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2015

# USDA Enterprise Roadmap

**Office of the Chief Information Officer**



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May 2015

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## Summary of Changes

The Department of Agriculture (USDA) is reporting several updates for its FY15 Enterprise Roadmap submission.

The FY15 USDA Enterprise Roadmap was reviewed and updated per the Office of Management and Budget's (OMB) Integrated Data Collection (IDC) guidance. To that end, OCIO solicited USDA's agencies to report and highlight new and/or significant changes to their FY14 Enterprise Roadmap submissions. OCIO received minor updates to milestones and content from USDA agencies.

The following is a summary of changes for the USDA FY15 Roadmap:

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Page No.	Change
TOC	Table of Contents removes Departmental Management, and Introduces the Office of the Chief Information Officer per OMB A-11 Bureau Code changes
Pages 98-102	Updated MIDAS Investment Transition Plan for Investment
Pages 102-105	Updated - CDSI Investment Description and Action Plan
Appendix A	Removed EAMMF Self –Assessment
Appendix B	Removed USDA Outcomes and Measures
Appendix C	Removed FY14 USDA Major Information Technology Investments Risks
Appendix D	Removed IRM/ER Traceability Matrix

The USDA is looking forward to and anticipating additional guidance from OMB regarding changes to the Federal Enterprise Architecture, and will work to ensure its FY16 Enterprise Roadmap complies with the forthcoming directive

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## 1.0 Introduction

The United States Department of Agriculture's (USDA) mission is to provide leadership on food, agriculture, natural resources, rural development, nutrition, and related issues based on sound public policy, the best available science, and efficient management.

USDA's mission is incredibly diverse and reaches far beyond what one might typically think of as "agriculture." As the following points illustrate, it is no exaggeration to say that USDA's work touches every American citizen, across every state, throughout every day:

- The Food and Nutrition Service is our Nation's first line of defense against hunger, especially for children and low-income citizens;
- The Food Safety and Inspection Service protects the nation against food-borne illness;
- The Forest Service leads all efforts to prevent and manage wildland fires;
- USDA is the tenth largest lender in the United States and through Rural Development has over 1 million loans in rural America; and
- USDA finances both housing and essential community facilities such as schools, hospitals, water supplies, electricity, and broadband access.

### USDA Mission

*We provide leadership on food, agriculture, natural resources, rural development, nutrition, and related issues based on sound public policy, the best available science, and efficient management.*

USDA Services to the American citizen and Industries include;

- Assisting Rural Communities
  - Broadband
  - Disaster Assistance
  - Grant
  - s and Loans
  - Insurance Programs
- Conservation
  - Environmental Markets

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- Conservation
  - Wildfire Prevention
  - Education and Research
    - Agricultural Research
    - Agricultural Statistics
    - Economic Research
  - Food and Nutrition
    - Child Nutrition Programs
    - Expanded Food and Nutrition Education Program (EFNEP)
    - Organic Program
    - Supplemental Nutrition Assistance Program (SNAP)
    - Women Infant and Children (WIC) Program
  - Marketing and Trade
    - Exporting Goods
    - Food Security
    - Importing Goods

USDA's FY 2014-18 strategic plan outlines five strategic goals that are essential to executing the Department's mission.

- **Strategic Goal 1:** Assist rural communities to create prosperity so they are self-sustaining, repopulating, and economically thriving.
- **Strategic Goal 2:** Ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources.
- **Strategic Goal 3:** Help America promote agricultural production and biotechnology exports as America works to increase food security.
- **Strategic Goal 4:** Ensure that all of America's children have access to safe, nutritious, and balanced meals.
- **Strategic Goal 5:** Create a USDA for the 21st Century that is high-performing,

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efficient, and adaptable.

This Enterprise Roadmap (ER) outlines the necessary technologies, capabilities, and operations necessary to execute the Department's mission and strategic goals. The roadmap supports the IT Strategic Goals identified in USDA's IRM Strategic Plan by presenting a high-level, integrated description of the Department's business objectives, enabling IT capabilities, and target outcomes across its Agencies and Mission Areas. It was developed using Enterprise Architecture (EA) concepts and methods to describe the Department's current architecture, future architecture, and transition plan. The ER is focuses on Department-wide initiatives and on the Department's major IT investment portfolio, as well as, the portfolio's effect on achieving USDA's strategic goals and objectives in support of USDA's seven (7) mission areas.

USDA's ER reflects the Department's dynamic environment and the continuously changing USDA IT environment. The FY 2015 Roadmap:

- Provides a holistic overview of major investments within the Department's Mission Areas and component Agencies.
- Demonstrates how USDA has prioritized and planned its transition strategy through a deliberate discussion of its high-priority modernization initiatives.

USDA's ER reflects the changing program and business context of a continuously evolving Department. USDA will continue to update the Department's Roadmap to provide the information necessary to assess USDA's current and future architectures and the transition plan.

## **Purpose**

The purpose of the USDA ER is to define and sequence the activities needed to yield the desired future state, according to USDA priorities, dependencies, and constraints. It is the basis for IT modernization, driving both investment and implementation of systems and technologies that will transform USDA's business.

The USDA ER is focused on Department-wide initiatives and the Department's major IT investment portfolio and its effect on achieving USDA's strategic goals and objectives in support of its seven (7) mission areas.

The USDA Roadmap documents USDA's Business and Technology Architecture, which includes the IT Asset Inventory collection, which is a list of IT systems and applications that support mission, administrative, and commodity IT services.

## Integrated IT Governance Lifecycle Management

The Secretary and Deputy Secretary of Agriculture provide USDA's overall guidance and direction, with the Under Secretaries and Assistant Secretaries providing leadership in the seven Mission Areas and staff offices. The Chief Information Officer (CIO) has primary responsibility for overseeing and coordinating the design, acquisition, maintenance, use, and disposal of IT goods and services.

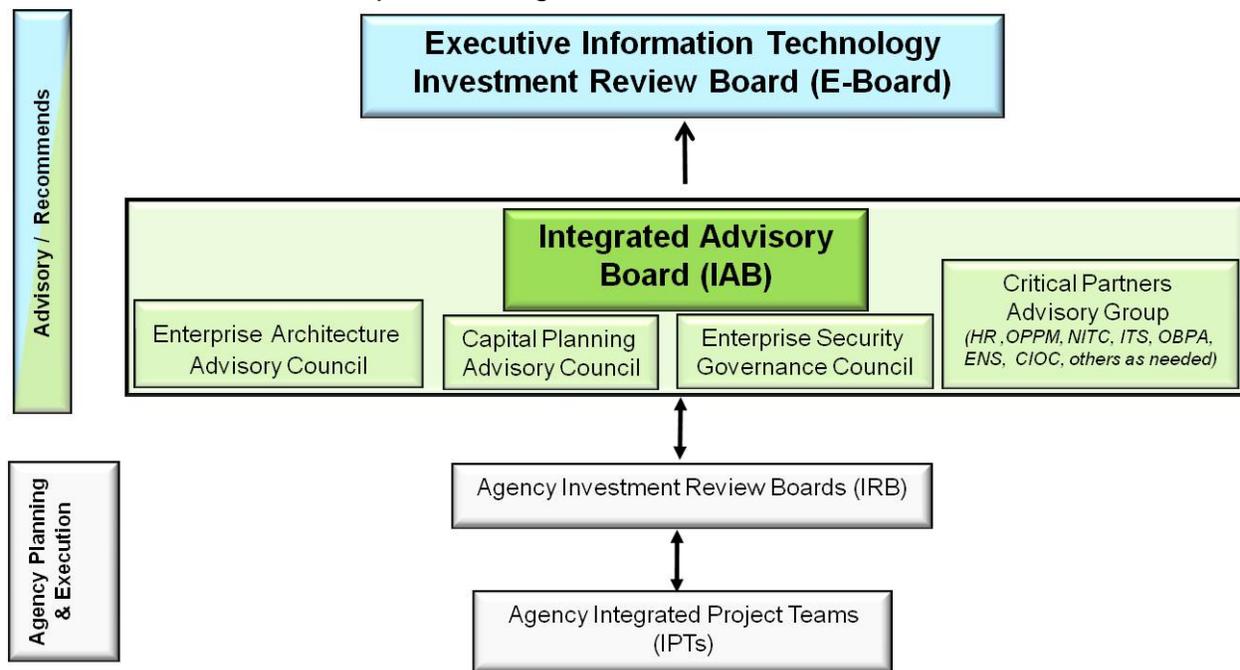


Figure 1: Enterprise IT Governance Management Structure

Through the implementation of an enterprise-wide IT governance process, the CIO brings together USDA Agencies, Staff Offices, and internal IT resources to promote department-wide technology innovations and operations that provide high-value return on investment. (Refer to Appendix D in the USDA IT Strategic Plan, titled "Governance Process").

## Architectural Leadership and Focus

For FY2015, the USDA has set a particular focus on ensuring organizational improvement and leadership in the following areas:

- **Aging Infrastructure:** Aging equipment is a pervasive challenge across the Department and a primary focus of architectural efforts. For example, some of the core IT infrastructure for USDA's Service Center Agencies (SCAs) has not been refreshed since their initial implementation in 2000. This includes more

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than 3,000 field office servers and thousands of network routers and switches, as well as, their associated voice communication infrastructure. Agencies affected by the outdated infrastructure include the Farm Service Agency (FSA), Rural Development (RD) and the Natural Resources Conservation Service (NRCS).

- **Fragmented Services:** Many services that are provided across USDA need to support a diverse set of organizations. This challenge has limited the ability to take advantage of economies of scale and has increased the resources required to adequately manage needed capabilities.

## 2.0 Enterprise Architecture Overview

In today's budget environment, information technology (IT) must be leveraged to deliver innovative, cost-effective solutions to support the business delivery needs of USDA's mission areas. Our shared purpose is to realize rural prosperity, preservation and maintenance of forests and working lands, sustainable agriculture, and alternative, renewable fuels and bio-based products; however, the Department and its Agencies, as well as farmers, ranchers and agri-businesses in the United States will not thrive without advances in IT. To ensure the safe, effective, and efficient implementation and oversight of innovative IT solutions, the Office of the Chief Information Officer (OCIO), as part of USDA's Departmental Management (DM) organization, is transforming how the USDA and its stakeholders collaborate. For example, the USDA OCIO has already achieved great successes in support of the *Secretary's Blueprint for Stronger Service*, which focuses on streamlining the Department's administrative operations and reducing costs, through the successful consolidation of the Department's Enterprise Data Centers (EDC) and the implementation of cloud-based solutions, such as the Enterprise Messaging System (EMS) and USDA Connect, USDA is positioning itself to streamline geospatial data, deliver broadband access for rural America, and enhance career paths for cyber security and IT program management professionals.

## 3.0 Current USDA EA Program

This section of the Roadmap documents the activities associated with administering EA as an ongoing program.

The objective of the Roadmap is to provide an integrated view of current high priority business and administrative initiatives and supporting technology solutions. The highly decentralized structure of USDA, articulated in the USDA IT Strategic Plan means much of the EA work is done at the USDA agency or office level.

- **Applications - Artifacts:**

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- In February 2014, USDA updated its EA Program guidance to articulate the vision, common EA approach, requirements, and artifact to underpin the USDA EA efforts. These EA requirements covered investments, systems, and applications in the “As Is” architecture to ensure the department’s alignment to the FEAF 2.0. Given the scale and scope of the USDA, the implementation will be a phased approach with initial focus on major investments. EA artifacts are now required and reviewed at every investment gate review in the lifecycle process.
  - **Security and Privacy:**
    - The IT security and Security Reference Model resources support the attainment of the strategic goals and initiatives; articulated in the “USDA IT Strategic Plan”, reference the plan’s section on Goal #4, which identifies security, security measurement, and analysis activities support each strategic objective of the USDA.
    - This section of the Roadmap discusses a general approach to security reference modeling and measurements across all programs and is in alignment with the USDA EA framework. IT security shall be part of any strategic goal or initiative that depends on accurate, properly authenticated information. High-level descriptions are provided on how security is built into business services and the control of information flows, as well as the design and operation of systems, services, and networks. Specific IT security information is not a part of the IT Strategic Plan or Roadmap because it may divulge vulnerabilities. This type of information is made available upon request in an appropriately marked or document to which appropriately cleared personnel will have access.
  - **Standards:**
    - Consistent with Section 12(d) of Public Law 104-113, National Technology Transfer and Advancement Act of 1995,” OMB Circular A-119 directs agencies to use voluntary consensus standards in lieu of government-unique standards except where inconsistent with law or otherwise impractical” and to submit a report describing the reason for use of government –unique standards in lieu of voluntary-consensus standards to OMB through NIST.
    - In accordance with OMB direction, when selecting standards, USDA agencies consider “full account of the effect of using the standard on the economy, and of applicable federal laws and policies, including laws and regulations relating to antitrust, national security, small business, product

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safety, environment, metrication, technology development, and conflicts of interest.

- The objective of this effort is to promote interoperability, shared services, data management, and integration to establish improved levels of efficiency and use and reuse of technology.

## **Open Data Strategy**

USDA's open data strategy is focused on optimizing content for mobile use, using open data and web APIs to further build capacity for public service innovation, and encouraging creative consumption of USDA's extensive resources, including the Department's high-value data, services, and systems.

In the past year, the USDA has focused its Open Data efforts on establishing a framework to enhance, enrich, and open, to the extent practicable, the USDA Enterprise Data Inventory (EDI). In so doing, the USDA has already achieved several Open Data milestones that have met and continue to meet the Office of Management and Budget's (OMB) Open Data requirements and the Department's internal requirements. These milestones have prepared the groundwork for the Department's future Open Data efforts and position the USDA and its Agencies to become a more transparent, collaborative, and effective organization. The following milestones are among the Department's recent Open Data achievements:

- **Open Data Council (ODC):** The Open Data Council is composed of Executive Leadership from the Department and its Agencies, and is responsible for overseeing the implementation of the Federal Agency requirements outlined in the President's Open Data Policy, as expressed in *OMB Memorandum-13-13, Open Data Policy – Managing Information as an Asset*, along with all subsequent supplemental guidance.
- **Extension of USDA Data Architecture working group to include Data Stewardship responsibilities for Open Data requirements on USDA's Data Asset Inventory such as open license metadata.** The Data Architecture Working Group consists of representation from each USDA Agency and was originally chartered to:
  - Promote data quality, data transparency, data accessibility, data governance, data standardization, reuse, information sharing, cost saving/avoidance by minimizing redundancy and rework, and collaboration;

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- Ensure that all OMB Guidance for Managing Information as an Asset is effectively implemented and documented, addressing interoperability, openness throughout the information life cycle, information safeguards, information collection/creation, information system design, and data management/release practices;
    - Identify common data elements, identify costs of information, and develop standard data definitions.
  - Creation of an Open Data Working Group (ODWG): The Open Data Working Group is composed of senior members from USDA's Office of the Chief Information Officer, Office of Communication and Office of General Council. The ODWG is primarily responsible for developing strategic and tactical implementation plans for the Department's Open Data effort including public communication and outreach efforts, data publication process, and open data requirements for USDA's Data Architecture asset catalog.
  - Completed an Open Data Policy Strategic Plan: USDA's Open Data Policy Strategic Plan initiates the Open Data Policy for the US Department of Agriculture (USDA) by providing recommendations for coordinating and collectively responding to the mandates and milestones described in the Open Data Cross Agency Priority (CAP) Goal Establishment draft document and to other OMB related documentation in a structured and timely manner.
  - Completed an MS Project Master Project Schedule for Open Data: The Department's Open Data master schedule outlines the Department's initial approach to implementing the goals and objectives identified in its Open Data Policy Strategic Plan. The master schedule provides project milestones as well as a high-level overview of USDA's process for providing monthly and quarterly updates to its EDI.
  - Completed USDA.gov/data page: The USDA.gov/data page lists all of the Department's datasets by its component agencies. The USDA.gov/data page will be updated in the future based on Department directives and customer feedback.
  - Submission of USDA's EDI to the Office of Management and Budget (OMB).
  - Continuous updating of USDA Public Data Listing: USDA's Public Data Listing was published on the USDA.gov/data page on November 29, 2013. The Public

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Data Listing accounted for an initial listing of public datasets within the Department's EDI. The PDL gets updated on a quarterly basis.

- Creation of an Open Data Blog: USDA's Deputy CIO for Policy and Planning, drafted and posted USDA's first blog specifically focused on the Open Data initiative. Over the next year, USDA staff and leadership will periodically update the blog, which is intended to facilitate USDA's customer engagement and outreach efforts.
- Update to USDA Digital Strategy: The updated USDA Digital Strategy page now includes additional information about USDA's on-going Open Data efforts, such as USDA's dataset publication process, Open Data milestones for FY14, and an overview of the USDA Open Data schedule.

The USDA Data Stewards Working Group, Open Data Working Group, Open Data Council, and Executive leadership convenes regularly to discuss the development of a USDA-specific Open Data Policy, standards, and outreach efforts, and to refine the Open Data publication. In addition, the Open Data Council, championed by USDA executive sponsors, is working with Agency CIOs to prioritize and oversee updates to the Department's EDI.

Members of the USDA Data Stewardship Working Group (DSWG) will coordinate activities within their agencies to ensure application of reusable and common data architecture standards, and will ensure data stewardship accountability. Data will be managed as complete and current enterprise assets, and all data are included in the scope of this function.

In the future, USDA will modernize information systems to maximize interoperability and information accessibility by establishing a baseline portfolio, identifying, prioritizing, and releasing high-value data sets. The Department will also use Social Media and Customer Relationship Management (CRM) tools to engage with and gather feedback from internal and external customers regarding the efficiency and effectiveness of the Department's systems and services.

## **Digital Strategy**

Following the Open Data Strategy detailed in 2.4, USDA will modernize information systems to maximize interoperability and open data availability by prioritizing high-value systems and services. OC will lead the Department's outreach and engagement with customers to assist in prioritization and provide regular feedback to continuously enhance our open data program. Collectively, we intend to utilize web analytics data, customer relationship management tools, and social media feedback to evaluate potential data, content, or system enhancements.

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## **Mobile Strategy**

The agricultural sector is introducing a new generation of mobile technologies designed to support our constituency by providing access to our services, programs, systems, and information any time, any place, and from any device. USDA must rise to the mobile technologies challenge by transforming our business delivery systems and our workforce to be effective in this new technological environment.

USDA will utilize existing processes to enable a mobile workforce. The Digital Strategy lead will review Acquisition Approval Requests (AAR) to ensure any new contracts, services, and initiatives are appropriately optimized for mobile. Additionally, the Digital Strategy lead will review IT projects throughout the life cycle through the IT Governance Process to ensure IT projects that are existing, new or under development include appropriate mobile optimization requirements and deliverables.

## **EA Value Measurement**

This Enterprise Roadmap discusses how EA supports and improves the enterprise's strategic and business planning, as well as, identifies performance gaps that architectural designs can help close. By showing how resources are currently used, and identifying useful new processes and technologies at each level of the framework, improvements in performance can be captured in the "To Be" EA views.

USDA leveraged the 2014 quarterly OMB mandated Integrated Data Collection (IDC) to inform the current IT Asset Inventory. This effort enabled the categorization of investments and systems by their respective PRM, BRM, ARM, and DRM taxonomy codes. The asset inventory has enabled EA to perform the required analysis to identify potential duplicative systems and performance gaps. It facilitates identifying potential in areas for strategic sourcing, enterprise licensing, cloud and/or shared services.

Quarterly Integrated Data Collection (IDC) continues to present opportunities to more fully populate the current architecture and to improve the data quality of the department's portfolio.

## **Investments by USDA Mission Areas**

- **Strategic Goals and Initiatives:**
  - The EA program and specific resources support the attainment of the strategic goals and initiatives; articulated in the "USDA IT Strategic Plan".

Reference the plan’s section on Goal #3, which identifies objectives that support each goal and initiative at the strategic level of the USDA.



