Office of the Chief Information Officer
Information Technology Strategic Plan

FY 2019 – 2022

Ver. 1.0 October 2019
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>MESSAGE FROM THE CIO</td>
<td>2</td>
</tr>
<tr>
<td>OCIO MISSION AND OCIO VISION</td>
<td>4</td>
</tr>
<tr>
<td>USDA OCIO STRATEGIC FRAMEWORK</td>
<td>6</td>
</tr>
<tr>
<td>STRATEGIC GOAL 1</td>
<td>IMPROVE CUSTOMER IT EXPERIENCES</td>
</tr>
<tr>
<td>STRATEGIC GOAL 2</td>
<td>CULTIVATE DATA-DRIVEN CAPABILITIES AND CULTURE</td>
</tr>
<tr>
<td>STRATEGIC GOAL 3</td>
<td>EXPAND RISK-BASED POLICIES</td>
</tr>
<tr>
<td>STRATEGIC GOAL 4</td>
<td>CULTIVATE A HIGHLY-EFFECTIVE IT WORKFORCE</td>
</tr>
<tr>
<td>STRATEGIC GOAL 5</td>
<td>OPTIMIZE VALUE OF IT SERVICES</td>
</tr>
<tr>
<td>STRATEGIC PERFORMANCE METRICS</td>
<td>20</td>
</tr>
<tr>
<td>GLOSSARY</td>
<td>21</td>
</tr>
<tr>
<td>APPENDIX A: REFERENCES</td>
<td>22</td>
</tr>
<tr>
<td>APPENDIX B: ARTIFACTS</td>
<td>23</td>
</tr>
</tbody>
</table>
INTRODUCTION

In May and September of 2017, the United States Department of Agriculture's (USDA) Secretary Sonny Perdue announced the Department's intent to improve customer service and maximize efficiency. USDA seeks to be the most efficient, effective, and customer-focused Department in the federal government.

In December 2017, Deputy Secretary Stephen Censky, followed the Secretary's announcement, introducing a new operating model for USDA that would transform the Department to transition to a customer-focused, facts-based, and data-driven organization. He stated that "we simply cannot continue to conduct business for the next 150 years based on splintered and outdated operating models."

As such USDA has undergone several reorganizations and launched a myriad of initiatives and efforts to deliver upon the Secretary's and Deputy Secretary's charge and priorities. The Office of the Chief Information Officer (OCIO) has launched a number of IT Modernization activities and projects to include a partnership with the White House Office of American Innovation (OAII), and the General Services Administration (GSA) Centers of Excellence (CoE). The CoE initiative includes four centers established at USDA: Cloud Adoption/Infrastructure, Contact Centers, Customer Experience, and Data Analytics. The GSA partnership takes place in a two-phased approach. Phase 1 (March - September FY 2018) was a comprehensive Department-wide assessment and planning effort that enabled USDA to determine how to improve service design and interactions with the American citizens it serves.

Phase 2 (FY 2019), included the implementation, execution and transition work which entailed implementing the agreed upon approaches Phase 1 defined, and acquiring technologies and other resources needed to support changes at USDA in perpetuity. In addition to the CoEs the USDA OCIO and mission areas ACIO offices are executing a number of activities to modernize USDA's IT processes as directed by Deputy Secretary Censky's December 14, 2017 memo that outlined four IT modernization strategic themes for the Department. These strategic themes provide the roadmap for IT modernization not only at USDA but across the Federal government.
MESSAGE FROM THE CIO

I’m delighted to present the U.S. Department of Agriculture’s (USDA) Information Technology (IT) Strategic Plan for fiscal years (FY) 2019 to 2022. It memorializes USDA’s IT strategic goals and objectives in alignment with the overarching USDA Strategic plan and other relevant Executive direction such as the President’s Management Agenda and Cross-Agency Priority Goals.

USDA seeks to be the most efficient, effective, and customer-focused Department in the federal government – to achieve our mission of providing leadership on agriculture, food, natural resources, rural development, nutrition, and related issues based on sound public policy, the best available science, and efficient management. The USDA Chief Information Officer (CIO) and mission area Assistant Chief Information Officers (ACIOs) serve the Department as strategic enablers of achieving that mission. The USDA OCIO delivers valuable infrastructure support services that enable the distributed mission area ACIO network’s responsive application and platform services. USDA OCIO additionally, provides a leadership role as steward of tax payer funds, and to prepare the information technology (IT) workforce for the innovation of today, and tomorrow.

USDA has the privilege of serving as the lighthouse agency for the White House OAI IT Modernization initiative. The President’s Management Agenda outlined modern information technology as one of its drivers of transformation, stating that “modern information technology must function as the backbone of how Government serves the public in the digital age. Meeting customer expectations, keeping sensitive data and systems secure, and ensuring responsive, multi-channel access to services are all critical parts of the vision for modern Government.”

During our last strategic performance period, USDA started to position itself to meet IT modernization innovation objectives. Since then, we have made some strategic changes and alignments across the Department such as reducing the number of USDA CIOs from more than 20 to one. We have been responsive to our customers while creating greater efficiencies across mission areas by reducing our more than 20 distributed Agency network IT support centers to eight mission area ACIO support centers. We have also been optimizing data center storage and strategic usage of that data – going from 39 to two enterprise data centers and helping USDA become a more data-driven organization through the facilitation and development of Department executive and Mission Area dashboards to fully harness the power of USDA’s impressive data set. We are also consolidating end-user support into a single organization at the Department level. We have made great strides in recent years and there is still much to accomplish in achievement of our OCIO strategic mission and vision.

I look forward to leading our USDA IT community in the achievement of our strategic goals and objectives for FY 2019 through 2022. We will continue to transform our technology services to meet our customer’s expectations, provide the greatest value for our customers, and support continued growth and development of our IT workforce.

Gary Washington
Chief Information Officer
U.S. Department of Agriculture
Strengthen Strategic IT Governance

As a first step toward this strategic theme, the Department now has a single CIO and one Assistant CIO for each mission area, reducing deficits in communication, strategic alignment, and authority. The CIO now reports directly to the Deputy Secretary to shine a light on how IT improves citizen services. Under this operating model, mission area Assistant CIOs are freed to increase their focus on utilizing IT to improve mission-specific services and programs, with the overall goal of improving customer experience.

In addition, the Department has re-chartered the Executive Information Technology Investment Review Board (E-Board) and is focusing governance and strategic investments toward efforts that improve USDA customer experience. Records management, in compliance with OMB A-130 Circular, Management of Federal Information Resources, ensures that records management and records archival functions are addressed in the requirements development phase for the design, development, and implementation of new or significantly revised information systems. Provisions for records management are included in both Capital Planning and Investment Control and Enterprise Architecture (EA) plans and include integration of electronic records management into resource allocation and use, including the budgeting, acquisition, and use of IT in accordance with the National Archives and Records Administration (NARA)'s Criteria for Managing Email Records in Compliance with the Managing Government Records Directive M-12-18.

