



Agency Priority Goal Action Plan

# IT Modernization

## Goal Leaders:

Stuart McGuigan, Chief Information Officer, Bureau of Information Resource Management

# Overview

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## Goal Statement

- Enhance user and mission efficiency by increasing the productivity, usability, security, and relevance of IT solutions supporting the Department. By September 30, 2019, the Department will establish a secure cloud-based platform to improve Information Technology (IT) service delivery by: implementing an Identity Management System (IDMS) solution for all Department systems, transitioning users to cloud collaboration platforms, closing redundant data centers, modernizing target architecture, and continuing to deploy wireless (Wi-Fi) Department wide.
  - ✓ *While not every underlying milestone was accomplished as initially planned, significant progress was realized (22 of 35 milestones completed), and in several instances, exceeded our forecasts*

## Challenge

- Legacy systems pose investment and security risks and rely on increasingly costly and obsolete technologies;
- Some IT investments do not benefit from full governance rigor, which may result in duplication, lack of strategic business and technical alignment, and investment risk.

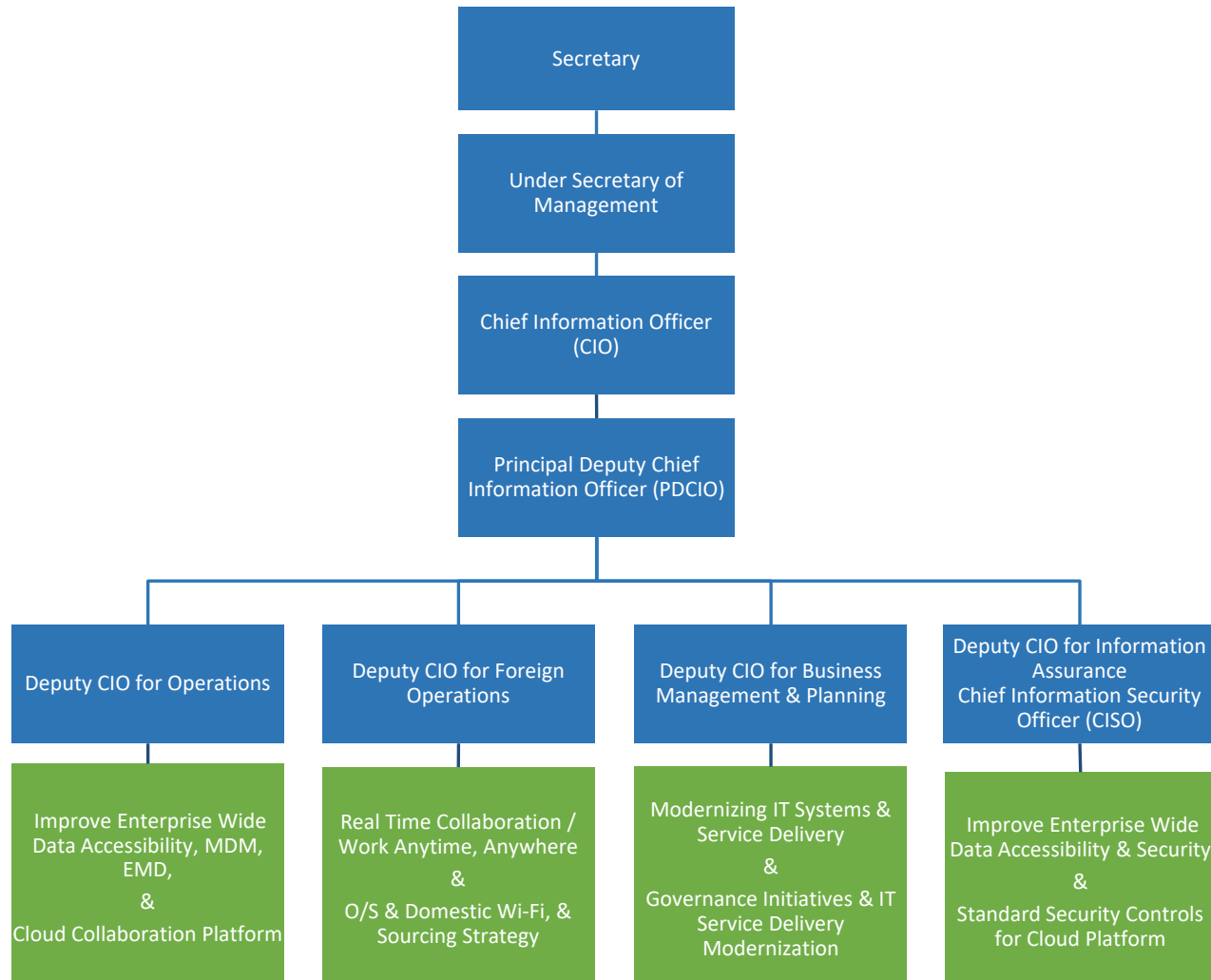
## Opportunity

- Provide single sign on for all users to access cloud-based and legacy systems/services;
- Design systems to target architecture to mitigate security risks posed by legacy systems and enhance overall IT security performance;
- Accelerate modernization of the Department's technology services, closure of data centers, and offer improved access to business data through commercial cloud services, cloud-ready digital identities, and cloud provided foundational services (i.e. email, Wi-Fi and productivity tools); and
- Restructure governance processes and IT portfolio (shifting an increased percentage to the budget from operations and maintenance (O&M) to development and modernization and enhancements (DM&E)).

# Leadership

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**Core Team:** This IT Agency Priority Goal (APG) is a result of the Department's IT Modernization initiative. Below is a high level organization representing the leadership support structure in place.



# Key Milestones



1.



## Improve Enterprise-Wide Data Accessibility

### *Right Data to the Right People*

Identify a certified project manager and submit a complete IDMS business case to the eGov PMO - Q3 FY 2018

### **IDMS for Cloud and for On-Premises Applications**

- Use governance to identify and procure an appropriate IDMS solution – Q3 FY 2018
- Pilot cloud application access through IDMS – Q4 FY 2018
- First production, on-premises application access via IDMS – Q1 FY 2019
- Launch additional legacy and cloud integration with IDMS – Q2 FY 2019



2.



## Real Time Collaboration / Work Anytime, Anywhere

### *Ecosystem to Support Mobility*

Identify a certified project manager and submit a complete business case to the eGov PMO for each of the projects below – Q3 FY 2018