Figure 2 Mission View

The USDA OCIO has identified eleven (11) High- Priority Modernization Initiatives and Investments that will offer broad benefit across the Department and enable its Agencies to streamline its services and modernize its infrastructure:

1. Modernize and Innovate the Delivery of Agricultural Systems (MIDAS)
2. Conservation Delivery Streamlining Initiative (CDSI)
3. Financial Management Modernization Initiative (FMMI)
4. Web Based Supply Chain Management (WBSCM)
5. Public Health Information System (PHIS)
6. RMA-13 Emerging Information Technology Architecture (EITA)
7. Animal Disease Traceability Information System (ADTIS)

8. Resource Ordering Status System (ROSS)
9. Comprehensive Loan Program (CLP)
10. USDA Identity Access and Management (Homeland Security Presidential Directive-12 (HSPD-12))
11. Enterprise Shared Service Telecommunication [Internet Protocol version 6 (IPv6)]

## Organizational View

USDA is composed of 19 agencies, which are organized into seven mission areas that carry out the Department's responsibilities and oversee its portfolio of Information Technology (IT) investments, which for FY 2015 consists of 24 major and 192 non-major IT investments, valued at roughly \$2.7 billion dollars.

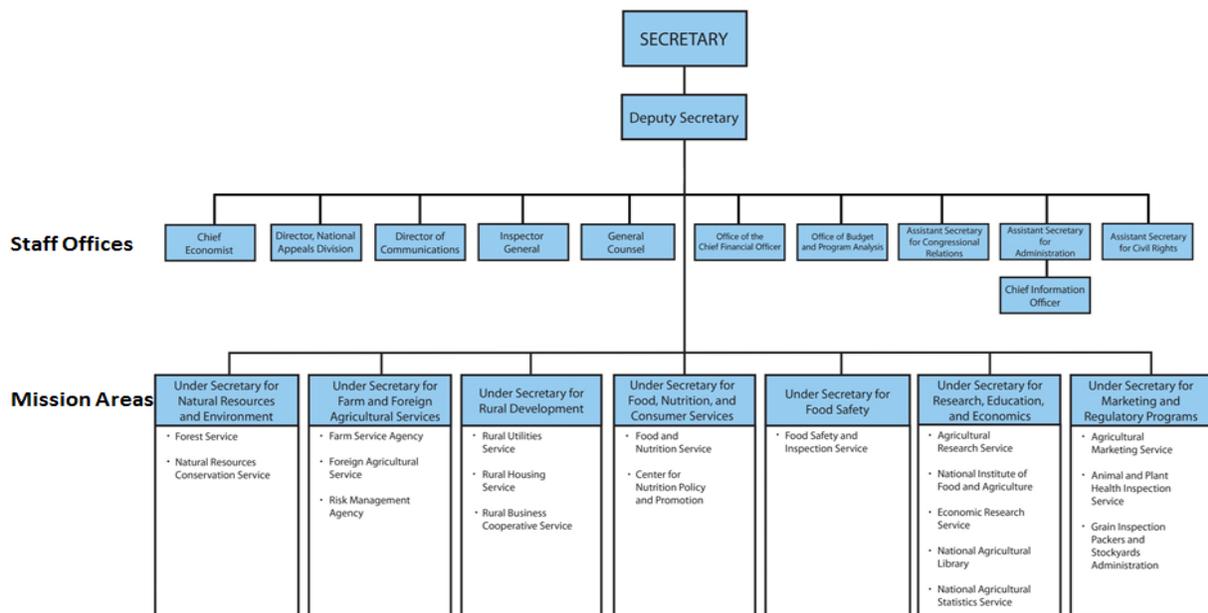


Figure 3: Organizational View

The following sections provide a snapshot of USDA's Investments, Business Needs, Current IT capabilities, requirements, and IT Benefits and Goals:

- **Business Need:** The Business Need column describes the issues, problems, gaps, and/or mandates that drive an investment. The information provided in this column describes why the investment is funded (e.g. Outdated or insufficient IT capabilities).

- **Current IT Capabilities:** The Current IT Capabilities column describes an investment’s supporting infrastructure, as well as the capabilities, functionalities, and services it provides.
- **Requirements:** Requirements are derived from the specific operational and/or project needs that an investment must address. Requirements may include legislative mandates and/or specific project requirements to close IT capability gaps.
- **IT Solutions, Benefits, and/or Goals:** The technology solutions, benefits, and goals describe the advantages of the investment’s planned outcomes.

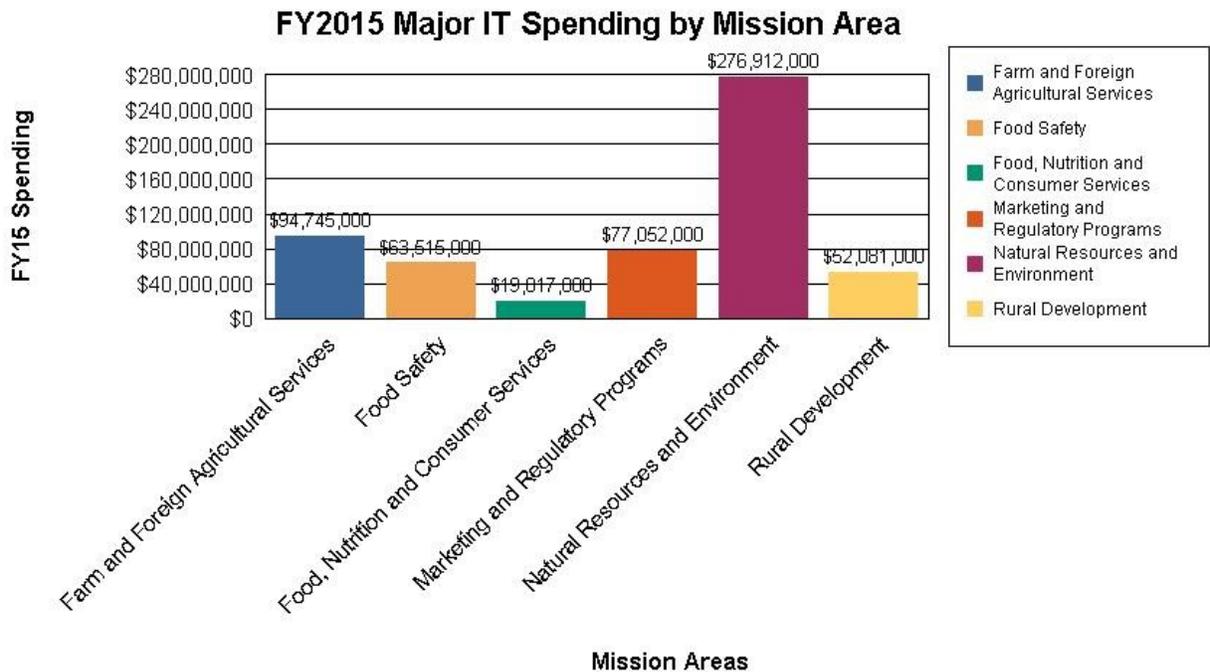


Figure 4: Major IT Investment Budgets by Mission Area

## USDA’s Major Investment Portfolio by Agency and Staff Office

USDA’s investments have been organized into the Mission Areas and Agencies that manage the Department’s 24 major IT investments. Descriptions of each of USDA’s Mission Areas and Agencies have also been provided as context, and serve as a primer for the descriptions of USDA’s major investment inventory.

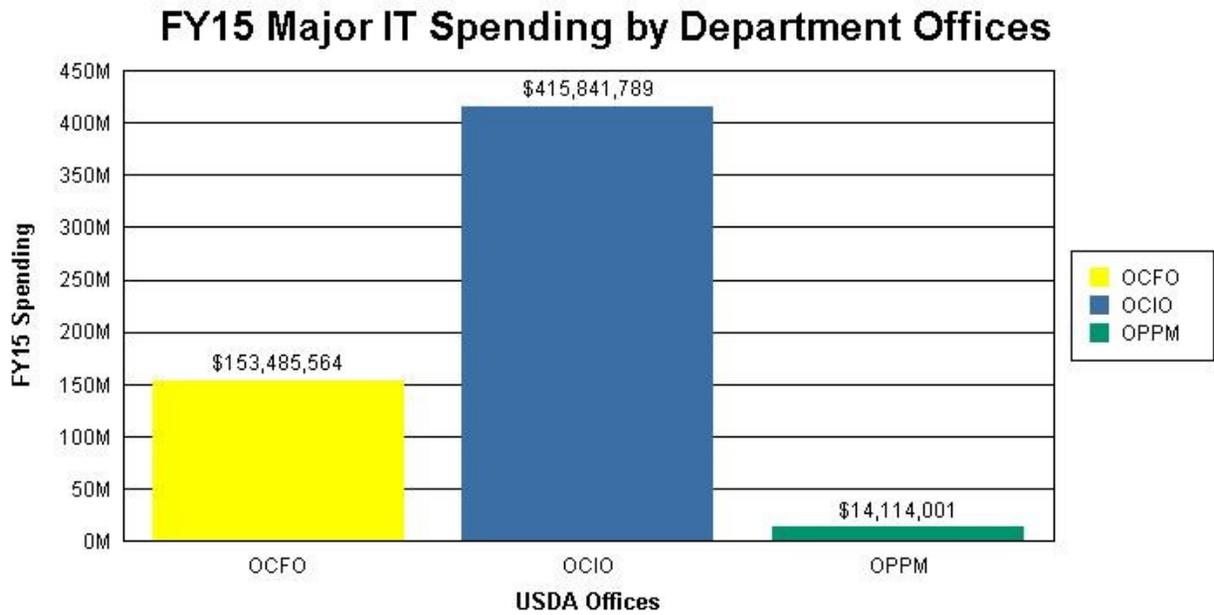


Figure 5: Major IT Investment Budgets by USDA Offices

## Office of the Chief Financial Officer (OCFO)

The Chief Financial Officer serves as the principal advisor to the Secretary and senior official on all matters related to financial management. The Office of the Chief Financial Officer is responsible for the financial leadership of an enterprise with more than 100,000 employees, 14,000 offices and field locations, \$128 billion in assets, and \$77 billion in annual spending. The major functional components of the OCFO include: National Finance Center (NFC); Financial Operations; Continuity of Financial Management Planning; Working Capital Fund; Financial Systems; and Internal Controls and Process Evaluation.

OCFO oversees two (2) of USDA's 24 major IT investments.

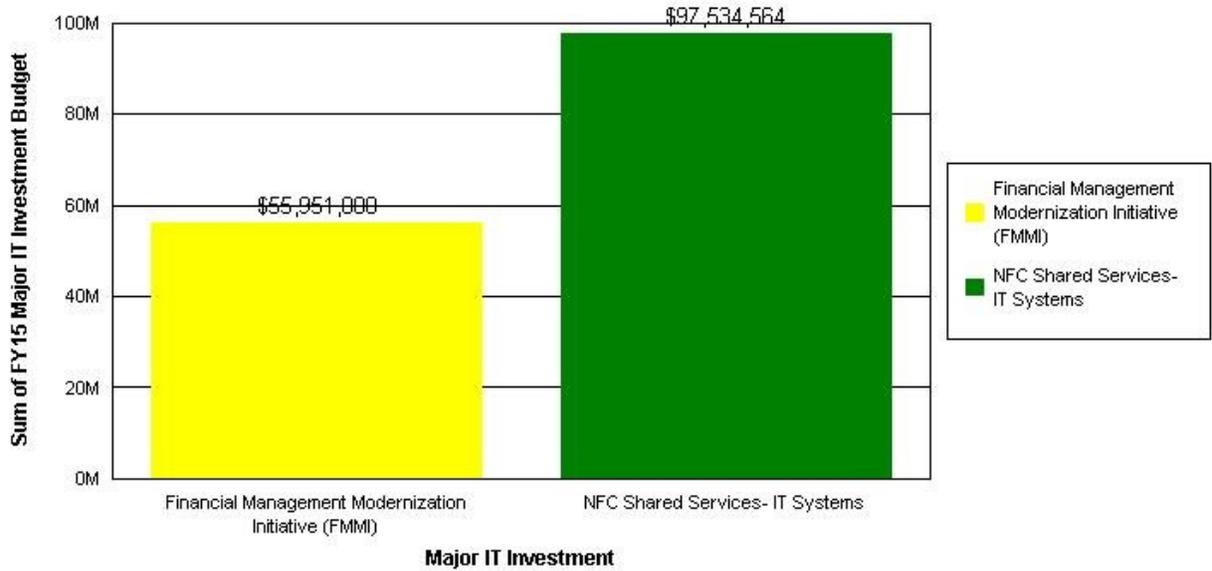


Figure 6: FY15 OCFOMajor IT Investment Budget

<u>Major IT Investment Name</u>	<u>PRM Strategic Goal</u>	<u>FY15 Budget</u>
NFC Shared Services- IT Systems	P00.000.411	\$97,534,564
Financial Management Modernization Initiative (FMMI)	P00.000.411	\$55,951,000
<b>OCFOFY15 Major IT Investment Budget Summary:</b>		<b>\$153,485,564</b>

## Financial Management Modernization Initiative (FMMI)

As part of USDA’s data center consolidation plan, the National Information Technology Center’s (NITC) data centers and the National Finance Center (NFC) data center were designated by the USDA CIO as enterprise data centers under the USDA data center consolidation initiative. FMMI consolidates payroll, human resource, financial, and procurement systems at NFC’s enterprise data center. Several systems were moved from NITC to NFC to accomplish this consolidation (FDW, CPAIS, MITS, ACRWS, IAS, and EmpowHR). The ACFO-FS has submitted applications to FIT for certification as a financial shared service provider.

CFMS, USDA’s legacy financial system, was comprised of numerous financial systems maintained by agencies across the Department. These systems led to multiple financial processes across the Department and different reporting mechanisms. FMMI has consolidated the Department’s financial data in a central database with common

business processes. While there are still additional financial systems within USDA, these systems interface with FMMI and impact the common general ledger where all USDA financial reporting is supposed to originate.

The legacy CFMS financial system did not meet the requirements of the OMB FMLoB guidance. FMMI has helped USDA to close the following gaps associated with the legacy system:

- Compliance with the OMB directives;
- Consolidation of nine USDA general ledgers into one general ledger for the Department; and
- Existence of multiple financial systems.

The ACFO-FS is transforming the Department’s financial processes through the implementation of FMMI, which consolidated multiple financial systems and created common financial processes across the department. As a result, ACFO-FS has continued to improve procedures for system maintenance and data consolidation, and has reduced the number of interfaces between systems. The FMMI investment entered into Operations & Maintenance-Steady State during FY13 and the retirement of CFMS, and maintains accurate financial data.

Business Need(s)	Current IT Capabilities	Requirements	IT Benefits and Goals
<p>The need for improved financial performance through a modern financial system that provides maximum support to mission.</p> <p>This is consistent with the USDA s strategic plan management initiatives requiring a solution to:</p> <p>Provide a single, operational web-based system for USDA Agencies and Staff Offices and an enterprise-wide view of data;</p> <p>Standardize business processes;</p> <p>Implement leading practices;</p> <p>Provide reliable, relevant and timely data for general accounting, funds management and financial reports; and</p>	<p>FMMI is the Corporate Platform for Enterprise Financial Management for USDA.</p> <p>FMMI utilizes commercially available software with minimal modifications, and has a complex infrastructure that requires constant coordination for software updates.</p> <p>FMMI has transitioned to the Steady State phase of the project and has replaced the previous core accounting system FFIS.</p> <p>FMMI provides high-speed data analytics that combines financial and program data, centralizes and standardizes financial management and reporting, reduces redundant financial systems across the agency, and offers a single source of the truth for USDA financial reporting.</p>	<p>Transition FMMI to O&amp;M Steady State operations.</p> <p>Provide the following three-tier architecture: web access tier, application tier and database tier.</p> <p>Provide both real-time and point-in-time web-based reporting of financial activity.</p> <p>Provide a robust data exchange capability for real-time service oriented services and batch interfaces.</p>	<p>FMMI replaced CFMS and is replacing other financial management systems within the USDA.</p> <p>FMMI provides a modern, centralized financial management system for the Department.</p> <p>FMMI provides opportunities for the following programs:</p> <ul style="list-style-type: none"> <li>• MIDAS</li> <li>• IPAS</li> <li>• CLP</li> <li>• NRCS Enterprise</li> <li>• Financial Management systems</li> <li>• CREEMS</li> </ul> <p>The programs listed above interface with the FMMI system, which results in the following benefits to these programs:</p> <ul style="list-style-type: none"> <li>• Streamlined processes; and</li> </ul>

<p>Enable single sign-on using USDA's eAuthentication system.</p>			<ul style="list-style-type: none"> <li>• Real Time access to data, as opposed to periodic batch processing.</li> </ul> <p>MIDAS is intended to align with Office of the Chief Financial Officer's (OCFO) Financial Management Modernization Initiative (FMMI) investment. It will accomplish increased compliance with modern internal control structures and effectively implement improved IT security.</p> <p>Gaps that FMMI has closed include:</p> <ul style="list-style-type: none"> <li>• Compliance with the OMB directives;</li> <li>• Consolidation of nine general ledgers into one within USDA.</li> <li>• Retired multiple financial systems.</li> </ul>
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## National Finance Center Shared Services –IT Systems

The National Finance Center (NFC) Shared Services investment is managed by NFC within the USDA's Office of the Chief Financial Officer (OCFO). In support of its Shared Services investment portfolio, the NFC acquires IT components (hardware, firmware, and software) along with IT support services under three General Support Systems (GSSs) and nine Major Applications (MAs).

The NFC has experienced rising maintenance costs resulting from Original Equipment Manufacturer (OEM) pricing, influenced by the current economy. To mitigate these rising costs, NFC has awarded several contracts open to all of the USDA in accordance with the shared first procurement policy. The purpose of these contracts is to provide a single point of supply to acquire hardware, software, and contractor support. NFC identifies these recurring requirements and funds requisitions as to meet current customer requirements. The equipment and associated processes, methodologies, and procedures are required to maintain NFC's Enterprise Architecture.

In addition, NFC has contributed to costs savings and cost avoidance by improving rapid provisioning through the following mechanisms:

- Awarded Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts for servers, network infrastructure, support services, and IT service management so orders can be placed directly against these contracts, resulting in reduction of procurement time by more than 60%;
- Awarded Business Services Management contract under shared first procurement policy reducing the need for agencies to award individual contracts;
- Awarded System Engineering and Technical Assistance (SETA) contract for contractor support; which led to reduction time to get contractor support by 50%;
- Established enterprise Microsoft SQL and Oracle database servers to share resources reducing the need to procure new licenses; and

Completed virtualization of the Linux and Windows server environments reducing the need to procure hardware for most new requirements.

Business Need(s)	Current IT Capabilities	Requirements	IT Benefits and Goals
<p>To provide reliable and secure IT systems to its customers as an OPM approved Shared Service Center (SSC) provider under NFC Shared Services investment for all 12 information technology systems in NFC's inventory (3 General Support Systems and 9 Major Applications).</p>	<p>NFC's system design for its shared services offering is scalable, flexible, and facilitates data extraction - it provides the capability for users to extract data in multiple formats and for a range of uses, including as internal and external needs change and potential uses not accounted for in the original design.</p>	<p>NFC follows the OPM requirements for EA, as well as OMB's guidance.</p> <p>The National Finance Center Shared Services investment must also conform to the statutes, regulations, directives, circulars, and policies, including but not limited to:</p> <ul style="list-style-type: none"> <li>• Security National Institute of Standards and Technology (NIST) Special Publication 800-53;</li> <li>• Federal Information Security Management Act (FISMA);</li> <li>• OMB Circular A-130; Privacy Act, Government Information Security Reform Act;</li> <li>• OMB Circular A-11 relating to digital government strategy;</li> <li>• Government Performance and Results Modernization</li> </ul>	<p>The NFC serves the USDA and other Federal organizations by providing reliable, cost effective, employee-centric systems and services thus allowing customers to focus on achieving their mission.</p> <p>The National Finance Center Shared Services investment gives NFC the ability to offer reliable, cost effective, and secure services to its customers.</p>

		Act of 2010; and • USA Title 40.	
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## Office of the Chief Information Officer (OCIO)

The USDA Office of the Chief Information Officer (OCIO) develops, delivers, and defends the business information technologies that empower every aspect of the USDA mission. OCIO supports the USDA’s mission areas by ensuring the Department’s information technology (IT) is aligned to its goals, objectives, and business needs, and by providing state-of-the-art, secure, reliable, cost-effective solutions for the Department and its stakeholders. To this end, the OCIO has primary responsibility to supervise and coordinate within USDA the design, acquisition, maintenance, use and disposal of Information Technology (IT) by USDA agencies, as well as monitoring the performance of USDA’s IT programs and activities.