Consolidate End User Services and Infrastructure Optimization

USDA’s transition of IT customer support services to enterprise services managed by OCIO provides cost-effective, quality Department-wide help desk, desktop, voice, and mobile shared services. Additionally, the Department has set a goal of reducing its data center footprint, (via accelerating cloud adoption), from a baseline of 39 data centers to two Enterprise Data Centers (EDCs) by the close of FY 2020.

To date, these initiatives have yielded $42.13M in onetime cost savings and avoidance from a reduced footprint, more efficient power utilization, decommissioning of obsolete equipment, and repurposing of labor. USDA will modernize its network infrastructure to a single, managed, enterprise solution, thereby reducing our cybersecurity risks and providing a more cost-effective solution for access to shared information and bandwidth needed to improve the customer experience.

Enable Strategic Approach to Data Management and Data-Driven Capabilities

To achieve Secretary Perdue’s vision for USDA to be an increasingly data-driven organization, USDA has focused on ensuring leadership and employees have access to integrated, standardized, quality, and reliable data and analytical tools that support rapid and well-informed decisions and helps tell the full story of a program’s performance. USDA’s Data Analytics Team delivered seven chief executive (CXO) dashboards and one executive dashboard, the first executive-level data dashboard of its kind. The Team also developed and implemented a cloud-based data lake and automated five data sources including data from the National Finance Center (NFC) and the Financial Management Modernization Initiative (FMIMI). The Data Analytics Team continues to enable data analytics across the Department to enable fast, data-driven decisions that drive the business of USDA.
Improve the USDA Customer Experience

USDA’s customer-focused approach to digital services requires streamlining the Department’s complex network of online resources that customers must navigate today to find or access services. Too often, service programs do not share or integrate customer data. To address this need for American farmers, in February 2018, USDA launched Farmers.gov, a consolidated and interactive website that provides easy accessibility to several resources and functions for the convenience of farmers. Functionality such as scheduling automatic payments for farm loans, digitally filing forms and setting up appointments at local USDA offices was released through the site in FY 2019.

USDA will continue to improve on its customer services by creating online service portals that are easy-to-use, include additional self-service capabilities, and integrate data for common customers. Providing the best possible customer service on a consistent basis also means ensuring that employees can access the network anywhere, anytime, regardless of agency, program, or location, and that employees have the necessary bandwidth to fully utilize the technology. The ongoing execution of this USDA IT vision and strategy enables effective strategic decision making, improves the customer experience, and creates a data-driven organization that will serve our customers well into the future.

Accelerate Cloud Adoption

USDA has a Strategic Initiative to become a Cloud Smart organization that will enable the USDA Mission Areas to leverage Cloud Landing Zones and Solutions (along with modernized network and hosting infrastructure) to modernize their application portfolios in support of providing enhanced citizen-centric capabilities throughout rural America.

The USDA will embolden its ongoing commitment to provide agencies with Cloud Smart technologies — including simplified access to cloud-based Landing Zones in commercial and hybrid cloud spaces. By providing a simplified acquisition strategy to cloud resources and assets, the OCIO will act as an enablement team to accelerate the rapid adoption of cloud technologies across the USDA Mission Areas.

USDA VISION, MISSION, AND GOALS

USDA VISION

Do right and feed everyone.

USDA MISSION

Provide leadership on agriculture, food, natural resources, rural infrastructure, nutrition, and related issues through fact-based, data-driven, and customer-focused decisions.

USDA STRATEGIC GOALS

1. Ensure USDA programs are delivered efficiently, effectively, and with integrity and a focus on customer service.
2. Maximize the ability of American agricultural producers to prosper by feeding and clothing the world.
3. Promote American agricultural products and exports.
4. Facilitate rural prosperity and economic development.
5. Strengthen the stewardship of private lands through technology and research.
6. Foster productive and sustainable use of our National Forest System Lands.
7. Provide all Americans access to a safe, nutritious and secure food supply.
OCIO VISION, MISSION AND GOALS

USDA OCIO VISION
Enable USDA to be a fact based, data driven, customer focused organization and the best managed agency in the Federal government.

USDA OCIO MISSION
Enable USDA's mission of Do Right and Feed Everyone though innovative, secure, and cost-effective IT solutions and services.

USDA OCIO STRATEGIC GOALS
1. Improve customer IT experiences
2. Cultivate a data-driven culture
3. Expand risk-based policies
4. Cultivate a highly-effective IT workforce
5. Optimize value of IT services
# USDA OCIO STRATEGIC FRAMEWORK

## OCIO VISION
Enable USDA to be a fact-based, data-driven, customer-focused organization and the best managed agency in the Federal government.

## OCIO MISSION
Enable USDA's mission of doing right and feeding everyone through innovative, secure, and cost-effective IT solutions and services.

## CORE VALUES
Honesty | Integrity | Live up to Commitments | Own Problems | Responsive | On Time Service | Guard, Conserve and Preserve USDA Resources

## STRATEGIC GOALS

| Goal 1 Improve Customer IT Experiences | Goal 2 Cultivate Data-Driven Capabilities and Culture | Goal 3 Expand Risk-Based Policies | Goal 4 Cultivate a Highly-Effective IT Workforce | Goal 5 Optimize Value of IT Services |

## STRATEGIC RESULTS

| Create digital services to enhance customers experiences | Through IT services, enable a data-driven culture to support informed decision making | Enable risk-based policies and best practices to safeguard USDA IT resources | Cultivate a highly-effective IT workforce capable of meeting mission requirements today and in the future | Optimize IT services to maximize value to customers |

## STRATEGIC OBJECTIVES

| G1-4. Standardize infrastructure technologies to improve performance | G1-5. Improve the end-user experience | G1-6. Accelerate Cloud Adoption | |

## STRATEGIC METRICS


USDA OCIO STRATEGIC PLAN 2019 - 2022 PAGE 6
STRATEGIC GOAL 1 | IMPROVE CUSTOMER IT EXPERIENCES

The USDA OCIO strategic goal 1 is “improve customer IT experiences”, further defined as creating digital services to enhance customer experiences. We recognize that our customers’ time is valuable and that having the information they need at their fingertips is critical to decisions they need to make. We are building USDA-IT to provide easy and intuitive access to information and resources. These improvements will provide our customers with greater self-service access to USDA information. Our goal is to make information available when, where, and how our customers need it.

USDA is moving to a customer-focused approach to digital services through the Customer Experience CoE, using industry best practices in human centered design and capturing the voice of the customer by observing and understanding employee and customer needs. These steps will ultimately provide improvements and efficiencies in quality of in-person service delivery, while developing high quality online/self-service delivery options using agile and human centered design approaches.

USDA is building a new network for next-generation applications and devices. This new network will simplify and modernize our existing networks by decreasing the number of points data must travel through to reach its destination so customers will receive services faster and more reliably from both our systems and our employees. For example, we will bring “anywhere” access to USDA networks. We will collect customers’ information once, store it securely, and reuse it only as needed and authorized for other purposes or for their interactions with USDA.

Drones

An unmanned aerial vehicle (UAV), commonly known as a drone, as an unmanned aircraft system (UAS), and referred to by several other names, is an aircraft without a human pilot aboard.

