO is proceeding while being limited in its ability to capture the full scope of DOL's IT modernization needs.

**WITH NO IT MODERNIZATION FRAMEWORK,
DOL'S IT MODERNIZATION EFFORTS LEFT
OPEN TO INTERPRETATION AND SUBJECT
TO CHANGES IN PERSONNEL**

We found the Department has not developed a formal, documented IT modernization framework. While the CIO has developed several elements that could become part of an IT modernization framework, we found those elements are not linked to one another to meet the Department's mission and achieve OCIO's strategic goals nor are they documented as part of a larger, formalized process.

As is noted by federal law and guidance, the documentation of policies and procedures is critical. When we inquired as to the reasoning for lack of documentation, the CIO stated he wants to keep the process dynamic and he does not want to document what may become outdated. However, a documented framework would ensure consistency going forward rather than leaving critical information related to DOL's IT modernization efforts open to interpretation and subject to changes in personnel. Establishing an overall framework that links and documents the elements would ensure that, in the future, DOL's IT modernization strategy is executed as designed and adjusted as appropriate.

OCIO's IT modernization focus is framed by four IT strategic goals:

1. creating the DOL IT platform,
2. modernizing legacy agency applications,
3. securing and enhancing the IT infrastructure, and
4. transforming the customer experience.

However, there are multiple needs that can drive IT modernization efforts for OCIO, including Congressional mandates, security, and risks to the business mission. OCIO has developed elements to help determine where to focus its efforts, including a prioritization spreadsheet. The spreadsheet is an example of

an element that could be documented as to how it fits in with other efforts as part of a formal IT modernization framework.

The CIO also reported that, to measure progress, the CIO focused on increasing development, modernization, and enhancement spending versus the ongoing operations and maintenance costs. The CIO encourages and assists agencies to use all available financial resources.

Overall, our audit work identified the following elements and processes that are considered part of DOL's IT modernization efforts:

- regular meetings with agencies,
- placemats and other documents to monitor ongoing IT modernization efforts enterprise-wide and at the agencies,
- multiple potential sources of funding (see Exhibit 1 for more details),
- a process for making IT modernization requests (see Exhibit 2 for more details), and
- a prioritization technique.

These elements could become part of an IT modernization framework; however, we found that, currently, the elements are not linked to one another and not documented in a framework. Because the CIO's IT modernization efforts are impacted by multiple and sometimes changing priorities, documentation is especially important. The documentation of policies and procedures is critical to ensure personnel know what to do as they follow laws, regulations, and guidance and also for agencies to know where to turn for vital information.

This importance is noted by both federal law on records management and by the Office of Management and Budget. Federal law on Records Management by Federal Agencies (44 U.S.C. Chapter 31) states:

The head of each federal agency shall make and preserve records containing adequate and proper documentation of the organization, functions, policies, decisions, procedures, and essential transactions of the agency and [be] designed to furnish the information necessary to protect the legal and financial rights of the Government and of persons directly affected by the agency's activities.

In addition, Office of Management and Budget Circular A-123 - Management's Responsibility for Internal Control states:

Generally, identifying and implementing the specific procedures necessary to ensure effective internal control, and determining how to assess the effectiveness of those controls, is left to the discretion of the agency head. While the procedures may vary from agency to agency, management should have a clear, organized strategy with well-defined documentation processes that contain an audit trail, verifiable results, and specify document retention periods so that someone not connected with the procedures can understand the assessment process.

The need to be flexible does not mean basic supporting processes and how they connect should not be documented in an overall framework. Without a documented IT modernization framework to establish the connection between OCIO's IT strategic goals and the variety of supporting IT modernization elements, DOL's IT modernization efforts may be misunderstood or misinterpreted by the staff across OCIO or in the agencies. This is why the Office of Management and Budget notes that management should establish a clear process to guarantee the same results no matter who is executing the approach.