The OCIO oversees seven (7) of the USDA’s 24 major IT investments. Figure 7 provides a detailed breakdown of spending on major IT investments by the OCIO.

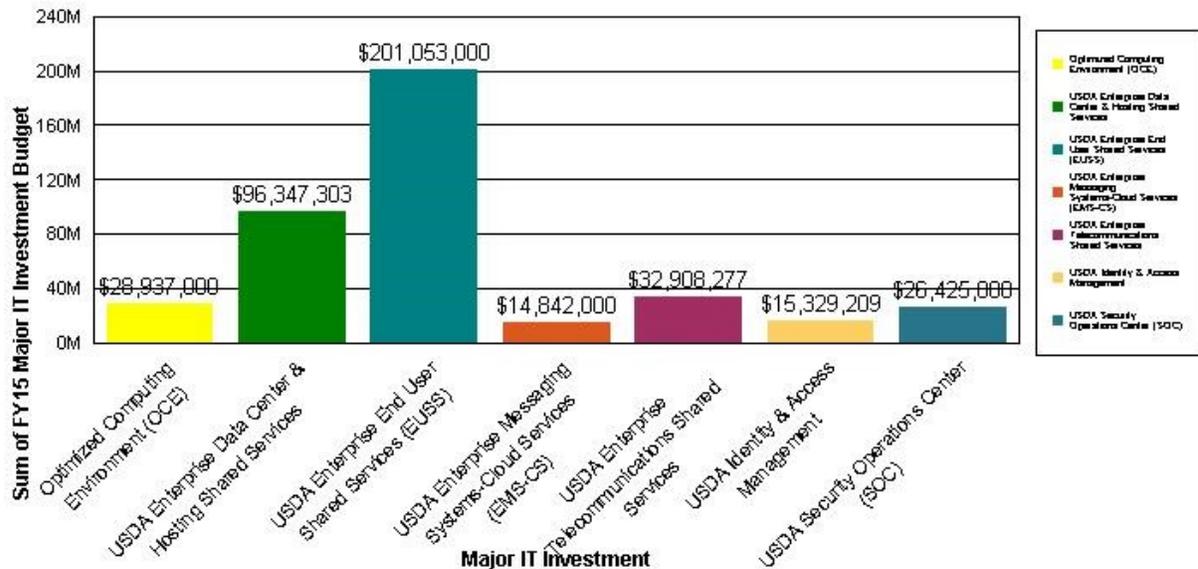


Figure 7: FY15 OCIO Major IT Investment Budget

Major IT Investment Name	PRM Strategic Goal	FY15 Budget
USDA Enterprise Messaging Systems-Cloud Services (EMS-CS)	P00.000.411	\$14,842,000

USDA Enterprise Data Center & Hosting Shared Services	P00.000.411	\$96,347,303
USDA Enterprise Telecommunications Shared Services	P00.000.411	\$32,908,277
USDA Enterprise End User Shared Services (EUSS)	P00.000.411	\$201,053,000
USDA Identity and Access Management	P00.000.411	\$15,329,209
Optimized Computing Environment (OCE)	P00.000.411	\$28,937,000
USDA Security Operations Center (SOC)	P00.000.411	\$26,425,000
<b>OCIO FY15 Major IT Investment Budget Summary:</b>		<b>\$415,841,789</b>

The Current Architectures for OCIO's major IT investments are provided in the following sub-sections.

## USDA Identity & Access Management (IAM)

Business Need(s)	Current IT Capabilities	Requirements	IT Benefits and Goals
To ensure physical and logical access to its infrastructure.	<p>IAM is an enterprise-wide collection of access components, providing storage and a means for controlled distribution of identification information for use by logical systems (login access to controlled USDA websites), personal computer hardware (access to desktops and laptops with card readers), and buildings and facilities (physical access via access control systems to controlled-entry facilities).</p> <p>IAM controls physical access to over 209 Federal buildings and offices, and controls logical access to over 450 USDA agency web applications.</p> <p>IAM includes the necessary support processes for issuance of Homeland Security Presidential Directive-12 (HSPD-12) compliant identification to USDA federal employees, associate employees and contractors.</p>	<p>The IAM investment is funded with the following requirements:</p> <ul style="list-style-type: none"> <li>Migrate 458 USDA agency applications from the legacy eAuthentication environments to the modernized eAuthentication service within the NITC EDC .</li> <li>Supplement inter-agency Credential Exchange functionality with the collection, maintenance, and exchange of digital identity data and enable secure attribute sharing with Federation partners including Health and Human Services and the Department of Justice as customers of the National Finance Center.</li> <li>Provide APHIS and RD customers/users the ability to be identity proofed remotely</li> </ul>	<p>The ASOC Security BPA which covers services only in the Areas of engineering (FA1), incident handling (FA2) and other Services such as COMSEC, Program Management etc (FA3) was awarded 17 August 2014 with a base plus two option years. It is an agency-wide BPA and has a 25M ceiling.</p>

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	<p>The IAM program also provides a centralized system for each access type (physical and logical), while allowing the agencies to manage access locally.</p>	<p>through the use of a service.</p> <p>Accept credentials (such as PIV) issued to other federal departments as an authentication mechanism for eAuthentication.</p> <p>Migrate from the current Consolidated Help Desk provider (IBM) to a new one.</p> <p>Provide a technical solution for creating and authenticating PIV-derived credentials.</p>	
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## Optimized Computing Environment (OCE)

The Optimized Computing Environment (OCE) investment is managed by the International Technology Services (ITS) division within USDA's Office of the Chief Information Officer (OCIO).

Business Need(s)	Current IT Capabilities	Requirements	IT Benefits and Goals
<p>To modernize the current SCA technology infrastructure, and significantly improve the quality and productivity in the delivery of SCA services to customers.</p>	<p>The current ITS infrastructure environment is characterized by a very limited ability to support future SCA program delivery. This situation stems from the following three key drivers:</p> <ol style="list-style-type: none"> <li>1. Underinvestment in infrastructure;</li> <li>2. Higher operational costs; and</li> <li>3. Fewer funds available for infrastructure refresh.</li> </ol>	<p>The OCE is a multi-year program that consists of sub-projects that support the following areas.</p> <ol style="list-style-type: none"> <li>1. SCA Network Enhancements;</li> <li>2. SCA End User Infrastructure;</li> <li>3. SCA Remote Computing Capability; and</li> <li>4. SCA Enterprise Mobility Solution.</li> </ol> <p>The specific objectives of the OCE are to:</p> <ol style="list-style-type: none"> <li>1. Support the delivery of the current and future Farm Programs and other customer agency programs;</li> <li>2. Support the basic IT infrastructure needs of customer agencies (e.g., phone systems);</li> <li>3. Meet the internal and external requirements for secure and effective IT infrastructure services; and</li> <li>4. Reduce the cost of IT infrastructure services.</li> </ol> <p>These objectives address what the SCA's must deliver as well as the level of service or performance required in delivering those services.</p>	<p>The OCE investment will streamline and modernize the back-end and office infrastructure to support SCA modernization initiatives.</p> <p>It will provide Solid Core Infrastructure Accelerate Performance and Service Standardize &amp; Advance Technology Right-Size Systems to achieve the following results:</p> <ol style="list-style-type: none"> <li>1. Meet Individual Business Needs;</li> <li>2. Minimize Business Service Outages; and</li> <li>3. Realize ROI and Minimize Recurring Costs.</li> </ol> <p>The purpose of optimizing the computing environment, enhancing mobility support, and replacing the aging infrastructure is to ensure that the core infrastructure meets the demands of the SCA application modernization requirements.</p>

## USDA Security Operations Center (ASOC)

Securing our nation against cyber-attacks has become one of the nation's highest priorities. As the organization charged with the responsibility for ensuring the Department's ability to support the national food supply chain, the agriculture economy, research and development, and an active loan portfolio of more than \$120 billion, the Security Operations Center understands the importance of securing the data and systems within this complex environment.

Business Need(s)	Current IT Capabilities	Requirements	IT Benefits and Goals
<p>The Agriculture Security Operations Center (ASOC) meets the Department's need to instill a mature USDA IT Security Program. ASOC was initially created to develop an enterprise-level operating picture of USDA security. In addition, ASOC has assumed the system authorization responsibilities, and by re-constituting the role of Chief Information Security Officer, strengthens the overall management of USDA's IT Security Program.</p>	<p>Security core capabilities include:</p> <ul style="list-style-type: none"> <li>• COMSEC;</li> <li>• Incident Handling</li> <li>• Compliance;</li> <li>• Threat Monitoring;</li> <li>• Security Reporting;</li> <li>• Scanning;</li> <li>• Forensics;</li> <li>• Assessment and Authorization;</li> <li>• Information Security Awareness Training</li> <li>• Outreach;</li> <li>• Penetration Testing;</li> <li>• Operational Assessments;</li> <li>• Security System Services;</li> <li>• Information Security Specialized Training; and</li> <li>• Devolution Support.</li> </ul>	<p>Appropriated funding was provided for ASOC in 2010 to support these mission critical initiatives:</p> <ol style="list-style-type: none"> <li>1. Conduct Network Security Assessments to analyze the state of USDA's network to identify vulnerabilities;</li> <li>2. Procure and Deploy Tools for enhanced monitoring and detection; and</li> <li>3. Establish an Agriculture Security Operations Center to monitor and protect USDA's systems.</li> </ol> <p>Other ASOC core requirements are, as follow:</p> <ul style="list-style-type: none"> <li>• Perform monitoring, threat/vulnerability/risk analysis, incident response, operational status, and forensics using state of the art tools and techniques;</li> <li>• Continually monitor, assess and facilitate the remediation of critical security issues across USDA;</li> <li>• Enhancing real time awareness of emerging threat and vulnerabilities;</li> <li>• Leveraging industry leading tools to facilitate proactive, real-time tracking and</li> </ul>	<p>The Agriculture Security Operations Center is designed to make USDA business resilient to risks by proactively collaborating with USDA Chief Information Officers (CIOs) to constitute a suitable security baseline, identify mitigation tactics for resolving pain points, and strategize action plans for advancing the security services.</p> <p>The Security Sensor Array (SSA) is utilized to manage risks, issue alerts and coordinate mitigation efforts on a 24x7x365 basis.</p> <p>Threat Analysis and Threat Awareness provides a 24x7 operations and Threat Analysis Center (highly technical support from Tiers 2 through 4). The ASOC develop situational awareness capability for USDA by correlating data from ASOC network and endpoint sensors.</p> <p>The Tivoli Endpoint Manager allows ASOC the ability for creation of multiple groups for easier patch deployment and granular management of endpoints.</p> <p>Operational Assessments are conducted to provide all USDA agencies with an agency risk profile.</p> <p>ASOC has identified and filled an existing void in communicating the urgent</p>

		<p>configuration management of client computers desktops and laptops) to mitigate security vulnerabilities;</p> <ul style="list-style-type: none"> <li>• Providing enterprise-wide tools and support to meet evolving security needs;</li> <li>• Ensuring all FISMA requirements are documented as Departmental policies and procedures.</li> <li>• Monitoring dedicated security network with granular control of security infrastructure; and</li> <li>• Blocking threats and reduces risks to Agency assets and users where the Department's network is connected to the Internet.</li> </ul>	<p>and compelling needs of Security across the USDA enterprise. By development of the ASOC Software Update Notices and the ASOC Situational Awareness Reports, critical event and issue data is shared with agencies in a repeatable and dependable format, informing agencies on the appropriate and necessary actions to take to reduce risks posed by new or emerging threats, focusing agency CIO's and IT personnel on enterprise cyber security risk in a consistent manner.</p>
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## USDA Enterprise End User Shared Services (EUSS)

The Enterprise End User Shared Services (EUSS) investment is managed by the International Technology Services (ITS) division within the Office of the Chief Information Officer (OCIO).

Business Need(s)	Current IT Capabilities	Requirements	IT Benefits and Goals
<p>The USDA requires a secure, modern and usable End User Computing Infrastructure for the Service Center Agencies to communicate and process information, both within USDA, and with public it they serve.</p>	<p>The investment provides full support to approximately 40,000 end users located in approximately 3,000 offices across the United States and its territories.</p>	<p>As information and communication needs grow and evolve, the infrastructure needs to be maintained, operated, and adapted to current, secure and modern supportable technologies.</p>	<p>This investment will expand IT services across the Department and will eventually assist all 120,000 USDA employees.</p> <p>This investment provides the following technical support: hardware and software support for workstations and end user devices; server administration; network management; equipment inventory and tracking; telephony, and other forms of communications; and security.</p> <p>USDA employees will benefit from having better</p>

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			access to information, improved collaboration and information sharing. Services fees are spread equitably back to customers.
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## USDA Enterprise Data Center & Hosting Shared Services

The USDA Enterprise Data Center & Hosting Shared Services is one of USDA’s new Major IT Investments.

Business Need(s)	Current IT Capabilities	Requirements	IT Benefits and Goals
<p>Enterprise hosting and data center operations, such as the need to provide private cloud solutions for mainframe, mid-tier and legacy mid-tier web hosting environments.</p>	<p>The USDA Office of the Chief Information Officer’s National Information Technology Center (OCIO-NITC) offers world-class data center hosting services to accommodate the business goals and technology requirements from federal, state and local government customers.</p> <p>The NITC provides secure, reliable, scalable, shared and cost effective IT hosting solutions.</p> <p>The hosting environment meets or exceeds the federal security requirements for FISMA high, moderate and low impact systems.</p> <p>The Enterprise Data Center currently offers a full range of services including: cloud, managed and collocated hosting services; professional services; and, specialty security services. Cloud services, both private and public, include standardized Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS) offerings to achieve programmatic and technical innovation for clients.</p> <p>Public cloud solutions from private sector vendors are available.</p>	<p>Support the Federal Data Center Consolidation Initiative.</p> <p>Adhere to the NIST Definition of Cloud Computing (NIST Special Publication 800-145) NIST Cloud Computing Reference Architecture (NIST Special Publication 500-292), NIST Cloud Computing Security Reference Architecture (NIST Special Publication 500-299 draft), Guide to Applying a Risk Management Framework to Federal Information Systems (NIST Special Publication 800-37, Rev 1), Security and Privacy Controls for Federal Information Systems and Organizations (NIST Special Publication 800-53), and Secretary Memorandum Numbers 1509 &amp; 1776.</p> <p>Maintain the high service quality levels provided to customers (i.e., USDA and other Federal) for mainframe services, and mid-tier private cloud hosting services;</p> <p>Support USDA Service Center Agencies in their application migration from the legacy web farm hosting platform;</p> <p>Consolidate networks;</p> <p>Consolidate security administration; and</p> <p>Expand the customer base by providing cost effective hosting services through a state-of-the-art, multi-tenant, sustainable Federal data center.</p>	<p>As a FedRAMP compliant CSP (Agency ATO), the EDC investment has targeted the following goals:</p> <ul style="list-style-type: none"> <li>• Accelerate the adoption of secure cloud solutions through reuse of assessments and authorizations;</li> <li>• Increase confidence in security of cloud solutions;</li> <li>• Achieve consistent security authorizations using a baseline set of agreed upon security standards;</li> <li>• Ensure consistent application of existing federal security practices; and,</li> <li>• Increase confidence in security assessments for customers.</li> </ul> <p>USDA’s FDCCI IT Portfolio goals include the following targets:</p> <ul style="list-style-type: none"> <li>• Promote the use of Green IT by reducing the overall energy and real estate footprint of government data centers;</li> <li>• Reduce the cost of data center hardware, software and operations;</li> <li>• Increase the overall IT security posture for the government;</li> <li>• Shift IT investments to more efficient computing platforms and technologies; and,</li> <li>• Achieve the goals of</li> </ul>

			USDA's Green Information Technology Strategic Plan published January 12, 2009.
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## USDA Enterprise Messaging System-Cloud Services (EMS-CS)

The Enterprise Messaging System – Cloud Services (EMS-CS) is managed by the International Technology Services (ITS) division within USDA's Office of the Chief Information Officer (OCIO).

Business Need(s)	Current IT Capabilities	Requirements	IT Benefits and Goals
<p>The ability to communicate via industry standard e-mail technology, both within the Department, and to other public and private entities.</p> <p>Additionally, the ability to share information, collaborate, store and exchange electronic correspondence, and transfer files.</p>	<p>Current Business needs are being met via a cloud delivered service that encompasses a dedicated (isolated) instance of Microsoft Office 365. The software as a service deployment includes Exchange Online for messaging and calendaring, SharePoint Online for document collaboration, Office Communicator Online/Lync for instant messaging, presence, including voice and presentation sharing and Office Live Meeting for web conferencing. USDA employees have benefited from having better access to information, a consolidated Department wide directory, improved collaboration and information sharing. Key Stakeholders are the CIO office and International Technology Service (ITS).</p>	<p>Requirements are being met by the current capabilities. USDA has the ongoing requirement to continue to operate, sustain, and evolve the environment in an efficient and secure manner. As additional capabilities are included in vendor included version upgrades of the cloud solution, USDA will continue to leverage the enhanced functional and security features.</p>	<p>EMS-CS consolidated 120,000 users spread across 21 email systems to one cloud offering by Microsoft Online Services. This streamline resulted in reduced costs and improved efficiencies that build on existing infrastructure and allow USDA to extend its on-premise software investments agreements to the cloud solution.</p> <p>In addition, the consolidation resulted in reduced costs, improved efficiencies and streamlined services, built on existing infrastructure. This allowed USDA to extend its on-premise software investments to the cloud solution. USDA employees benefit from having better access to information, improved collaboration and information sharing.</p>

## USDA Enterprise Telecommunications Shared Services

The Universal Telecommunications Network (UTN) was initially deployed in 2001 to provide USDA with a Trusted Internet Connection (TIC) capability. In FY07 through FY09 OCIO developed to acquire the Next Generation (NG) of Wide Area Network

(WAN) referred to as the “Unified Telecommunications Network – Next Generation (UTN-NG),” which commenced the transformation and enhancement of both WAN and TIC services under GSA’s Networx Universal Contracts. In FY13, USDA reclassified the UTN-NG as a “major IT Investment” and renamed it USDA Enterprise Shared Services as a part of the commodity IT consolidation strategy. This investment is considered USDA’s Wide Area Network (WAN) solution, and all departmental and agency Local Area Networks (LAN) are configured to pass traffic through the WAN’s Trusted Internet Connections (TIC).