### **Mobile Device Management and Conversion Strategy – A Foundational Enterprise Service**

- Use governance to modernize mobile device management – Q4 FY 2018

### **Cloud Collaboration Platform**

- Ensure all core functionality is available domestically and begin providing targeted services overseas – Q1 FY 2019

### **Overseas and Domestic Wi-Fi – A Foundational Enterprise Service**

- Develop and launch a consolidated rollout strategy – Q1 FY 2019



3.



## Modernize IT Systems and Service Delivery

### *Ecosystem to Adapt to a Changing Workforce*

Identify a certified project manager and submit a complete business case to the eGov PMO for each of the projects below – Q3 FY 2018

### **Governance Initiatives & IT Services Delivery**

- Develop new Service Delivery governance model – Q4 FY 2018
- Develop a modernized Enterprise Architecture (EA) program – Q4 FY 2018
- Build IT Modernization focused EA roadmap – Q1 FY 2019
- Upgrade service delivery governance processes and risk management framework – Q2 FY 2019
- Upgrade IT portfolio investments and systems modernization using new EA and service delivery model – Q3 FY 2019



4.



## Improve Enterprise-Wide Data Accessibility & Security

### *Cybersecurity and Standard Security Controls for Cloud Platform*

Complete the Enterprise Information Security Program Plan – Q4 FY 2018

### **Cybersecurity**

- Increase the Domain-based Message Authentication, Reporting, and Conformance (DMARC) set to default 'reject' to 100% – Q1 FY 2019
- Increase high and medium impact systems that have authorization to operate (ATO) – Q4 FY 2019

### **Standard Security Controls for Cloud Platforms**

- Complete the Amazon Web Services Information Security Program Plan – Q4 FY 2019

*See pages 5-11 for detailed milestones for each subproject.*

# Summary of Progress – FY 2018 Q1 – 2019 Q4

Despite the dynamic nature of Information Technology, especially over a two-year period of time, the Department was successful in achieving its IT Modernization APG Goal Statement for enhancing the productivity, usability, security and relevance of IT solutions supporting the Enterprise. While not every underlying milestone was accomplished as initially planned, significant progress was realized (22 of 35 milestones completed), and in several instances exceeded our forecasts.



**1.**



## **Improve Enterprise-Wide Data Accessibility**

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- The Enterprise Identity Management (IDMS) solution is now operational for all of the Department's FAN cloud environment users. IDMS user numbers will continue to grow throughout FY 2020 as the solution is integrated with the ServiceNow cloud environment, and eventually all Department-sponsored cloud environments.
- The WiFi Deployment initiative successfully completed seventeen overseas installations. While this fell short of target, delays were due to security processes at several posts as well as on a cost distribution structure.



