# Modernize IT to Increase Productivity and Security

## Goal Leaders

**Steve Censky,** Deputy Secretary, United States Department of Agriculture

**Chris Liddell,** Office of American Innovation, Executive Office of the President

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## Goal Statement

- The Executive Branch will build and maintain more modern, secure, and resilient information technology (IT) to enhance mission delivery and productivity – driving value by increasing efficiencies of Government IT spending while potentially reducing costs, increasing efficiencies, and enhancing citizen engagement and satisfaction with the services we provide.

## Challenges

- Limited accountability for achieving enterprise-wide outcomes that enhance IT service effectiveness and reduce cybersecurity risks.

- Slow adoption of cutting edge commercial technologies due to onerous acquisition and authorization processes.

- Federal agencies employ patchwork network architectures and rely on legacy systems that are costly and difficult to secure and upgrade.

## Opportunities

- Expand the use of modern commercial technologies that are effective, economical, and secure.

- Reduce the impact of cybersecurity risks by safeguarding IT systems, sensitive data, and networks.

- Leverage common solutions and innovative practices to improve efficiency, increase security, and ultimately meet citizens' needs.

# Lead - Executive Office of the President

**Office of Management and Budget (OMB)**

LEAD:

**Suzette Kent**, Federal Chief Information Officer

KEY PERSONNEL:

**Margie Graves**, Deputy Federal Chief Information Officer

**Grant Schneider**, Acting Federal Chief Information Security Officer; Senior Director - Homeland, NSC Cybersecurity Directorate

**Peter Warren**, Associate Director for Personnel and Performance Management

**Office of American Innovation (OAI)**

LEAD:

**Chris Liddell,** Director, American Technology Council

**U.S. Digital Service (USDS)**

LEAD:

**Matt Cutts,** Acting Administrator

KEY PERSONNEL:

**Eddie Hartwig,** Deputy Administrator

# Supporting Agencies

**General Services Administration (GSA)**

LEAD:

**Emily Murphy,** Administrator of General Services

KEY PERSONNEL:

**Allison Brigati,** Deputy Administrator

**Alan Thomas,** Commissioner, Federal Acquisition Service

**Joanne Collins-Smee,** Deputy Commissioner, Technology Transformation Service

**Department of Homeland Security (DHS)**

LEAD:

**Christopher Krebs,** Undersecretary Nominee, National Programs and Protection Directorate

KEY PERSONNEL:

**Jeanette Manfra,** Assistant Secretary, Cybersecurity and Communications (CS&C)

**Richard Driggers,** Deputy Assistant Secretary,  CS&C

**Mark Kneidinger,** Director, Federal Network Resilience

# CAP Partner Agency

**Department of Agriculture (USDA)**

LEAD:

**Steve Censky,** Deputy Secretary

KEY PERSONNEL:

**Gary Washington,** Chief Information Officer

*A multi-pronged IT modernization strategy between OMB and Agency Partners to achieve the desired results this Administration expects and our citizens deserve.*

**Realize** the recommendations in the **Report to the President on Federal IT Modernization** to allow for greater utilization of shared services, consolidated infrastructure, and cloud-based collaboration tools that can deliver improved functionality and drive cost efficiencies to improve Government operations and citizen services.

**Implement** the **Modernizing Government Technology Act** to enable agencies to establish IT working capital funds that can direct cross-agency dollars to IT modernization projects, and establishing a centralized $500 million Technology Modernization Fund (pending appropriations) that will invest in modernization.

**Develop** a new **Federal cloud adoption strategy** to provide agencies the guidance and flexibilities needed to move safely, securely and rapidly to the cloud and decommission antiquated internal agency systems.

**Collaborate** with the Office of American Innovation and the General Services Administration to establish **Centers of Excellence** to provide technical expertise and strategic acquisition support to help agencies perform top to bottom modernization activities.

**Work** with the Office of Personnel Management to fundamentally overhaul our recruitment, retention, and reskilling strategies to bring **more top technical talent** into the Government, improve the technology and cybersecurity capabilities of our current workforce.