Business Need(s)	Current IT Capabilities	Requirements	IT Benefits and Goals
<p>Provide a trusted internet connection capability.</p>	<p>The Universal Telecommunications Network (UTN) Next Generation (NG) provides shared network services, used by all of USDA including U.S. Public, providing Trusted Internet Connection (TIC) and Security Operations Capability.</p> <p>The Unified Telecommunications Network (UTN) a managed services solution, is the USDA enterprise-wide backbone to the Internet and data centers for all USDA agencies and provides the contract mechanism for USDA agencies to procure network services such as access circuits, virtual private networks, network monitoring, etc.</p> <p>UTN-NG is the backbone that enables such critical public-facing USDA systems as the Farm Loan Program, Public Education Materials (e.g., Food Pyramid, Food Safety), School Lunch Program, Food Stamp Program, and Forest Service Incident Response Dispatch Service (ROSS), etc. USDA envisions increased use of and reliance upon UTN-NG well into the future.</p> <p>UTN-NG is consistent with the Departments enterprise architecture goal of replacing multiple, redundant systems and technology components</p>	<ul style="list-style-type: none"> <li>• Adhere to legislative mandate M-05-22;</li> <li>• Plan USDA transition to Internet Protocol version 6 (IPv6);</li> <li>• Support the Telecommunications Network Stabilization and Migration Procedure (TNSMP);</li> <li>• Support Departmental and Unplanned Waiver Process;</li> <li>• Maintain the Forecast Inventory Resources database;</li> <li>• Manage operations of telecommunications services;</li> <li>• Manage the Department’s Enterprise Backbone Network and Internet Access;</li> <li>• Manage of Domain Name Services, IP addressing and other shared Departmental network/data services;</li> <li>• Provide engineering and project assistance to USDA agencies and staff offices;</li> <li>• Provide network modeling, analyses and optimization;</li> <li>• Provide network design and development assistance to USDA agencies and staff</li> </ul>	<p>This investment supports the following Homeland Security mission area: Protection of critical infrastructure and key assets.</p> <p>UTN has enabled USDA’s migration from stove piped network solutions toward an enterprise approach that maximizes the collective buying power to realize best value in telecommunications services.</p> <p>Since deployment, this investment has achieved great success, consistently exceeding initial performance expectations in terms of availability, reliability, network security, bandwidth, and in documented customer satisfaction. The UTN architecture has proven sufficiently flexible to readily absorb new mandates from USDA or OMB, such as new IT security requirements, Trusted Internet Connection (TIC) and IPv6.</p> <p>This investment provides the next generation of enterprise-wide services such as email, enterprise messaging, data center consolidation, and secure video conferencing, and common VPN usage.</p>

	with coordinated, enterprise-wide approaches and is documented in the USDA Enterprise Architecture Transition Strategy.	offices; <ul style="list-style-type: none"> <li>• Implement, manage and maintain USDA Telecommunications Programs through its department-wide telecommunications and network security services and operations;</li> <li>• Develop and coordinate technology programs of the Federal Government and related activities and organizations;</li> <li>• Provide guidance and facilitate governance for efficient and cost-effective use and management of USDA telecommunications resources; and</li> <li>• Lead the Department's effort to improve telecommunications services and reduce costs by evaluating and improving USDA telecommunication processes.</li> </ul>	
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## Office of Procurement and Property Management (OPPM)

The USDA Office of Procurement and Property Management (OPPM) serves the Secretary and USDA agencies with policy, advice and coordination in acquisitions, procurement and management of real and personal property. In addition, it provides oversight and policy in transportation, supply, motor vehicles, aircraft, recycling, and energy conservation.

The USDA OPPM oversees one (1) of USDA's 24 major IT investments.

<b>Major IT Investment Name</b>	<b>PRM Strategic Goal</b>	<b>FY15 Budget</b>
Integrated Acquisition System (IAS) (OPPM)	P00.000.411	\$14,114,000
<b>OPPM FY15 Major IT Investment Budget Summary</b>		<b>\$14,114,000</b>

The Integrated Acquisition System (IAS) investment managed by OPPM is described in the following section.

## Integrated Acquisition System (IAS)

The IAS Program was initiated to solve several enterprise administrative business problems at USDA. The fundamental business issue was that acquisition management across USDA was performed with multiple legacy systems that supported mostly manual, paper-based processes. These acquisition processes were not standardized and reflected relatively loose financial controls

Business Need(s)	Current IT Capabilities	Requirements	IT Benefits and Goals
<p>USDA's acquisition need is to provide the following functions:</p> <ul style="list-style-type: none"> <li>• A real-time interface to USDA's core financial systems;</li> <li>• Reliable data;</li> <li>• System administration and reporting;</li> <li>• Electronic requisition processing and contract management;</li> <li>• A reduction in procurement cycle times; and</li> <li>• Extensibility and scalability to support more advanced strategic and standardized acquisition management practices across the Department</li> </ul> <p>The OPPM has SLA's with the following organizations in place to support IAS:</p> <ul style="list-style-type: none"> <li>• National Finance Center (NFC) IAS Hosting Support</li> <li>• International Technology Services (ITS) Help Desk Server Hosting SharePoint</li> <li>• Washington</li> </ul>	<p>IAS operates in a Web browser-based environment. The current technical architecture utilizes Composearch PRISM 7.1 server, an Oracle applications server, and an Oracle database server hosted at NFC in Denver, Colorado.</p> <p>To support IAS future releases, change requests, and disaster recovery, the IAS technical architecture also includes hardware and software components located at NFC's backup computing facility in St. Louis, Missouri.</p> <p>IAS interfaces to seven (7) systems:</p> <ul style="list-style-type: none"> <li>• Financial Management Modernization Initiative (FMMI);</li> <li>• Invoice Processing Platform (IPP);</li> <li>• Federal Procurement Data System-Next Generation (FPDS-NG);</li> <li>• Financial Data Warehouse (FDW) Procurement Data Mart (PDM);</li> <li>• Enterprise Content Management (ECM);</li> <li>• Forest Service (FS)</li> </ul>	<p>As an IT system management program, IAS must also comply with federal IT management requirements. To satisfy regulatory compliance, IAS implements functionality and business processes needed to remain current with all Federal acquisition management mandates. The common sources for these requirements are the following:</p> <ul style="list-style-type: none"> <li>• Federal Acquisition Regulation (FAR);</li> <li>• OMB Exhibits 300 and 53;</li> <li>• OMB Circular A-123;</li> <li>• OMB Circular A-130 (Appendix III);</li> <li>• Federal Funding Accountability and Transparency Act (FFATA) Clinger Cohen Act (CCA);</li> <li>• Federal Acquisition Reform Act (FARA);</li> <li>• Federal Acquisition Streamlining Act (FASA); and</li> <li>• United States Rehabilitation Act.</li> </ul> <p>IAS needs funding to:</p> <ul style="list-style-type: none"> <li>• Perform Daily systems</li> </ul>	<p>IAS is an enterprise-wide solution utilized by all USDA agencies to procure goods and services providing delivery support of USDA mission critical programs. IAS aids in realizing the following benefits for the Department:</p> <ul style="list-style-type: none"> <li>• Facilitates strategic sourcing initiatives to lower purchasing costs;</li> <li>• Ensures reliable and accurate Department-wide procurement-related financial information;</li> <li>• Reduces costs incurred associated with Prompt Pay interest and allows USDA to capitalize on the Treasury's Invoice Processing Platform (IPP);</li> <li>• System support for improved internal controls for procurement processes and policy;</li> <li>• Enables reporting capabilities to satisfy data calls to support executive and congressional reporting requirements; and</li> <li>• Reduces redundant data entry among multiple systems.</li> </ul>

<p>Communications and Technology Service (WCTS) PSD Help Desk Support</p>	<p>Document Look-Up Tool; and</p> <ul style="list-style-type: none"> <li>eAuthentication (eAuth).</li> </ul> <p>IAS also interfaces with FPDS-NG, which is a congressional database established to collect historical and statistical information about the federal government's procurements. IAS feeds award information directly to FPDS-NG in order to satisfy mandated reporting requirements.</p> <p>IAS supplies procurement data for reporting purposes to the FDW PDM, as well as copies of invoices for storage in the ECM system.</p> <p>Lastly, IAS interfaces with the USDA eAuthentication platform to provide a single sign-on feature for users in compliance with USDA standards for enterprise systems.</p> <p>Ability to customize rules for acquisition approval based on agency-specific procedures.</p> <p>IAS interfaces with two internal USDA systems:</p> <p>A. Financial Management Modernization Initiative(FMMI) - Real Time integrated procurement and financial management capabilities; and,FMMI Business Intelligence (BI) - Financial Data Reporting</p> <p>B</p> <p>Ability to customize with two External USDA systems:</p> <p>A. Invoice Processing Platform (IPP):</p> <ul style="list-style-type: none"> <li>e-Invoicing and Workflow approval</li> </ul>	<p>performance monitoring, release planning and management, data fix, software testing, and code migration support;</p> <ul style="list-style-type: none"> <li>Interfaces management – daily monitoring of procurement data transactions to and from FMMI and FPDS-NG, along with the IAS/IPP interface support;</li> <li>IAS Help Desk and Website Maintenance – operations and management of user call center and website;</li> <li>Security Compliance – annual OMB, NIST, FISMA and A123 testing requirements; system scanning and monitoring and Certification and Accreditation (C&amp;A); and</li> <li>Capital and Strategic Planning – Exhibit 300, AAR, OMB reporting requirements and Agency reporting requirements support.</li> </ul>	<p>With FMMI, IAS checks for funds availability, commits and obligates funds real-time, and allows users to authorize vendor payment. FMMI is the replacement for the Foundation Financial Information System (FFIS), which was the previous financial system in which IAS interfaced. FMMI is a more modernized, user-friendly and web-enabled tool with robust reporting and viewing capabilities.</p> <ol style="list-style-type: none"> <li>IAS enables streamlined acquisition processes through complete spend chain capabilities.</li> <li>Designed to meet OMB and USDA strategic goals to improve procurement efficiency and effectiveness.</li> <li>Help Desk tier 1-3 support fully established.</li> <li>Available 24/7 except for planned maintenance.</li> <li>Meets or exceeds quarterly reliability of metrics.</li> </ol> <p>Goals: Make enhancements to the IAS system to provide the users with added benefits and find cost savings in the current state.</p>
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	<ul style="list-style-type: none"> <li>• Meets OMB's e-Invoicing initiative</li> <li>• Interface with IPP had reduced USDA's interest payments by almost 50% within the first year.</li> <li>• Vendors submit invoices electronically with receipt and online access to status.</li> </ul> <p>B. Federal Procurement Data Systems-Next Generation (FPDS-NG), which satisfies the government's reporting requirements.</p>		
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## Farm and Foreign Agricultural Services

Farm and Foreign Agricultural Services helps to protect America's farmers and ranchers in business as they face the uncertainties of weather and markets. The FFAS mission area delivers commodity, credit, conservation, disaster, and emergency assistance programs that help improve the stability and strength of the agricultural economy.

- The FFAS mission area contributes to multiple USDA Strategic Goals. Specifically, to assist rural communities, the FFAS mission area: (1) supports a strong financial safety net including providing access to credit for farmers and ranchers who are temporarily unable to obtain commercial credit such as beginning farmers and socially disadvantaged farmers and ranchers; and (2) promotes the vitality of rural America by improving access to international markets, providing credit guarantees for U.S. farm exports, and supports industry efforts to develop new markets. In support of ensuring private working lands are preserved, the FFAS area: (1) protects watershed health to ensure clean and abundant water; and (2) enhances soil quality to maintain productive working cropland. Finally, in support of agricultural production, FFAS promotes the international acceptance of new technologies, and promotes sustainable, productive agricultural systems and trade in developing countries to enhance global food security. The work of the FFAS mission area is carried out by its three agencies:
  - Farm Service Agency
  - Risk Management Agency

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- Foreign Agricultural Service

**Farm Service Agency (FSA):** The Farm Service Agency (FSA) ensures the well-being of American agriculture, the environment, and the American public through the administration of farm commodity programs; farm ownership, operating, and emergency loans; conservation and environmental programs; emergency and disaster assistance; and domestic and international food assistance. FSA programs are delivered through an extensive network of field offices in 2,124 USDA County Service Centers and 51 State Offices. FSA oversees two (2) of USDA's 24 major investments, including the Farm Program Modernization (MIDAS) #097, one (1) of the Department's eleven (11) high-priority modernization initiatives.

Following FY2015 OMB guidance, FSA launched a systematic review and realignment of its strategic and operational plans and processes. A new FSA Business Strategy and a new FSA Information Technology Strategy were published in late 2014. Joint business and IT roadmapping sessions followed. The FSA leadership team then jointly reviewed, prioritized and selected strategic FY2015 IT projects. A full update of all Farm Programs related investments is in progress to ensure that these reflect the new insights and priorities. At least three (3) additional IT investments will be raised to major status beginning in FY2016, as one outcome of this review.

This effort covers the seven (7) current FSA Farm Programs direct mission delivery IT investments:

1. Cotton Management System (#9)
2. Subsidy and Payment Systems (#30)
3. Farm Programs Modernization (MIDAS) (#97)
4. Price Support Systems (#101)
5. Consolidated Natural Disaster Relief Programs (#102)
6. Conservation Systems (#105)
7. Common Farm Programs Systems (#111)

It also addresses the five (5) current FSA IT shared service investments that provide support for Farm Programs, as well as other, systems:

1. Information systems Security Program (#26)
2. FSA Architecture, SDLC and Common IT Solutions (#109)

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3. FSA Data and Database Administration (#110)
  4. Infrastructure Operations and Services Provided by FSA (#115)
  5. Enterprise Data Center & Hosting Shared Services (#120)

In addition, FSA will deliver a required Plan for Expenditure to Congress and GAO by the end of April. A second report will be delivered by the end of September based primarily on revised business cases for the twelve (12) investments listed. The content required for this second report closely follows key fields in OMB CPIC exhibits. Hence, business cases will be reviewed, strengthened and aligned as discussed over the next several months. These revised business cases will not be ready in time to contribute to the USDA 2015 Enterprise Roadmap, as this is due to OMB on May 31, 2015.

FSA is creating a corrective action plan to address identified weaknesses in its current capital planning and expects to share the plan at the May 20, 2015 portfolio review.

**Foreign Agricultural Service (FAS):** The Foreign Agricultural Service (FAS) works to improve foreign market access for U.S. products and administers market development and export financing programs. FAS helps U.S. exporters develop and maintain markets overseas for U.S. food and agricultural products. FAS helps developing countries improve their agricultural systems and build their trade capacity.

**Risk Management Agency (RMA):** The Risk Management Agency (RMA) administers the Federal Crop Insurance Corporation (FCIC) programs and promotes national welfare by improving the economic stability of agriculture through a secure system of crop insurance and risk management tools. Through a network of public and private sector partners, RMA creates crop insurance and risk management products; provides risk management education and outreach; and ensures program accessibility and integrity. RMA manages *RMA-13 Emerging Information Technology Architecture (EITA)*, which is a major investment and one of the Department's eleven (11) high-priority modernization initiatives.

Overall, the Farm and Foreign Agricultural Services administer four (4) of USDA's 24 major IT investments, including one (1) of its high-priority initiatives. Figure 6 provides a detailed breakdown of the FFAS mission area's major IT investment spending.

## Farm and Foreign Agricultural Services Sum of FY15 Major IT Investment Budget



Figure 8: Farm and Foreign Agricultural Services FY15 Major IT Investment Spending

<u>USDA Organization</u>	<u>Major IT Investment Name</u>	<u>PRM Strategic Goal</u>	<u>FY15 Budget</u>
FSA	Consolidated Farm Loan Program Information and Delivery Systems #1	P00.000.411	\$15,427,000
FSA	Farm Program Modernization (MIDAS) #097	P00.000.411	\$65,000,000
<b>FSA FY15 Major IT Investment Sum</b>			<b>\$80,427,000</b>
RMA	RMA-13 Emerging Information Technology Architecture (EITA)	P00.000.411	\$14,318,000
<b>RMA FY15 Major IT Investment Sum</b>			<b>\$14,318,000</b>
<b>Farm and Foreign Agricultural Services Total Major IT Investment Spending: \$94,745,000</b>			

## Consolidated Farm Loan Program Information & Delivery Systems #103

Farm loan programs serve as an important safety net for America’s farmers by providing a source of credit when they are temporarily unable to obtain credit from commercial sources. In order to meet the growing demand for farm credit, funding for farm loans hit a record of \$6 billion in 2010. FSA anticipates continued strong demand for its farm loan programs in 2015 as a result of relatively high production costs and increased operating capital needs.

The Consolidated Farm Loan Program & Delivery Systems investment (CFLPIDS) directly supports FSA's Farm Loan Program (FLP) and its goal of assisting American farmers and ranchers by providing them with ownership, operating and emergency loans.

Specifically, the FLP acts as a lender of last resort to new and socially disadvantaged farmers and ranchers who are unable to obtain credit through commercial lenders, helping them to establish or stabilize their operations in the face of financial hardship and/or natural disasters.

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
<p>To provide a functionality to create loan requests for operating, ownership and emergency loans; obligate and disburse funds to customers; close loans; and provide system support for all loan and farm servicing.</p>	<p>The current CFLPIDS architecture consists of two farm loan programs systems: the Direct Loan System (DLS) and the Program Loan Accounting System (PLAS).</p> <p>The DLS system is a SQL server-based web application that replaced several distributed FLP systems, including most of the online functionality of PLAS - a Cobol application, residing on an IDMS mainframe, which provides backend transaction processing and general ledger functionality.</p> <p>CFLPIDS loan making and servicing functions are originated in the DLS system and files are moved to the PLAS mainframe every evening for final processing.</p> <p>CFLPIDS currently uses the Service Center Information Management System</p>	<p>The scope of the CFLPIDS project is to replace existing program functionality. The accounting portion of this investment will utilize FMMI or other Departmentally sanctioned accounting functions.</p>	<p>The CFLPIDS investment has been specifically designed to achieve the following key benefits:</p> <ol style="list-style-type: none"> <li>1. Enable an integrated, timely view of the programs risk profile by creating a centralized data repository;</li> <li>2. Streamline and modernize business processes that eliminate redundant data entry;</li> <li>3. Provide faster delivery and obligation of loans to eligible farmers and ranchers;</li> <li>4. Automate routine tasks that currently require substantial manual effort;</li> <li>5. Redeploy some USDA Service Center staff to higher value added activities;</li> </ol>

	<p>(SCIMS) to register Borrowers and keep track of personal information and the COTS Program Funds Control System (PFCS) for Allotment funds control.</p> <p>CFLPIDS is currently in the process of analyzing the best fit and interface points for the Departmental Systems; Financial Management Modernization Initiative (FMMI) and Modernize and Innovate the Delivery of Agricultural Systems (MIDAS).</p>		<p>6. Significantly reduce scheduled and unscheduled system outages and associated productivity losses;</p> <p>7. Return regular work schedules for USDA Service Center staff due to improved system availability;</p> <p>8. Enhance accurate, comprehensive, reliable and available data for reporting, research and inquiry; and</p> <p>9. Reduce loan delinquency through improved system capability to ensure that official lending procedures are followed for each loan application.</p>
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## Modernize and Innovate the Delivery of Agricultural Systems

Modernize and Innovate the Delivery of Agricultural Systems (MIDAS) is the Farm Service Agency's (FSA) investment to improve the delivery of FSA programs through the re-engineering of FSA business processes and the adoption of enhanced and modernized information technology.

MIDAS is a critical part of FSA's IT modernization efforts that supports farm program delivery with streamlined business processes and integrated applications that share information and resources efficiently. MIDAS achieved an initial operating capability in April 2013 that modernized the storage and retrieval structure of current farm records and integrated this information with land use data, land imagery data and producer information. The system will permit FSA employees to access and better validate program eligibility data and financial services data from a single source and improve customer account management.

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
To improve business processes and streamline the information technology capabilities necessary to continue delivery of farm program benefits and services.	<p>MIDAS is a new system that in part uses existing FSA systems and data. It does not share data or technology with other systems outside of FSA.</p> <p>The National Finance Center (NFC) has implemented</p>	<p>MIDAS is intended to align with the Office of the Chief Financial Officer's (OCFO) Financial Management Modernization Initiative (FMMI) investment via the following mechanisms:</p> <p>1. Improve compliance</p>	<p>MIDAS will provide capabilities to meet the increasing demand for customer self-service, and will eliminate FSA's reliance on aging technology.</p> <p>The MIDAS project will re-engineer business</p>

	<p>cloud technology for the MIDAS development and production systems. All new Enterprise Resource Planning functionality is targeted to be cloud based.</p> <p>MIDAS is designed to leverage the USDA and FSA infrastructure improvements being implemented under the OCE initiative.</p>	<p>with modern internal control structures;</p> <ol style="list-style-type: none"> <li>2. Implement improved IT security functions; and</li> <li>3. Provide self-service functionality to farmers, ranchers, and producers.</li> </ol>	<p>processes to be common and centralize data assets to support all farm programs, eliminate program specific duplication of functionality and non-integrated distributed data that exists between farm program software applications.</p> <p>The MIDAS project's success will be measured by metrics associated with enhanced business process efficiencies, improved services to customers, achievements in compliance (reduction in erroneous payment percentages), and decreases in redundancies within farm program delivery and services.</p>
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## RMA-13 Emerging Information Technology Architecture

The Agricultural Risk Protection Act of 2000 (ARPA) identified new program directions for RMA, and expanded its authority to serve 1 million livestock ranchers. The RMA-13 investment supports RMA's strategic plan and uses e-commerce technology to integrate the organization and its insurance delivery partners into a single electronic community.