**2.**



## **Real Time Collaboration / Work Anytime, Anywhere**

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- Microsoft Office Online (MS O365) is now available to 100 percent of enterprise users, and 93 percent of on-premises mailboxes have been successfully migrated to the O365 cloud environment, exceeding initial forecasts.
- A Mobile Device Management (MDM) solution was selected and implemented, enabling greater control, security and policy enforcement on mobile devices. There are now over 10,000 users, and usage will continue to expand in the next cycle.



**3.**



## **Modernize IT Systems and Service Delivery**

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- In accordance with the Data Center Optimization Initiative (DCOI), the Department's ESOC East data center was closed by the end of FY 2019.
- The Department developed a service layer lexicon in line with the OMB-sponsored TBM Service Delivery Framework that is being used to establish clear alignment of the IRM IT Portfolio to the Department's Mission and Service Offerings.



**4.**



## **Improve Enterprise-Wide Security**

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- The Information Assurance team made progress toward its goal of reaching 100% authorization for all High and Moderate Impact systems. Moderate Impact System authorization processes improved from 53% to 67%, while High Impact System authorizations fell slightly below targets to 66%. IA's enhanced vulnerability identification and tracking capabilities resulted in a larger volume of required system mitigations, which have an impact on the level of effort associated with both ensuring POAM completion and initiating new authorization processes.

# Summary of Progress – FY 2019 Q4

## Improve Enterprise-Wide Data Accessibility Milestones

Key Milestones	Milestone Due Date	Milestone Status	Change from Last Quarter	Comments
IDMS – IRM/FO				
Implement requirements gathering and analysis	Q1 FY 2018	Completed	N/A	
Identify a PM and submit IDMS business case to the eGov PMO	Q3 FY 2018	Completed	N/A	
Design IDMS solution and develop acquisition plan	Q3 FY 2018	Completed	N/A	
Pilot cloud application/integration access through IDMS Solution	Q4 FY 2018*	Completed	Yes	The IDMS solution has been successfully integrated with the Department's FAN cloud environment.
First production, on premises application access via IDMS	Q1 FY 2019	Completed	Yes	
Expand legacy system integration with IDMS	Q2 FY 2019	Planned	Yes	Now planned for FY 2020 Q2. This delay dates back to impacts from FY18, which were reported in previous submissions. Acquisition of required solution products was not completed until the end of Q4FY18, which in turn delayed the on-boarding process of contractor SME support resources.

# Summary of Progress – FY 2019 Q4

Real Time Collaboration / Work Anytime, Anywhere Milestones				
Key Milestones	Milestone Due Date	Milestone Status	Change from Last Quarter	Comments
Cloud Collaboration – IRM/CPMO				
Implement requirements gathering and analysis	Q1 FY 2018	Completed	N/A	
Identify a PM and submit business case to the eGov PMO	Q3 FY 2018	Completed	N/A	
Deploy collaboration capabilities to targeted domestic and overseas locations, including Outlook Online, Skype, SharePoint Online, OneDrive Web, OneDrive Sync, InTune, and Office Online	Q3 FY 2018	Completed	Yes	Collaboration capabilities have been deployed to targeted domestic and overseas locations.
Expand domestic and overseas cloud collaboration capabilities	Q1 FY 2019	In Process	Yes	MS Office online is available to 100% of users, 93% of users have migrated to MS O365 cloud-based mail. The remaining 7% of on-prem inboxes are dependent upon increasing the bandwidth at high latency posts. This will be accomplished in FY 2020.

# Summary of Progress – FY 2019 Q4

## Real Time Collaboration / Work Anytime, Anywhere Milestones

Key Milestones	Milestone Due Date	Milestone Status	Change from Last Quarter	Comments
<b>Overseas and Domestic Wi-Fi – IRM/FO</b>				
Finalize pilot and develop plan	Q1 FY 2018	Completed	N/A	
Identify a PM and submit Wi-Fi business case to the eGov PMO	Q3 FY 2018	Completed	N/A	
Identify target domestic and overseas locations for Wi-Fi install / upgrades	Q3 FY 2018	Completed	N/A	
Deploy Wi-Fi to planned FY 2018 locations	Q4 FY 2018	Completed	Yes	
Expand domestic and overseas Wi-Fi Deployment	Q1 FY 2019	In Process	Yes	<p>Of the planned 30 installations, 17 were completed. This was due to three major external constraints:</p> <ol style="list-style-type: none"> <li>1. Some underlying contracts were not funding until FY 2019 Q4, delaying the contract actions necessary to execute installations;</li> <li>2. Selected overseas posts were not ready with their security pre-requisites;</li> <li>3. Selected overseas posts were not able to support the installation on the proposed schedule.</li> </ol> <p>The majority of deployments were rescheduled for after FY 2019 Q4.</p>