The U.S. Forest Service formed an interdisciplinary Unmanned Aircraft Systems Advisory Group (UASAG) by official charter in September 2012. The UASAG is comprised of subject matter experts with backgrounds in aviation management and safety; remote sensing; information technology and geographic information systems; natural resource management programs; law enforcement; and research and development.

Drones are one of the more widely accessible gadgets to come out of farming’s high-tech makeover. Providing new ways of increasing crop yields through in-depth field analysis, long-distance crop spraying, and high-efficiency crop monitoring, drone technology is quickly becoming invaluable for farmers. Practical applications for drone technology are constantly growing so it’s likely that drone-powered solutions will be on the up over the next few years.

- Drone technology is used today and IoT capabilities are evolving, bringing more common use to the industry such as sensors to monitor moisture in seed containers
- Using drone technology to capture visual damage and using that data to create algorithms to monitor impacts such as disease, insect damage, and their impact on crop yields
- Leveraging models using data, we can improve our ability to predict damage impacted by hurricanes and tornados
- Develop models to track and predict various environmental impacts on crop yields

Driverless Tractors

Technology firms across an array of industries have been developing adaptations of driverless vehicle technology for quite some time, and agriculture is no different. Combining ever-more sophisticated software with ‘off-the-shelf’ technologies such as sensors, radars and GPS systems, farmers will soon be able to hand this century-old machine over to robots. With autonomous harvests farmers will reduce pressures on an already strained workforce and allow for more acreage to be worked for longer time periods.
**Crop Health Monitoring**

Similarly, conventional crop health monitoring methods are incredibly time-consuming and are generally categorical in nature. In comparison, companies developing automated detection and analysis technologies—such as hyperspectral imaging and 3D laser scanning—will substantially increase the precision and volume of data collected. With the ability for microscopic data collection, farmers will be able to produce diagnostics specific to individual plots or even single plants.

**Remote Sensing**

Remote sensing is the process of detecting and monitoring the physical characteristics of an area by measuring its reflected and emitted radiation at a distance from the targeted area. Special cameras collect remotely sensed images of the Earth, which help researchers’ sense things about the Earth. Some examples are:

- Cameras on satellites and airplanes take images of large areas on the Earth’s surface, allowing us to see much more than we can standing on the ground.
- Sonar systems on ships can be used to create images of the ocean floor without needing to travel to the bottom of the ocean.
- Cameras on satellites can be used to make images of temperature changes in the oceans.

Some specific uses of remotely sensed images of the Earth include:

- Large forest fires can be mapped from space, allowing rangers to see a much larger area than from the ground.
- Tracking clouds to help predict the weather or watch erupting volcanos and help watch for dust storms.
- Tracking the growth of a city and changes in farmland or forests over several years or even decades.
- Mapping the ocean bottom—Discovery and mapping of the rugged topography of the ocean floor (e.g., huge mountain ranges, deep canyons, and the “magnetic striping” on the ocean floor). (USGS)

The USDA Remote Sensing Coordination Committee provides a basis for closer collaboration across agencies on remote sensing efforts and assures that efforts and investments are not duplicated, strengths are leveraged, and USDA is pursuing all reasonable efforts in remote sensing innovation for agriculture, natural resources, forestry, and food security.

**Augmented Reality**

The agriculture system might seem a simple and straightforward thing on an apparent level—just sow the seeds and reap the harvest. It may sound simple, but it isn’t and farmers in today’s environment need the tools to assist them in producing greater yields. One of those tools is called Augmented Reality (AR). AR is an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information. This technology can aid farmers in different ways to help them achieve that goal. For example, it can inspect the field and detect the presence of pests and insects in it. It is also capable of identifying the species of the insect and determining ways to handle it in the proper manner. Thus, it works as an efficient pest control management system to help farmers come up with improved and increased amount of harvest. The technology can be utilized to determine the quality of a piece of land for farming purposes and what kind of crops will best flourish in it. In other words, it will help setting up a reliable firming model to be used for a long time. This will help the farmer to facilitate improved farming both in terms of quality and quantity.

Moreover, AR can provide weather related information on a real time basis. This ability can be well utilized when farmers are about to initiate a farming process that is dependent upon certain weather conditions. This could reduce much of their time and effort which often get wasted due to whimsical nature of weather. The key to our success in accomplishing this is through ensuring our employees have the most advanced technology available to them, with information at their fingertips. USDA leverages the strength and talent of our employees with continued dedication to data-driven, enterprise solutions through collaborative governance and human capital management strategies centered on accountability and professional development. At the heart of our efforts is the US citizen, whose livelihood is positively impacted by USDA every day.
Objective 1.1 | Rural Connectivity Improvements

Rural Connectivity Improvements, involves increasing connectivity access and availability in all rural areas through increased evidence-based understanding of external customer broadband demand. America’s economic prosperity is dependent on rural America’s ability to compete in the new global economy, and rural broadband e-Connectivity is fundamental to achieving America’s potential in the 21st Century. USDA has been investing in rural telecommunications infrastructure for decades, and our current programs offer more than $700 million per year for modern broadband e-Connectivity in rural communities.

This new funding option was created by the United States Congress in the Consolidated Appropriations Act of 2018, as an ambitious initiative to rebuild America’s infrastructure. Recommended by President Trump as a “first installment” of his bold proposal to restore and modernize the nation’s crumbling infrastructure, this pilot program will carry out our commitment to invest in rural America.

Reliable and affordable high-speed internet e-Connectivity, or electronic connectivity, is fundamental for economic activity throughout the US. Access to high-speed internet is vital for a diverse set of industries, including agricultural production, manufacturing, mining, and forestry and acts as a catalyst for rural prosperity by enabling efficient, modern communications between rural American households, schools, and healthcare centers as well as markets and customers around the world. This is why the Agriculture and Rural Prosperity Task Force recommended e-Connectivity for all rural Americans because it is a modern-day necessity, not simply an amenity, in today’s information-driven global economy. The framework outlined by Congress in this new pilot program is different than other USDA Broadband programs. USDA is currently reviewing all legal aspects and setting up administrative operations for carrying out this new pilot program (e-Connectivity Pilot).

Strategies:
- Improve bandwidth availability in USDA field offices — OCIO has been able to improve bandwidth availability by 325% in the last fiscal year to the vast majority of local area networks in state and local offices. As service availability improves through vendor expansion, OCIO will continue to offer additional improvements and introduce higher-capacity circuits to new offices. Providing this network improvement is critical for rural offices to take advantage of new technologies and improve administrative and customer service performance.
- Alternative Bandwidth Solutions — For offices that are currently unable to take advantage of broadband network services, OCIO is and will continue to explore the availability of wireless technology to ensure connectivity without the dependence on office circuits. Having the ability to “take the office to the customer” is an increasingly attractive service, and helpful to the American farmer, rancher, and producer. Improvements in wireless technology, available now and planned for the near future, will enable and expand this ability for USDA employees.

Objective 1.2 | Leader in Federal Customer Service

Leader in Federal Customer Service, aims to evaluate, prioritize, and integrate additional capabilities to expand offerings, streamline the customer experience, and establish USDA as a leader in customer service across the federal government.