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
<p>To replace mission-critical legacy financial and business systems currently at or past end-of-life, and unable to meet the demands of the current Risk Management program.</p>	<p>RMA-13 supports the development of RMA systems, which are used by general public, AIPs (Approved Insurance Providers) and internal RMA users. Some of the applications developed for the general public are Price Discovery and Cost Estimator, which are tools used to calculate the crop insurance premium.</p> <p>Approved Insurance providers use RMA systems extensively to get data about crop insurance.</p> <p>Infrastructure support includes on-premises data-driven solutions on physical and virtualized HP servers utilizing .NET and SQL.</p>	<p>Investment 13 is following a transition strategy to achieve the following requirements:</p> <ul style="list-style-type: none"> <li>• Improve services to business partners and citizens;</li> <li>• Respond to legislative changes and mandates;</li> <li>• Respond to increased demand for services amid reduced budgetary resources;</li> <li>• Fulfill information security requirements;</li> <li>• Collaborate with relevant cross-agency initiatives; and</li> <li>• Reduce fraud and abuse.</li> </ul>	<p>The RMA-13 investment addresses several capability gaps with existing legacy systems:</p> <ul style="list-style-type: none"> <li>• Cost of maintenance;</li> <li>• Difficulty of maintenance;</li> <li>• Number of developer tools in use; and</li> <li>• Lack of sufficient ability to implement new risk products within stringent timeframes.</li> </ul> <p>This investment will also automate functions now performed manually:</p> <ul style="list-style-type: none"> <li>• Manual underwriting;</li> <li>• Post-SRA changes to accounting reports; and,</li> </ul>

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			<ul style="list-style-type: none"> <li>• Poor/cumbersome end-user reporting tools.</li> </ul>
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## Food, Nutrition and Consumer Services

The Food, Nutrition and Consumer Services mission area works to harness the Nation's agricultural abundance to end hunger and improve health in the United States. Its agencies administer federal domestic nutrition assistance programs and the Center for Nutrition Policy and Promotion, which links scientific research to the nutrition needs of consumers through science-based dietary guidance, nutrition policy coordination, and nutrition education.

The Food, Nutrition and Consumer Services Mission Area is made up of the following two (2) agencies:

- Center for Nutrition Policy and Promotion (CNPP)
- Food and Nutrition Service (FNS)

The programs and funding of Food, Nutrition, and Consumer Services support the USDA Strategic Goal to ensure that all of America's children have access to safe, nutritious, and balanced meals.

**The Center for Nutrition Policy and Promotion (CNPP):** The mission of CNPP is to improve the health of Americans by developing and promoting dietary guidance that links the best evidence-based, scientific research to the nutrition needs of Americans. The Center for Nutrition Policy and Promotion (CNPP) establishes Federal nutrition policy through the Dietary Guidelines for Americans, sets priorities for nutrition research, sets nutrition standards, and disseminates dietary guidance. It maintains the MyPlate food guidance system.

**Food and Nutrition Service (FNS):** The Food and Nutrition Service (FNS) administers the USDA nutrition assistance programs that provide children and low-income people access to food, a healthful diet, and nutrition education. Programs include the Supplemental Nutrition Assistance Program (SNAP, formerly called the Food Stamp Program), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), School Lunch and Breakfast, among others. In addition, FNS oversees the *FNCS IT Infrastructure*, the only one of USDA's 24 major investments within the FNCS mission area. Figure 9 provides a detailed breakdown of the FNCS mission area's major IT investment spending.

FNS contributes significantly to two objectives under this strategic goal: (1) improving access to nutritious food; and (2) promoting healthy diet and physical activity behaviors.

FNS administers USDA’s domestic nutrition assistance programs. Working in partnership with State agencies and other cooperating organizations, FNS helps to ensure children and other low-income Americans have access to sufficient food, a healthful diet, and nutrition education. FNS is committed to increasing the performance, efficiency, and integrity of USDA programs. Figure 9 provides a summary of the FNCS mission area’s major IT investment spending.

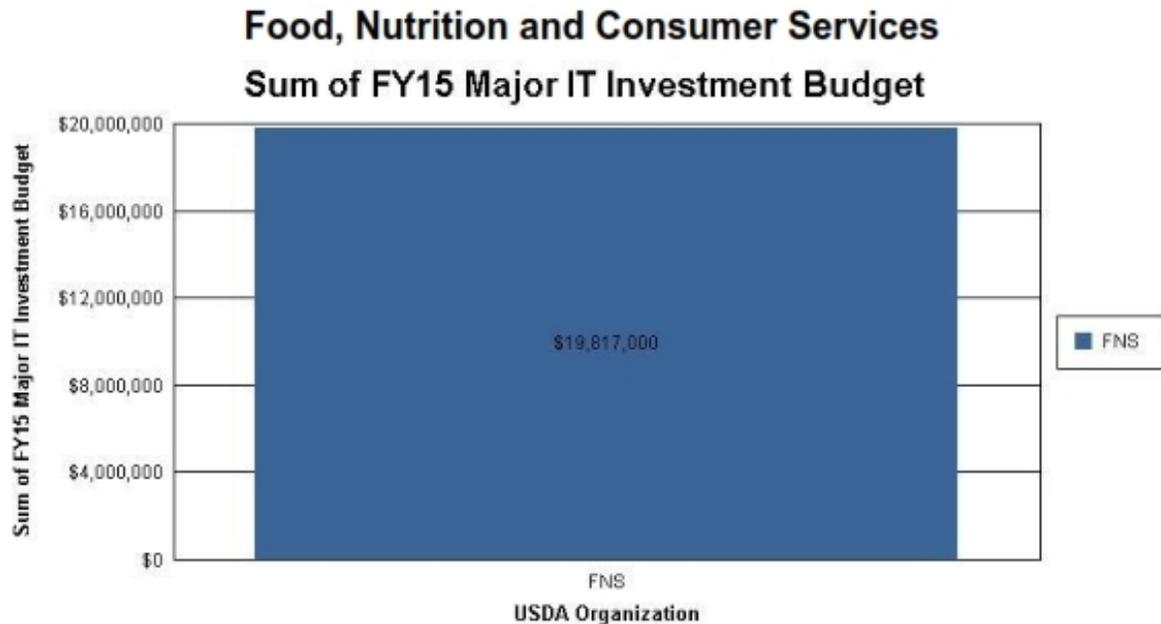


Figure 9: FNCS FY15 Major IT Investment Summary

<u>USDA Organization</u>	<u>Major IT Investment Name</u>	<u>PRM Strategic Goal</u>	<u>FY14 Budget</u>
FNS	FNCS IT Infrastructure	P00.000.414	\$19,817,225.00
<b>FNS FY15 Major IT Investment Sum</b>			<b>\$19,817.225.00</b>
<b>Food, Nutrition and Consumer Services FY15 Major IT Investment Budget Summary:</b>			
<b>\$19,817.225.00</b>			

## FNCS IT Infrastructure

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
<p>To ensure employees have access to up-to-date IT infrastructure, tools, and applications that enable them to more effectively and productively accomplish their work in support of the FNCS mission.</p>	<p>The FNCS IT Infrastructure investment enables FNS to maintain daily O&amp;M of the FNS public websites, intranet, extranet, Drupal and web-based applications.</p> <p>The FNCS IT Infrastructure is in steady state, and utilizes the USDA-wide Email Consolidation initiative.</p> <p>The FNCS IT Infrastructure is integrated with eAuth and utilizes the USDA NITC Enterprise Data Center (EDC) for the hosting of Intranet and Internet Websites for FNS.</p>	<p>The FNCS IT Infrastructure investment includes the following requirements:</p> <ul style="list-style-type: none"> <li>• Provide FNS with HW, systems SW and Web infrastructure;</li> <li>• Provide IT security and related physical security infrastructures;</li> <li>• Provide support contracts, IT salaries and benefits;</li> <li>• Follow internal e-Gov activities and other IT procedures not specific to an individual initiative.</li> </ul>	<p>The FNCS IT Infrastructure (e.g. tools and applications) is crucial to FNS's IT operations, and their continued support is essential to maintaining FNS's operational continuity and stability.</p>

## Food Safety

The Food Safety mission area is the public health mission area of USDA; responsible for ensuring that the Nation's commercial supply of meat, poultry and processed egg products are safe, wholesome, and properly labeled and packaged. This includes products produced domestically in federally inspected establishments, as well as products imported from foreign countries. The Food Safety mission area support the USDA Strategic Goal to ensure that all of America's children have access to safe, nutritious, and balanced meals.

The Food Safety mission area consists of one agency, the Food Safety and Inspection Service (FSIS). FSIS provides federal inspection of meat, poultry and processed egg products facilities/plants; support for State inspection programs; support development and implementation of the Public Health Information System to enhance science-based, data-driven inspections; support determination of international equivalence of foreign systems; and inspection of imported meat, poultry and egg products.

Food Safety ensures that the Nation's commercial supplies of meat, poultry, and egg products are safe, wholesome, and properly labeled, and packaged. This mission area also plays a key role in the President's Council on Food Safety and has been instrumental in coordinating a national food safety strategic plan among various partner

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agencies including the Department of Health and Human Services and the Environmental Protection Agency.

Foodborne illness is recognized as a significant public health problem in the United States. About 48 million people (one in six Americans) get sick, 128,000 are hospitalized, and 3,000 die each year from foodborne diseases, according to the latest (2011) estimates from the Centers for Disease Control and Prevention. USDA and other Federal agencies are working in cooperation to ensure that the food Americans eat is safe and healthy.

**Food Safety Inspection Service (FSIS):** FSIS coordinates the development of its policies with other USDA agencies and other Federal agencies, including the Food and Drug Administration, the Environmental Protection Agency, the Centers for Disease Control and Prevention, as well as foreign governments and international organizations, to ensure an integrated farm-to-table approach to food safety.

To accomplish its functions, FSIS employees are located at over 6,400 slaughtering and processing establishments and import houses, and other Federally- regulated facilities. Headquarters personnel are responsible for overseeing administration of the program and ensuring that scientific and technological developments are incorporated into inspection procedures.

The Food Safety and Inspection Service (FSIS) is responsible for overseeing and carrying out USDA's Food Safety mission, which includes the management of two (2) of USDA's 24 major IT investments including one high priority modernization initiatives – the Public Health Information System (PHIS). Figure 8 below provides a summary of major IT investment spending for the Food Safety mission area.

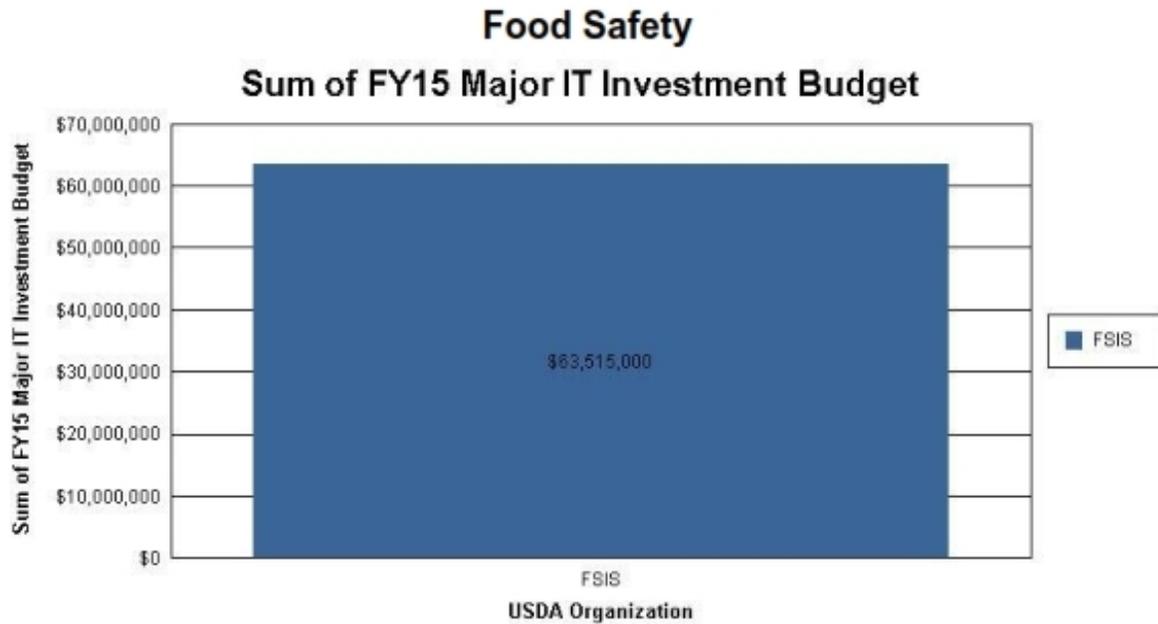


Figure 10: FSIS FY15 Major IT Investment Summary

<u>USDA Organization</u>	<u>Major IT Investment Name</u>	<u>PRM Strategic Goal</u>	<u>FY15 Budget</u>
FSIS	Public Health Data Communications Infrastructure System (PHDCIS)	P00.000.414	\$55,542,000
FSIS	FSIS Public Health Information System (PHIS)	P00.000.414	\$7,973,000
<b>FSIS FY15 Major IT Investment Sum</b>			<b>\$63,515,000</b>
<b>Food Safety Mission Area Total Major IT Investment Spending: \$63,515,000</b>			

## FSIS Public Health Information System (PHIS)

The FSIS's public health-based approach, supported by PHIS, is in line with the core food safety principles of the President's Food Safety Working Group and guides the development of a modern, coordinated food safety system that prevents harm to consumers.

PHIS enables FSIS to utilize data to perform effective analyses in support of food safety inspections and enforcements, and assists the Agency to identify and quickly stop outbreaks of foodborne illness. To this end, PHIS has empowered FSIS with tools to

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stay ahead of food safety threats by more rapidly and accurately identifying emerging trends, patterns and anomalies in data.

PHIS is an application modernization project that employs Service Oriented Architecture (SOA) principles. It consolidates food inspection data and leverages business intelligence tools for efficient decision-making, and it integrates business functionalities from legacy applications.

- **Technology Modernization, PHIS SOA Modernization & Application Consolidation:** The development of PHIS has afforded FSIS the opportunity to consolidate/integrate many application development functions into a single clearinghouse for software reuse and cross agency collaboration efforts. Through the use of a Service Oriented Architecture (SOA), FSIS has enabled methodologies where applications reuse existing code to perform common functions instead of re-engineering code to perform the same function. An example of this is FSIS's Authentication/Authorization services, which allow developers to reuse code for login purposes. This reduces maintenance and code development time.
- **Application Consolidation:** PHIS integrates into a single system Performance Based Inspection System (PBIS) for domestic inspection and the Automated Inspection Information System (AIIS) for import re-inspection, as well as export certification and predictive analytics (PA) components. The resulting functionality of this integration allows for easier cross-functional needs, such as reporting and developing common software components to perform shared functions.
- **Technology Modernization & Business Intelligence:** PHIS has employed a PA component for trend analysis, and data aggregation needs, which will allow for more timely and accurate decision making capabilities.

The PHIS Investment aligns with the following goals:

- USDA Goal 4.3: Protect Public Health by ensuring Food is safe.
- FSIS Goal 1, Ensure that food safety inspection aligns with existing and emerging risks.
- FSIS Goal 2: Risk-based measures strengthen regulatory verification and enforcement activities on behalf of the consumer.
- FSIS Goal 8: Based on the defined Agency business needs, develop, maintain and use innovative methodologies, processes, and tools, including PHIS, to

protect public health efficiently and effectively and to support defined public health needs and goals.

The following table provides detailed information regarding the benefits of the PHIS investment.

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
<p>To collect, mine, and analyze inspection, surveillance, and investigative data, in compliance with the Safe Port Act of 2006.</p>	<p>PHIS leverages USDA's consolidated data center infrastructure and leverages FSIS's shared business application infrastructure located in the USDA Enterprise Data Center to reduce duplication and improve efficiencies.</p> <p>PHIS employs USDA's information centric, shared platform, customer centric, and security privacy Digital Strategy principles to provide services to citizens and government organizations that consume food inspection services.</p> <p>PHIS leverages technology to automate procedures throughout agency programs Share information with other government agencies (DHS, FDA, CDC), within USDA (APHIS, AMS), and with international trading partners (Mexico, Japan, New Zealand).</p> <p>PHIS employ a shared first approach by consuming services from other applications (e.g. USDA authorization services, USDA e-authentication services, and e-certification from international partners).</p> <p>The applications/systems included in the investment help close agency performance gaps by providing more effective and cost efficient services to better detect and prevent food safety threats.</p>	<p>The PHIS investment includes the following requirements:</p> <ul style="list-style-type: none"> <li>• Automate procedures throughout agency programs;</li> <li>• Improve information sharing with Congress, Industry, Consumers, International Governments, State Governments, other Government Agencies with international trading partners; and</li> <li>• Eliminate duplicate efforts for various system functions, data, and integration points.</li> </ul>	<p>PHIS is a powerful decision-making tool that enables FSIS to protect public health more efficiently, effectively and rapidly than it was able to using previous data systems. PHIS have significantly improved the way FSIS detects and responds to foodborne hazards.</p> <p>PHIS offers the following benefits:</p> <ul style="list-style-type: none"> <li>• Provides an analytical tool and data to improve the agency's ability to detect the introduction of intentional/unintentional food borne threats.</li> <li>• Enables near real-time data collection for reporting and analysis.</li> <li>• Streamlines information collection to assist FSIS with trace back and trace forward investigations for identifying product disposition and/or the origins of hazards.</li> <li>• Provides the ability to collaborate with DHS, FDA, international trading partners and with other USDA agencies to improve mission critical performance in inspections, surveillance, tracking, auditing, enforcement and more.</li> </ul>

## Public Health Data Communications Infrastructure System (PHDCIS)

The PHDCIS provides the network and communications infrastructure required for all FSIS investments and serves as the technology foundation for all applications and services leveraged to support the FSIS mission. PHDCIS facilitates IT efficiency and economy through the consolidation of IT infrastructure and the implementation of virtualization technologies that maximize technological utility. PHDCIS IT components are selected based on a factor of operational economy and efficiency, and all PHDCIS components are located at the EDCs or leverage cloud services managed by USDA.

The PHDCIS utilizes USDA’s cloud services (IaaS/ SaaS/ PaaS), and leverages infrastructure hosting services, server deployment, and storage services from the USDA Data Center.