DOL does not have an overall framework that links IT modernization goals with the funding sources, change requests, a place to review current efforts, or the ability to effectively prioritize IT systems modernization. As a result, the Department is vulnerable to spending valuable time and resources on IT projects that are not the highest priorities for ensuring the security and availability of vital DOL systems.

WITHOUT COMPLETE DOCUMENTS, CIO HAS LIMITED VISIBILITY ON CURRENT AND FUTURE IT MODERNIZATION EFFORTS

We also found that at least two of DOL's IT modernization elements could be improved. First, the agency update documents the CIO uses to monitor IT modernization projects² are incomplete and also agency-curated, instead of being based on the full picture. The two types of agency update documents are:

² Projects are IT initiatives including IT hardware and software.

1. “placemats”—a primarily one-page document that covers all the new projects for IT shared services agencies, detailing each project’s goals, funding status, timeline, and points of contact—and
2. other agency-specific documents for non-IT shared services³ agencies.

Second, the inventory of IT systems used to prioritize IT modernization efforts is a spreadsheet that has to be manually updated and does not link to other elements. A software solution, Strategic Enterprise Architecture System (SEAS), is in development but not yet in production for widespread OCIO usage as a means of reviewing and updating the inventory of IT systems. These issues lead to gaps in the CIO’s visibility of the current and future states of DOL’s IT modernization. As a result, DOL is vulnerable to spending valuable time and resources on IT projects that are not the highest priorities for ensuring the security and availability of vital DOL systems.

OCIO’S ABILITY TO MONITOR CURRENT IT MODERNIZATION PROJECTS IS LIMITED BY INCOMPLETE, AGENCY-CURATED DOCUMENTS

IT Shared Services Agencies’ Projects

For shared service agencies, OCIO monitors IT modernization projects via agency- and enterprise-level placemats, which are discussed at Joint Business Planning (JBP) meetings. However, these primarily one-page documents are limited. Specifically, the placemats do not include all current IT modernization projects; they only include new projects, not enhancements to existing systems, and they focus on agency priorities rather than an agency’s whole IT portfolio. Also, the placemats lack notation that they are not a comprehensive inventory of all projects. With such limitations, the potential exists for efforts to be overlooked.

The JBP meeting is a regular, high-level meeting in which the CIO meets with the head of an IT shared services agency to discuss the agency’s projects using the placemats as a guide. In a JBP meeting, the CIO and agency head are both able to raise concerns about ongoing projects, suggest new projects, and discuss enterprise-level initiatives being undertaken by OCIO.

³ In 2019, DOL realigned its IT resources from across the organization, consolidating IT functions into an IT shared services model. To accomplish this, DOL moved operations and management of its IT, along with moving the majority of IT specialists from the agencies to the Office of the Assistant Secretary for Administration and Management, under the direction of the CIO. DOL’s IT Governance Lacked the Framework Necessary to Support the Overall Mission, Report No. 23-21-002-01-001 (September 30, 2021), <https://www.oig.dol.gov/public/reports/oa/2021/23-21-002-01-001.pdf>

To facilitate and guide JBP meeting discussions, OCIO uses an agency placemat. The agency placemat outlines an agency's ongoing and in-development projects and has five categories: (1) Current Prioritized Program Efforts, (2) Success Outcomes, (3) Funding Information, (4) Timeline/Milestones, and (5) Stakeholders/Points of Contact. The agency placemats are created with direction from the agency regarding which projects should appear on the placemat. However, as the placemats focus is on agency priorities, it does not represent every agency project.

DOL-wide projects are shown on OCIO's Enterprise Placemat, used in JBP meetings to highlight initiatives that might have an impact or value for multiple agencies that have expressed interest. The DOL Enterprise Placemat outlines OCIO's initiatives for enterprise-level projects and lists four areas: (1) Success Outcomes, (2) Points of Contact, (3) Timeline/Milestones, and (4) whether or not the project complies with a federal mandate.

