FY 2022

CONGRESSIONAL BUDGET JUSTIFICATION

DOL IT MODERNIZATION
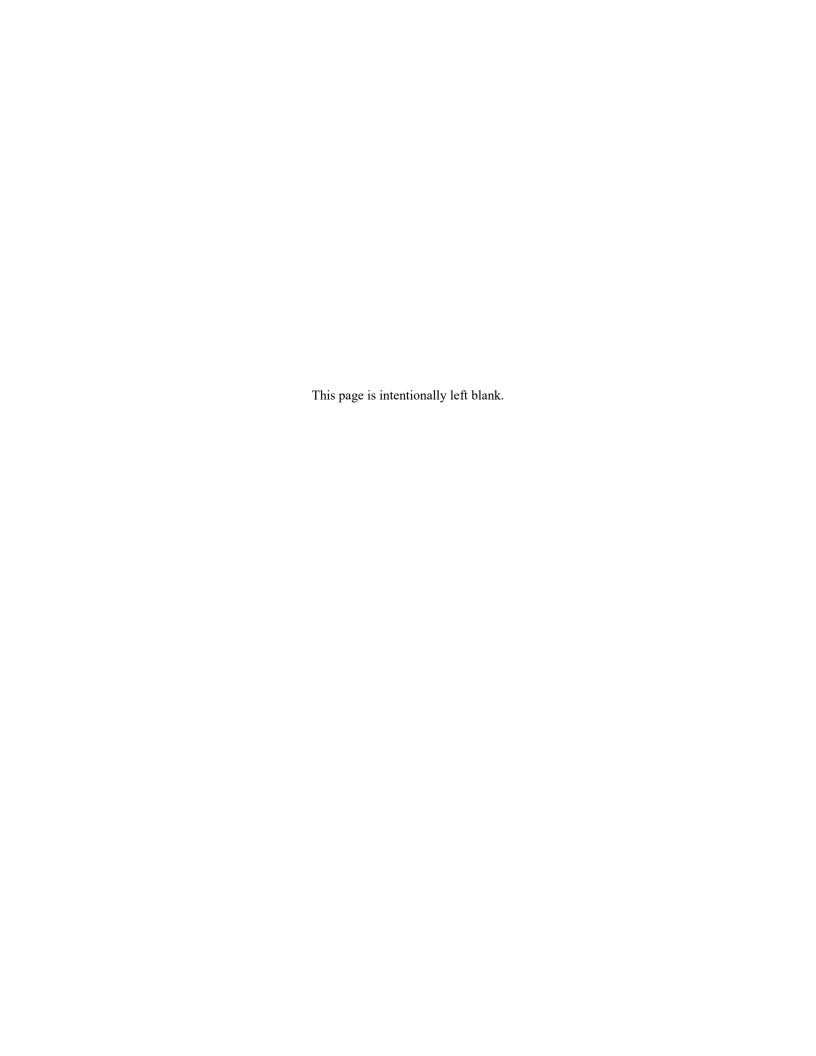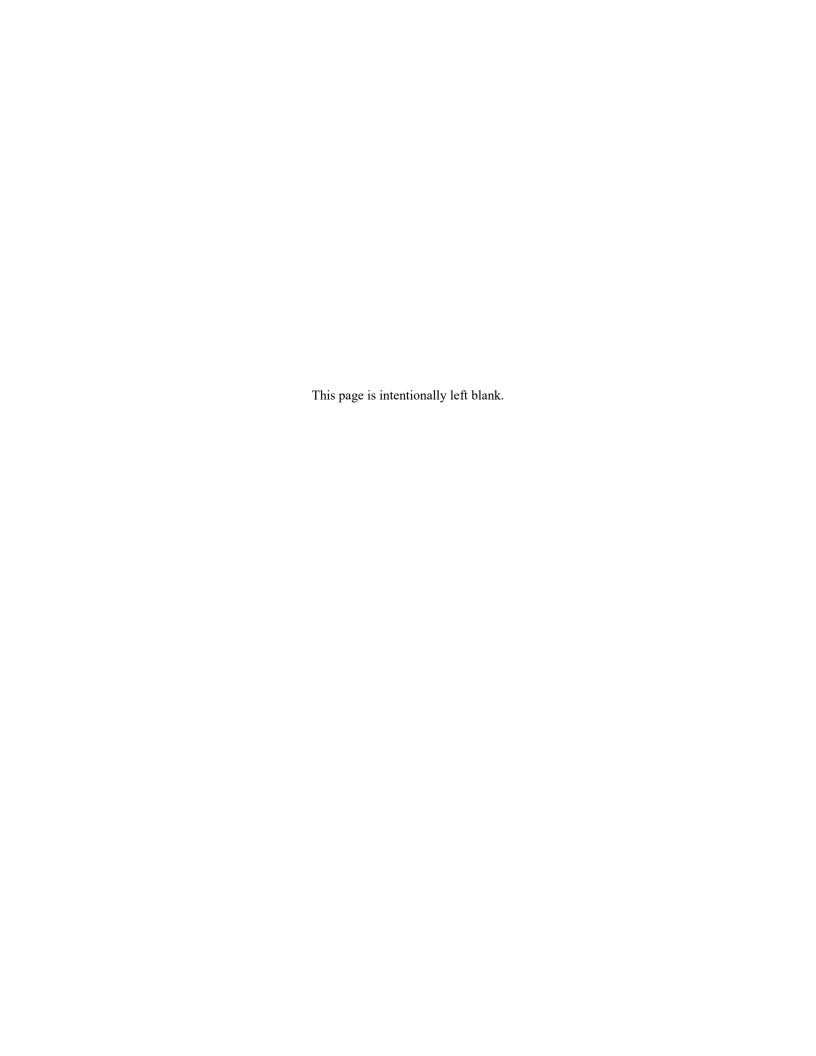
This page is intentionally left blank.