Strategies:
- A key concept in improving the customer experience across USDA Mission Areas and Agencies is the integration of customer data into a single Digital Identity. A single individual having business dealings with (for example) Natural Resources Conservation Service (NRCS), the Farm Services Agency (FSA), and Rural Housing Service (RHS) may have as many customer records with duplicative information. A goal for USDA IT would be to consolidate
repetitive data points into a single repository, so any customer would be a single personal record that each of
the agencies that serve them would be operating from the same record. Reduction of duplication of like data
points improves record accuracy, saves time for the customer, and facilitates portfolio management for USDA.

- A correlated benefit to Customer Service is the development of a centralized customer call center infrastructure.
Through the collaboration with the GSA Contact Center of Excellence (CoE) and OCIO, infrastructure and
applications designed to streamline the contact process with the capacity to handle significant call volumes.
Providing the tools to facilitate higher performing contact centers improves the performance of customer
support personnel, which will improve customer experience over time.

Objective 1.3 | Mobile Innovations

Mobile Innovations, sets out to modernize and implement technology infrastructure to deliver IT solutions that support
centralized, integrated solutions and provide exceptional customer experience, including the development of mobile
innovations originating from the field.

Strategies:
- Through the efforts of the Contact Center CoE, USDA is transitioning IT customer support from decentralized
operational support to enterprise services. By moving customer support to an enterprise, USDA customers will
experience a centralized support service which will provide easier and faster response times when resolving
customer business needs.
- Mobile endpoints – the tablet has become as familiar to the government employee today as laptops and mobile
phones. Continual improvements in ergonomic design, computing performance, battery life, and network
improvement strategies mentioned previously make physically smaller and lighter devices a serious
consideration as the single device a USDA employee would use to serve the customer. As these capabilities
continue to grow, USDA will see cost savings through the reduction in the number of devices needed to support
the mission, and improvements in delivery on mission-critical services where travel and outreach are required.
- Mobile Application development and support – ensuring future endpoints have maximum capability will require
associated development of more capable applications. The future of mobile application development and
support needs strong governance processes and a community of practice to ensure improved application
functionality is provided securely and efficiently. As USDA matures the mobile application development
framework over the next several years, the availability of new mobile applications and the facility of existing
application platforms to handle mobile device interface improves. These new applications will take advantage
of and support the network and device improvements simultaneously, making USDA a thought and service
leader in rural areas. See APPENDIX B: ARTIFACTS for the Mobile Strategic Plan.

Objective 1.4 | Standardize infrastructure technologies to improve performance

Standardize on Enterprise communications and collaboration platforms – an element of the End-User Consolidation
initiative combines dozens of existing analog and Voice over Internet Protocol (VoIP) telephony systems into a single
platform, which saves the taxpayer in duplicative contract fees and service agreements. Similar savings and complexity
reductions will occur with consolidation and standardization of collaboration platforms providing Video Teleconference
(VTC) and Instant Messaging (IM) functions. Future state architecture will combine many such functions in a single
platform, and the buying power of a single agreement for all USDA users will save funds and reduce environmental
complexity.

Strategies:
- Consolidate to a single Information Technology Service Management (ITSM) platform – another element of End-
User Consolidation is the eventual determination of and migration to a single ITSM platform to address Help
Desk, Asset Management, and reporting functions critical to a successful End-User Support organization. A single platform reduces complexity for the end-user (one number to call and one place to find self-help information), streamlines the reporting of end-user support statistics (a single tool to gather all activity), and eliminates support complexity (one way to update and close tickets) for the staff.

- Migrate data to cloud-based storage solutions with integrated Records Management technology – USDA organizations are heavily dependent on legacy storage technologies that are neither cost effective nor sophisticated in file access and availability. A properly secured and configured implementation of a cloud-based storage platform can improve user’s ability to access relevant files independent of local file servers. By incorporating Records Management technology (record designation, retention requirements, duplicate information identification) into the platform, NARA compliance becomes much easier to manage and the amount of storage required can be reduced significantly.

**Objective 1.5 | Improve the end-user experience**

As the public becomes more accustomed to accessing and utilizing the Internet for any and every facet of their personal lives on a single and highly portable device, Government IT organizations are changing to accommodate this use-case within compliance requirements. Industry best practice for end-user support regarding large organizations like USDA revolves around standardization and modernization. The less complex an environment is, the more efficiently it can be supported. In consultation with numerous Fortune 500 companies and contracted resources, several strategies for environmental standardization, simplification, and modernization have been identified and planned for implementation.

**Strategies:**

User to Device Ratio and selecting the best single device – the device that an employee uses is extremely important to their utility and performance. However, supporting multiple devices per-user raises costs significantly. Industry standards point to a 1:1 device to user ratio for maximum efficiency (with spares for loaner, training, and temporary employee use) and cost-effectiveness. Over the timespan of this Strategic Plan, moving users to a single device that accommodates all use-cases will require several adaptations:

- The availability of mission-critical applications in a mobile format or through a uniform resource link (URL) to minimize onboard computing requirements.
- Providing a well-researched selection of a few device makes/models to meet user requirements while minimizing complexity for support activities like operating system patching and device driver updates. Thin and zero client devices in various formats will be championed to further reduce the dependence on support resources assigned to traditional endpoints.
- User Education on how to operate new technologies and let go of legacy behaviors (saving copies of documents to local drives, installation of duplicative applications, not making use of new capabilities like soft phones and collaboration tools.
- Tier Zero Support – As websites and online applications become more familiar, the need to specialize training for their use is reducing. Users looking to answer their own questions – often perceived as faster than calling a Help Desk – are looking for tools and services to allow them to self-support. Often known as “Tier Zero”, this communications and support resource will receive significant investment over time. The more questions that are answered by Tier Zero, the fewer that are addressed by trained technical staff, which can either improve support for more technical issues or reduce costs for Tier One and Tier Two support.
- Managed Print Services or Print Demand reduction – the increased availability and acceptance of digital signatures in the Federal space, and the movement to digital signage in public spaces in Federal buildings, has reduced the requirement for printing overall and specifically in standard office spaces. As a result, more efficient means to provide service to those that still require printed pages have been explored and improved over the last several years. Three trends will continue to evolve over the coming years:
Evolution and increased acceptance of digital signatures (the PIV-D program allowing authentication to USDA resources using a mobile device) and other approval mechanisms will decrease the need for the printed page over time.

Improvements in the timeliness and utility of digital display technology will continue to replace the bulletin board and poster as communications methods.

Continued improvements in the Managed Print Services offering will increase the effectiveness of printing services as a cost savings measure and decrease the per-page cost of print jobs for the service users.

- Mobile Infrastructure and Device Improvements – as discussed in other areas of this Strategic Plan, the trend for more functionality in smaller devices continues in the mobile space, and USDA will continue to advance available technology while adopting a strong governance practice. Enabling the end-user to access the proper information from virtually any location at any time services the USDA customer more effectively and efficiently.
- Ensure our USDA workforce has access to the right device at the right time with the necessary secured applications and provide communication services for employees in remote locations that meet user needs.

Objective 1.6 | Accelerate Cloud Adoption and Optimize Infrastructure

Enable the USDA Mission Areas to leverage Cloud Smart Landing Zones and Solutions; along with modernized network and hosting infrastructure, in order to modernize their application portfolios in support of providing citizen-centric capabilities.