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
<p>To provide mission-critical IT infrastructure to ensure that the Nation's commercial supply of meat, poultry, and egg products is safe, wholesome, and correctly labeled and packaged.</p>	<p>PHDCIS consolidates the FSIS IT infrastructure, and provides a robust IT Infrastructure system that leverages technology to automate procedures throughout agency programs.</p> <p>PHDCIS consists of the IT hardware, operations management, back-office systems and services required to support the FSIS business applications and user community.</p> <p>FSIS leverages telecommunication (network, video, and telephony) services from USDA/Network.</p> <p>FSIS leverages USDA Enterprise Data Centers and email collaboration services from Microsoft.</p>	<p>The PHDCIS investment includes the following requirements:</p> <ul style="list-style-type: none"> <li>• Modernize existing products;</li> <li>• Refresh aging equipment/end-of-life products;</li> <li>• Provide O&amp;M Labor Services;</li> <li>• Fund existing, telecommunication costs, and hardware and software license renewals;</li> <li>• Implement mobile and wireless technologies; and</li> <li>• Comply with mandates</li> <li>• Implement Shared Services, IPv6, and Digital Strategy.</li> </ul>	<p>The PHDCIS investment aligns with the principles outlined in the OMB Circular No. A-130 and the Federal IT Shared Services Strategy by extracting efficiency and economy from the IT products and services used to execute the FSIS mission.</p> <p>PHDCIS supports nearly 12,000 Federal and State inspectors and investigators in over 6,000 locations nationwide 24/7/365 as well as three national laboratories.</p> <p>PHDCIS provides many benefits, such as those in the following list:</p> <ul style="list-style-type: none"> <li>• Provides a robust IT infrastructure system that is able to support all field activities and all other FSIS business IT systems.</li> <li>• Leverages USDA Enterprise Data Center to reduce duplication and efficiencies of multiple Federal data centers.</li> <li>• Uses strategic sourcing when appropriate for</li> </ul>

## Marketing and Regulatory Programs

The Marketing and Regulatory Programs (MRP) mission area facilitates domestic and international marketing of U.S. agricultural products, ensures the health and care of animals and plants, and supports billions of dollars in agricultural trading each year by providing timely, accurate, and unbiased information on cotton, dairy, fruits, vegetables, specialty crops, livestock, grain, and poultry. Marketing and Regulatory Programs (MRP) facilitates and help protect the agricultural sector from plant and animal health threats; and to ensure humane care and treatment of certain animals. Because these programs provide the basic infrastructure to improve agricultural market competitiveness for the overall benefit of consumers and producers of American agriculture, this mission area contributes to all of USDA's Strategic Goals.

Marketing and Regulatory Programs area is administered by the following agencies, which are active participants in setting national and international standards:

- Agricultural Marketing Service (AMS)
- Animal and Plant Health Inspection Service (APHIS)
- Grain Inspection, Packers, and Stockyards Administration (GIPSA)

**Agricultural Marketing Service (AMS):** The mission of AMS is to facilitate the strategic marketing of agricultural products in domestic and international markets, while ensuring fair trading practices and promoting a competitive and efficient marketplace to the benefit of producers, traders, and consumers of U.S. food and fiber products.

AMS administers a variety of programs that enhance the marketing and distribution of agricultural products. Activities include the collection, analysis, and dissemination of market information; surveillance of shell egg handling operations; development of commodity grade standards; protection of producers from unfair marketing practices; statistical sampling and analysis of commodities for pesticide residues; development and enforcement of organic standards; and research and technical assistance aimed at improving efficiency of food marketing and distribution. AMS efforts aid the development of food value chains such as food hubs and other marketing outlets for locally- and regionally-produced food where data, infrastructure and technology gaps limit producers' marketing opportunities and consumers' access, and its programs promote a strategic marketing perspective that adapts product and marketing practices and technologies to the issues of today and the challenges of tomorrow. These efforts will support the USDA strategic goal to assist rural economies to create prosperity by better connecting consumers with local producers.

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AMS oversees the high-priority *Web Based Supply Chain Management (WBSCM)*, which is also one of USDA's 24 major IT investments.

**Animal and Plant Health Inspection Service (APHIS):** The Animal and Plant Health Inspection Service (APHIS) makes a significant contribution to the value of the Nation's food supply by protecting U.S. agricultural resources from pests and diseases, managing wildlife damage, regulating genetically engineered organisms, and administering the Animal Welfare Act. APHIS programs integrate plant and animal disease surveillance, epidemiology, emergency response, and information delivery to ensure the marketability of U.S. agricultural products. APHIS works cooperatively with State and local agencies, private groups, and foreign governments to protect the safety of the Nation's agriculture, and its efforts also focus on resolving and managing trade issues related to animal or plant health. APHIS supports the Department's strategic goal to ensure all children have access to safe, nutritious, and balanced meals by minimizing major diseases and pests that would otherwise hinder agricultural production.

APHIS manages two (2) of USDA's 24 major investments: Animal Disease Traceability Information System (ADTIS) and APHIS Enterprise Infrastructure (AEI).

**Grain Inspection, Packers and Stockyards Administration (GIPSA):** The Grain Inspection, Packers and Stockyards Administration (GIPSA) facilitates the marketing of livestock, poultry, meat, cereals, oilseeds, and related agricultural products. The agency promotes fair and competitive trading practices for the overall benefit of consumers and American agriculture.

Overall, the Marketing and Regulatory Programs mission area is responsible for three (3) of USDA's 24 major investments: Web-Based Supply Chain Management (WBSCM); Animal Disease Traceability Information System (ADTIS); and APHIS Enterprise Infrastructure (AEI). Figure 11 provides a summary of the Marketing and Regulatory Programs major IT investments.

## Marketing and Regulatory Programs Sum of FY15 Major IT Investment Budget

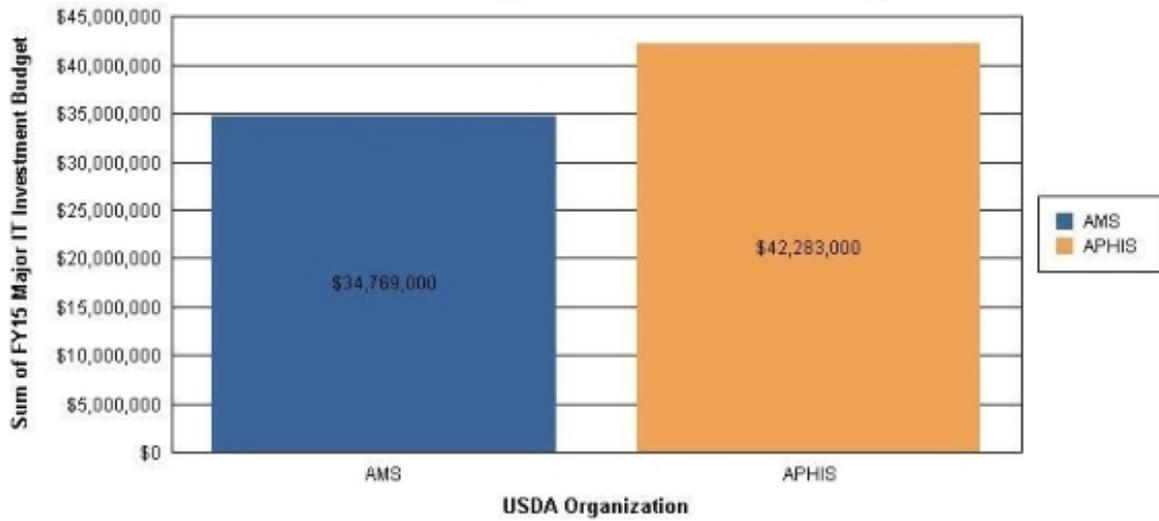


Figure 11: Marketing and Regulatory Programs FY15 Major IT Investment Spending

<u>USDA Organization</u>	<u>Major IT Investment Name</u>	<u>PRM Strategic Goal</u>	<u>FY15 Budget</u>
AMS	Web-Based Supply Chain Management (WBSCM)	P00.000.414	\$34,769,000
<b>AMS FY15 Major IT Investment Sum</b>			<b>\$34,769,000</b>
APHIS	APHIS Enterprise Infrastructure (AEI)	P00.000.411	<b>\$40,820,000</b>
APHIS	Animal Disease Traceability Information System (ADTIS)	P00.000.414	<b>\$1,463,000</b>
<b>APHIS FY15 Major IT Investment Sum</b>			<b>\$42,283,000</b>
<b>Marketing and Regulatory Programs Total Major IT Investment Spending: \$77,052,000</b>			

### Web-Based Supply Chain Management (WBSCM)

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
<p>To provide an integrated Internet-based commodity acquisition, distribution, and tracking system for use by USDA agencies and the United States Agency for International Development (USAID) for the commodity distribution program that provides over 4.5 million tons of food (involving over 200 commodities across eight programs) to targeted populations in the U.S. and abroad.</p>	<p>The Web Based Supply Chain Management (WBSCM) system is an integrated Internet-based commodity acquisition, distribution, and tracking system, built on System Application and Products (SAP) commercial software.</p>	<p>The overarching requirement for the WBSCM investment is to implement an ERP solution that eliminates a point solution for the USDA.</p>	<p>WBSCM is a mission critical system that supports commodity operations for the Agricultural Marketing Service (AMS), the Food and Nutrition Service (FNS), the Farm Service Agency (FSA), the Foreign Agricultural Service (FAS), and the U.S. Agency for International Development (USAID).</p> <p>The commodity programs serve a dual mission and purpose:</p> <ol style="list-style-type: none"> <li>1. Strengthening American agriculture through surplus removal, price support, and other means; and</li> <li>2. Strengthening food security by distributing commodities to schools and other recipient agencies that serve the needy throughout the world under an array of domestic and foreign feeding programs operated by USDA and USAID.</li> </ol>

## Animal Disease Traceability Information System (ADTIS)

The Animal Disease Traceability Information System (ADTIS) is crucial to successfully tracing animal illnesses and public health. Tracing the location of at-risk animals is key to preserving animal health, reducing animal illnesses and limiting economic losses to farmers.

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
<p>To support a traceback in the event of an animal health incident.</p>	<p>The system is designed to operate in the NITC cloud architecture. It employs WEB service calls and accomplishes its tasks via messaging. This approach minimizes the impact on the USDA infrastructure by relying</p>	<ul style="list-style-type: none"> <li>• Enforce applicable data standards as they relate to FISMA-compliant security policies and the Risk Management Framework (RMF);</li> <li>• Maintain a security</li> </ul>	<p>The Animal Disease Traceability Information System (ADTIS) supports animal disease traceability activities related to animal identification, movements and locations where animals are managed. It is being implemented by</p>

	<p>on the "data-in-place*" to the maximum extent possible.</p> <p>*(Data-in-place Refers to the concept that a query can be completed without transferring the whole data set across the network - a SQL query result is transmitted instead.)</p> <p>ADTIS effectively provides integration points with all 50 States, 8 Tribes, 2 Territories, and the APHIS Cost Management System (ACMS). In addition, 12 private companies rely on the ADTIS to allocate ISO Standard unique ID numbers that are applied on animal ID devices. This allows APHIS to trace diseased animals and keep them out of the food supply.</p> <p>The ADTIS system is housed in the NITC SaaS environment, and integrates with other investments via messaging over WEB services.</p> <p>The investment takes advantage of the NITC PAAS cloud and the Apache web services server.</p> <p>While this system is not dependent on other systems, it does support SCS, NAHLN, AHSM, VSPS and EMRS. Since this system is developed and in steady state mode, it poses no risk to those investments.</p>	<p>posture commensurate with the confidentiality, integrity, and availability of the data stored;</p> <ul style="list-style-type: none"> <li>• Integrate advancing technologies to maintain efficiency and accuracy of data collection, especially pertaining to researching emerging applications for reliable and efficient animal identification;</li> <li>• Improve government performance in accordance with the President's Management Agenda;</li> <li>• Meet the requirements of the Government Paperwork Elimination Act; and,</li> <li>• Meet accessibility requirements.</li> </ul>	<p>the USDA and state agencies – in cooperation with industry – to enable timely trace back of the movement of diseased or exposed animal.</p> <p>Animal disease traceability helps to ensure rapid disease containment and maximum protection of America's animals.</p> <p>The system is designed to operate in the NITC cloud architecture. It employs WEB service calls and accomplishes its tasks via messaging. This approach minimizes the impact on the USDA infrastructure by relying on the "data-in-place*" to the maximum extent possible.</p> <p>*(Data-in-place Refers to the concept that a query can be completed without transferring the whole data set across the network - a SQL query result is transmitted instead.)</p>
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## APHIS Enterprise Infrastructure

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
To enhance and modernize	AEI is an existing, steady state investment that is	The primary requirements for the AEI investment is to	AEI strives to increase availability from 99.97% to

<p>the IT infrastructure.</p>	<p>the GSS for APHIS. AEI is the primary computing infrastructure for APHIS.</p> <p>AEI provides the core computing capabilities that are used for monitoring plant and livestock health to help and support rural communities.</p> <p>APHIS has consolidated its mobile telecommunications contracts.</p> <p>APHIS has migrated its email to the USDA Outlook email, and is in the process of moving its systems to an EDC.</p> <p>AEI's Domino platform moved to NITC cloud service. Oracle is currently under review for move to the NITC Cloud service.</p> <p>APHIS implemented Web Sphere's Portal to adhere to the President's Digital Strategy.</p>	<p>acquire software, hardware, desktop components, and other related services needed to enhance and modernize the infrastructure.</p>	<p>99.999%. The increased availability will be achieved by consolidation of servers, utilizing EDC technologies, and increasing redundancy in Enterprise systems.</p> <p>AEI has a 12 year ROI compared to commercial provided solutions.</p> <p>AEI utilizes existing Microsoft offerings that allow us to retire legacy solutions. APHIS is using Windows Server 2008, Windows 2010, and MSOffice 2010. APHIS has retired Windows Server 2000 and 2003, XP OS, and Windows 2007.</p>
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## Natural Resources and Environment

USDA's Natural Resources and Environment mission area ensures the health of the land through sustainable management. To this end, NRE promotes the conservation and sustainable use of natural resources on the Nation's private lands and sustains production of all the goods and services that the public demands of the national forests and grasslands. The mission area includes two agencies that work to prevent damage to natural resources and the environment, restore the resource base, and promote good land management:

- Natural Resources Conservation Service (NRCS)
- Forest Service (FS)

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NRCS and FS are the primary contributors to achieving the Strategic Goal that ensures our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing water resources.

**Forest Service:** The Forest Service (FS) manages 193 million acres of public lands in 155 national forests and 20 grasslands and is the largest forestry research operation in the world. The Forest Service provides technical and financial assistance to help rural and urban citizens, including private landowners, care for forest, watersheds, and rangelands in their communities. The Forest Service oversees three (3) of USDA's 24 major IT investments, including the Resource Ordering and Status System (ROSS), which is one of USDA's high-priority modernization initiatives (HPMI).

**Natural Resources Conservation Service (NRCS):** The Natural Resources Conservation Service (NRCS) helps people maintain the land through scientifically based, locally led voluntary conservation efforts, and improves natural resources on private lands. NRCS work results in productive lands and a healthy environment through reduced soil erosion; water and air quality; energy conservation; restored woodlands and wetlands; enhanced fish and wildlife habitat; and reduced upstream flooding. NRCS manages the Conservation Delivery Streamlining Initiative (CDSI), a major investment and one of USDA's high-priority modernization initiatives.

The Natural Resources and Environment mission area manages four (4) of USDA's 24 major IT investments, including two of its high-priority modernization initiatives: Conservation Delivery Streamlining Initiative (CDSI) and the Resource Ordering Status System (ROSS). Figure 12 provides a summary of major IT investments by the NRE mission area.

## Natural Resources and Environment Sum of FY15 Major IT Investment Budget

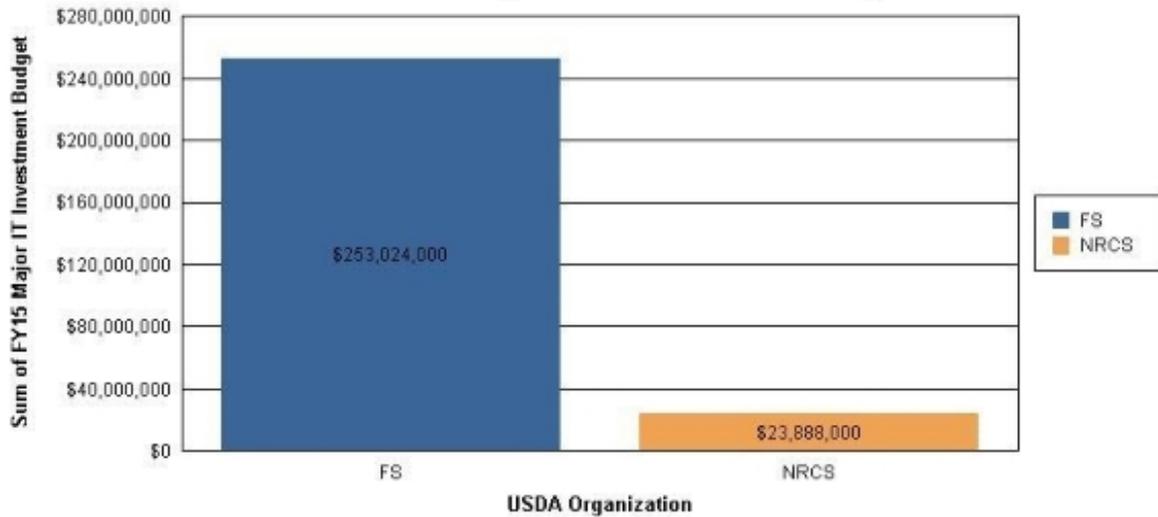


Figure 12: NRE FY15 Major IT Investment Spending

USDA Organization	Major IT Investment Name	PRM Strategic Goal	FY15 Budget
FS	Resource Ordering and Status System (ROSS)	P00.000.412	\$6,028,000
FS	USDA Public Safety Land Mobile Radio System (AgPRS)	P00.000.412	\$37,932,000
FS	Forest Service Computer Base (FSCB)	P00.000.412	\$209,064,000
<b>FS FY15 Major IT Investment Sum</b>			<b>\$253,024,000</b>
NRCS	Conservation Delivery Streamline Initiative (CDSI)	P00.000.412	<b>\$23,888,000</b>
<b>NRCS FY15 Major IT Investment Sum</b>			<b>\$23,888,000</b>
<b>Natural Resources and Environment Total Major IT Investment Spending: \$276,912,000</b>			

### USDA Land Public Safety Radio System (AgPRS)

The mission of the USDA Forest Service LMR Program is to manage the design, installation and sustainment of the wireless communications needs of the Forest Service including Fire Prevention and Response, Aviation, Research, Law Enforcement

and Business Operations for both voice and data applications. The Forest Service sustains our Nation's forests and grasslands by delivering seamless LMR and other communications technologies through our (C)ustomer Focus; (I)nnovative Solutions; (O)penness & Collaboration.

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
<p>To support field-oriented administrative, project, incident, safety, and emergency work.</p> <p>Deploy and maintain radio capability across the agency.</p>	<p>The Forest Service land mobile radio system provides essential and instantaneous communication over vast areas of national forest land.</p> <p>In many locations, the FS radio system is the only means of communication.</p>	<p>The AgPRS investment includes the following requirements:</p> <ul style="list-style-type: none"> <li>• Maintain over 3000 communication sites nationally.</li> <li>• Deliver critical field going communications for 135 National Forest and Grasslands.</li> <li>• Provide dispatch capability for administrative and Fire operations for 135 National Forests.</li> <li>• Adhere to the industry standard APCO P25 (Association of Communications Public Safety Officials, Project 25).</li> </ul>	<p>There is a great dependence on AgPRS for day-to-day business as well as safety and emergency operations. Internal studies have indicated that dependence on the LMR system is high- over 80% of the 15,000 user base surveyed respondents rely on the system for day-to-day business.</p> <p>This investment funds sustainment and modernization efforts to deploy and maintain radio capability across the agency.</p>

## Forest Service Computer Base (FSCB)

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
<p>To provide voice, video and data network infrastructure to meet the business needs of the agency.</p>	<p>The FSCB investment enables the Forest Service to provide voice, video and data network infrastructure for its employees.</p>	<p>The FSCB investment includes the following requirements:</p> <ul style="list-style-type: none"> <li>• Provide and maintain the Forest Service's IT infrastructure;</li> <li>• Purchase, replacement, and maintenance of personal computers and peripheral equipment;</li> <li>• Purchase, replacement, and maintenance of servers, storage and peripherals for file</li> </ul>	<p>This investment is vital to ensure that the Forest Service can continue to carry out its natural resource mission in an e-Gov environment.</p>

		<p>storage, databases, applications, etc.;</p> <ul style="list-style-type: none"> <li>• Purchase, replacement, and maintenance of software for office automation, e-mail, collaboration, databases, etc.;</li> <li>• Integration services to ensure the interoperability of the various parts of the infrastructure; and</li> <li>• End-user support center for helpdesk services for all components of the infrastructure.</li> </ul> <p>This investment is currently in the Steady State phase of the USDA CPIC process. There are pockets of modernization efforts going on but no full scale DME initiatives.</p>	
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## Resource Ordering and Status System (ROSS)

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
To provide a fully automated capability that improves resource mobilization in response to disasters.	ROSS is an integral part of the nation's emergency response framework, and is relied upon for incident support within FS, DOI, State (e.g., CALFIRE) and local agencies.	The ROSS investment is required to link approximately 400 interagency wildland incident dispatch offices to share resource and incident status information, provide a means to order resources, and provide for order confirmation.	ROSS automatic interfaces with both VIPR and e-ISuite will continue to improve IT integration in support of wildland fire and other federal emergency management activities.

