

FY 2018

CONGRESSIONAL BUDGET JUSTIFICATION

DOL IT MODERNIZATION

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DOL IT MODERNIZATION

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DOL IT MODERNIZATION

APPROPRIATION LANGUAGE

For necessary expenses for Department of Labor centralized infrastructure technology investment activities related to support systems and modernization, \$29,722,000, which shall be available through September 30, 2019.

Note.-A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Further Continuing Appropriations Act, 2017 (P.L. 114-254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.

DOL IT MODERNIZATION

AMOUNTS AVAILABLE FOR OBLIGATION						
(Dollars in Thousands)						
	FY 2016 Enacted		FY 2017 Full Year C.R.		FY 2018 Request	
	FTE	Amount	FTE	Amount	FTE	Amount
A. Appropriation	0	\$29,778	0	\$29,722	0	\$29,722
<i>Subtotal Appropriation</i>	<i>0</i>	<i>\$29,778</i>	<i>0</i>	<i>\$29,722</i>	<i>0</i>	<i>\$29,722</i>
B. Gross Budget Authority	0	\$29,778	0	\$29,722	0	\$29,722
C. Budget Authority Before the Committee	0	\$29,778	0	\$29,722	0	\$29,722
D. Total Budgetary Resources	0	\$29,778	0	\$29,722	0	\$29,722
Unobligated Balance Expiring	0	\$0	0	\$0	0	\$0
E. Total, Estimated Obligations	0	\$29,778	0	\$29,722	0	\$29,722

DOL IT MODERNIZATION

SUMMARY OF CHANGES

(Dollars in Thousands)

	FY 2017 Full Year C.R.	FY 2018 Request	Net Change
Budget Authority			
General Funds	\$29,722	\$29,722	\$0
Total	\$29,722	\$29,722	\$0
Full Time Equivalents			
General Funds	0	0	0
Total	0	0	0

Explanation of Change	FY 2018 Change							
	FY 2017 Base		Trust Funds		General Funds		Total	
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount
Increases:								
A. Built-Ins:								
To Provide For:								
Advisory and assistance services	0	\$24,320	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	\$0	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	\$818	0	\$0	0	\$0	0	\$0
Equipment	0	\$4,584	0	\$0	0	\$0	0	\$0
Built-Ins Subtotal	0	+\$29,722	0	\$0	0	\$0	0	\$0
B. Programs:								
Total Increase	0	+\$29,722	0	\$0	0	\$0	0	\$0
Decreases:								
A. Built-Ins:								
To Provide For:								
Built-Ins Subtotal	0	\$0	0	\$0	0	\$0	0	\$0
B. Programs:								
Total Decrease	0	\$0	0	\$0	0	\$0	0	\$0
Total Change	0	+\$29,722	0	\$0	0	\$0	0	\$0

DOL IT MODERNIZATION

SUMMARY BUDGET AUTHORITY AND FTE BY ACTIVITY (Dollars in Thousands)								
	FY 2016 Enacted		FY 2017 Full Year C.R.		FY 2018 Request		Diff. FY18 Request / FY17 Full Year C.R.	
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount
Departmental Support Systems	0	4,898	0	4,889	0	4,889	0	0
General Funds	0	4,898	0	4,889	0	4,889	0	0
IT Infrastructure Modernization	0	24,880	0	24,833	0	24,833	0	0
General Funds	0	24,880	0	24,833	0	24,833	0	0
Total	0	29,778	0	29,722	0	29,722	0	0
General Funds	0	29,778	0	29,722	0	29,722	0	0

NOTE: 2016 reflects actual FTE.

DOL IT MODERNIZATION

BUDGET AUTHORITY BY OBJECT CLASS					
(Dollars in Thousands)					
		FY 2016 Enacted	FY 2017 Full Year C.R.	FY 2018 Request	Diff. FY18 Request / FY17 Full Year C.R.
	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	0	0	0
24.0	Printing and reproduction	0	0	0	0
25.1	Advisory and assistance services	8,929	24,320	24,320	0
25.2	Other services from non-Federal sources	0	0	0	0
25.3	Other goods and services from Federal sources 1/	0	0	0	0
25.4	Operation and maintenance of facilities	0	0	0	0
25.7	Operation and maintenance of equipment	18,365	818	818	0
31.0	Equipment	2,484	4,584	4,584	0
	Total	29,778	29,722	29,722	0
	1/Other goods and services from Federal sources				

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				0
2018					
Base Appropriation	\$29,722				0

DOL IT MODERNIZATION

OVERVIEW

Introduction

The Department of Labor (DOL) Information Technology (IT) Modernization program is managed by the Office of the Chief Financial Officer (OCIO). The program consists of two vital functions to modernize IT Systems and ensure the most efficient and secure delivery of IT solutions for DOL users. These two IT Modernization functions are:

- Departmental Support Systems (DSS), which provides the resources for IT Security enhancement modernization efforts, and
- IT Infrastructure Modernization (ITIM), which provides the resources for a cloud-based computing solution and consolidation of infrastructure and networks.