DOL IT MODERNIZATION

TABLE OF CONTENTS

This page is intentionally left blank.

DOL IT MODERNIZATION

APPROPRIATION LANGUAGE

For necessary expenses for Department of Labor centralized infrastructure technology investment activities related to support systems and modernization, [$27,269,000]*$37,269,000*, which shall be available through September 30, [2022]*2023*.

(Department of Labor Appropriations Act, 2021.)

DOL IT MODERNIZATION

AMOUNTS AVAILABLE FOR OBLIGATION (Dollars in Thousands)						
	FY 2020 Revised Enacted		FY 2021 Enacted		FY 2022 Request	
	FTE	Amount	FTE	Amount	FTE	Amount
A. Appropriation	**0**	**$25,269**	**0**	**$27,269**	**0**	**$37,269**
Unobligated Balance Carried Forward	0	$2,559	0	$2,581	0	$0
Subtotal Appropriation	*0*	*$27,828*	*0*	*$29,850*	*0*	*$37,269*
B. Gross Budget Authority	**0**	**$27,828**	**0**	**$29,850**	**0**	**$37,269**
C. Budget Authority Before the Committee	**0**	**$27,828**	**0**	**$29,850**	**0**	**$37,269**
D. Total Budgetary Resources	**0**	**$27,828**	**0**	**$29,850**	**0**	**$37,269**
Unobligated Balance	0	-$2,581	0	$0	0	$0
E. Total, Estimated Obligations	**0**	**$25,247**	**0**	**$29,850**	**0**	**$37,269**

DOL IT MODERNIZATION

SUMMARY OF CHANGES
(Dollars in Thousands)

	FY 2021 Enacted	FY 2022 Request	Net Change
Budget Authority			
General Funds	$27,269	$37,269	+$10,000
Total	$27,269	$37,269	+$10,000
Full Time Equivalents			
General Funds	0	0	0
Total	0	0	0

			FY 2022 Change					
Explanation of Change	FY 2021 Base		Trust Funds		General Funds		Total	
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount
Increases:								
A. Built-Ins:								
To Provide For:								
Costs of pay adjustments	0	$0	0	$0	0	$0	0	$0
Communications, utilities, and miscellaneous charges	0	$130	0	$0	0	$0	0	$0
Printing and reproduction	0	$0	0	$0	0	$0	0	$0
Advisory and assistance services	0	$640	0	$0	0	$0	0	$0
Other services from non-Federal sources	0	$0	0	$0	0	$0	0	$0
Other goods and services from Federal sources	0	$1,431	0	$0	0	$0	0	$0
Operation and maintenance of facilities	0	$0	0	$0	0	$0	0	$0
Operation and maintenance of equipment	0	$19,858	0	$0	0	$0	0	$0
Equipment	0	$5,210	0	$0	0	$0	0	$0
Built-Ins Subtotal	**0**	**+$27,269**	**0**	**$0**	**0**	**$0**	**0**	**$0**
B. Programs:								
To provide for IT modernization	0	$0	0	$0	0	$10,000	0	$10,000
Programs Subtotal			**0**	**$0**	**0**	**+$10,000**	**0**	**+$10,000**
Total Increase	**0**	**+$27,269**	**0**	**$0**	**0**	**+$10,000**	**0**	**+$10,000**
Decreases:								
A. Built-Ins:								
To Provide For:								
Built-Ins Subtotal	**0**	**$0**	**0**	**$0**	**0**	**$0**	**0**	**$0**

DOL IT MODERNIZATION

	FY 2021 Base		FY 2022 Change							
Explanation of Change			**Trust Funds**		**General Funds**		**Total**			
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount		
B. Programs:										
Total Decrease	0	$0	0	$0	0	$0	0	$0		
Total Change	0	+$27,269	0	$0	0	+$10,000	0	+$10,000		

ITM - 4

DOL IT MODERNIZATION

SUMMARY BUDGET AUTHORITY AND FTE BY ACTIVITY (Dollars in Thousands)								
	FY 2020 Revised Enacted		**FY 2021 Enacted**		**FY 2022 Request**		**Diff. FY22 Request / FY21 Enacted**	
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount
Departmental Support Systems	**0**	**4,889**	**0**	**4,889**	**0**	**4,889**	**0**	**0**
General Funds	0	4,889	0	4,889	0	4,889	0	0
IT Infrastructure Modernization	**0**	**20,380**	**0**	**22,380**	**0**	**32,380**	**0**	**10,000**
General Funds	0	20,380	0	22,380	0	32,380	0	10,000
Total	**0**	**25,269**	**0**	**27,269**	**0**	**37,269**	**0**	**10,000**
General Funds	**0**	**25,269**	**0**	**27,269**	**0**	**37,269**	**0**	**10,000**