Non-IT Shared Services Agencies' Projects

Non-IT shared services agencies—the Bureau of Labor Statistics and the Office of Chief Financial Officer—do not use placemats or have JBP meetings with OCIO. Instead, the Bureau of Labor Statistics and Office of Chief Financial Officer use different, agency-specific documents to maintain communication with OCIO. For example, the Bureau of Labor Statistics utilizes the Associate Commissioner Memo, a yearly itemized worklist used in discussion with the CIO. The Office of the Chief Financial Officer only has one IT system of which to keep track, the New Core Financial Management System, and briefs the CIO monthly on current projects.

Job Corps, which has not been incorporated into IT shared services, is covered under the Employment and Training Administration's Agency Placemat. Its OCIO-managed projects are discussed as part of the JBP meetings with the Employment and Training Administration.

OCIO'S ABILITY TO MONITOR CURRENT AND FUTURE IT MODERNIZATION SYSTEM NEEDS IS LIMITED BY A MANUAL, NON-REAL-TIME PRIORITIZATION SPREADSHEET

Currently, the CIO's ability to review IT systems to determine which need modernization and, of those, which need to be modernized first, is limited. Specifically, the OCIO Enterprise Architecture group has developed an inventory of current systems that are manually tracked in an IT Prioritization List

spreadsheet. This spreadsheet allows OCIO to rank prioritization based on different criteria and use the information to focus limited funding resources on those IT systems in critical need of modernization.

The IT Prioritization List spreadsheet contains details on all agencies, IT shared services and non-IT shared services, at three levels: (1) System, (2) Application, and (3) Component. Each item is scored in each level by 12 criteria, created by the Enterprise Architecture group, that can be sorted to determine which items are most in need of IT modernization depending on the chosen criteria. The assigned scores are OCIO's current method of prioritizing allocation of funds for IT modernization projects.

Agency responses (from both IT shared services and non-IT shared services agencies) to the criteria are updated when agencies update other information as a part of a regular data call, without the need for the creation of a new process. We compared OCIO's criteria with the Government Accountability Office's (GAO) recommended practice for establishing criteria⁴ and determined the Department's criteria were a reasonable metric for scoring IT modernization items. However, the list remains a spreadsheet that has to be manually updated. The lack of an automated, real-time inventory for IT modernization prioritization could lead to the IT systems becoming obsolete and may misdirect funding based on inaccurate prioritization.

The Enterprise Architecture group is currently developing SEAS with the benefit of building a comprehensive, real-time inventory of all DOL's IT applications, components, and systems that will help OCIO determine the prioritization of future IT modernization efforts. As a part of reaching this end-goal, SEAS will be integrated with the current financial portfolio and security systems of record for the Department. OCIO has migrated and verified application-level data into SEAS. Using the SEAS system will allow OCIO to maintain a real-time, automatically updated inventory of all DOL IT systems enabling OCIO to better prioritize current and future IT modernization efforts.

Having a complete, real-time inventory of IT systems allows for accurate and full understanding of the ongoing and potential future IT modernization efforts. It also aligns with the National Institute of Science and Technology's Program Management Framework, which notes the need for developing and updating an inventory of organizational systems.⁵ The National Institute of Science and

⁴ GAO, Information Technology: Agencies Need to Develop Modernization Plans for Critical Legacy Systems, GAO-19-471 (June 11, 2019), <https://www.gao.gov/products/gao-19-471>

⁵ National Institute of Science and Technology, Security and Privacy Controls for Information Systems and Organizations, SP 800-53 Rev. 5 (updated December 10, 2020), <https://csrc.nist.gov/publications/detail/sp/800-53/rev-5/final>

Technology recommends developing and documenting an inventory of system components that:

- accurately reflects the system,
- includes all components within the system,
- does not include duplicate accounting of components or components assigned to any other system, and
- is at the level of granularity deemed necessary for tracking and reporting.⁶