IT Modernization investments provide the tools necessary to carry out essential, mission-critical activities that support the safety, security, and rights of the American workforce. The FY 2018 President's Request funding level provides necessary funding for these IT security and mission-support activities.

DSS initiatives are vital to DOL's mission-critical business needs. DSS increases IT infrastructure and network security through multiple mandated and proactive measures to protect the integrity of sensitive confidential information including personally identifiable information (PII). This information is collected Department-wide by a variety of agencies including the Office of Worker's Compensation, Bureau of Labor Statistics, and Occupational Safety Health Administration. Nearly all of DOL's agencies collect sensitive information, and these critical business results require robust security infrastructure. OCIO is actively engaged in implementing all mandated security requirements, as well as consolidating infrastructure, network environments, and applications to centrally manage security of these environments as they house DOL Enterprise data that must not be compromised.

DSS FY 2018 initiatives include renewed commitment to the President's Executive Direction to protect each Department's network from cybersecurity attacks that threaten to compromise the integrity and benefits of DOL data. Compromised data breach from a cybersecurity attack could result in the accidental disclosure of confidential information related to private citizens and businesses. Cybersecurity attacks could significantly impact not only data integrity, but also infrastructure and network availability that would slow the work DOL employees conduct such as worker case management litigation, labor market statistics, and a variety of pertinent workforce benefits. OCIO's Identity and Access Management (IAM) group will continue work to centrally manage access to systems and applications via PIV card usage, which will increase security by reducing the level risk associated with managing multiple network and application account management silos.

The current DSS investments are crucial to IT Security. IT Modernization is the primary path for DOL to improve its IT Security posture. DOL will improve cyber security as a result of all ITM projects because in parallel with adding new infrastructure capabilities (such as the existing Data Center Consolidation project, and subsequent Unified Communications project), DOL is able to

DOL IT MODERNIZATION

correct legacy infrastructure vulnerabilities. DOL cannot do this with the existing end-of-life network, security, server and storage infrastructure due to limited technical capability of the legacy equipment and associated DOL Enterprise-wide architecture weaknesses.

The second function is achieved through IT Infrastructure Modernization (ITIM) funding which includes two major initiatives: (1) Data Center Optimization Initiative and (2) Unified Communications. These two major projects work together to provide a consolidated and modernized IT network infrastructure complete with multiple mission enhancing tools that are aimed at providing direct benefits to the American workforce through DOL programs. The agility of a consolidated IT infrastructure for the Department provides multiple benefits for DOL programs including cost savings and cost avoidance, increased work efficiencies, increased productivity, and enhanced security measures.

ITIM FY 2018 initiatives not only meet the goals of the Federal Data Center Consolidation Initiative (FDCCI), but also build on benefits through a suite of projects such as mobile device modernization, virtual desktop integration, case management, cross-agency data sharing (CADS), and video-teleconferencing (VTC) all of which are mission critical enhancement tools that enable DOL employees to conduct their work in a more accurate and timely manner. OCIO's Data Center Optimization Initiative (DCOI), which is mandated by Federal Chief Information Officer under the (FDCCI, requires each agency to reduce its IT footprint through the consolidation of traditional data center to promote the use of Green IT, reduce the cost of data center hardware, increase the overall IT security posture of the government, and shift IT investments to more efficient computing platforms and technologies. The ITIM projects will give DOL a leaner more agile network that, in turn, will allow for a leaner more agile DOL workforce that can better meet the needs of the American taxpayer.

DEPARTMENTAL SUPPORT SYSTEMS

BUDGET AUTHORITY BEFORE THE COMMITTEE				
(Dollars in Thousands)				
	FY 2016 Enacted	FY 2017 Full Year C.R.	FY 2018 Request	Diff. FY18 Request / FY17 Full Year C.R.
Activity Appropriation	4,898	4,889	4,889	0
FTE	0	0	0	0

Introduction

The Departmental Support Systems 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. These efforts are achieved through several new and ongoing projects mandated by executive and congressional directives.