Strategies:
- The USDA will embolden its ongoing commitment to provide agencies with a Cloud Smart approach to cloud adoption – including simplified access to cloud-based Landing Zones in commercial and hybrid cloud spaces. The OCIO will offer a customer centric approach to employing enterprise cloud services based on customer needs; serving as a trusted partner in their journey to the cloud. By providing a simplified acquisition strategy to cloud resources and assets, the OCIO will act as an enablement team to accelerate the rapid adoption of cloud technologies across the USDA Mission Areas.
- Over the next several years, USDA will optimize its networks to make this vision a reality. USDA will modernize its network infrastructure to a single, managed, enterprise solution, thereby reducing our cybersecurity risks and providing a more cost-effective solution for access to shared information and bandwidth needed to improve the customer experience.

STRATEGIC GOAL 2 | CULTIVATE DATA-DRIVEN CAPABILITIES AND CULTURE

USDA’s ability to leverage its data as a strategic asset and to take a leadership role in the changing agricultural data landscape are key success factors in the Department’s vision for a facts-based, data-driven, and customer-focused organization. USDA has an opportunity to harness its vast data assets strategically to improve internal decision-making and efficient use of resources, maximize the impact of citizen-facing programs, and provide the public and private industry with easy access to data that can solve public problems and drive commercial innovation. By making information and data readily accessible and visualizing that data in meaningful ways, USDA can make more informed, insightful, and fact-based decisions that will improve program outcomes.

USDA’s recent implementation of a modern, enterprise-wide data analytics platform infrastructure is helping USDA expedite data collection across the enterprise and developing analytical tools such as dashboards to transform data into information. Enhancing access to high quality data through a data sharing framework will enable USDA to leverage predictive modelling, prescriptive analytics, and artificial intelligence, while empowering the larger public and private sectors to drive artificial intelligence research and development.
USDA must also define its strategic role with the rise of analytics in areas like precision agriculture, where new technologies are generating and capturing enormous quantities of data that are disrupting value chains in the agricultural and other relevant sectors that will have likely have significant ramifications for USDA programs, agricultural markets, and research.

**Objective 2.1 | Enterprise Data Governance**

Effective and efficient management of USDA’s data assets supports the development of vast untapped value for internal decision-makers, researchers, private sector businesses, and the larger Federal and public sector. Today, USDA collects and manages data by individual agencies, limiting its ability to share data and data infrastructure, resulting in higher costs and lower overall value. To effectively govern its data, USDA will:

**Strategies:**
- Establish an enterprise data governance board to create policy on data resources, management, protection, quality, access, dissemination, and alignment of investments
- Implement a data and analytics maturity model, assess USDA programs, agencies, and mission areas on data management maturity, and develop targeted improvement plans
- Strengthen data leadership within mission areas by clearly defining lifecycle data management and analytics roles and responsibilities
- Develop and maintain a comprehensive data inventory for all data assets created by or collected by USDA
- Establish department-wide data policies, standards, and best practices
- Establish enterprise analytics services in FY20 to enable a strategic approach to data management and data infrastructure

**Objective 2.2 | Enable Data-Driven Decision Making**

To create a strong data-driven culture that supports data-driven decision-making, USDA will implement enterprise analytics infrastructure, tools, and training to enable the USDA’s leadership and workforce to leverage data and analytics tools as a strategic asset.

In FY18, USDA implemented a modern, cloud-based enterprise analytics infrastructure—a “data lake”—and integrated common administrative data (HR, IT, procurement, property, fleet, operations, and homeland security) across the USDA for the first time, introducing analytical and visualization tools that increase manager and employee capabilities to communicate information on program performance, trends, and risks clearly and efficiently. USDA’s data lake enables access to these visualization and data assets through a single front door, improving the customer experience with rapid, secure access to integrated data, reducing the need for data calls, and shifting work from low value to higher value work. USDA will be better positioned to conduct effective evaluations of administrative programs and provide leaders access to the data necessary to make informed decisions. These tools enable leadership the ability to monitor and meet program goals, communicate progress, identify challenges, and address strengths, threats, and opportunities.

In FY19, USDA will enhance these tools to ensure that leaders across USDA have increasing access to key administrative and program information critical to making data-driven decisions on behalf of customers:

**Strategies:**
- Implement data analytics communities of practice
- Develop analytics training materials, playbooks, and training plans and expand the number of employees trained in analytics
- Expand analytics to program data to improve citizen facing outcomes by implementing mission area dashboards each quarter in FY19
- Deploy advanced analytics to key cross-cutting data-driven questions facing the department
- Develop, enhance and support mission area measurement of customer feedback and service delivery data
• Implement enterprise analytics services to rapidly deploy data visualization, advanced analytics, and analytics training to support strategic organizational objectives.

**Objective 2.3 | Promote Data Sharing**

Strategic improvements in USDA’s data governance, practices and infrastructure will enable data to be shared more readily through a risk-based approach. USDA’s data assets can be more fully leveraged through the creation of a framework of processes and standards that supports appropriate internal data sharing, while promoting public engagement and implementation of open data to deliver public and private sector value:

**Strategies:**

- Develop a comprehensive data sharing strategy, including an open data plan, that effectively engages USDA stakeholders to facilitate appropriate data sharing across USDA, with the public, and with researchers
- Develop and maintain a comprehensive data inventory that accounts for all data assets created by USDA, as well as a process for determining which data assets can be shared through an assessment of value and risk
- Create and manage public facing data competitions and collaborations to engage the public in understanding and demonstrating the value of USDA’s data, and to solve cross-agency problems around data at USDA
- Track data asset usage by users within and outside of USDA, and improve processes that assist the public in responding to quality issues, usability issues, recommendations for improvements regarding USDA’s data
- Conduct open data assessments to improve the timeliness, completeness, consistency, accuracy, usefulness, and availability of open Government data assets

**STRATEGIC GOAL 3 | EXPAND RISK-BASED POLICIES**

The USDA OCIO strategic goal 3 is “risk-based policies.” The USDA OCIO intends to enable risk-based policies and best practices to safeguard USDA IT resources. Cybersecurity protects the USDA mission by ensuring the integrity, availability, and confidentiality of IT systems/applications. Cyber threats are ongoing and quickly evolving. The Federal Government’s cybersecurity posture, policies, and requirements are updated continuously to address adversarial tactics. Many required statutes and polices ensure Federal cybersecurity, including the *Federal Information Security Modernization Act (FISMA)* of 2014; the *Privacy Act of 1974; the E-Government Act of 2002*; and numerous Office of Management and Budget (OMB) memoranda.

USDA will implement a risk-based, fact-driven approach to drive our decision-making process. We assess the risk of data that customers provide and we protect it appropriately. We will use information across the Department to make risk-based decisions. This approach will help us determine how to protect the data, which programs we invest in, and how to improve our business processes. For example, we are using IT cybersecurity and IT governance processes to provide the risk-based data that will help us determine where we invest our IT dollars.