DOL IT MODERNIZATION

		FY 2020 Revised Enacted	**FY 2021 Enacted**	**FY 2022 Request**	**Diff. FY22 Request / FY21 Enacted**
	BUDGET AUTHORITY BY OBJECT CLASS (Dollars in Thousands)				
	Full-Time Equivalent				
	Total	0	0	0	0
11.1	Full-time permanent	0	0	0	0
11.9	Total personnel compensation	0	0	0	0
23.3	Communications, utilities, and miscellaneous charges	0	130	130	0
24.0	Printing and reproduction	0	0	0	0
25.1	Advisory and assistance services	7,585	640	2,640	2,000
25.2	Other services from non-Federal sources	0	0	0	0
25.3	Other goods and services from Federal sources 1/	0	1,431	1,431	0
25.4	Operation and maintenance of facilities	0	0	0	0
25.7	Operation and maintenance of equipment	14,819	19,858	27,858	8,000
31.0	Equipment	2,865	5,210	5,210	0
	Total	**25,269**	**27,269**	**37,269**	**10,000**
1/Other goods and services from Federal sources					
	Services by Other Government Departments	0	1,431	1,431	0

DOL IT MODERNIZATION

APPROPRIATION HISTORY (Dollars in Thousands)					
	Budget Estimates to Congress	House Allowance	Senate Allowance	Appropriations	FTE
2012					
Base Appropriation	$25,000			$19,814	0
2013					
Base Appropriation	$21,852			$18,778	0
2014					
Base Appropriation	$20,587			$19,778	0
2015					
Base Appropriation	$30,578			$15,394	0
2016					
Base Appropriation	$119,602			$29,778	0
2017					
Base Appropriation	$63,162			$18,778	0
2018					
Base Appropriation...1/	$29,722	$20,769		$20,769	0
2019					
Base Appropriation...1/		$29,169	$20,769	$23,269	0
2020					
Base Appropriation...2/	$37,000	$37,000	$23,269	$25,269	0
2021					
Base Appropriation	$37,000			$27,269	0
2022					
Base Appropriation	$37,269				

[1] This bill was passed by the Senate. It was passed out of the House Subcommittee but was not reported out of the House Committee or by the full House.

[2] This bill was passed by the House. It was not taken up by the Senate Appropriations Subcommittee or full Appropriations Committee.

DOL IT MODERNIZATION

OVERVIEW

The Information Technology Modernization (ITM) appropriation is managed by the Office of the Chief Information Officer (OCIO). OCIO is dedicated to providing information technology (IT) leadership, products and support for DOL. OCIO plays a critical leadership role in driving reforms to help control system development efforts, better manage technology spending, and succeed in achieving real, measurable improvements in mission performance. The office provides guidance and support in Chief Information Officer (CIO) directives for capital planning, IT security, information management, and enterprise architecture.

The ITM appropriation provides resources for Department-wide investments, including the resources for IT security enhancement modernization efforts, accelerated adoption of cloud-based computing solutions, consolidation of infrastructure and networks, and the modernization of legacy IT systems and applications. The appropriation is one of the funding mechanisms used by the Department to fund IT. The Working Capital Fund (WCF) funds Department-wide IT operations; agencies also fund the development and the operational costs for their specific applications through the WCF. The Departmental Management account provides policy development and oversight for all IT activities.

ITM resources are critical to perform DOL's and the OCIO's work in support of the IT strategic goals:
- Goal 1: Create the DOL IT Platform – Create an integrated platform that links hardware, applications and data providing strategic capabilities to achieve DOL-wide operational efficiencies to more effectively serve the wage earners, job seekers, and retirees of the United States.
- Goal 2: Modernize Legacy Agency Applications – Drive the modernization of legacy agency mission critical applications by delivering technology leadership and modern solutions, resulting in a state-of-the-art end-user experience, optimized functionality and increased security.
- Goal 3: Secure & Enhance the IT Infrastructure – Integrate and standardize DOL's IT infrastructure to provide a robust cybersecurity posture while increasing the reliability and functionality of DOL's information systems and infrastructure that support mission critical services.
- Goal 4: Transform the Customer Experience – As DOL's IT service provider, deliver best in class IT services and solutions to enable DOL agencies to provide superior support to the American public.

The FY 2022 ITM request totals $37,269,000 to support these IT strategic goals. The strategic goals work in concert with the Department's Cloud Smart Initiative and is in alignment with an accelerated cloud adoption strategy. Initiatives discussed in the FY 2021 President's Budget will continue, including the DOL-wide rollout of Unified Communications to regional offices, the consolidation of logically separate networks/directories, continued Identity and Access Management rollout, and advancement of an expanded 24/7 cybersecurity enterprise security operations center (ESOC). Additionally, the Department will work on maturing its Cybersecurity Governance efforts by addressing the shared services model, developing an enhanced privacy program, developing the Enterprise Risk Tracking and Prioritization tools as well as improving

DOL IT MODERNIZATION

on the previously identified data quality issues in the Continuous Diagnostics and Mitigation CDM dashboard.