## Conservation Delivery Streamlining Initiative (CDSI)

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
Streamlined business processes and simplified conservation delivery.	<b>High Level Functionality</b> <b>Conservation Desktop:</b> Provides conservation planning and financial	The CDSI investment includes the following requirements: <ul style="list-style-type: none"> <li>• Implement an</li> </ul>	As the Conservation Delivery Streamlining Initiative (CDSI) comes online over several fiscal years, initially five legacy

	<p>assistance; Conservation Services Toolkit; Automating the additional six pillars of conservation planning</p> <p><b>Client Gateway:</b> Online self-service access to customer and conservation data; Online access to NRCS Program Information; Online access to their own customer records</p> <p><b>Mobile Planner: Implements a new business model using mobile application(s):</b> Result in technical staff spending 65 to 80 percent of time in field -- Conducting conservation planning; Application and financial assistance activities</p>	<p>effective, efficient, and sustainable business model for delivering conservation assistance across the Nation.</p> <ul style="list-style-type: none"> <li>• Simplify conservation delivery for customers and employees.</li> <li>• Streamline business processes to increase efficiency and integration across business lines.</li> <li>• Ensure science-based assistance to reinforce the delivery of technically sound products and services.</li> <li>• Provide an effective and efficient business model and tools to simplify and streamline conservation delivery.</li> </ul>	<p>systems will be replaced or retired. As functions currently implemented via legacy applications are deployed under the CDSI Conservation Desktop, those legacy applications will be deprecated and decommissioned.</p> <p>New business processes that replace existing ones may also result in retirement of legacy applications.</p>
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## Research, Education and Economics

Research, Education and Economics is dedicated to the creation of a safe, sustainable, competitive U.S. food and fiber system, as well as strong communities, families, and youth through integrated research, analysis, and education. The REE mission area works with other USDA agencies, other Federal agencies, international organizations, and the private sector to protect, secure, and improve our food, agricultural and natural resources systems.

REE provides Federal leadership for the discovery, application, and dissemination of information and technologies spanning the biological, physical, and social sciences through agricultural research, education, and extension activities and economic research and statistics, and its responsibilities are carried out by four agencies:

- Agricultural Research Service (ARS)
- Economic Research Service (ERS)
- National Agricultural Statistics Service (NASS)
- National Institute of Food and Agriculture (NIFA)

REE, through its intramural and competitive grant programs and by strengthening the capacity of institutions of higher education, supports all of USDA's Strategic Goals;

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however, the REE mission area does not oversee any major IT investments, and is not reporting an enterprise architecture at this time.

**Agricultural Research Service (ARS):** The Agricultural Research Service (ARS) is USDA's chief scientific, in-house research agency. ARS conducts intramural research in, and is the largest intramural research agency of USDA. The agency conducts research in the area of natural and biological science to develop new scientific knowledge, transfer technology to the private sector to solve technical agricultural problems of broad scope and high national priority, and provide access to scientific information. This research covers a wide range of critical problems affecting American agriculture, with about 1,200 research projects organized under 4 major program areas: Nutrition; Food Safety and Food Quality; Animal Production and Protection; Natural Resources and Sustainable Agricultural Systems; and Crop Production and Protection.

**National Institute of Food and Agriculture (NIFA):** The National Institute of Food and Agriculture (NIFA) is USDA's primary extramural research funding agency. Its mission is to advance knowledge for agriculture, the environment, and human health and wellbeing by funding targeted research, education, and extension projects and programs, some of which are specific to the Land-Grant University System, others open to participation by other partner organizations. NIFA partners with land grant and non-land grant colleges and universities in carrying out extramural research, higher education, and extension activities.

**Economic Research Service (ERS):** The Economic Research Service (ERS) is USDA's primary source of economic information and economic and social science research. ERS' mission is to anticipate economic and policy issues related to food, agriculture, the environment, and rural development, and conduct research that informs public program and policy decisions.

**National Agricultural Statistics Service (NASS):** The National Agricultural Statistics Service (NASS) conducts the Census of Agriculture and provides the official, current statistics on agricultural production and indicators of the economic and environmental welfare of the farm sector. NASS reports cover virtually every aspect of U.S. agriculture, including production and supplies of food and fiber, prices paid and received by farmers, farm labor and wages, farm finances, chemical use, and changes in the demographics of U.S. producers.

NASS is responsible for overseeing the NASS Survey Processing System, which used to be part of USDA's inventory of major investments but was recently downgraded. As a result, the REE mission area does not have any major IT investments on which to report.

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## Rural Development

Rural communities and businesses are implementing innovative technologies and modernizing infrastructure to create jobs, develop new markets, and increase competitiveness, while conserving the Nation's natural resources and providing a safe, sufficient and nutritious food supply for the country and the world. As a leading advocate for rural America, USDA is at the forefront of developing the technology and tools necessary to transform rural America to take advantage of new opportunities. All of the funding for USDA's Rural Development (RD) programs contributes to the Strategic Goal of assisting rural communities to create prosperity by providing financial and technical assistance to rural residents, businesses, and private and public entities for a broad range of purposes that bring prosperity and better living to Rural America.

Rural Development is committed to helping improve the economy and quality of life in all of rural America by providing financial programs to support essential public facilities and services as water and sewer systems, housing, health clinics, emergency service facilities and electric and telephone service. Rural Development promotes economic development by providing loans to businesses through banks and community-managed lending pools, while also assisting communities to participate in community empowerment programs.

Since 2009, USDA has helped more than 804,000 rural families buy, refinance, or repair a home, and provided nearly 19,000 grants and loans to help approximately 75,000 small rural businesses create and save over 377,000 jobs. As a leading advocate for rural America, USDA is at the forefront of developing the technology and tools necessary to transform rural America to take advantage of new opportunities; however, declining staff levels, increased program levels, and the age of Rural Development's workforce pose a challenge to RD's future development and support efforts.

Investments in RD staff and technology are a high priority in FY 2015. Funding is provided to hire 250 additional staff to fill critical delivery and management positions to perform portfolio management activities and enhance program operations. A portion of these new hires will assist Rural Development with the implementation of a pilot called Rural Corps that will place economic development professionals in 10 high-need areas to provide technical assistance and hands-on support at the local level. This model will increase the likelihood that investments in infrastructure and economic development are strategic, creating jobs and long-term economic benefits within the region. Additionally, this pilot will enable RD to move towards a more modern, mobile work force and better enable RD to leverage its resources with other Federal agencies.

The Rural Development mission area and its associated investments are overseen and managed by USDA's Rural Development (RD) agency. RD currently manages the Comprehensive Loan Program (CLP), which is USDA's only major IT investment

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belonging to the Rural Development mission area. The BY15 Budget includes \$15 million for information technology investments for the Comprehensive Loan Program (CLP).

For FY15, Rural Development seeks to achieve the following objectives with regard to its IT infrastructure:

**Legacy Systems Retirement:** Rural Development seeks to retire the following legacy systems: Program Loan Accounting System, Automated Multi-Family Housing Accounting System and Rural Utilities Legacy System. Determine the business requirements and implementation strategy to convert and retire legacy systems to enterprise solutions.

**Service Oriented Architecture for Common Services:** Rural Development hopes to implement a Common Application Framework (CAF) and Customer Portal processing that efficiently meets diverse and changing business needs. The CAF and Customer Portal will be leveraged by RD to facilitate the development and storage of customer support applications for cash management, customer documentation, and customer debarment.

**Modernize Program Reporting Infrastructure:** In FY15, RD will also focus on the enhancement of data, analytics, and standards for critical management needs, and will focus specifically on the development of borrower data and demographic models, which will be used to improve visibility into portfolio and program performance. RD also plans to develop obligation and disbursement models for customer status reporting.

**Modernize Program Reporting Infrastructure:** RD aims to develop delinquency models that will assist program staff report mission progress and retire mainframe reporting tools.

**New Loan Origination System (RD APPLY):** Finally, RD will continue the development of RD Apply and will incorporate Rural Development's Single Family Housing's loan and grant programs.

Please refer to Figure 13 for a summary of major IT investment spending by the Rural Development mission area.

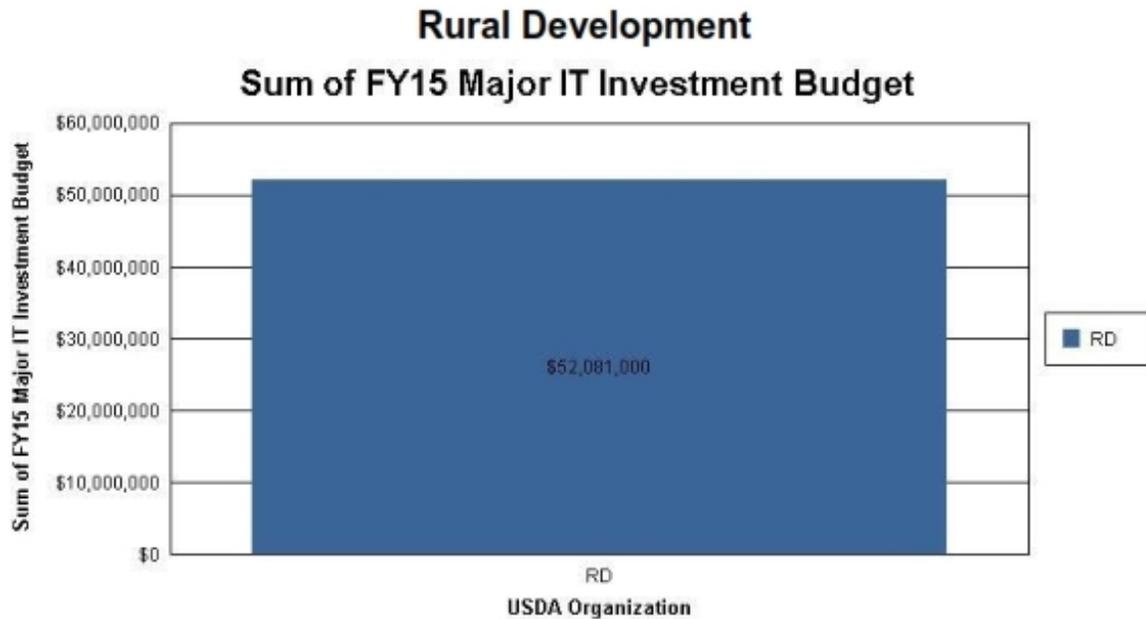


Figure 13: Summary of Rural Development FY15 Major IT Investment Spending

USDA Organization	Major IT Investment Name	PRM Strategic Goal	FY15 Budget
RD	Comprehensive Loan Program	P00.000.411	\$52,081,000
<b>RD FY15 Major IT Investment Sum</b>			<b>\$52,081,000</b>
<b>Rural Development Total Major IT Investment Spending: \$52,081,000</b>			

## Comprehensive Loan Program (CLP)

Business Need(s)	Current IT Capabilities	Requirements	IT Solutions, Benefits, and Goals
To provide cost effective IT solutions and to streamline processes that are enable RD to make its loan program available anytime, anywhere, and to anyone in rural America.	Through the CLP investment, RD consolidated loan and grant programs into a suite of system components that will provide the foundation for building shared services.  CLP integrates and provides a new business rules engine, modern business intelligence tools and streamlined loan closing	CLP is following a transition plan to achieve the following: <ul style="list-style-type: none"> <li>Improve the delivery and access of RD services to citizens and the public;</li> <li>Provide RD staff in the field offices and other locations with greatly improved automation support;</li> </ul>	This investment addresses capability gaps with existing legacy systems, mobile end-user applications, shared services for common processes, and modern reporting capability.

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	processes.	<ul style="list-style-type: none"><li>• Enable more rapid rollout of new or changed programs;</li><li>• Provide data accessibility and reporting to support executive decision making;</li><li>• Reduce operations and maintenance complexity through eliminating duplicate IT systems; and,</li><li>• Modernize the technologies to help ensure availability of support, improved systems security, and longevity of systems.</li></ul>	
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## Future Architecture

The Secretary's *Administrative Streamlining Project* challenges USDA's leadership to innovate, consolidate, and achieve more effective and efficient methods of executing the mission and reducing operational cost. USDA's IT strategic plan promotes smarter investment strategies, the next generation of "corporate" governance, renewed emphasis on cost savings through "cloud" service offerings, and upgrading skill sets to better manage investment performance and oversight. To this end, the USDA has streamlined its IT investment portfolio from 301 investments in FY13 to 251 investments in FY14 and 221 investments in FY15, by consolidating redundant and duplicative investments.

The Future Architecture articulates the future IT environment in alignment with the FEA 2.0 reference model categorizations.

The Future Architecture section builds from the information provided in the Current Architecture section of this document, and is organized by Mission Area, Agency, and Agency Investments. The Future Architecture section for each Major Investment contains a table that provides the following information:

- **Future IT Capabilities**: The Future IT Capabilities column presents the desired functionalities the investment is hoping to achieve through operational improvements and development and modernization projects.
- **Reduction and/or Consolidation of Duplicative IT**: The second column in the Future Architecture section identifies if the investment is facilitating the consolidation of IT infrastructure and will result in a reduction of duplicative IT.
- **Areas of Business Process Improvement**: The third column in the table provides an overview of each investment's business processes, and how those processes are evaluated and modified to ensure an investment reaches its targets.
- **Major Milestones**: Recent and planned milestones are listed in the Major Milestones column of the Roadmap for each investment.

An overview USDA's Future Architecture is provided on the pages that follow.

## Office of the Chief Financial Officer (OCFO)

### National Finance Center Shared Services – IT Systems

The National Finance Center Shared Services investment is managed by the NFC within the USDA OCFO.

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>The PPS Risk Mitigation project converts the Payroll System Development environment from IDMS to DB2.</p> <p>Enterprise Reporting project is to modernize reporting at NFC moving from a collection on legacy reporting systems to a single corporate data warehouse and business intelligence toolset that will add value to National Finance Center Shared Services.</p> <p>The General Support Systems Technology Refresh is a project with the objective for quickly procuring new hardware and software to replace (refresh) existing hardware and software as obsolescence approaches. The expected outcome is to allow for continued growth and to meet customers' performance expectations. In FY15, NFC plans to complete the following Tech Refreshes/Tech Insertions: Network Infrastructure, Mainframe VSM-peering, SAN Storage and SAN Enterprise Management.</p> <p>The following Tech Refreshes/Tech Insertions are planned for FY16 and FY17: End-to-End Monitoring, Business Service Management (BSM), Network Infrastructure, Mid-Tier Physical Servers, Enterprise</p>	<p>To reduce and/or consolidate duplicative IT, the NFC established contracts in accordance with NFC Shared First Procurement Policy, providing a single point of supply to acquire hardware, software, and services.</p> <p>The NFC performs Technology Refreshes and Insertions annually to support consolidation and reduction of IT resulting in current, continual, and evolving technology that is part of the EA.</p> <p>The network modernization project is an example of IT consolidation and reduction with evolving technology.</p>	<p>NFC's procurement process has improved through its implementation of shared first procurement policy and associated contracts.</p> <p>NFC's clients have experienced process improvements with reporting and data management through NFC's Major Applications.</p>	<p>Phase I of the Risk Mitigation Project was completed in FY15. Phase II is scheduled to be completed in FY16.</p> <p>The Enterprise Reporting project contains 4 builds. Build 1 completed in FY14; Build 2 will be completed in FY15; and Build 3 and Build 4 will be completed in FY16.</p> <p>In FY15 NFC plans to:</p> <p>Identify appropriate contract, lease/purchase required hardware, software, firmware, IT material (e.g. cable plant components, and services), Receipt of orders. Implementation of newer technology, and retirement of older less effective technology.</p>

<p>Secure File Transfer, Continuation of Windows Server Virtualization, Mainframe Software, VolP/Video Collaboration, Enterprise Document Management (EDM)/Enterprise Content Management (ECM), MS SQL Server Database, Oracle Database, P5, and Printer/Copier Capability Upgrade.</p> <p>Additional refresh projects are scheduled for FY18.</p>			
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## Financial Management Modernization Initiative (FMMI)

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>FMMI's Future IT Capabilities are outlined below.</p> <p>FMMI will use the following three-tier architecture: web access tier, application tier and database tier.</p> <p>FMMI will provide both real-time and point-in-time web-based reporting of financial activity.</p> <p>FMMI will also provide a robust data exchange capability for real-time service oriented services and batch interfaces.</p>	<p>To mitigate rising software maintenance costs NFC has partnered with the following organizations and vendors:</p> <ul style="list-style-type: none"> <li>• USDA on enterprise software contract vehicles such as the Microsoft Enterprise Agreement to incur savings.</li> <li>• Vendors such as Oracle, Red Hat, Computer Associates, IBM, and VMware to negotiate better prices.</li> </ul>	<p>With the FMMI investment replacing CFMS, the common financial processes have been instituted across agencies of the department and reduced the number of separate agency financial systems, consolidating them into a central departmental system. With all of the data housed in a single system and common processes across the department, it will be much simpler to process the general ledger at year end to close the books for the fiscal year.</p> <p>Users are able to garner their own opinions through the annual survey conducted by the department to gather the users' opinions of the ability of FMMI to meet the department's financial business needs. In addition, it allows users to indicate the user friendliness (or usability) of the system to meet the department's needs. The</p>	<p>The Financial Management Modernization Initiative (FMMI) is the new core accounting system for USDA.</p> <p>The current CFMS system, FFIS, is being retired. FMMI has subsumed the accounting, and the FMMI investment will now incorporate the remaining minor systems formerly reported in the CFMS investment.</p>

		<p>results of these surveys assist OCFO determine where process can be improved.</p> <p>Finally, FMMI provides the following benefits associated with BPIs:</p> <ul style="list-style-type: none"> <li>• FMMI centralizes and Standardizes Financial Management and Reporting;</li> <li>• Reduces redundant financial systems across the agency; and</li> <li>• Provides a single source of the truth for USDA financial reporting.</li> </ul>	
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## National Finance Center Shared Services (NFC SS)

The National Finance Center Shared Services investment (NFC SS) is managed by the National Finance Center within USDA’s Office of the Chief Financial Officer (OCFO).

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>The Risk Mitigation project is the conversion of the Payroll System Development environment from IDMS to DB2.</p> <p>The General Support Systems Technology Refresh is a project with the objective of quickly procuring new hardware and software to replace (refresh) existing hardware and software as obsolescence approaches. The expected outcome is to allow for continued growth and to meet customers' performance expectations.</p> <p>In BY14 and BY15 NFC plans to complete the following Tech Refreshes: MS SQL Server, Oracle Database, PeopleTools, Mainframe Software, Mid-Tier Storage Management, Cloud Computing and Enterprise Management,</p>	<i>No information.</i>	<i>No information.</i>	<p>Phase I and Phase II of the Risk Mitigation Project will be completed in FY 14 and Phase III and Phase IV will be completed in BY15. Enterprise Reporting project is to modernize reporting at NFC moving from a collection on legacy reporting systems to a single corporate data warehouse and business intelligence toolset that will add value to NFC's HRLOB offering.</p> <p>The Enterprise Reporting project contains 4 builds. Build 1 and Build 2 will be completed in FY14, and Build 3 and Build 4 will be completed in BY15.</p> <p>In FY14 and BY15 NFC plans to complete the following Tech Refreshes: MS SQL Server, Oracle Database, PeopleTools, Mainframe Software, Mid-</p>

Windows Hosts, and Linux Hosts. Additional refresh projects are scheduled for BY16 and BY17.			Tier Storage Management, Cloud Computing and Enterprise Management, Windows Hosts, and Linux Hosts. Additional refresh projects are scheduled for BY16 and BY17.
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## Office of the Chief Information Officer (OCIO)

### Optimized Computing Environment (OCE)

The Optimized Computing Environment (OCE) investment is managed by the International Technology Services (ITS) division within USDA's Office of the Chief Information Officer (OCIO).