# Summary of Progress – FY 2019 Q4

Real Time Collaboration / Work Anytime, Anywhere Milestones (Cont.)				
Key Milestones	Milestone Due Date	Milestone Status	Change from Last Quarter	Comments
<b>Mobile Device Management (MDM) and Conversion Strategy – IRM/OPS/MSO/MRA</b>				
Implement requirements gathering and analysis	Q1 FY 2018	Completed	N/A	
Initiate pilot and develop plan	Q2 FY 2018	Completed	N/A	
Identify a PM and submit MDM business case to the eGov PMO	Q3 FY 2018	Completed	N/A	
Begin upgrade/modernization of MDM Solution	Q4 FY 2018	Completed	N/A	
Expand upgrade/modernize MDM Solution	Q2 FY 2019	In Process	Yes	The current MDM solution has been expanded to over 10,000 users. Development and improvement of MDM capability will continue to be addressed in an agile fashion.
Retire Legacy MDMs	Q4 FY 2019	Planned	Yes	XenMobile legacy MDM enrollment will end on 10/25/2019.
New MDM systems available	Q4 FY 2019	Completed	Yes	The <i>GO mobile</i> branding of the MDM solution, based on the AirWatch platform, was announced at the 2019 IMO Workshop.

# Summary of Progress – FY 2019 Q4

## Modernize IT Systems and Service Delivery Milestones

Key Milestones	Milestone Due Date	Milestone Status	Change from Last Quarter	Comments
<b>Governance Initiatives &amp; IT Services Delivery – Enterprise Architecture Governance – IRM/BMP/OCA</b>				
Implement requirements gathering and analysis	Q1 FY 2018	Completed	N/A	
Identify a PM and submit EA business case to the eGov PMO	Q3 FY 2018	Completed	Yes	A PM has been identified and the business case is complete.
Develop a modernized EA Program focused on services	Q4 FY 2018	In Process	Yes	<p>The Department continues to mature and modernize the EA program by focusing on the following services:</p> <ul style="list-style-type: none"> <li>• Architecture Alignment</li> <li>• Business Capability Analysis</li> <li>• System Data (Information) Exchange</li> <li>• Application Line of Sight Mapping</li> <li>• Cybersecurity Reference Model Alignment</li> <li>• Normalization and Categorization.</li> </ul>
Build IT Modernization focused EA roadmap(s)	Q1 FY 2019	In Process	Yes	Key focus areas for developing EA roadmaps have been identified as a part of the EA Plan that is currently going through internal review and acceptance.
Update IT portfolio investments and systems modernization using modernized EA	Q3 FY 2019	In Process	Yes	The Department started a phased approach towards developing a comprehensive, accurate, and up-to-date organization-wide information system inventory in accordance with NIST 800-530

# Summary of Progress – FY 2019 Q4

Modernize IT Systems and Service Delivery Milestones				
Key Milestones	Milestone Due Date	Milestone Status	Change from Last Quarter	Comments
Governance Initiatives & IT Services Delivery – Service Delivery Governance – IRM/BMP/OCA				
Implement requirements gathering and analysis	Q1 FY 2018	Completed	N/A	
Identify a PM and submit service delivery business case to the eGov PMO	Q3 FY 2018	Completed	Yes	An IT Concept Questionnaire for the creation of an automated and optimized IT Governance Service, to analyze streamlined automated workflows, was submitted through the iMatrix CPIC tool.
Develop new Service Delivery Model	Q4 FY 2018	In Process	Yes	The Department has developed a service layer lexicon in line with OMB sponsored Technology Business Management (TBM) taxonomy's Service Delivery Model, that is being used to align all the IT system inventory.
Upgrade IT portfolio investments and systems modernization using new service delivery model	Q4 FY 2019	In Process	Yes	The Department conducted an agency-wide data call (FY 2019 Q3) to all IT system owners, to capture the service delivery model based on the TBM taxonomy.