In summary, producing DOL's Enterprise Placemat and agency placemats that list all current projects would take considerable space, more than the primarily one-page format, so OCIO allows agencies to set agency priorities and focuses on certain projects in the DOL Enterprise Placemat. In addition, OCIO is working with a temporary, manual inventory solution to prioritize projects for future IT modernization until SEAS is finalized and goes live. Planning and prioritizing future IT modernization efforts based on a non-real-time, manual inventory means the Department may be unable to accurately plan IT modernization efforts or may misdirect funding based on inaccurate prioritization. In addition, operating without a full picture of DOL's current IT modernization efforts means OCIO is proceeding while being limited in its ability to understand the scope of DOL's IT modernization needs.

OIG'S RECOMMENDATIONS

We recommend the Chief Information Officer:

1. Document an IT modernization framework including the variety of connections between different elements and publish the information to ensure all Department personnel are aware of how it works.
2. Develop documents for IT modernization project discussions that ensure completeness of IT modernization efforts including new projects and enhancements to existing systems.
3. Implement a system/program to maintain an automated, real-time inventory of all Department systems and applications that enables prioritization of IT modernization.

⁶ National Institute of Science and Technology, Security and Privacy Controls for Information Systems and Organizations, SP 800-53 Rev. 5 (updated December 10, 2020), <https://csrc.nist.gov/publications/detail/sp/800-53/rev-5/final>

SUMMARY OF CIO'S RESPONSE

In response to a draft of this report, OCIO agreed with all three recommendations and noted some corrective actions underway or planned:

- In response to Recommendation 1, OCIO stated it has formalized an IT modernization scoring mechanism which was not yet in place at the time of the audit and will take further measures to publish a model which demonstrates the key elements and relationships involved in the process.
- In response to Recommendation 2, OCIO stated it will review and refine documents to ensure completeness of IT modernization efforts including new projects and enhancements to existing systems.
- In response to Recommendation 3, OCIO stated it will focus on maintaining an inventory of all programs and systems using IT discovery tools, which will be automated, although not necessarily “real-time,” to the extent possible within budget constraints.

We look forward to working with OCIO personnel and reviewing corrective actions during the audit resolution process. Management’s response to the draft report is included in its entirety in Appendix B.

We appreciate the cooperation and courtesies the CIO and OCIO extended us during this audit. OIG personnel who made major contributions to this report are listed in Appendix C.



Carolyn R. Hantz
Assistant Inspector General for Audit

EXHIBIT 1: FUNDING FOR IT MODERNIZATION

We examined the manner of funding IT modernization efforts by the Department, and there were no findings in this area.

Funding IT modernization projects in the government can be difficult, given the annual nature of appropriations compared with the multi-year investment required for modernization and infrastructure. OCIO has assisted DOL agencies in acquiring funds for IT modernization projects, and, in Fiscal Year (FY) 2021, the Department spent \$133 million on IT modernization. The six funding sources for DOL IT modernization efforts are:

1. agency appropriation,
2. OCIO IT Modernization appropriation,
3. the Working Capital Fund (WCF),
4. Expired Funds,
5. the Technology Modernization Fund (TMF), a federal loan program; and
6. use of Unobligated Balances within the WCF.

These multiple sources of funding can be used in tandem or solely to support an IT modernization project.

Agency Appropriation

DOL agencies may allocate funds from annual Congressional appropriations to IT modernization projects. However, given that IT modernization efforts can require multiple years to develop a product, funding through annual appropriations is potentially difficult.

OCIO IT Modernization Appropriation

OCIO can use its annual appropriation for modernizing DOL IT systems for two different focuses:

1. modernization of IT infrastructure, the network, and IT backbone on which the Department's IT operates; and
2. cybersecurity: the resources needed to protect the confidentiality, availability, and integrity of the Department's IT from unauthorized access or changes.