Ongoing and new enterprise security efforts in the planning, development, and/or implementation phases that will be supported in FY 2018 include:

- Identity and Access Management (IAM),
- Network Consolidation via Unified Communications,
- Continuous Diagnostics and Mitigation (CDM),
- Cybersecurity Executive Direction, and
- Enterprise Architecture Development.

Five-Year Budget Activity History

<u>Fiscal Year</u>	<u>Funding</u> (Dollars in Thousands)	<u>FTE</u>
2013	\$11,195	0
2014	\$4,898	0
2015	\$4,898	0
2016	\$4,898	0
2017	\$0	0

NOTE: A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared.

FY 2018

In FY 2018, OCIO will work to enhance network and cybersecurity to ensure the Department's confidential and sensitive data is protected. As the threat of cybersecurity continues to grow throughout the government, OCIO is focused on its continued commitment to executive direction around cybersecurity including addressing requirements outlined in the President's Executive Order on Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure. To address these growing concerns, OCIO will (1) implement enhanced security analytics, in order to reduce risk from critical vulnerabilities, (2) expand operation of cyber-security defensive capabilities to protect DOL and prevent impact to associated components of critical

DEPARTMENTAL SUPPORT SYSTEMS

infrastructure, and (3) implement a lessons learned organization centered on security functions to enhance flexibility which will increase DOL's resiliency against mission disruption. All of these enhancements will prevent cyber-attacks by denying bad actors entry into DOL networks and systems, and in the event of a breach, shortens the time between entry and eviction. A significant breach could result in the compromise of DOL data and its ability to support its most critical missions. Such a compromise could have far reaching, harmful impact on the U.S. Economy. In the long-term, the cost of properly securing DOL assets and providing the necessary enhancement tools to do so is far less than the cost that would be incurred for failing to make such provisions.

Additionally, OCIO is also working with the Department of Homeland Security (DHS) and the Office of Management and Budget on implementing the Continuous Diagnostics and Mitigation (CDM) program, as required by *Enhancing the Security of Federal Information and Information Systems* (M-14-03) . OCIO's CDM program supports the implementation of the Federal security dashboard, various DOL enterprise-wide CDM tools aimed at reducing vulnerabilities and enhancing cyber defenses on multiple levels. CDM achieves these goals through increased monitoring of DOL systems to ensure they are protected and controls are in place to allow DOL to respond quickly to cyber threats. As an added benefit, these CDM tools cost the government less money as the same tools are used government-wide. These tools give OCIO insight into the DOL network to monitor real-time activity yielding fact-based decisions to reduce both risk and costs. Without these types of security monitoring capabilities, DOL would incur far more cost in duplicative security tools. The cost savings for moving to DHS CDM tools is approximately \$1.3M annually in maintenance costs alone.

The Identity and Access Management (IAM) program ensures that DOL knows who is accessing IAM DOL IT assets and restricts them to appropriate limited areas and functions based on their role. The program also establishes the governance and processes that manage the lifecycle of all Department IT users. The program aligns to the Federal Cybersecurity Cross Agency Priority (CAP) goals for Identity, Credential, and Access Management. IAM will integrate DOL applications to provide single sign-on capabilities, increasing productivity. IAM will also enhance user lifecycle management business processes, thereby increasing security. Lastly, IAM will refine technology processes to accommodate mobile device platforms, increasing mission required flexibility. All of these activities will result in a reduction in disparate user credentials reducing risk of security breach potentially involving citizens' personally identifiable information. The IAM project will also streamline IT processes for account creation and modifications which will improve productivity and result in a cost savings in password reset tickets of an estimated \$1M annually.

Additional Departmental Support Systems projects include Unified Communications network consolidation and DOL Enterprise Architecture. As a part of network consolidation efforts, UC provides increased security by reducing the number of networks to monitor from seven to one. Lastly, a DOL Enterprise Architecture is a framework to identify and align investments in people, processes, and technologies with strategic priorities, targeted capabilities and desire performance improvements.

DEPARTMENTAL SUPPORT SYSTEMS

FY 2017

Figures shown for FY 2017 reflect the annualized Continuing Resolution level, as a full-year appropriation had not been enacted at the time the budget was produced. The Department will provide an Operating Plan after a full-year appropriation bill is enacted.