This funding level will support maintenance and enhancement of foundational capabilities established in FY 2020 and FY 2021 to accelerate DOL mission improvement and application modernization. Centers of Excellence (COE) that facilitate cloud migration, case management functionality, data analytics, and mobile application design are in progress through FY 2021. DOL COEs will house centralized expertise and techniques for propagation across subsequent modernization efforts to continuously improve design and minimize development. Further, planned initiatives pending funding can be initiated including a centralized expansion of emerging technology usage (e.g., Robotic Process Automation, Artificial Intelligence, etc.), enterprise data governance, implementation of 5G wireless technology, integrated IT operational platform and financial management capabilities, and centralized document intake and records management. DOL is establishing a centralized function to manage the 92,000+ individual communication service connections and transition to the new GSA Enterprise Infrastructure Services (EIS) contract and has awarded four EIS task orders to date with an additional task order for supplemental telecommunications implementation labor to come. In order to meet the needs of the EIS transition, DOL is establishing a database and chargeback system to address the functions GSA will no longer perform under the new EIS contract. The infrastructure build out, migration and the telecommunications management system is funded under IT Modernization, once operational it will be paid and maintained out of the WCF Telecommunications budget.

DEPARTMENTAL SUPPORT SYSTEMS

BUDGET AUTHORITY BEFORE THE COMMITTEE				
(Dollars in Thousands)				
	FY 2020 Revised Enacted	FY 2021 Enacted	FY 2022 Request	Diff. FY22 Request / FY21 Enacted
Activity Appropriation	4,889	4,889	4,889	0
FTE	0	0	0	0

Introduction

The Departmental Support Systems (DSS) activity supports enterprise-wide information technology security enhancement initiatives. These initiatives facilitate a centrally managed IT environment with increased security parameters to protect the integrity of DOL data and network availability. DOL achieves these efforts through several new and ongoing projects mandated by executive and Congressional directives.

Activities funded in DSS include Identity and Access Management, Network Consolidation via Unified Communications, Continuous Diagnostics and Mitigation, Cybersecurity Executive Direction, a shift to continuous system security assessments, and enhancements enabling more secure personnel off boarding processes. DOL is continuing to improve the expanded 24/7 security operations.

Five-Year Budget Activity History

Fiscal Year	Funding	FTE
	(Dollars in Thousands)	
2017	$4,898	0
2018	$4,889	0
2019	$4,889	0
2020	$4,889	0
2021	$4,889	0

FY 2022

The FY 2022 request for DSS is $4,889,000. Funding at this level enables OCIO to maintain necessary enterprise-wide information technology security. FY 2022 initiatives will support the IT Strategic Goal 3 - Secure and Enhance the IT Infrastructure. Initiatives will include:

- *Identity Credentialing and Access Management (ICAM):* The ICAM program ensures authorized DOL users have the appropriate access to technology resources at the right times and for the right reasons, seamlessly and securely. A common platform for ICAM enables the application of uniform security policies across all DOL devices and operating platforms. The Identity Management tools de-provision federal employees and ultimately address FISMA findings related to the timely removal of identities from IT Systems when employees leave DOL. DOL's password management tool, Identity Credential and Access Management (ICAM), houses passwords for 900+ service accounts. Further, ICAM's Self Service Password and Multifactor Authentication has a 99.1 percent

adoption rate and has reduced password reset related helpdesk calls by approximately 4,300 a month. In FY 2022, DOL will implement the user access certification features of the Identity Management system that will provide functionality to enable, review, and certify access to applications across the Department. Other activities include consolidating and upgrading the ICAM tools to maintain security at DOL and reducing the overall cost by decommissioning the legacy application.

- *Continuous Diagnostic and Mitigation (CDM) Program*: Information systems require continuous monitoring and maintenance to detect and correct software vulnerabilities and configuration errors promptly before any damage to systems or data can occur. To address this issue, DOL deploys and operates state-of-the-art IT monitoring and management tools – many acquired through the Department of Homeland Security's (DHS) Continuous Diagnostic and Mitigation (CDM) program. In FY22, DOL will continue improving the effectiveness, accuracy, and coverage of these tools through deployment efforts to all corners of the DOL IT enterprise, awareness and training of applicable staff, increased oversight and automated alerting of tool coverage issues, data quality improvement for improved accuracy, and more informative alerting and reporting outputs.

- *Cybersecurity Functions*: To enhance the cybersecurity identity capabilities, DOL will enable an audit management program that improves Cyber Security Division (CSD) processes to improve internal coordination and become better prepared for audits, by streamlining collaboration for Factual Accuracy (FA) and Notification of Finding and Recommendation (NFR) responses. DOL will also bolster the cybersecurity protection functions by providing cybersecurity preparedness training for all personnel during National Cybersecurity Awareness Month (NCSAM), continue optimizing existing tools and extend usage to increase integration, identify and remediate risks, and improve sharing of information. Finally DOL will work across CSD to improve FISMA scores, by establishing and monitoring metrics to optimize operations, and develop a plan to address deficiencies identified in the FY 2020 audit reports.

- *Robotic Process Automation (RPA)*: DOL will continue refining the RPA and Artificial Intelligence/Machine Learning initiative to create innovate solutions around Labor's mission delivery to the American public. So far, the RPA pilot programs across OCIO, have proven to streamline workloads and reduce redundancy and errors. OCIO will continue to identify and address Departmental demand for RPA both now and into the future.

FY 2021

The FY 2021 request for DSS is $4,889,000. Funding at this level is enabling OCIO to maintain necessary enterprise-wide information technology security.