Working Capital Fund

The WCF is a centralized fund to which all DOL agencies contribute that then pays for enterprise Department needs such as real estate, human resources, and IT. The WCF may be used for IT modernization via the IT Operations budget activity managed by OCIO. This IT Operations portion of the WCF pays for DOL's IT infrastructure (internet, email, and security) and may be used for IT modernization among other uses.

Expired Funds

In FY 2019, the Department received authority to repurpose unobligated balances, which must be spent within 5 years, for the purpose of IT modernization. These Expired Funds are drawn from agency appropriations and do not include the WCF.

DOL uses Expired Funds to target legacy systems that are outdated, pose a security risk, are too costly to maintain, or are inefficient. Therefore, not all IT modernization requests qualify for Expired Funds. The types of projects that might not qualify for expired funds are: functionality additions, enterprise-wide infrastructure, system enhancements, or emerging technologies.

Expired Funds only pay for the building and implementation of an IT modernization project; agencies must pay for the ongoing costs of supporting the project. DOL has a 5-step process that agencies must use when applying for Expired Funds. In this process, DOL's criteria is used for determining which projects meet the targets for Expired Funds.

Since receiving authority to repurpose unobligated balances, DOL reallocated \$2 million dollars in FY 2021 and an additional \$15 million dollars of Expired Funds available for use in FY 2022.

Technology Modernization Fund

The TMF is a funding source available to all federal agencies that provides loans to assist them in achieving IT modernization goals. OCIO has encouraged DOL agencies to apply for TMF loans if possible to help them meet their IT modernization needs. The loans allow agencies to solve the issue of finding funding to begin an IT modernization effort; however, the loans must be repaid and the operations and maintenance costs of the new program must be feasible for the agency going forward.

For an agency to apply for a TMF loan, it follows a certain process within DOL. First, it submits an agency-developed TMF proposal. OCIO evaluates that

proposal using four internally-developed criteria: (1) Administration or Secretarial priority, (2) New Regulations or Mandate, (3) Internal DOL scaling (one agency or multiple), and (4) ranking on the IT Prioritization List spreadsheet. If OCIO approves, the proposal is submitted to DOL leadership for approval before the proposal is submitted to the Technology Modernization Board for review and approval for funding.

The board evaluates TMF proposals and oversee approved TMF projects to ensure they achieve their intended goals. The board uses the following four criteria for determining which proposals to fund: (1) modernizing high priority systems, (2) cybersecurity, (3) public-facing digital services, and (4) cross-government collaboration / scalable services.

DOL has received \$20.3 million in funding from the TMF for the following projects:

- In FY 2019, DOL received \$3.5 million for the Labor Certificate Modernization project. Completed in FY 2021, this project moved a paper-based process to an electronic process for securely issuing Labor Certifications and improved data accessibility and reporting capabilities;
- In FY 2021, DOL received \$9.6 million for a Data Modernization project, which will modernize DOL's enterprise data management and analytics capabilities to help improve availability and accessibility of critical DOL data to all consumers of that data; and,
- In FY 2022, DOL secured \$7.2 million for the Permanent Labor Certification Program Visa Modernization project, which will integrate a modernized Permanent Labor Certification Program labor certification process into DOL's Foreign Labor Application Gateway digital platform to enable the secure and efficient sharing of labor certification data across the multi-agency visa processing life cycle.

Unobligated Balances within WCF

The final source of IT modernization funding is Unobligated Balances. OCIO is able to reallocate unobligated funds within the WCF that are 2 years or more past when they were supposed to be spent. Unobligated Balances may be used for IT modernization efforts, but it is not required.

EXHIBIT 2: METHODS FOR IT MODERNIZATION REQUESTS

We also examined DOL’s methods for IT modernization requests, and there were no findings in this area.

DOL’s IT shared services agencies⁷ can make IT modernization requests in one of two ways. OCIO handles small requests for changes to existing systems through Change Management requests. For large functionality changes to existing systems or for new systems, agencies submit the IT modernization request to their Client Engagement Manager, who submits the request in ServiceNow, initiating the Demand Management Process. The Demand Management Process can be used to fulfill business needs, to start a change that either OCIO or the agency has identified, or to fulfill government mandates. Once initiated, the request is known as a demand.