DEPARTMENTAL SUPPORT SYSTEMS

DETAILED WORKLOAD AND PERFORMANCE					
		FY 2016 Enacted		FY 2017 Full Year C.R.	FY 2018 Request
		Target	Result	Target	Target
Departmental Support Systems					
ITM-DSS-OCIO	Number of vulnerabilities for which remediation has not occurred within 30 days of identification for DOL major information systems	0	0	0	0

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

DEPARTMENTAL SUPPORT SYSTEMS

Workload Summary

In FY 2018, OCIO will continue to integrate DOL applications with DOL's enterprise Identity and Access Management (IAM) solution to provide single-sign-on capabilities. Single sign-on allows network and application access through the use of two-factor, user-based PIV authentication that will increase network access security, and mitigating the risk of allowing unauthorized actors to access sensitive and confidential data on the DOL network.

Additionally, OCIO will start work on Phase 2 security tools for the Continuous Diagnostics and Mitigation project and Federal security dashboard. By implementing this enhanced monitoring functionality, DOL will reduce risk levels of a security breach of the DOL network including cybersecurity attacks that could have the potential to majorly disrupt DOL services that are vital to the safety, health, and rights of the American labor force.

As a part of the Cybersecurity Executive Direction, OCIO will implement an enhanced security analytics capability, reducing risk from critical vulnerabilities. OCIO will also continue to expand operation of cyber-security defensive capabilities, to protect DOL and prevent impact to associated components of critical infrastructure. Lastly, OCIO will commence implementation of learning-machine driven orchestration of security functions to enhance flexibility and dynamic capabilities. This will increase DOL's resilience against mission disruption which will mitigate the impact level of a security breach by assigning our most robust security defenses to our most critical infrastructure and data.

As a part of ongoing network consolidation via the Unified Communications project in FY 2018, OCIO will continue to leverage opportunities across the country at DOL offices to pair network infrastructure modernization with the deployment of UC solutions such as VoIP, video teleconferencing, and wireless infrastructure. By seizing this combined modernization model, OCIO is inherently increasing efficiencies and also ensuring that our network environment is using the most current technologies on a consolidated platform that provides increased security enterprise-wide.

Lastly in FY 2018, OCIO will start work on a DOL Enterprise-wide Architecture design detailing the current and to-be state of DOL infrastructure and network topology. This will guide DOL in meeting its network design goals and result in the most consolidated and secure network for DOL agencies and programs. A simplified and streamlined architecture will result in more efficient processes and less operational complexity. Less complexity will result in a more manageable network to mitigate risk, increase redundancy, and reduce single points of failure. These network design features help mitigate risk in the event of network failure or cybersecurity attack allowing DOL mission critical functions to maintain continuity to ensure DOL employees to perform the vital services DOL provides taxpayers.

DEPARTMENTAL SUPPORT SYSTEMS

BUDGET ACTIVITY BY OBJECT CLASS					
(Dollars in Thousands)					
		FY 2016 Enacted	FY 2017 Full Year C.R.	FY 2018 Request	Diff. FY18 Request / FY17 Full Year C.R.
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	4,498	0	0	0
25.2	Other services from non-Federal sources	0	0	0	0
25.3	Other goods and services from Federal sources 1/	0	0	0	0
25.4	Operation and maintenance of facilities	0	0	0	0
25.7	Operation and maintenance of equipment	400	305	305	0
31.0	Equipment	0	4,584	4,584	0
	Total	4,898	4,889	4,889	0
	1/Other goods and services from Federal sources				

DEPARTMENTAL SUPPORT SYSTEMS

CHANGES IN FY 2018

(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 2016 Enacted	FY 2017 Full Year C.R.	FY 2018 Request	Diff. FY18 Request / FY17 Full Year C.R.
Activity Appropriation	24,880	24,833	24,833	0
FTE	0	0	0	0

Introduction

IT Infrastructure Modernization will 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. This activity consolidates existing DOL agencies' infrastructure to gain economies of scale, eliminates duplication, and implements new capabilities. All of these benefits result in a more agile DOL workforce that is able to provide enhanced services and benefits for the American workforce.

The IT Infrastructure Modernization Program continues to establish a reliable and secure enterprise wide IT infrastructure that is a necessary prerequisite to implement DOL mission critical application system improvements. Over time, the projects will transform the DOL IT Infrastructure to a standardized set of enterprise-wide IT software, hardware and services. This will reduce the number of duplicate and incompatible solutions; improve cost effectiveness; increase reliability, maintainability, and security.