**Objective 3.1 | Enhance Cybersecurity Governance**

Enhancing cybersecurity governance, involves strengthening the role of cybersecurity in providing governance across the mission areas. Given the complexity and criticality of cybersecurity, USDA will elevate the role of cybersecurity professionals to provide input and guidance throughout the entire lifecycle of the service, application, or system. Rather than an “add-on” piece of technology, cybersecurity safeguards the availability, integrity, and confidentiality of the Department’s information, technology, and stakeholders. Thus, USDA cybersecurity professionals with a knowledge of Federal and USDA requirements will be highly involved during every lifecycle phase and incorporate real-time, enterprise monitoring through the Department’s Information Security Center (ISC). This positioning ensures a baked-in-not-bolted-on approach to cybersecurity while having the added benefit of reducing duplication, fragmentation, and costs by capitalizing on economies of scale.
USDA will standardize and consolidate cybersecurity’s operational functions and transform them into a shared service. A department-wide shared service security operations center (SOC) will reduce security risks and vulnerabilities through synchronization, integration, and centralization of IT security capabilities. Other benefits of this consolidation include reducing costs, eliminating redundancies and enhancing the customer experience.

Given the complexity and importance of effective cybersecurity to USDA’s core mission, the Cybersecurity Workforce (CSWF) will become key stakeholders throughout the entire lifecycle of IT services, applications, or systems. The CSWF leverages its specialized expertise to incorporate real-time, enterprise monitoring processes and tools in the Information Security Center (ISC).

Cybersecurity is not an “add-on” capability; these measures are integral to the availability, integrity, and confidentiality of the Department’s information technology and data. ISC efforts to centralize cybersecurity functions and capabilities eliminate duplication of effort, fragmentation of accountability and capitalize on the economies of scale.

Strategies:
• Consolidating cybersecurity operations by applying the National Institute of Standards and Technology (NIST) Cybersecurity Framework
• Fostering a high-performance cybersecurity workforce (CSWF)
• Adopting a customer-centric mindset
• Using a risk-based approach to balance cybersecurity and business outcomes
• Shouldering detect, protect and defend so Mission Areas can focus on secure technology delivery.
• Using scorecards and metrics to keep ISC performance aligned to the CIO’s expectations

Objective 3.2 | Cybersecurity Tool Modernization

Cybersecurity Tool Modernization focuses on acquiring and leveraging a modernized set of cybersecurity tools to reduce and / or eliminate threats and vulnerabilities.

Strategies:
• Using a procurement methodology to rapidly implement innovative commercially-available tools
• Validating requirements and identifying challenges to leverage other Federal agencies’ test environments for new solutions
• Publishing technical guidance, standard practices, implementation templates, and capability assessment methodologies
• Identifying and deploying open-source technologies that enhance cybersecurity capabilities

Objective 3.3 | Integrate Security Requirements for Mobile Technology

Integrate Security Requirements for Mobile Technology, develops a “baked in not bolted on” approach to mobile technology and applications that incorporates security requirements in all phases of the software development cycle (to include design).

Strategies:
• Employing systems engineering methodology throughout the mobile application lifecycle
• Deploying enterprise management technologies to improve the security of enterprise
• Developing and implementing uniform standards for mobile security
• Enforcing privacy protection settings to reduce cybersecurity risks to users

STRATEGIC GOAL 4 | CULTIVATE A HIGHLY-EFFECTIVE IT WORKFORCE

The USDA OCIO strategic goal 4 is “cultivate a highly-effective IT workforce” capable of meeting mission requirements today and in the future. USDA leverages technology to enable critical support for citizens in all areas of American society, from providing loans to farmers, ranchers and rural communities, to protecting the public from food-borne illness. Technology also serves as the backbone in supporting USDA’s mission statement to provide leadership on
agriculture, food, natural resources, rural infrastructure, nutrition, and related issues through fact-based, data-driven, and customer-focused decisions. Ensuring employees have the tools and information they need when they need it enables them to serve our customers better and faster by making decisions at the local level.

Because of the strategic importance of technology to USDA’s mission, modernizing USDA’s IT capability is a top priority across the Department, with significant investments being made on IT modernization initiatives. OCIO recognized the importance of strengthening and strategically managing the IT workforce to meet emerging technology requirements
and formalized an IT Workforce Program. Key USDA IT Workforce Program initiatives in FY19 included creating a strategic IT Workforce Plan and developing a Department-wide IT workforce planning cycle.

The investments USDA is making in modernizing its technology, architecture, and processes will only realize the expected returns if the IT workforce can effectively operationalize and maintain them. Further, the importance of information technology (IT) to Federal government effectiveness has resulted in legislation like the Federal IT Acquisition Reform Act (FITARA) and the Federal Cybersecurity Workforce Assessment Act, and corresponding requirements from OPM, OMB and GAO related to maturing IT workforce planning and management capabilities and closing IT workforce staffing and skill gaps.

Attracting and retaining an IT workforce that has the knowledge, skills, and abilities to be effective, both today and in the future, is therefore critical to the success of the Department’s IT modernization efforts. In today’s environment, where organizations across public and private sectors are currently struggling to find IT staff with the requisite skills and competencies, it is more important than ever that USDA be ahead of the curve in defining its current and future IT workforce requirements, identifying IT workforce gaps, and implementing strategies to optimize IT workforce succession planning, recruitment and retention across the Department.

**Objective 4.1 | Foster strategic, proactive IT workforce planning and management**

Foster strategic, proactive IT workforce planning and management, aims at ensuring that the IT workforce is made up of the right people, in the right roles at the right times. In today’s environment where IT is evolving at an increasingly rapid pace, it is important that USDA has the capability to proactively manage its IT workforce, so it can ensure the Department has the expertise needed to efficiently and effectively manage USDA’s IT assets.

With drones, robots and intelligent monitoring systems now successfully being used in research and field trials, artificial intelligence, or machine learning, is set to revolutionize the future of farming as the next phase of ‘ultra-precision’ agriculture is on the horizon. The adoption of automation and artificial intelligence (AI) technologies will not only transform the workplace, it will accelerate the shift in required IT workforce skills that typically follows the introduction of new technology. Further, the competition for high-skilled workers will intensify, making it more important than ever for USDA to be proactive in recruiting and retaining skilled talent.

**Strategies:**

- Develop and implement a Department-wide IT workforce planning cycle and strategic IT workforce plan to position USDA to be ahead of the curve in building an IT workforce ready for emerging technologies, the OCIO, in collaboration with the Office of Human Resources (OHRM), Mission Areas, and Staff Offices, will develop and implement a Department-wide IT workforce planning cycle and create a strategic IT Workforce Plan. Implementing an IT workforce planning cycle will ensure USDA is regularly scanning the environment for new technologies, assessing the workforce to identify gaps, and developing strategies to close IT workforce gaps and improve the efficiency and effectiveness of the IT workforce. The workforce planning cycle will also facilitate the development of a strategic IT Workforce Plan that will be published every four (4) years in alignment with this USDA IT Strategic Plan. The IT Workforce Plan will outline Department-wide goals, objectives and strategies to address IT workforce gaps, and will serve as a guide for Mission Areas and Staff Offices when developing IT workforce actions, metrics and targets to include in their annual Human Capital Action Plans (HCAPS).