- *Identity and Access Management (IAM):* Provide Simplified Sign On (SSO) capabilities across the enterprise, reducing multiple password requirements for DOL's application users. DOL has implemented SSO on 61 applications. The plan is to have SSO enabled on a total of 75 or more applications by the end of FY 2021.

- *Continuous Diagnostics and Mitigation*: In FY 2021, OCIO continues to implement additional capabilities to reduce manual data feeds in alignment with the DHS

implementation schedule, which includes data integrity, data loss prevention, cloud, and mobile capability enhancements. Other activities include:

- o Implemented DHS' Agency-Wide Adaptive Risk Enumeration (AWARE) scoring methodology and added functional insight into the dashboard. DOL identified data quality issues with the DHS deployment, resulting from DOL's input to DHS. DOL then supported DHS's government-wide assessment across all Federal Agencies identifying similar quality issues that they were then able to fix and resolve across the board.
- o Design, test, and implement a new CDM dashboard that utilizes a Cloud-Forward approach, improves user experience, and utilizes agile technologies (ELK). The target for production deployment is early FY 2022.

FY 2020

The FY 2020 revised enacted funding for DSS is $4,889,000. FY 2020 initiatives included:

- *Identity and Access Management*: In FY 2020, OCIO continued designing and engineering key IAM capabilities. OCIO enabled five agency applications with the DOL IAM Simplified Sign On solution to simultaneously improve the DOL security posture while easing the daily burden on the agency workforce. OCIO also deployed the Multifactor Authentication (MFA) and Self-Service Password Reset (SSPR) with an adoption rate of 99.1 percent using SSPR with ~4000 successful password resets per month without Enterprise Service Desk involvement.
- *Continuous Diagnostics and Mitigation*: In FY 2020, OCIO implemented the federal-wide risk algorithms, a Master User Record, and enhanced security correlation capabilities to meet a Congressional Mandate.

DEPARTMENTAL SUPPORT SYSTEMS

WORKLOAD AND PERFORMANCE SUMMARY					
		FY 2020 **Revised Enacted**		**FY 2021** **Enacted**	**FY 2022** **Request**
		Target	**Result**	**Target**	**Target**
Departmental Support Systems					
OCIO-46S	Percent of Open Plan of Action and Milestones (POA&Ms), assigned to OCIO-managed Information Systems, with a past-due Planned Finish Date	--	--	5%	5%
OCIO-33F	Percentage reduction in "repeat clickers" from the Q4 results of the previous fiscal year's phishing exercise.	--	--	50%	50%
OASAM-ITM-OCIO-04	Percentage of mobile devices compliant with current operating system version (iOS, Symbian, etc.)	100%	75%	100%	100%

Legend: (r) Revised   (e) Estimate   (base) Baseline   -- Not Applicable   TBD - To Be Determined   [p] - Projection

DEPARTMENTAL SUPPORT SYSTEMS

Workload Summary

DOL will focus on reducing the impact of cybersecurity risks by safeguarding IT systems, sensitive data, and networks. DOL has created new measures in the cybersecurity area and now tracks the percentage reduction of users who repeatedly fail Departmental 'phishing exercises. Targeting a goal of a 50% reduction in FY 2021, DOL will reassess performance to determine an appropriate target for FY 2022. DOL continues to strive towards a 100 percent rate of mobile devices compliant with the current operating system updates. Additionally, DOL targeted reducing the percent of Plans of Actions and Milestones (POA&MS) in a delayed status to 50 percent in FY 2021, and will drive that level down further in FY 2022.

- Implemented system-wide enhancements to improve IT asset management and tracking automation which facilitates remediation of security patching efforts
- Deployed additional DHS CDM tools for vulnerability management
- Implemented new Data Loss Prevention (DLP) mechanisms
- Increased Web Application Firewalling and implemented cloud based platforms to enable secure information sharing and to manage access in a remote environment
- Began shift to an on-going authorization (OA) process for information systems that require on-going and continuous security monitoring.

DEPARTMENTAL SUPPORT SYSTEMS

		FY 2020 Revised Enacted	**FY 2021 Enacted**	**FY 2022 Request**	**Diff. FY22 Request / FY21 Enacted**
	BUDGET ACTIVITY BY OBJECT CLASS (Dollars in Thousands)				
11.1	Full-time permanent	0	0	0	0
11.9	Total personnel compensation	0	0	0	0
23.3	Communications, utilities, and miscellaneous charges	0	130	130	0
24.0	Printing and reproduction	0	0	0	0
25.1	Advisory and assistance services	0	500	500	0
25.2	Other services from non-Federal sources	0	0	0	0
25.3	Other goods and services from Federal sources 1/	0	1,100	1,100	0
25.4	Operation and maintenance of facilities	0	0	0	0
25.7	Operation and maintenance of equipment	4,889	3,159	3,159	0
31.0	Equipment	0	0	0	0
	Total	**4,889**	**4,889**	**4,889**	**0**
1/Other goods and services from Federal sources					
	Services by Other Government Departments	0	1,100	1,100	0

DEPARTMENTAL SUPPORT SYSTEMS

CHANGES IN FY 2022
(Dollars in Thousands)

Activity Changes
  Built-In
    To Provide For:
    Costs of pay adjustments $0
    Communications, utilities, and miscellaneous charges   0
    Printing and reproduction   0
    Advisory and assistance services   0
    Other services from non-Federal sources   0
    Other goods and services from Federal sources   0
    Operation and maintenance of facilities   0
    Operation and maintenance of equipment   0
    Equipment   0
  Built-Ins Subtotal   **$0**