**Modernizing Federal IT will enhance mission effectiveness and reduce mission risks through a series of complementary activities that culminate in 2022.**

### Enhance Mission Effectiveness
Improve the quality and efficiency of critical citizen-facing services by modernizing the IT stack and removing the barriers for rapidly adopting the best-in-class commercial solutions.

### Reduce Cybersecurity Risks to the Federal Mission
Mitigate the impact of risks to Federal agencies' data, systems, and networks by implementing cutting edge cybersecurity capabilities.

### Build a Modern IT Workforce
Enable agencies to develop and empower an IT workforce with the skills to achieve modernization goals and support up-to-date technology.

**Enhance the effectiveness and efficiency of government services, leveraging data-driven, customer-focused strategies to modernize legacy systems, consolidate common agency services, adopt new shared service models, and embrace commercial cloud solutions.**

## STRATEGIES

**Modernize the Stack**
Retire legacy IT systems, update systems that must remain on premise, and direct cost savings and lessons learned to achieve mission-driven outcomes.

**Embrace Cloud Solutions**
Rapidly implement cost-effective, cloud-based, commercial IT solutions, such as E-mail and collaboration tools, while also reducing the Government's IT footprint.

**Mitigate Project Delivery Risks**
Establish key performance measures to evaluate the status of project delivery and prevent project failure through early intervention, and level of customer satisfaction to inform the level of effort and allocation of resources.

**Mitigate the risk and impact of threats to Federal agencies' data, systems, and networks by implementing cutting edge cybersecurity capabilities.**

## STRATEGIES

**Manage Asset Security**
Implement capabilities that provide observational, analytical, and diagnostic data of an agency's cybersecurity.

**Protect Networks and Data**
Implement advanced network and data protection capabilities to protect agency networks and sensitive government and citizen data.

**Limit Personnel Access**
Implement credential and access management capabilities that ensure users only have access to the resources necessary for their job function.

## Enable Federal agencies to build a workforce with modern technology skills.

### STRATEGIES

**Assessment and Planning**
Identify workforce position and skill gaps using better data and develop strategies to address those gaps.

**Recruit and Retain Exceptional Talent**
Recruit and retain top talent by offering competitive pay and workplace flexibilities.

**Reskill the Workforce**
Offer opportunities for our employees to develop new skills to better address future Government and citizen needs.

# Key Milestones: Modernize the IT Stack

**Utilize new opportunities to drive foundational technology changes that will improve critical citizen services and increase efficiency.**

| Key Milestones | Milestone Due Date | Milestone Status | Change from last quarter | Owner | Anticipated Barriers or other Issues Related to Milestone Completion |
|---|---|---|---|---|---|
| **Enterprise Infrastructure Solutions (EIS)** | | | | | |
| All agencies submit Agency Transition Plans (ATPs) to modernize its network infrastructure to OMB. | Q2FY18 | In Progress | N/A | OMB | *Agencies are on a tight schedule to migrate services to EIS and may defer modernizing just to meet schedule* |
| All agencies release less than 3 Fair Opportunity solicitations. | Q2FY18 | In Progress | N/A | Agencies | *Agency failure of planning requirements and time constraints to meet FY2020 migration deadline* |
| Agencies release their consolidated fair opportunity task order solicitations on according to their ATP schedule. | Q4FY18 | Not Started | N/A | OMB, Agencies | *Modernizing and consolidating services may require additional time for planning requirements* |
| **Technology Modernization Fund (TMF)*** | | | | | |
| Launch at least 3 initial projects selected for funding through the Technology Modernization Fund | Q3FY18 | In Progress | N/A | OMB OFCIO, GSA | *Dependent on agencies submitting valid project proposals and identifying methods to repay the Technology Modernization Fund investment* |
| 100% of initially funded projects demonstrate successful completion of initial milestones | Q4FY18 | Not Started | N/A | OMB OFCIO, GSA | *Insufficient team strength or delays in deployment of technical assistance resources or acquisition execution* |
| 100% of project repayment schedules are on time | Q4FY19 | Not Started | N/A | Agencies, GSA | *Successful project execution, leading to cost savings.* |
| 100% of project completion schedules are on time | Q4FY19 | Not Started | N/A | Agencies, GSA | *Successful project execution* |