Ongoing enterprise efforts in the planning, development, and/or implementation phases that will be supported in FY2018 include:

- Data Center Optimization Initiative (DCOI), and
- Unified Communications (UC)

Five-Year Budget Activity History

<u>Fiscal Year</u>	<u>Funding</u> (Dollars in Thousands)	<u>FTE</u>
2013	\$7,583	0
2014	\$14,880	0
2015	\$10,496	0
2016	\$24,880	0
2017	\$0	0

NOTE: A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared.

FY 2018

In FY 2018, OCIO will continue work on two projects to include (1) Unified Communications network consolidation and (2) the Data Center Optimization Initiative. The UC project is to modernize and secure DOL's infrastructure and network to provide effective communication and

IT INFRASTRUCTURE MODERNIZATION

collaboration tools to the DOL enterprise. As a part of the network consolidation, UC provides increased security by reducing the number of networks to monitor from seven to one. In FY 2018, OCIO will deploy VoIP telephone systems Department-wide including 42 distributed offices. OCIO will also deploy wireless infrastructure to each DOL Agency and distributed office. Lastly, under UC implementation, OCIO will deploy video teleconferencing capabilities to each identified DOL sub-agency and site. These upgrades will provide improved connectivity, optimized bandwidth, and overall quality of service. VoIP and VTC solutions with both DOL internal and external users promotes a collaborative and productive workplace by reducing travel costs and allowing optimal multi-point conferencing across any geographic location. Work efficiency is improved through empowering field staff engineers with the tools necessary to carry out mission critical work almost instantaneously by updating data real time, discuss challenges, and engage with management to facilitate immediate decision making.

Additionally, OCIO will continue work on the Data Center Optimization Initiative. Some of the activities that will occur in FY 2018 will be to (1) continue consolidating legacy DOL physical servers moving decommissioned server data to virtual instances, (2) collaborating with DOL sub-agencies to implement an enterprise case management platform, (3) continue build-out of cross-agency data sharing, and (4) configure data center platform for virtual desktop integration (VDI). This work will drive down infrastructure complexity and create a standardized operational model to deliver higher service levels. DCOI will activities will increase performance with reduced and standardized systems infrastructure resulting in less time spent on support and administrative activities and more time focused on proactive performance tuning and architectural design. Additional projects such as case management, VDI, all provide DOL users with the tools necessary to conduct work anytime and anywhere. The increased mobility of DOL platforms will have direct impact on work productivity resulting in better DOL products and services.

FY 2017

Figures shown for FY 2017 reflect the annualized Continuing Resolution level, as a full-year appropriation had not been enacted at the time the budget was produced. The Department will provide an Operating Plan after a full-year appropriation bill is enacted.

IT INFRASTRUCTURE MODERNIZATION

DETAILED WORKLOAD AND PERFORMANCE					
		FY 2016 Enacted		FY 2017 Full Year C.R.	FY 2018 Request
		Target	Result	Target	Target
IT Infrastructure Modernization					
ITM-01	Percentage of employees with access to a consolidated and standardized unified communications VoIP solution	30%	30%	100%	100%

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

IT INFRASTRUCTURE MODERNIZATION

Workload Summary

DOL's Data Center Optimization Initiative (DCOI) is a continued effort pursuant to the Federal Data Center Consolidation Initiative program (FDCCI) guidance. The OCIO has leveraged this consolidation program to modernize the fundamental computing platform available to Agencies in support of business processes vital to DOL's mission focused initiatives. OCIO has created a virtualized infrastructure which significantly reduces the IT hardware footprint, while simultaneously enabling advanced capabilities that improve the Agency mission user experience while enhancing taxpayer interfaces. This infrastructure has enabled cross-agency data sharing, data analytics, and case management toolsets. It has also advanced mobility capabilities enabling mobile device access to DOL resources and a virtual desktop capability that allows users to operate their unique desktop through Internet browser access.