  Net Program   **$0**
    Direct FTE   **0**

	Estimate	FTE
Base	**$4,889**	**0**
Program Increase	**$0**	**0**
Program Decrease	**$0**	**0**

IT INFRASTRUCTURE MODERNIZATION

BUDGET AUTHORITY BEFORE THE COMMITTEE				
(Dollars in Thousands)				
	FY 2020 Revised Enacted	FY 2021 Enacted	FY 2022 Request	Diff. FY22 Request / FY21 Enacted
Activity Appropriation	20,380	22,380	32,380	10,000
FTE	0	0	0	0

Introduction

OCIO leverages IT Infrastructure Modernization (ITIM) to fund initiatives that increase user productivity and allow DOL to provide better services, while also eliminating cost redundant infrastructures and creating a more reliable, secure, and consistent IT infrastructure across the Department. ITIM initiatives support the consolidation of existing DOL agencies' infrastructure to gain economies of scale, eliminate duplication, and implement new capabilities. All of these benefits result in a more agile DOL workforce, able to provide enhanced services and benefits for the public. These proactive efforts also enabled DOL to seamlessly shift 95 percent of non-essential DOL staff to full-time teleworking in 2020 due to the COVID-19 pandemic, with uninterrupted delivery of mission-critical services and maintain cybersecurity as a top priority. Efforts funded in this activity include the implementation of business process management and business intelligence capabilities on the enterprise-wide DOL IT platform, migration to cloud, and continued implementation of Unified Communications.

Five-Year Budget Activity History

Fiscal Year	Funding	FTE
	(Dollars in Thousands)	
2017	$13,880	0
2018	$15,880	0
2019	$18,380	0
2020	$20,380	0
2021	$22,380	0

FY 2022

The FY 2022 request for ITIM is $32,380,000, for an increase of $10,000,000 above the FY 2021 revised enacted funding. The program funding is required in order to continue the buildout of the DOL cloud environment and IT platform capabilities. Many of DOL's critical mission systems have been built over the course of years to meet unique mission requirements and have disparate system architectures that are unsuitable for cloud migration without significant redesign and reengineering. The program requires these funds to enable the timely transition and sequencing of legacy mission systems and applications for migration to the cloud and the DOL IT platform. The funding will also support continuing the implementation of shared service provisioning capabilities and service consolidation to centralized provisioning platforms. As the shared service consolidations have completed, the focus is now on ways to improve efficiency across the new enterprise. The endeavor will entail redesign of administrative business processes

and enablement of the resulting improved workflows. Increased funding will also support the enterprise-wide implementation of the Technology Business Management (TBM) framework for improvements in IT cost visibility and management.

Without the requested resources in FY 2022, OCIO will need to extend initiative timelines, in many cases by multiple years. These delays will have significant downstream impacts on the budget, planning, and implementation efforts of several agencies working to modernize mission applications in the medium term. The disruption would delay citizen-impacting benefits prioritized by the Administration for programs affecting mine safety, visa processing, grants management, retirement benefits assurance, and oversight requirements for association health plans. Extending these timelines will significantly increase OCIO and agency costs, increase duplication of effort, lead to proliferation of point solutions, and increase the overall complexity of the IT landscape that DOL is working to simplify. In a worst-case scenario, the delay could even derail modernization plans altogether.

These resources work in concert with the request for IT Working Capital Fund authorities. This fund will further enable agencies to leverage OCIO's expertise and capacity to execute IT projects. However, additional resources are still required to provide the necessary modernization investment level.

DOL will realize IT modernization return on investment (ROI) in several aspects. DOL will gain increased productivity and faster processing times for case adjudications through standardized business processes and automated workflows. This will result from the continued transition of case management systems to the DOL IT platform based on prudent business process redesign. DOL will also realize quantifiable cost savings through operating the various mission and case management systems within the centralized, cloud-based platform. Centralized hosting and management will simplify the physical IT infrastructure, improve visibility over case management performance, enable greater flexibility in staff and workload management, and provide common interfaces across all case management processes to reduce on-boarding and training/cross training time and resource costs.

The additional program funding will enable DOL to implement its IT modernization agenda and overall IT strategic plan, which will include the following initiatives, in line with DOL IT goals and objectives:

- Goal 1 - Create the DOL IT Platform:
  - Continue developing the DOL IT platform by implementing capabilities that allows OCIO to implement multiple agency use cases on the same platform. Associated benefits include improved data access and interoperability across bureau data, simplified data access for ad hoc report creation, improved evidence-based decision-making, improved search, and increased advanced analytics capabilities.
  - Continue to build foundational capabilities and further enhance the business process management capabilities that accelerate the development cycle and functional benefits for case management systems migrating to the platform. Integrating the functionality of IT Service Management with Software Asset

management, Demand and Project management through the build out of functional workflows and access directories will drive customer facing foundational efficiencies enabling a self-service capability to the DOL customers to more effectively perform laborious tasks such as: tracking inventories, asset ownership and software statuses.

o Digitize DOL's document-based resources and increase accessibility by integrating with the data analytics IT platform capability, with the ultimate potential cost avoidance of $11.6 million per year due to increased efficiency in finding electronic records versus physical records. Execute DOL's approach and implementation of NARA-compliant records management processes.

o The DOL Content Service Platform of integrated systems will produce, organize, track, and store electronic documents and content. It provides a set of services that share common repositories, facilitating organization of diverse content that will integrate with Enterprise Records Management (ERM). The ability to leverage these capabilities across the Department transfers into greater efficiencies by expediting data retrieval, minimizing the need to purchase additional hardware and therefore better supporting the remote workforce initiative.