* Milestones is dependent upon the level of appropriations for the TMF in FY 2018

# Key Milestones: Embrace Cloud Solutions

**Leverage and secure the commercial cloud for the right services; improve the on-premises alternative.**

| Key Milestones | Milestone Due Date | Milestone Status | Change from last quarter | Owner | Anticipated Barriers or other Issues Related to Milestone Completion |
|---|---|---|---|---|---|
| **Cloud and Email Migration** | | | | | |
| At least 3 agencies without cloud email begin leveraging the Acquisition Tiger Team's "quick start" acquisition package to facilitate rapid license and migration service acquisitions | Q3FY18 | In progress | N/A | OMB | *Resource constraints on setting up number of Tiger Teams to meet agency demand* |
| Track agency migration to cloud email and use data engage agencies to facilitate migration | Q3FY18 | Not Started | N/A | DHS & GSA | *Agencies appropriately use this information target cloud email migration* |
| All agencies with cloud email develop initial set of standardized requirements as baseline for greater collaboration optimization | Q4FY18 | Not Started | N/A | OMB, GSA | *Enabling a central body to convene the appropriate stakeholders and receive agreement among the interagency on standardized requirements* |
| All agencies are using cloud email and cloud-based collaboration tools unless specific legal or mission constraints make it impossible | Q3FY19 | Not Started | N/A | OMB, Agencies | *Some Federal policies may need to be updated to sufficiently support migrations* |
| **Data Center Consolidation\*** | | | | | |
| Agency submission of data center optimization initiative strategic plans | Q3FY18 | Not Started | N/A | OMB, Agencies | *Prioritization of Data Center Optimization and moving to the cloud within agencies and ensuring accountability* |
| Federal agencies demonstrate cost savings of $2.7 billion or more | Q4FY18 | Not Started | N/A | OMB, Agencies | *Failure to realize cost savings from consolidation and closures performed to date* |
| 100% of federal agencies' tiered data centers have power metering | Q4FY18 | Not Started | N/A | Agencies | |
| All agency-operated tiered data centers achieve a power usage effectiveness (PUE) rating of 1.5 or below | Q1FY19 | Not Started | N/A | Agencies | |
| Federal agencies close 471 tiered data centers and 4,006 non-tiered data centers | Q1FY19 | Not Started | N/A | Agencies | *Inability to migrate or deprecate systems and applications to enable closure; difficulties disposing of facilities identified for closure* |

\* Milestones is dependent upon the level of appropriations for the TMF in FY 2018

# Ensure that all IT projects are delivering services in a timely and efficient manner that meet customer expectations

| Key Milestones | Milestone Due Date | Milestone Status | Change from last quarter | Owner | Anticipated Barriers or other Issues Related to Milestone Completion |
|---|---|---|---|---|---|
| **Improve IT Project Delivery** | | | | | |
| Redesign data collection efforts to more accurately capture IT investment performance data (e.g. schedule, cost, etc.) | FY19 | In progress | N/A | OMB & GSA | *Changes to existing data collection (e.g. CPIC) is slow; might meet resistance* |
| Establish new process for identifying and intervening on struggling or failing investments (e.g. TechStat) | Q3FY18 | Not Started | N/A | OMB | |
| Develop models for identify existing failure and predicting future failure before it occurs | FY 19 | Not Started | N/A | OMB | |
| **Improve Customer Satisfaction** | | | | | |
| Promote and facilitate the use of customer satisfaction & customer experience metrics into work flows through guidance and training | FY19 | Not Started | N/A | OMB & GSA | *PRA challenges might slow or stall progress* |
| Identify and aggressively address barriers that prevent the agencies from using customer satisfaction surveys | Q3FY18 | Not Started | N/A | OMB & GSA | *PRA challenges might slow or stall progress* |
| Develop plan to identify and standardize customer satisfaction metrics across government (e.g. CSAT, NPS, CES) | FY19 | Not Started | N/A | OMB & GSA | *PRA challenges might slow or stall progress* |
| Increase the usage of Digital Analytics Program (gov web analytics); and connect this web analytics data to existing IT budget and performance | FY19 | In progress | N/A | OMB & GSA | *Requires prioritization* |