# Summary of Progress – FY 2019 Q4

Improve Enterprise-Wide Data Accessibility & Security & Standard Security Controls for Cloud Platform Milestones				
Key Milestones	Milestone Due Date	Milestone Status	Change from Last Quarter	Comments
Cybersecurity and Standard Security Controls for Cloud Platform – IRM/IA				
Complete the Enterprise Information Security Program Plan	Q4 FY 2018	Completed	N/A	
[For intrusion detection and prevention] Increase the DMARC set to default 'reject' to 100%	Q1 FY 2019	Completed	Yes	As of October 16, 2018, DMARC level is at 100%.
In support of the standard security controls for the cloud platform, complete the Amazon Web Services Information Security Program Plan	Q4 FY 2019	Planned	N/A	
Increase High Impact Systems that have authorization to operate (ATO) to 75%	Q4 FY 2019	In Process	Yes	FY 2018 Q4 – 70% Q1 FY 2019 Cybersecurity Risk Management Assessment was canceled due to furlough. FY 2019 Q2 – 75% FY 2019 Q3 – 72% FY 2019 Q4 – 66%
Increase Moderate Impact Systems that have ATO to 60%	Q4 FY 2019	In Process	Yes	FY 2018 Q4 – 53% FY 2019 Q1 Cybersecurity Risk Management Assessment canceled due to furlough. FY 2019 Q1 – 57% FY 2019 Q2 – 64% FY 2019 Q3 – 66% FY 2019 Q4 – 67%

# Key Indicators

Indicator	Baseline	Target	Forecast FY 2018	Forecast FY 2019
<b>Improve Enterprise-Wide Data Accessibility</b>				
Percentage of users that are leveraging the enterprise IDMS solution thus increasing efficiencies	0	116,000	0%	4%
<b>Real Time Collaboration / Work Anytime, Anywhere</b>				
Percentage of employees transitioned to primary cloud collaboration platform.	0	116,000	50%	93%
Percentage of domestic data centers that are closed due to efficiencies of the cloud.	0	126	15%	30%
Percentage of Department domestic buildings and overseas posts that support Wi-Fi.	18	100	10%	17%
<b>Modernize IT Systems and Service Delivery</b>				
Percentage of systems designed to the target architecture.	0	122	0%	0%
<b>Improve Enterprise-Wide Data Accessibility &amp; Security</b>				
Percentage of High Impact Systems that have ATO	FY 2018 Q3 65%	75%	65%	66%
Percentage of Moderate Impact Systems that have ATO	FY 2018 Q3 46%	60%	46%	67%
[Intrusion and Detection Prevention] Percentage of DMARC set to default 'reject'	FY 2018 Q3 25%	100%	55%	100%

# Data Accuracy and Reliability

Data Source	Accuracy & Reliability
<u>Project:</u> IDMS Central digital ID Store  Enterprise GAL	The data source is highly reliable and current.
<u>Project:</u> Anywhere/Anytime  Enterprise GAL, DCOI Report, A & OBO	There are three core data sources that are required for this effort. First, is the Enterprise Global Address List (GAL) data source is highly reliable and current that will support user metrics. Second, the Data Center Optimization Initiative (DCOI) report is an annual report providing status about data center consolidation. Lastly, the Bureau of Administration (A) & Bureau of Overseas Building Operations (OBO) provide data regarding building and facilities domestically and overseas. Each system is an accurate data source.
<u>Project:</u> Optimized IT Governance & Service Delivery  iMatrix	iMatrix provides an accurate representation of the approved enterprise systems within the Department.
<u>Project:</u> Improve Enterprise-Wide Data Accessibility & Security  FISMA	The data source is the Department of Homeland Security's quarterly Cybersecurity Risk Management Assessment report. These reports are considered reliable.

# Additional Information

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## Contributing Programs

### Organizations:

- Bureau of Information Resource Management (IRM)

### Program Activities:

- (1) Improve Enterprise-Wide Data Accessibility, (2) Real Time Collaboration / Work Anytime, Anywhere, (3) Modernize IT Systems and Service Delivery, and (4) Improve Enterprise-Wide Data Accessibility & Security

### Regulations:

- E-Government Act (eGov), Federal IT Acquisition Reform Act (FITARA), Clinger-Cohen Act (CCA), Modernizing Government Technology Act (MGT), Federal Information Security Management Act (FISMA), President's Management Agenda (PMA), Executive Order (EO) 13800: *Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure*, Report to the President on Federal IT Modernization

### Policies:

- 1 FAM 270, 5 FAM, 12 FAM 600

### Other Federal Activities:

- Foreign Affairs Cloud Environment Technology (FACET), Foreign Affairs Network (FAN), Strategic Sourcing, Enterprise Mobile Management (EMM) Modernization

## Stakeholder / Congressional Consultations

IRM regularly meets with OMB's eGov office reporting on these and other IT modernization initiatives and upon request briefs Senate and House committees.