- Goal 2- Modernize Legacy Agency Applications:
  o Continue the adoption of DOL IT platform capabilities, cloud hosting, and mobile platform as opportunity to modernize agency legacy applications.
  o Transform selected systems utilizing the business process management capability on the DOL IT platform while integrating with the data analytics capability.
  o Continue on-going modernization and enhancement of the General Support and General Infrastructure assets.

- Goal 3- Secure and Enhance the IT Infrastructure:
  o Leverage Enterprise Infrastructure Solution (EIS) to modernize remote office networks with more secure network capabilities.
  o Continue DOL website modernization to standardize front-end technology and simplify access to DOL services making them more user-friendly and easier to maintain.
  o As part of the pandemic response, an accelerated proof of concept has been initiated to address the need for visual information for employees coming back to the Francis Perkins Building (FPB). The ingestion of and distribution of visual content for the digital signage is currently a manual process done by engineering, and engineering will continue to streamline and automate that process. Future expansion could include also displaying live cable feeds through these devices, and distribution of displays and information to DOL Sites outside of FPB that will be centrally controlled from DOL. The Digital Signage Pilot is designed to provide a centralized capability to send visual information to electronic displays within the building. The system provides capability for distributing curated subscribed content (such as localized AP news feeds, Twitter feed of Official DOL Accounts, local and National Weather, local public Transportation and traffic reports), emergency alerts (originating from Informacast) and DOL internally designed content.

- Goal 4 - Transform the Customer Experience:
  - Increase customer engagement and satisfaction by implementing a single portal for IT and non-IT services that centralize resource access and provide a single engagement point for customer service assistance and issue resolution.
  - Mature project management capabilities by migrating all bureau-led projects to standardized DOL-wide project management framework to drive consistent project delivery and performance levels. Provide training to advance project management practices in support of DOL's IT modernization: agile methodologies, human-centered design, business process reengineering, etc.
  - Leverage the Virtual Desktop Infrastructure (VDI) Remote Access pilot results to centralize desktop provisioning from a secure cloud environment and enable a unified user desktop experience from any internet-connected device. VDI saves hardware costs due to the procurement of thin client, zero client, Bring Your Own Device (BYOD), or Chromebook. VDI will decrease provisioning and deployment time by using packages, as opposed to working on single workstations. The VDI system will deliver efficiencies enterprise-wide.
  - Setup mobile applications COE to facilitate agency mobile application development by providing guidance and assistance in assessing agency applications, data sets, and web-enabled content for optimal mobile enablement.
  - The COVID-19 pandemic propelled the adaptability of virtual and telework functionality across the Department. As remote work outlines the future landscape of the federal workforce, DOL is working to develop a reservation system that can be leveraged to book onsite conference rooms or shared hotel space for individuals that chose to or must return to the building going forward while allowing for COVID safety precautions and regulations.

DOL continues to make foundational progress and advance modernization efforts and has reached an operational state with key bureau modernization project plans. Yet, DOL does not have the resources to maintain a healthy modernization investment level. To tip the investment scale towards modernization there is a need for continued investment in delivery of new services to facilitate agency modernization momentum.

FY 2021

The FY 2021 revised enacted funding level for ITIM is $22,380,000. High priority activities in FY 2021 include the following:

- In support of the Shared Service Platform and Modernization of Legacy Systems, DOL is leveraging the Case Management platform to eliminate redundancies in infrastructure, network and system administration, cybersecurity, authority to operate, governance, and Section 508 compliance. DOL is also utilizing data analytics capabilities to drive better executive decision making while driving modernization and compliance around OMB's Memorandum M-19-21 to digitize all of NARA's paper records by FY22,
- DOL continues its effort to Secure and Enhance Infrastructure by recently demonstrating a $119 million in cost savings and avoidance for the Department by

consolidating 7 data centers (bringing the total closed by the end of FY 2021 to 80), consolidating hardware and software contracts, installing wireless networks in 115 DOL offices, and centralizing DOL staff's workstations under an enterprise lease program. As part of the pandemic response strategy DOL focused on maximizing efficiencies by investing in strengthening and optimizing their Infrastructure Solutions, Unified Communication Tools, and Cybersecurity initiatives aimed to strengthen safeguards to protect the Department's systems and manage identified security risks.

- This year the goal is to mature the IT Shared Service model by setting policy, governance, resources, acquisitions and tools in place to leverage innovation while standardizing repeatable process to streamline IT development and deliver best in class IT services and solution to enable DOL agencies to provide superior support to the American public. DOL maintained five FITARA "A" grades across six total categories, ranking DOL among the top one-third of federal agencies and departments assessed on the implementation of IT modernization and cybersecurity FITARA directives.