**Advanced network and data protection capabilities defend agency networks and systems from malicious actors and the potential loss of government information.**

**The three components of Intrusion Detection and Prevention, Exfiltration and Enhanced Defenses, and Data Protection are new, and agencies will seek to meet the following targets by 2020:**

| Key Milestones* | Milestone Due Date | Milestone Status | Change from last quarter | Owner | Anticipated Barriers or other Issues Related to Milestone Completion |
|---|---|---|---|---|---|
| Intrusion Detection and Prevention: At least 4 of 6 Intrusion Prevention metrics have met an implementation target of at least 90% and 100% of email traffic is analyzed using DMARC email authentication protocols | Q4FY20 | In Progress | New, 7 agencies met | Agencies, OMB | |
| Exfiltration and Enhanced Defenses: At least 4 of 5 Exfiltration and Enhanced Defenses metrics have met an implementation target of at least 90% | Q4FY20 | In Progress | New, 15 agencies met | Agencies, OMB | |
| Data Protection: At least 5 of 7 Data Protection metrics have met an implementation target of at least 90% | Q4FY20 | In Progress | New, 6 agencies met | Agencies, OMB | *OMB is in the process of updating guidance regarding the protection of High Value Assets (HVAs); upon the issuance of this policy, metrics associated with the protection of high impact systems will shift to HVAs* |

*These milestones represent key areas within the Federal Information Security Modernization Act of 2014 (FISMA) Chief Information Officer metrics. DHS programs, including Continuous Diagnostics and Mitigation (CDM) and EINSTEIN, may provide some of these capabilities to agencies.

| Agency | October 2017 (FY 2017 Q4) | | | January 2018 (FY 2018 Q1) | | | Change | | |
|---|---|---|---|---|---|---|---|---|---|
| | Intrusion Detection and Prevention* | Exfiltration and Enhanced Defenses | Data Protection | Intrusion Detection and Prevention* | Exfiltration and Enhanced Defenses | Data Protection | Intrusion Detection and Prevention | Exfiltration and Enhanced Defenses | Data Protection |
| Commerce | | | | 5 | 4 | 3 | | | |
| DHS | | | | 5 | 3 | 1 | | | |
| DOT | | | | 5 | 4 | 3 | | | |
| ED | | | | 3 | 5 | 3 | | | |
| Energy | | | | 3 | 2 | 1 | | | |
| EPA | | | | 3 | 3 | 4 | | | |
| GSA | | | | 4 | 5 | 4 | | | |
| HHS | | | | 3 | 3 | 2 | | | |
| HUD | New in FY 2018 | | | 6 | 5 | 6 | New in FY 2018 | | |
| Interior | | | | 6 | 4 | 3 | | | |
| Justice | | | | 6 | 5 | 3 | | | |
| Labor | | | | 6 | 2 | 6 | | | |
| NASA | | | | 4 | 1 | 0 | | | |
| NRC | | | | 5 | 5 | 2 | | | |
| NSF | | | | 4 | 4 | 5 | | | |
| OPM | | | | 6 | 5 | 5 | | | |
| SBA | | | | 1 | 5 | 4 | | | |
| SSA | | | | 4 | 4 | 7 | | | |
| State | | | | 5 | 5 | 4 | | | |
| Treasury | | | | 4 | 5 | 2 | | | |
| USAID | | | | 4 | 3 | 5 | | | |
| USDA | | | | 6 | 5 | 3 | | | |
| VA | | | | 6 | 3 | 1 | | | |
| # Met Goal | | | | 7 | 15 | 6 | | | |

* Marked as met if at least 4 of 6 metrics are met and if 100% of email traffic is analyzed using DMARC email authentication protocols (DHS BOD 18-01).