The Demand Review Council—composed of staff from within OCIO, with a core group of attendees, including the Deputy CIOs and Division Directors—reviews the demands to determine the appropriate service provider to address the demand. If the council deems additional research is needed and the demand then needs to be presented again, OCIO will continue to gather the information needed for a decision to be made. If the council does not deem the demand feasible, they can defer or reject the demand. If the demand is approved, it continues to move through the demand management process. Demands are also reviewed by the Enterprise Architecture Review Board to determine if the potential for an enterprise-level solution exists.

⁷ Non-IT shared services agencies have the option of utilizing the Demand Management Process for their IT modernization requests, but it is not required. For example, Job Corps has utilized the Demand Management Process; however, the Bureau of Labor Statistics and Office of Chief Financial Officer do not regularly do so.

APPENDIX A: SCOPE AND METHODOLOGY

SCOPE

Our audit covered DOL's IT modernization efforts from January 2022 through August 2022. Our review of the Department's modernization efforts included close analysis of routes for initiating modernization of agency systems, systems in place to catalogue DOL's IT inventory, documentation designed to keep key DOL figures aware of modernization activities, and funding mechanisms surrounding DOL's IT modernization efforts.

METHODOLOGY

We conducted this performance audit 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.

To answer our audit objective, we performed the following activities:

- Evaluated documentation related to IT modernization, including its prioritization, funding and process for requests;
- Conducted benchmarking activities of DOL's IT modernization structure with that of other federal agencies; and
- Interviewed representatives from DOL agencies and from OCIO to ascertain their perspectives on the current state of IT modernization and to gain information about any planned future activities where the goal would be to strengthen DOL's IT modernization efforts.

Specifically, we interviewed OCIO employees, including the CIO, Deputy CIOs, Director of Business Application Services, Director of IT Governance, and the head of the Enterprise Architecture Division. We also interviewed representatives from both IT shared services agencies and non-IT shared services agencies. We also interviewed representatives from GAO and the U.S. Department of Housing and Urban Development OIG. This report represents the culmination of our efforts in this endeavor.

We did not solely rely on any OCIO data to support findings, conclusions, or recommendations. As such, we did not perform a specific assessment of the reliability of computer-processed data.

In planning our audit, we identified the internal control standards relevant to our performance audit of DOL IT modernization. These included internal control audit standards primarily found in GAO’s Government Auditing Standards and the OIG’s Office of Audit Handbook. In planning and performing our audit, we considered OCIO’s internal controls relevant to our audit objective by obtaining an understanding of those controls and assessing control risks for the purpose of achieving our objective. The objective of our audit was not to provide assurance of the internal controls; therefore, we did not express an opinion on OCIO’s internal controls.

CRITERIA

- 44 U.S.C. Chapter 31, Records Management by Federal Agencies
- Office of Management and Budget Circular A-123 - Management’s Responsibility for Internal Control
- National Institute of Standards and Technology, Security and Privacy Controls for Information Systems and Organizations, Revision 5, SP 800-53 Rev. 5 (December 10, 2020)

PRIOR RELEVANT COVERAGE

A relevant June 11, 2019, GAO report (GAO-19-471) entitled, “Information Technology: Agencies Need to Develop Modernization Plans for Critical Legacy Systems,” is available at: <https://www.gao.gov/products/gao-19-471>.