FY 2020

The FY 2020 revised enacted funding for ITIM is $20,380,000. FY 2020 initiatives included:
- Adjustment of operations in response to COVID-19 by executing improved Enterprise Service Desk (ESD) services to its customers, especially in a maximum telework environment, offering new and improved communication tools and more effective knowledge sharing and training on Cybersecurity
- Consolidation of public-facing websites (DOL.gov, Benefits.gov, OSHA.gov, GovLoans.gov, Apprenticeship.gov, HireVETS.gov and SeasonalJobs.dol.gov) into a unified web presence to bolster security and improve the digital user experience.
- Completion of 100 percent of the Windows Server 2008 Upgrades (including 1247 servers) to the development, test and infrastructure servers. Decommissioned 350 servers to maximize infrastructure resources and reduce costs.

Workload Summary

In support of the Department's IT modernization goals, OCIO conducted an assessment and selected the Appian Product Suite to develop a scalable business process management capability tailored to meet agency needs. DOL implemented this capability to drive the consolidation of the Department's disparate case management systems. The Department successfully on-boarded agency applications to the platform and continues to launch applications on the DOL IT Platform including the ETA Foreign Labor Application Gateway (FLAG) system for the H-2B and Prevailing Wage Determination modules.

Also in support of IT modernization goals, the Department established DOL Cloud Services, a cross-agency cloud solution consistent with the Federal Cloud Computing Strategy. The solution gives DOL agencies access to Cloud Service Providers (CSPs) with the ability to leverage a central Authority to Operate (ATO) between DOL data centers, CSPs, and DOL agencies. To date, DOL has deployed 30 production applications and a development environment into the

IT INFRASTRUCTURE MODERNIZATION

Department cloud. In FY 2021 and FY 2022, DOL plans to continue migrating additional applications to the Department cloud and plans to leverage a hyper-converged infrastructure to quickly and easily implement application hosting; whether dedicated, virtualized, or cloud-hosted.

DOL also launched its Unified Communications (UC) program to integrate and modernize the Department network. With tools like video-teleconferencing (VTC), wireless Internet (Wi-Fi), and Voice over Internet Protocol (VoIP) phones with Cisco Jabber soft phone capabilities, Department staff can now make secure calls from anywhere on any device, host interactive meetings regardless of location, and collaborate in new ways. To support the transition to full-time telework, the Department accelerated implementation of Microsoft Teams and is incorporating it with VTC to support seamless and integrated functionality. The UC program consolidates nine legacy network infrastructures into one modern network. The new UC network better prevents cyberattacks on the Department by upgrading network equipment (e.g. switches, routers), providing enterprise network monitoring tools, and enabling authentication technology, as well as adding network redundancies to protect the infrastructure in the event of an unplanned outage. By the end of FY 2020, staff at 130 sites and the Frances Perkins Building, which constitute over 70 percent of DOL workforce, will leverage UC capabilities. Transition to UC infrastructure for core regional sites is planned to be completed in FY 2021. DOL is investigating the potential of 5G wireless technology to eliminate the need to re-wire the 200+ smaller sites.

DOL will improve the use of data for decision-making and accountability by implementing enterprise data management and data analytics capabilities on the DOL IT platform. These capabilities will ease integration of data from across organizational silos, provide users with tools to develop custom reports and visualizations, and provide self-service analytics to drive evidence-based mission management and decision-making across Program boundaries where allowable. In FY 2021 and FY 2022, DOL will continue to integrate agency data repositories within the Department central repository and establish the data analytics capability for more agency applications, along with a data governance model. Pilot data analytics capabilities have been developed and are being utilized by ETA and OASP with additional agencies discussing plans for adoption.

IT INFRASTRUCTURE MODERNIZATION

		FY 2020 Revised Enacted	**FY 2021 Enacted**	**FY 2022 Request**	**Diff. FY22 Request / FY21 Enacted**
	BUDGET ACTIVITY BY OBJECT CLASS (Dollars in Thousands)				
11.1	Full-time permanent	0	0	0	0
11.9	Total personnel compensation	0	0	0	0
23.3	Communications, utilities, and miscellaneous charges	0	0	0	0
24.0	Printing and reproduction	0	0	0	0
25.1	Advisory and assistance services	7,585	140	2,140	2,000
25.2	Other services from non-Federal sources	0	0	0	0
25.3	Other goods and services from Federal sources 1/	0	331	331	0
25.4	Operation and maintenance of facilities	0	0	0	0
25.7	Operation and maintenance of equipment	9,930	16,699	24,699	8,000
31.0	Equipment	2,865	5,210	5,210	0
	Total	**20,380**	**22,380**	**32,380**	**10,000**
1/Other goods and services from Federal sources					
	Services by Other Government Departments	0	331	331	0

IT INFRASTRUCTURE MODERNIZATION

CHANGES IN FY 2022
(Dollars in Thousands)

Activity Changes
  Built-In
    To Provide For:
    Costs of pay adjustments $0
    Communications, utilities, and miscellaneous charges   0
    Printing and reproduction   0
    Advisory and assistance services   0
    Other services from non-Federal sources   0
    Other goods and services from Federal sources   0
    Operation and maintenance of facilities   0
    Operation and maintenance of equipment   0
    Equipment   0
  Built-Ins Subtotal   **$0**

Net Program   **$10,000**
  Direct FTE   **0**

	Estimate	FTE
Base	**$22,380**	**0**
Program Increase	**$10,000**	**0**
Program Decrease	**$0**	**0**