- Improve OCIO collaboration with the USDA Office of Human Resources (OHRM), Mission Areas, and Staff Offices. Regular coordination and collaboration among USDA’s IT workforce stakeholder groups is critical to the success of the Department’s IT workforce planning and management efforts. Not only will increased collaboration ensure strategic and tactical alignment on matters related to IT workforce, it will also enable the stakeholder groups to share workforce planning best practices and provide visibility into IT workforce initiatives taking place.
across the Department. Additionally, stakeholder groups collectively manage responses to IT-related requests from OPM, OMB and GAO. Consistent interaction amongst stakeholder groups will facilitate more coordinated responses and faster turnaround time to complete these requests.

**Objective 4.2 | Enhance IT workforce data collection and analysis capabilities**

Enhance IT workforce data collection and analysis capabilities, aims to enable data-driven IT workforce planning and management across USDA. A data-driven workforce is a shared Department and OCIO strategic goal. Clear and measurable data is critical to the development of a strong workforce. Metrics such as gender, race, performance ratings, vacancies, retirement, and attrition help identify current and future workforce needs. The timely identification of workforce needs is the first step in reducing critical vacancies and increasing efficiencies in recruitment.

**Strategies:**

- Standardizing IT workforce data, competency models, and position descriptions (PDs) across USDA will significantly improve the reliability of IT workforce data, and in turn, result in more effective decision-making. Competency models and position descriptions serve as the foundation for hiring decisions, career planning, setting performance expectations, evaluating performance, and succession planning. By standardizing IT workforce data, competency models, and PDs, USDA will have the ability to efficiently and effectively evaluate candidates with confidence they have the skills to succeed in their roles, as well as identify existing employees with the potential to advance vertically and/or laterally.

- Regularly assessing IT workforce competencies and staffing levels will enable USDA to proactively identify workforce strengths and gaps. Effective workforce planning depends on an organization’s ability to analyze its current workforce and compare the skills and staffing levels of that workforce to what is required to succeed. Implementing regular IT workforce competency assessments will provide employees and supervisors with insight into skills gaps that need to be addressed by the employee either in his/her current role, or to move to a desired future role. Further, regularly assessing USDA's IT workforce staffing levels against what is required enables USDA to be proactive in recruiting and/or retaining key IT personnel.

**Objective 4.3 | Foster an environment of supervisor/employee engagement, communication and accountability**

Foster an environment of supervisor/employee engagement, communication and accountability, aims to enhance employee effectiveness and retention through proactive performance management. Each USDA employee contributes directly to our mission success and we will continue to foster a work environment that maximizes employee performance. Research indicates that the level of employee engagement is a key predictor of organizational productivity and efficiency. An employee's performance is directly tied to his or her level of engagement and empowerment. Engaged and empowered employees are more dedicated, persistent, and passionate about their jobs and service delivery, and are more willing to invest personally to support the mission.

Employee engagement and empowerment are directly tied to mission delivery; thus, OCIO will continue to work with Mission Areas to celebrate, share, and learn from employee success and innovation. Departmental directives and policies will be refined to streamline personnel processes and emphasize employee engagement through performance management. USDA will collaborate with other Federal agencies that have high levels of employee engagement, and we will review studies from the public and private sector to continually improve our support of a high-performing workforce.
Strategies:

- Providing IT employees and supervisors with career planning and professional development tools and resources aims to enhance employee performance management and succession planning. Career planning and professional development supports employee career goals and USDA's business needs. USDA has a goal of proactively supporting professional development at the start of an employee's career, making a professional development plan a “living” document reviewed and updated on an ongoing basis. USDA will deploy annual competency assessments and skill-based trainings to support professional growth and succession planning within the current workforce. Succession planning is critical to retaining and promoting current IT talent and alleviating workforce gaps. Further, regular supervisor/employee conversations about performance and career planning will increase engagement.

- Leveraging upskilling and reskilling enables USDA to ensure IT workforce skills and competencies are aligned with emerging technologies and requirements. Upskilling involves identifying opportunities to enhance IT workforce skills in their existing roles, and reskilling involves training non-IT workforce members for IT roles. USDA’s workforce must be prepared to support the USDA community in leveraging the full capabilities of IT modernization. Providing upskilling and reskilling opportunities to the IT workforce shows that USDA is invested in their future, while also developing the competencies of employees to meet the demands of the 21st century.

STRATEGIC GOAL 5 | OPTIMIZE VALUE OF IT SERVICES

The USDA OCIO strategic goal 5 is “Optimize Value of IT Services.” As stewards of tax payer funds and USDA resources, the OCIO intends to Optimize IT services to maximize value to customers. USDA IT services are the lynchpin to USDA’s business. We will use future technologies, applications, and services to modernize USDA service offerings and business processes. By modernizing how USDA conducts business using IT, our employees will be able to serve our customers faster and will experience greater job satisfaction. For example, migrating USDA applications and services to the cloud will decrease our operating costs, allow systems and applications to be more readily accessible, and increase the responsiveness of our applications and platforms. Through network modernization and risk-based decisions, we will create a robust network, granting USDA employees access to and use of previously untapped information.

OMB M-18-23, Shifting from Low Value to High Value Work states, “Develop and implement strategies for shifting resources to high-value activities. Agencies should develop and implement reforms to eliminate unnecessary or obsolete compliance requirements and reduce the cost of mission-support operations. Reforms may include streamlining or eliminating unnecessary reporting requirements, consolidating processes and functions across offices, using shared service solutions or technologies, eliminating agency-specific guidance or policies that preclude using shared services, and introducing new technologies, such as Robotic Process Automation (RPA), to reduce repetitive administrative tasks, and other process reform initiatives."

RPA takes the robot out of the human. It mimics the activity of a human in carrying out a task within a process. As a ‘digital assistant’ RPA can do repetitive tasks more quickly, accurately, and tirelessly than humans, freeing them to do other tasks requiring human strengths such as: intelligence; reasoning; judgment; and customer engagement. It removes human errors by automating manually intensive processes, which eliminates rework and data inaccuracies resulting in enhanced accuracy and compliance.

RPA deployments are measured in weeks, through the recording then replaying of user activities. This enables rapid, low-touch automation that can quickly revert to manual processing if required. It uses the current security models to access agency systems with user name and password, which avoids any modifications to existing security policies within the enterprise. Companies are using automation and robotics to help farmers find more efficient ways to protect their crops from weeds. Blue River Technology has developed a robot called See & Spray which reportedly leverages computer vision to monitor and precisely spray weeds on cotton plants. Precision spraying can help prevent herbicide resistance.

Objective 5.1 | Streamline IT Portfolio Management Processes
Streamline IT Portfolio Management Processes, implements streamlined investment, procurement, program, and project management processes to increase operational effectiveness, achieve cost efficiencies, and enable effective portfolio planning and management.