APPENDIX B: AGENCY'S RESPONSE TO THE REPORT

U.S. Department of Labor

Office of the Assistant Secretary
for Administration and Management
Washington, DC 20210



MEMORANDUM FOR: CAROLYN T. HANTZ
Assistant Inspector General for Audit

FROM: GUNDEEP AHLUWALIA GUNDEEP
Chief Information Officer AHLUWALIA Digitally signed by
GUNDEEP AHLUWALIA
Date: 2023.11.05 20:18:52
-05'00'

SUBJECT: Without an IT Modernization Framework, DOL is Vulnerable to
Inadequate Resource Prioritization for Ensuring Security and
Availability of DOL Systems
Draft Report Number 23-24-002-07-725

Thank you for the opportunity to review and comment on the Draft Report Number 23-24-002-07-725, *Without an IT Modernization Framework, DOL is Vulnerable to Inadequate Resource Prioritization for Ensuring Security and Availability of DOL Systems* (September 29, 2023). I am pleased that the OIG acknowledged the dynamic nature of DOL’s modernization approach and confirmed OCIO has developed several elements of the IT Modernization Framework. OIG’s fact finding occurred between January and August of 2022. The draft report was initially scheduled to be released in November 2022, but was delayed through OIG’s clearance process for nearly a year. Due to this delay, circumstances have changed since the time of initial fact finding, and DOL’s approach to an IT Modernization Framework has evolved. Below is management’s response to the OIG Draft Report noting how OCIO has already addressed or will work to address the recommendations.

Statement of Findings: *We found the Department has not developed a formal, documented IT modernization framework. While the CIO has developed several elements that could become part of an IT modernization framework, we found those elements are not linked to one another nor documented as part of a larger, formalized process. When we inquired as to the lack of a formal, documented IT modernization framework, the CIO stated that he wanted to keep the approach dynamic. However, a documented IT modernization framework would ensure consistency going forward rather than leaving DOL’s IT modernization efforts open to interpretation and subject to changes in personnel.*

Also, we found that at least two of the elements could be improved. First, the agency update documents the CIO uses to monitor IT modernization projects—including 1-page documents known as “placemats”—are incomplete and also agency-curated, instead of being based on the full picture. Second, the inventory of IT systems used to prioritize IT modernization efforts is a spreadsheet that has to be manually updated and does not link to the other elements. A key element of IT modernization is planning for the future by identifying systems in need of IT modernization and monitoring the current progress of those being modernized.

These issues lead to gaps in the CIO’s visibility of the current and future states of DOL’s IT modernization. As a result, DOL is vulnerable to spending valuable time and resources on IT projects that are not the highest priorities for ensuring the security and availability of vital DOL systems. In addition, operating without a full picture of DOL’s current IT modernization efforts means OCIO is proceeding while being limited in its ability to capture the full scope of DOL’s IT modernization needs.

Recommendation 1: Document an IT modernization framework including the variety of connections between different elements and publish the information to ensure all Department personnel are aware of how it works.

Management’s Response: Management accepts this recommendation. OCIO has formalized an IT modernization scoring mechanism which was not yet in place at the time of the audit and will take further measures to publish a model which demonstrates the key elements and relationships involved in the process.

Recommendation 2: Develop documents for IT modernization project discussions that ensure completeness of IT modernization efforts including new projects and enhancements to existing systems.

Management’s Response: Management accepts this recommendation. However, OCIO would like to offer clarification that the placemats are used at Joint Business Planning (JBP) meetings to enable strategic discussions between OCIO and the agencies; they are not intended to be all-inclusive documents. OCIO will review and refine our documents to ensure completeness of IT modernization efforts including new projects and enhancements to existing systems.

Recommendation 3: Implement a system/program to maintain an automated, real-time inventory of all Department systems and applications that enables prioritization of IT modernization.

Management’s Response: Management accepts this recommendation. OCIO will focus on maintaining an inventory of all programs and systems using IT discovery tools which are subject to a natural lag time between asset discovery and reporting. This inventory will be automated, although not necessarily “real-time”, to the extent possible within budget constraints.

Should you have any questions regarding OCIO’s response, please have your staff contact the OCIO IT Governance Division (ITG) Strategic Business Management (SBM) at sbm@dol.gov.

APPENDIX C: ACKNOWLEDGMENTS

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