**Implement capabilities to allow agencies to understand the assets and users operating on their networks.**

**Delays in implementation of government-wide tools have led to uneven implementation of these capabilities. All agencies will seek to meet the following targets by 2020:**

| Key Milestones* | Milestone Due Date | Milestone Status | Change from last quarter | Owner | Anticipated Barriers or other Issues Related to Milestone Completion |
|---|---|---|---|---|---|
| Hardware Asset Management: 95% of hardware assets are covered by a capability to detect and alert upon the connection of an unauthorized hardware asset | Q4FY20 | In Progress | Unchanged from 12 agencies | Agencies, OMB | *Delays in implementation of government-wide tools have led to uneven implementation of ISCM capabilities* |
| Software Asset Management: 95% of software assets are covered by a whitelisting capability | Q4FY20 | In Progress | Decrease from 12 agencies to 11 | Agencies, OMB | *Delays in implementation of government-wide tools have led to uneven implementation of ISCM capabilities* |
| Authorization Management: 100% of High and Moderate Impact Systems are covered by a valid security ATO | Q4FY20 | In Progress | Decrease from 11 agencies to 10 | Agencies, OMB | |
| Mobile Device Management: 95% of mobile devices are covered by a capability to remotely wipe contents if the device is lost or compromised | Q4FY20 | In Progress | New, 15 agencies met | Agencies, OMB | |

*These milestones represent key areas within the Federal Information Security Modernization Act of 2014 (FISMA) Chief Information Officer metrics. DHS programs, including Continuous Diagnostics and Mitigation (CDM) and EINSTEIN, may provide some of these capabilities to agencies.

| | October 2017 (FY 2017 Q4) | | | | January 2018 (FY 2018 Q1) | | | | Change | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Agency | Hardware Asset Management | Software Asset Management | Authorization Management* | Mobile Device Management | Hardware Asset Management | Software Asset Management | Authorization Management* | Mobile Device Management | Hardware Asset Management | Software Asset Management | Authorization Management | Mobile Device Management |
| Commerce | 71% | 64% | 100% | | 65% | 64% | 100% | 89% | -6% | 0% | 0% | |
| DHS | 77% | 95% | 95% | | 81% | 90% | 91% | 100% | 4% | -5% | -4% | |
| DOT | 95% | 85% | 78% | | 95% | 85% | 94% | 94% | 0% | -1% | 16% | |
| ED | 100% | 100% | 97% | | 100% | 100% | 97% | 100% | 0% | 0% | 0% | |
| Energy | 85% | 91% | 96% | | 73% | 90% | 97% | 99% | -12% | -1% | 1% | |
| EPA | 38% | 63% | 92% | | 50% | 13% | 0% | 98% | 12% | -50% | -92% | |
| GSA | 100% | 96% | 100% | | 100% | 95% | 100% | 100% | 0% | -1% | 0% | |
| HHS | 93% | 51% | 97% | | 85% | 43% | 97% | 84% | -8% | -8% | 0% | |
| HUD | 99% | 100% | 100% | | 99% | 100% | 100% | 100% | 0% | 0% | 0% | |
| Interior | 79% | 36% | 100% | | 57% | 43% | 100% | 100% | -22% | 7% | 0% | |
| Justice | 97% | 98% | 100% | | 96% | 97% | 100% | 99% | -1% | -1% | 0% | |
| Labor | 77% | 100% | 100% | | 87% | 97% | 100% | 100% | 10% | -3% | 0% | |
| NASA | 4% | 0% | 100% | | 4% | 0% | 99% | 100% | 0% | 0% | -1% | |
| NRC | 98% | 96% | 100% | | 99% | 95% | 96% | 23% | 1% | -1% | -4% | |
| NSF | 100% | 54% | 100% | | 100% | 39% | 100% | 65% | 0% | -14% | 0% | |
| OPM | 100% | 100% | 100% | | 100% | 100% | 100% | 100% | 0% | 0% | 0% | |
| SBA | 98% | 10% | 78% | | 98% | 0% | 83% | 72% | 0% | -10% | 5% | |
| SSA | 100% | 100% | 100% | | 100% | 100% | 100% | 100% | 0% | 0% | 0% | |
| State | 82% | 96% | 45% | | 82% | 97% | 44% | 100% | 0% | 1% | -1% | |
| Treasury | 89% | 94% | 86% | | 86% | 92% | 84% | 92% | -3% | -1% | -2% | |
| USAID | 100% | 98% | 71% | | 100% | 100% | 100% | 100% | 0% | 2% | 29% | |
| USDA | 95% | 100% | 82% | | 100% | 100% | 88% | 100% | 5% | 0% | 6% | |
| VA | 20% | 7% | 98% | | 20% | 8% | 73% | 92% | 0% | 1% | -25% | |
| Civilian CFO Act Average | 67% | 68% | 91% | | 64% | 65% | 91% | 96% | -3% | -3% | 0% | |
| # Met Goal | 12 | 12 | 11 | | 12 | 11 | 10 | 15 | 0 | -1 | -2 | |