As OCIO continues the consolidation of servers in legacy data centers, those servers are virtualized into the new consolidated DOL environment meaning that several virtual servers and their applications share one actual computer server. OCIO's virtualization efforts have exceeded the FDCCI target ratio of a 4:1 for virtual to physical instances, with DOL averaging a ratio of 17 virtual machines on each physical server. The greater virtualization ratio significantly reduces the DOL hardware investment and commensurately lowers maintenance cost spent on maintaining physical servers. An added benefit is the acceleration of the new server provisioning cycle which speeds 'time to market' of new or modified Agency mission applications. For the American taxpayer this means that the time it takes to stand-up or replace a server containing applications directly related to the services DOL provides. A modernized, leaner infrastructure platform coupled with modernized Agency systems will directly impact DOL employees to increase work efficiencies. First, OCIO will continue build-out of the Cross-Agency Data Sharing (CADS) infrastructure. CADS allows DOL agencies to centrally store and provide cross-agency access to key enforcement datasets. The Data Analytics platform in development will provide all Agencies with a common set of tools to conduct advanced analytics.

In order to address requirements for continuity of operations and increase workforce mobility, the DCOI platform is being configured to provide a virtual desktop that will more easily integrate with mobile application access. A virtual desktop allows users to log into the same desktop that they utilize at their normal work duty station from any Internet enabled device. This provides the capability to access mission information and applications via tablets and other supported mobile devices. This same effort enables development of mobile applications that will be available from the DOL app store. Mission-capable front ends will expand the mobility options for the highly distributed enforcement and investigative workforces to minimize workforce burden and simplify constituent interaction.

OCIO is working with vendors to establish a Cloud Service Provider to support the migration of appropriate applications and IT services to the cloud. Cloud capabilities present multiple benefits, but the primary benefit is the ramp up of virtual infrastructure on-demand to fulfill very rapid implementation of citizen-facing services. This allows agencies to rapidly respond to changing requirements or Executive Orders that might require immediate action. Cloud services also have the benefit of severely shrinking the government procurement timeline enabling the

IT INFRASTRUCTURE MODERNIZATION

addition of significant infrastructure capacity in a very short time frame. This capability makes it practical to establish program resources such as web sites or additional storage with a short life span or establish backup facilities without requiring procurement of a physical location or infrastructure.

A multi-year effort, UC was initiated in FY 2016 to transform DOL's communication capabilities to facilitate collaboration, mobility, and interaction between DOL, its highly distributed workforce, and external constituents including taxpayers, companies, organizations, and other Federal entities. The most visible and pervasive benefit that will reach all DOL employees is the switch to Voice over Internet Protocol (VOIP) telephones. Migration to VOIP will be near completion in the Frances Perkins Building by FY 2018 but will continue through the fiscal year as OCIO implements VOIP across 42 distributed offices nationwide. The transition moves DOL away from a traditional phone service to a service that transmits much of the telecommunications traffic across the DOL wide area network. This is a significant change that provides an extensive list of benefits such as being able to log into any DOL phone, call forwarding, and voicemails sent to email addresses. It also has the added benefit of saving traditional telephone system maintenance and telephone access bills, greatly reducing the operating and maintenance costs. The UC team estimates that yearly cost reductions which begin ramping up in FY 2018 will reach \$3 million per year by FY 2020.

UC is also providing capabilities to greatly increase the accessibility and utilization of video teleconferencing. Advanced video teleconference centers are being established in key DOL locations across the DOL offices. There are also advanced audio and video capabilities to minimize historical issues with being able to see and hear different participants. These centers are supplemented with the capability to join teleconferences from one's desk. The participant list for video conferences can be extensive and geographically dispersed for inclusively managing the distributed DOL workforce where the "office of 1" is common. The UC team has analyzed workforce travel and determined that teleconferencing alone will help avoid over \$20 million in travel cost yearly once implementation is completed in FY 2019.

IT INFRASTRUCTURE MODERNIZATION

BUDGET ACTIVITY BY OBJECT CLASS					
(Dollars in Thousands)					
		FY 2016 Enacted	FY 2017 Full Year C.R.	FY 2018 Request	Diff. FY18 Request / FY17 Full Year C.R.
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	4,431	24,320	24,320	0
25.2	Other services from non-Federal sources	0	0	0	0
25.3	Other goods and services from Federal sources 1/	0	0	0	0
25.4	Operation and maintenance of facilities	0	0	0	0
25.7	Operation and maintenance of equipment	17,965	513	513	0
31.0	Equipment	2,484	0	0	0
	Total	24,880	24,833	24,833	0
	1/Other goods and services from Federal sources				

IT INFRASTRUCTURE MODERNIZATION

CHANGES IN FY 2018

(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	\$24,833	0
Program Increase	\$0	0
Program Decrease	\$0	0