Strategies:

- Enhance and automate USDA’s current mechanisms for monitoring and reviewing agency-level IT spending. IT Acquisition Approval Request (AAR) process improvements will increase efficiency and ensure the accuracy of information (i.e. Contract Uniform Procurement Instrument Identifier (PIID), Period of Performance, Total Contract Cost) in the AAR approval memo by using user inputs. Additionally, the process improvements will guarantee timely distribution by automatically developing AAR approval memos and sending notifications as soon as AARs receive executive approval.
- Adopt the Technology Business Management (TBM) framework USDA-wide to support IT spending data transparency and data-driven decision making. IT Asset-Level Costs Enhancements are currently in development and will establish a data structure to capture costs at the IT Asset-level and support future AgMAX-EAR integration. These enhancements will also support mapping to Enterprise Active Directory (EAD) Business Capabilities, mapping to TBM Services Hierarchy, and Identify High Value Assets (i.e., Mission Critical/Security/Both).
- Reduce redundant budget activities among OCIO and the Office of Budget and Program Analysis (OBPA). Quarterly IT Portfolio Reviews in collaboration with OBPA become a joint responsibility and will reduce redundant activities for both OCIO and OBPA, eliminating duplicative and overlapping data request, and maximize interaction with Mission Areas for greater insight into portfolios health and alignment with the Secretary’s goals.
- Improve investment review strategies to emphasize daily partnership and collaboration with agencies and staff offices, improving compliance, and maximizing time savings to enable additional process improvement. Improved practices will ensure that investments will be reviewed in a standardized way and lead to more consumable data for better reporting.

Objective 5.2 | Enhance Governance Processes

Enhance Governance Processes, implements robust governance processes to maximize investment value and optimize IT support in alignment with business objectives.

Strategies:

- Improve collaboration, strategic and tactical planning between the business and IT Leaders regarding the mission. The partnership between USDA business and IT leaders is key to enabling a culture for enterprise-wide decision-making, which ensures the organization is driving towards maximum business value from IT (deliver value to the business and assess return on investment). Additionally, transparent management of the IT budgets and priorities will identify cost avoidance and savings opportunities in sustainment (operations and maintenance) areas, thereby enabling scarce resources to be used for innovation.
- Realign IT governance boards and policy to establish and maintain flexible repeatable/automated processes for prioritizing requirements and dashboard reporting. Improved policies and processes will allow USDA to better manage, evaluate, measure, and monitor IT services, and the resulting work and deliverables, in a more consistent, incremental and repeatable manner.
**STRATEGIC PERFORMANCE METRICS**

The USDA OCIO strategic performance metrics provide performance targets and means for tracking progress over time. We will establish and track these strategic and operational metrics, giving USDA leadership a view of USDA’s progress towards strategic goal accomplishment over FY 2019 – 2022.

<table>
<thead>
<tr>
<th>Strategic Goal</th>
<th>Goal Owners</th>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic Goal 1</strong></td>
<td>ACIO Digital Infrastructure Services Center and ACIO Client Experience Center</td>
<td>Percentage Increase in Rural Connectivity</td>
<td>Measure annual increase year over year in rural connectivity against the baseline.</td>
</tr>
<tr>
<td>Improve customer IT experiences</td>
<td>ACIO Digital Infrastructure Services Center and ACIO Client Experience Center</td>
<td>Customer Satisfaction Index</td>
<td>Measure customer’s satisfaction with USDA’s IT service and solution delivery.</td>
</tr>
<tr>
<td></td>
<td>ACIO Digital Infrastructure Services Center and ACIO Client Experience Center</td>
<td>Mobile Innovation Index</td>
<td>Measure the compliance to USDA’s mobile innovation strategies and standards.</td>
</tr>
<tr>
<td><strong>Strategic Goal 2</strong></td>
<td>Chief Data Officer</td>
<td>Data Analytics Index</td>
<td>Measure the compliance to USDA’s data analytics adoption and implementation strategy, requirements and standards.</td>
</tr>
<tr>
<td>Cultivate a data-driven capabilities and culture</td>
<td>ACIO Information Resource Management Center</td>
<td>Cybersecurity Posture Index</td>
<td>Measure the health of cybersecurity activities including outstanding critical and high risk vulnerabilities and authority to operate assessments.</td>
</tr>
<tr>
<td><strong>Strategic Goal 3</strong></td>
<td>ACIO Information Resource Management Center</td>
<td>IT Workforce Skill Gap Improvement</td>
<td>Measure the average proficiency levels for each 2210 series role/grade and compare to the target proficiency levels for the role/grade.</td>
</tr>
<tr>
<td>Expand Risk based policies</td>
<td>ACIO Information Resource Management Center</td>
<td>Complete and Accurate Data</td>
<td>Identify the number of IT employee records with incomplete or inaccurate data.</td>
</tr>
<tr>
<td><strong>Strategic Goal 4</strong></td>
<td>ACIO Information Resource Management Center</td>
<td>Workforce Engagement and Development Index</td>
<td>Measure employee engagement, professional career development and FEVS benchmarking.</td>
</tr>
<tr>
<td>Cultivate a Highly Effective IT Workforce</td>
<td>ACIO Information Resource Management Center</td>
<td>IT Workforce Retention</td>
<td>Measure the average attrition rate of the IT workforce.</td>
</tr>
<tr>
<td><strong>Strategic Goal 5</strong></td>
<td>ACIO Information Resource Management Center</td>
<td>IT Governance Index</td>
<td>Measure the efficiency of IT investment reviews across GSA governance bodies.</td>
</tr>
<tr>
<td>Optimized value of IT services</td>
<td>ACIO Information Resource Management Center</td>
<td>FITARA Compliance Index</td>
<td>Measure performance and compliance in accordance with FITARA.</td>
</tr>
<tr>
<td></td>
<td>ACIO Information Resource Management Center</td>
<td>IT Cost Savings / Avoidance Index</td>
<td>Measure the total amount of IT cost savings and avoidance.</td>
</tr>
<tr>
<td></td>
<td>ACIO Information Resource Management Center</td>
<td>IT Cost Transparency Index</td>
<td>Measure alignment to the cost transparency model including taxonomy mapping, application of zero-based budgeting and budget improvement opportunities.</td>
</tr>
</tbody>
</table>
APPENDIX A: REFERENCES


USDA is Investing in Rural Broadband

USDA Strategic Plan 2018-2022
APPENDIX B: ARTIFACTS

Agency Feedback Cloud Eligible Apps, September 28, 2018
APHIS IT Roadmap 2018
Artificial Intelligence with Strawberries May Improve Food Quality and Safety While Minimizing Field Labor, September 27, 2018
Baseline Standards Profile/Forecast - 2018
FNCS Data Center and Cloud Migration Roadmap
FNS National Office Decommissioning Plan, September 28, 2018
FSIS IT Quarterly Review, October 2018
Information Technology Modernization Business Modernization Office (BMO) 2018
Infrastructure Optimization, October 24, 2018
Mobile Strategic Plan, October 2018
MRP Cloud Migration and Data Center Optimization Plan
MRP IT System Decommissioning WBS
NRF Strategic Vision 2.6 – 2019-2024
Overarching FAS IT Systems Roadmap, September 28, 2018
RD Response - Overarching legacy IT system decommissioning plan, September 30, 2018
USDA Strategic Plan 2018-2022
USDA Target Architecture Plan 2018