Note: "New in FY 2018" appears in the Mobile Device Management columns for October 2017 and in the Change section.

* Marked as met if both high and moderate impact systems are 100%. Value presented is smaller of the two.

**Credential and access management capabilities allow agencies to understand who is on their networks and limit users' access to the information necessary to perform their work.**

**The updated strategy moves from a focus on multifactor authentication (FY 2012 - FY 2017) to the more advanced issue of access management. All agencies will seek to meet the following targets by 2020:**

| Key Milestones* | Milestone Due Date | Milestone Status | Change from last quarter | Owner | Anticipated Barriers or other Issues Related to Milestone Completion |
|---|---|---|---|---|---|
| Privileged Network Access Management: 100% of privileged users are required to use a PIV card or AAL3 multifactor authentication method to access the agency's network* | Q4FY18 | In Progress | Decrease from 17 agencies to 16 | Agencies, OMB | *Overall Federal implementation is currently approximately 99%, with small numbers of privileged users still awaiting appropriate credentials* |
| High Impact System Access Management: 90% of High Impact Systems require all users to authenticate using a PIV card or AAL3 multifactor authentication method | Q4FY20 | In Progress | New, 3 agencies met | Agencies, OMB | *OMB is in the process of updating guidance regarding the protection of HVAs; upon the issuance of this policy, metrics associated with the protection of high impact systems will shift to HVAs* |
| Automated Access Management: 95% of users are covered by an automated, dynamic access management solution that centrally tracks access and privilege levels | Q4FY20 | In Progress | New, 8 agencies met | Agencies, OMB | *Decentralized identity management at agencies is a significant impediment to improving access management* |

\* These milestones represent key areas within the Federal Information Security Modernization Act of 2014 (FISMA) Chief Information Officer metrics. DHS programs, including Continuous Diagnostics and Mitigation (CDM) and EINSTEIN, may provide some of these capabilities to agencies.

\*\* This is a continuation of the FY 2015-2017 Cybersecurity CAP Goal; as such, agencies are expected to complete this metric by Q4FY18

# Limit Personnel Access: Q1 Update

| Agency | October 2017 (FY 2017 Q4) | | | January 2018 (FY 2018 Q1) | | | Change | | |
|---|---|---|---|---|---|---|---|---|---|
| | Privileged Network Access Management | High Impact System Access Management | Automated Access Management | Privileged Network Access Management | High Impact System Access Management | Automated Access Management | Privileged Network Access Management | High Impact System Access Management | Automated Access Management |
| Commerce | 97% | | | 98% | 68% | 10% | | | |
| DHS | 99% | | | 99% | 91% | 21% | | | |
| DOT | 100% | | | 97% | 68% | 19% | | | |
| ED | 100% | | | 100% | 67% | 5% | | | |
| Energy | 96% | | | 96% | 89% | 47% | | | |
| EPA | 100% | | | 100% | 100% | 0% | | | |
| GSA | 100% | | | 100% | 20% | 0% | | | |
| HHS | 100% | | | 100% | 32% | 100% | | | |
| HUD | 100% | | | 100% | NA | 96% | | | |
| Interior | 99% | | | 100% | 33% | 100% | | | |
| Justice | 94% | | | 93% | 16% | 0% | | | |
| Labor | 100% | New in FY 2018 | | 100% | NA | 0% | | New in FY 2018 | |
| NASA | 100% | | | 100% | 0% | 0% | | | |
| NRC | 100% | | | 100% | 20% | 100% | | | |
| NSF | 100% | | | 100% | NA | 1% | | | |
| OPM | 100% | | | 100% | 35% | 100% | | | |
| SBA | 100% | | | 94% | NA | 95% | | | |
| SSA | 100% | | | 100% | NA | 100% | | | |
| State | 93% | | | 12% | 90% | 100% | | | |
| Treasury | 100% | | | 100% | 35% | 5% | | | |
| USAID | 100% | | | 100% | NA | 0% | | | |
| USDA | 100% | | | 100% | 78% | 5% | | | |
| VA | 100% | | | 100% | 0% | 0% | | | |
| Civilian CFO Act Average | 98% | | | 92% | 42% | 30% | | | |
| # Met Goal | 17 | | | 16 | 3 | 8 | | | |

* Agency reports no high impact systems

17

**Invest in recruiting, retaining, and reskilling IT and cybersecurity talent to support mission outcomes and deliver more effective, efficient, and secure Government services.**

| Key Milestones I | Milestone Due Date | Milestone Status | Change from last quarter | Owner | Anticipated Barriers or other Issues Related to Milestone Completion |
|---|---|---|---|---|---|
| All agencies identify and quantify workforce positions and skill gaps using the National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework per P.L. 114-113 | Q3FY18 | In Progress | N/A | Agencies, OPM, OMB, | *Additional communications may be required from newly appointed OPM Director.* |
| Each agency CIO and CHCO must jointly identify two position or skills gap priorities and incorporate them into to the agency's Human Capital Operating Plan, which will be shared with OMB. Actions to address these two gaps must be executed no later than FY19 | Q1FY19 | Not Started | N/A | Agencies, OPM, OMB | |
| OPM will provide agencies Federal Employment Viewpoint Survey and other workforce data to aid in workforce planning. OPM, in collaboration with CHCO and CIO councils, will develop a standard dashboard to be used by all agencies to track and analyze workforce data that facilitates agile operations | Q4FY18 | Not Started | N/A | Agencies, OPM, OMB, | |
| Engage industry and academia to develop Federal workforce planning strategies that include initiatives to reskill and redeploy the existing workforce to achieve mission results. The CHCO and CIO councils shall jointly present recommendations to OMB no later than FY19 | Q2FY19 | Not Started | N/A | Agencies, OPM, OMB, CIO Council, CHCO Council | |
| Develop a market-informed pay and compensation strategy for cybersecurity and other mission critical IT positions to improve recruitment and retention | Q2FY19 | Not Started | N/A | Agencies, OPM, OMB | |

## Department of Homeland Security

Numerous DHS programs support the Reduce Cybersecurity Risks to the Federal Mission strategy. DHS has established an Agency Priority goal (APG) to Strengthen Federal Cybersecurity with the FY 2019 President's Budget.

- The APG measures the effectiveness of several DHS cybersecurity programs, including: Continuous Diagnostics and Mitigation (CDM), National Cybersecurity Protection System (NCPS), the High Value Asset Program, Cyber Hygiene Scanning, and Hunt and Incident Response Teams (HIRT).
- DHS' APG supports this CAP Goal by providing tools and services that help agencies achieve the targets set forth in all three components of the Reduce Cybersecurity Risks strategy.

## General Services Administration

The Modernize the Stack and Embrace Cloud Solutions portion of the CAP Goal rely on GSA as a close partner to help Federal agencies acquire and adopt modern IT products and services.

- Federal Acquisition Service (FAS)
  - Technology Transformation Service (TTS)
- Office of Government-wide Policy (OGP)

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## Interagency Councils

- CIO Council
- CHCO Council
- CISO Council
- Small and Micro Agency Council

## Department of Commerce

- National Institute of Standards and Technology (NIST)

## Office of Personnel Management

- Employee Services (ES)

## U.S. Department of Agriculture

- IT Modernization Partner