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>The future ITS technical architecture consists of three logical tiers: End User, Office, and Data Center.</p> <p>In addition to the three logical tiers, Enterprise Management contains architecture components that span many tiers.</p> <p>The OCE investment will provide the modernization of the following SCA technology infrastructure areas:</p> <p>Modernization of Field Service Center Network Hardware - In order to replace aging hardware and support standardized field network architecture, a complete network hardware replacement was required. The routers and switches in all 2,761-field offices have been replaced as part of this task. Each office has one router, and the number of switches varies based on office requirements.</p>	<p>The OCE investment will streamline and modernize the back-end and office infrastructure to support SCA modernization initiatives.</p> <p>The focus of optimizing the computing environment, enhancing mobility support, and replacing the aging infrastructure is to ensure that the core infrastructure meets the demands of the SCA application modernization requirements.</p> <p>The future ITS technical architecture consists of three logical tiers: End User, Office, and Data Center.</p> <p>In addition to the three logical tiers, Enterprise Management contains architecture components that span many tiers.</p>	<p>Included in the International Technology Services (ITS)EA Modernization Blueprint / Transition Plan, the OCE represents the natural evolution from the current architecture, founded by the Common Computing Environment (CCE) that has supported the Service Center Agencies (SCA).</p> <p>The OCE provides the optimized IT infrastructure architecture to support the major SCA initiatives the FSA/MIDAS; NRCS/CDSI and the RD/CLP programs.</p>	<p>Modernization of Field Service Center Network Hardware - In order to replace aging hardware and support a standardized field network architecture, a complete network hardware replacement was required. The routers and switches in all 2,761 field offices have been replaced as part of this task. Each office has one router, and the number of switches varies based on office requirements.</p> <p>Optimize SCA Network: Wide Area Network (WAN) Optimization hardware is being placed at key points in the USDA infrastructure to provide the streamlining needed to expedite network traffic.</p> <p>Upgrade Head End Network Hardware: The Head End is a key piece of network infrastructure. It manages all network traffic into and out of the data centers and across the entire ITS environment.</p>

SCA Network Optimization - Wide Area Network (WAN) Optimization hardware is being placed at key points in the USDA infrastructure to provide the streamlining needed to expedite network traffic.

Head End Network Hardware Upgrade - The Head End is a key piece of network infrastructure. It manages all network traffic into and out of the data centers and across the entire ITS environment.

Head End WAN Optimization - Head End WAN Optimizers support the increasing number of WAN Optimizer appliances in the field.

Office Environment - VoIP Site Installations – Installation of VoIP technology to replace and modernize phone systems at SCA service centers.

This installation through OCE will allow a common upgrade for all SCA users co-located in the field office and provide centralized management of the phone systems.

Office Environment - Server Virtualization Storage Backup - the setup and configuration of the virtual servers SCA Service Centers. Includes the centralized backend infrastructure, licensing and configuration of backup capabilities to the data center.

Optimize Head End WAN: Head End WAN Optimizers support the increasing number of WAN Optimizer appliances in the field.

## USDA Identity & Access Management

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>IAM will include the following IT Capabilities in the future:</p> <ul style="list-style-type: none"> <li>• Provide a back-end solution to electronically identity proof customers and upgrade the eAuthentication account to a level2;</li> <li>• Accept external credentials; and</li> <li>• Mobile authentication.</li> </ul>	<p>Currently, USDA agencies have over 13,000 Local Registration Agents (LRA) providing identity proofing activities. This solution will dramatically reduce the number of customers required to physically visit an LRA.</p> <p>Expand eAuthentication service to accommodate the needs of customers and USDA agencies.</p> <p>Expand the current native mobile eAuthentication service to Android devices.</p>	<p>IAM is working to improve the following business processes:</p> <ul style="list-style-type: none"> <li>• Enhancing customer convenience;</li> <li>• Enabling non-federal users to securely access online services across multiple agencies without requiring a new username and password for each service; and</li> <li>• Providing agencies the ability to include eAuthentication service for Android mobile applications.</li> </ul>	<p>No further milestone reported due to establishing new BPA contrac.</p>

## USDA Security Operations Center (ASOC)

As USDA seeks to achieve greater efficiencies and cost reductions from its business channels, the degree of information security risk increases, and the number of necessary security controls rises. USDA's increased focus on securing the enterprise demands a scalable, integrated solution to protect confidential, personal, and sensitive data. The future architecture of the information security program is aligned to the USDA IT Strategic Plan in combination with information and information system risk management responsibilities and federal mandates for cyber security compliance. The future architecture of the Department's information security program also addresses security priorities as identified and defined by USDA leadership, business owners, and users of USDA information and information systems. The Department's future business needs require scalable cyber security products and services and IT security governance framework that includes the following components:

**An Inclusive Security Program** that is composed of stakeholders within the OCIO, USDA agencies, and external USDA community.

**A Risk Management Framework (RMF)** customized to meet business needs and compliance to federal mandates.

**An Open and Transparent View** of USDA operations that will enable the USDA

SOC to establish a holistic view of the Department and to facilitate information sharing across the enterprise.

**An Enterprise Security Architecture and Security Services** to deploy a broad-burst spectrum of security products and managed security services.

**Information Security Training and Awareness** that is interactive, comprehensive, and compliant with federal laws, regulations, and standards.

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>The USDA SOC is focused on providing the following IT capabilities in the future:</p> <ul style="list-style-type: none"> <li>• Enhance Incident Management technical services, system tools and procedural methods;</li> <li>• Develop, manage and communicate to relevant authorities all aspects of formal incident detection, response and reporting processes;</li> <li>• Provide robust Cyber Security Shared Services offerings; and</li> <li>• Implement a continuous Assessment &amp; Authorization (A&amp;A) /Risk Management Framework Evolution.</li> </ul> <p>Develop a business focused risk model.</p>	<p>In compliance with the IT streamlining initiative, enterprise contracts for standardizing security products and services will result in reduction in duplication of agency procured cyber security products and services, and reductions in cost per unit. Moreover, these efficiencies will simplify USDA's IT Security infrastructure, improve asset management and data integrity, and improve federal compliance.</p>	<p>USDA has built security into Capital Planning's IT decision-making process for investments, as outlined by National Institute of Standards and Technology (NIST) Special Publication (SP) 800-65 and Departmental policies and procedures.</p> <p>ASOC plans to continuously improve its Information Security Continuous Monitoring (ISCM) program - as prescribed by the Office of Management and Budget (OMB) and Department of Homeland Security (DHS) Continuous Diagnostic and Mitigation (CDM) program.</p> <p>ASOC intends to establish an IT Security Governance structure that is inclusive of Department and USDA agencies and staff offices.</p> <p>ASOC is establishing a communication framework between the agencies and the Department to improve adoption of security controls, which ultimately increase the agency's ability to respond to threats or improve our security posture.</p>	<p>Enterprise Cyber Security Products and Services Blanket Purchase Agreement (BPA). <i>Target: July 2014</i></p> <p>Established ISCM strategy for USDA. <i>Target: October 2015</i></p> <p>Integration of DHS CDM capabilities as outlined by OMB. <i>Target: May 2016</i></p> <p>Technical refresh of Security Systems. <i>Target: September 2016</i></p> <p>Conversion of USDA to Continuous A&amp;A. 18 SYSTEMS ARE left to convert as of 5/19/2015. <i>Target: September 2015</i></p>

## USDA Enterprise End User Shared Services

The Enterprise End User Shared Services (EUSS) is one of USDA's new Major IT Investments. The EUSS investment is managed by the International Technology Services (ITS) division within USDA's Office of the Chief Information Officer (OCIO).

ITS did not submit information about the EUSS investment for the FY14 USDA Roadmap. The information provided in the table below was derived from previously reported information.

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>Within EUSS, USDA is implementing an enterprise-wide directory service, known as Enterprise Active Directory (EAD), to serve as a scalable and robust foundation for a USDA-wide information IT infrastructure.</p>	<p>The EAD services consolidated through the EUSS investment provides secure reliable access to IT resources and simplifies IT infrastructure management.</p> <p>EAD is an enterprise service and the cloud based USDA Enterprise Messaging Service is dependent upon it.</p> <p>Other IT services such as Enterprise Virtual Private Network, Mobile Device Management, Enterprise Fax2Mail, and Managed Print Services interact with EAD as well.</p> <p>EUSS-related services are focused on streamlining efforts to better manage costs, improve security and increase the efficiencies of critical IT resources.</p>	<p>Enterprise Active Directory (EAD) infrastructure is designed to effectively support agency and Department business processes and performance objectives by establishing a single repository for Access and Authentication. The directory service is based on the Microsoft Windows Server 2012 version of Active Directory.</p>	<p>The EUSS investment will provide full support to approximately 40,000 end users located in over 3,000 offices across the United States and its territories in FY14.</p> <p>In FY15, specific IT services are to reach across the Department and will assist all 120,000 USDA employees world-wide. A wide range of technical support will be offered to all USDA Agencies including: hardware and software support; server administration; network management; equipment inventory and tracking; telephony, and other forms of communications; security; and other services in all years of the investment.</p>

## USDA Enterprise Data Center & Hosting Shared Services

The USDA Enterprise Data Center & Hosting Shared Services (USDA EDC) investment promotes the shared (multi-tenant), cost-effective and sustainable Federal data center model for USDA agency business application hosting needs. Through the USDA EDC investment, USDA's IT Portfolio will achieve the following benefits:

- Promote the use of Green IT by reducing the overall energy and real estate footprint of USDA's hosting locations;
- Reduce the cost of data center hardware, software and operations through consolidation;
- Increase the overall IT security posture for USDA;
- Shift IT investments to more efficient computing platforms and technologies; and,

- Achieve the goals of USDA's Green Information Technology Strategic Plan published January 12, 2009.

For FY2015, the Data Center will focus on developing a customer self-provisioning cloud-based service offering for Infrastructure-as-a-Service.

The following table expands on the planned Future Architecture for the EDC investment.

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p><b>“Big Data” services (Enterprise Cloud-Based Storage)</b></p> <p>The USDA requires a service which will enable the consolidation of data to ensure protection against loss and centralization for access, analysis and presentation to the public via various tools and/or APIs</p>	<p>Implementation of “Big Data” services will reduce the need for extensive use of disparate disk storage systems and methodologies in use today.</p> <p>The USDA Service Center Agencies and organizations have extremely large amounts of data which are spread throughout the enterprise on disparate storage platforms, USB drives, external hard drives, and DVDs.</p>	<p>The EDC investment will utilize BPIs to support the Federal Data Center Consolidation Initiative and will implement technologies that enable the centralization of large data sets utilizing commodity hardware and low-cost, or free open source software, to ensure the lowest total cost of ownership while ensuring the protection of the data against loss and enabling the use and access of the data for presentation and analysis by persons or organizations within the USDA or the public sector.</p>	<p>Investigation of low-cost commodity hardware and software (FOSS). Target: First half of FY14.</p> <p>Design a platform for the storage and presentation of large data sets via various tools and/or APIs. Target: Second half of FY14.</p> <p>Procure software and hardware for approved “Big Data” designs. Target: September FY 14.</p> <p>Implement approved designs and procured hardware and software to support “Big Data” services. Target: 1<sup>st</sup> half of FY15.</p>
<p><b>Enterprise Service Bus (ESB)</b></p> <p>The USDA requires a method of allowing machine-to-machine or application-to-application communication that is low cost and highly effective.</p>	<p>Implementation of an ESB will reduce the need to custom integrate machine-to-machine or application-to-application communication which is currently performed by developing a one-to-one relationship between machines and applications as needed.</p> <p>This one-to-one relationship requires continual and redundant integrations to be performed which increases costs and also increases complexity.</p>	<p>The EDC investment’s ESB service supports the M 13-13 “Open Data” initiative, and ensures BPIs through the enablement of a “write once, use many” capability wherein integrations are written only one time in order to enable use of the ESB. Multiple machines and/or applications may then make use of that single integration without requiring multiple complex integration efforts on a one-to-one basis.</p>	<p>Investigation of ESB technologies. Target: 1<sup>st</sup> half FY14</p> <p>Recommendation for ESB technical design direction. Target: 1<sup>st</sup> half FY14.</p> <p>Procurement and Implementation of approved ESB technical design and direction.</p>

			<p>Target: 2<sup>nd</sup> half FY14.</p> <p>Production ESB use – beginning of FY15</p>
<p><b>Individual Cloud-Based Storage</b></p> <p>The USDA requires the ability to enable its employees to store data in a manner, which increases availability on and off the USDA network via PC-based browsers and mobile browsers while in and out of the office.</p>	<p>Implementation of an Individual Cloud-Based Storage service will reduce, or eliminate, the need for multiple methods of storing and transporting data (i.e. removable hard drives, external hard drives, USB drives, and DVDs)</p> <p>It will also reduce, or eliminate, the need for complex and expensive technologies (i.e. VPN appliances and clients) to enable access to data which is only available on USDA's corporate storage platform(s).</p>	<p>The implementation of Individual Cloud-Based Storage services will enable USDA personnel to store files in the "cloud" and access them from any device (PC or mobile) from within or outside the office.</p>	<p>Investigation of Individual Cloud-Based Storage technologies. Target: 2<sup>nd</sup> half FY13.</p> <p>Recommendations for Individual Cloud-Based Storage technical design and direction. Target: 1<sup>st</sup> quarter FY14</p> <p>Procurement and implementation of approved Individual Cloud-Based Storage technical design and direction. Target: 1<sup>st</sup> half FY14</p> <p>Production availability of Individual Cloud-Based Storage. Target: 3<sup>rd</sup> quarter FY14.</p>
<p><b>Self-Service Infrastructure as a Service</b></p> <p>The USDA requires the ability to enable its SCAs and organizations an efficient and cost-effective method of procuring and deploying servers to provision the applications and services necessary to complete their mission and goals.</p>	<p>Implementation of a Self-Service Infrastructure as a Service platform utilizing commodity hardware and, to the greatest extent, free open source software (FOSS) will reduce the total cost to deploy virtual servers and will increase capabilities for USDA SCAs and organizations.</p> <p>This lower cost and increased capability will help foster a more rapid adoption of FDCCI which will reduce the need for expensive data center server installations throughout the USDA.</p>	<p>Support the Federal Data Center Consolidation Initiative.</p> <p>Reduction in overall IT costs for the USDA by way of enabling USDA SCAs and organizations to utilize a low-cost and feature rich self-service Infrastructure as a Service environment to increase the pace of data center consolidation.</p> <p>Enablement of various implementations of Cloud-based virtual data centers such as:</p> <ul style="list-style-type: none"> <li>• Virtual Private Data Centers</li> <li>• Virtual Community Data Centers</li> <li>• Virtual Hybrid Data Centers</li> </ul>	<p>Investigation of Self-Service Infrastructure as a Service technology. Target: 1<sup>st</sup> quarter FY13</p> <p>Recommendations for Self-Service Infrastructure as a Service technical design and direction. Target: 2<sup>nd</sup> half FY13.</p> <p>Procurement of initial hardware and software necessary to implement the approved technical design and direction. Target: End</p>

			<p>of FY13.</p> <p>Installation of procured hardware and software in order to implement the approved technical design and direction. Target: 1<sup>st</sup> half FY14</p> <p>Production availability of initial Self-Service Infrastructure as a Service. Target: 2<sup>nd</sup> half FY14</p>
<p><b>Software Defined Networking</b></p> <p>USDA has, throughout its data centers, a significant amount of physical networking equipment. This equipment is expensive and requires routine technical refresh, which incurs more cost.</p>	<p>Implementation of Software Defined Networking (SDN) will enable the USDA to reduce its installation of physical networking devices throughout its Enterprise Data Centers. This will enable consolidation of physical networking devices by replacing them with virtual ones; thereby reducing cost and increasing flexibility due-to-the-fact that enhancements in capability will no longer necessitate as many large physical infrastructure procurements.</p>	<p>Support the Federal Data Center Consolidation Initiative.</p> <p>Reduction in overall IT costs for the USDA by way of enabling USDA EDCs to provide complex networking solutions and capabilities without requiring as much physical networking hardware which reduces overall costs to the Department.</p>	<p>Investigation of SDN technologies. Target: 1<sup>st</sup> quarter FY13</p> <p>Recommendations for SDN technical design and direction. Target: 2<sup>nd</sup> half FY13.</p> <p>Procurement of initial hardware and software necessary to implement the approved technical design and direction. Target: End of FY13.</p> <p>Installation of procured hardware and software in order to implement the approved technical design and direction. Target: 1<sup>st</sup> half FY14.</p> <p>Production availability of initial SDN capability. Target: 2<sup>nd</sup> half FY15.</p>
<p><b>Multi-tenant Virtual Desktop Infrastructure (VDI)</b></p> <p>The USDA requires the ability to enable its SCAs and organizations by</p>	<p>Implementation of Multi-tenant VDI will enable the USDA to provide desktop-like environments for multiple USDA SCAs and other organizations so that they may access</p>	<p>Support the Federal Data Center Consolidation Initiative.</p> <p>Reduces the requirement for USDA SCAs and other organizations to implement</p>	<p>Investigation of VDI technologies. Target: 1<sup>st</sup> quarter FY13.</p>

<p>providing an efficient and cost-effective method performing development of applications and management of large data sets on desktop-like infrastructure, which is near the application being developed or data being managed or manipulated to prevent the need to perform these functions across the Wide-Area Network (WAN).</p>	<p>development environments or large data sets without the need to traverse the WAN.</p> <p>This will reduce the pace at which bandwidth will need to be increased as the data will reside "locally" to the server or data which negates the need for larger WAN links to allow for efficient movement of the data between the developer or data manager and their application or large data set.</p>	<p>large and expensive storage platforms local to their developers or data managers reducing the overall cost to the government while increasing efficiencies through economies of scale within the data center.</p>	<p>Recommendations for VDI technical design and direction. Target: 2<sup>nd</sup> half FY13.</p> <p>Procurement of initial hardware and software necessary to implement the approved technical design and direction. Target: End of FY13.</p> <p>Installation of procured hardware and software in order to implement the approved technical design and direction. Target: 1<sup>st</sup> half FY14.</p> <p>Production availability of initial VDI environment. Target: 2<sup>nd</sup> half FY14.</p> <p>Expanded production availability of VDI environment. Target: 1<sup>st</sup> half FY15.</p>
<p><b>High Process Computing (HPC)</b></p> <p>The USDA requires the compute capability to process and perform analysis or simulation on extremely large data sets</p>	<p>USDA SCAs and other organizations require the need to perform simulations and process or analyses extremely large data sets. Implementation of a HPC solution within the USDA will preclude the need for these SCAs or other organizations from having to procure large computer platforms or lease these services outside the USDA.</p> <p>Additionally, this HPC platform may be able to utilize compute resources of existing server infrastructure which may otherwise sit idle, or be underutilized, during off-peak hours. Thereby reducing costs and increasing capabilities.</p>	<p>Support the Federal Data Center Consolidation Initiative.</p> <p>Implementation of a HPC service will allow for consolidation of disparate resources which are owned, or leased, throughout the Enterprise enabling FDCCI and providing increased capabilities to the USDA while lowering cost through economies of scale.</p>	<p>Investigation of HPC technologies. Target: 2<sup>nd</sup> half FY14.</p> <p>Recommendations for HPC technical design and direction. Target: 1<sup>st</sup> quarter FY15.</p> <p>Procurement of initial hardware and software necessary to implement the approved technical design and direction. Target: 1<sup>st</sup> half FY15.</p> <p>Installation of procured</p>

			<p>hardware and software in order to implement the approved technical design and direction. Target: 3<sup>rd</sup> quarter FY15.</p> <p>Production availability of initial HPC environment. Target: 2<sup>nd</sup> half FY15.</p> <p>Expanded production availability of HPC environment. Target: 1<sup>st</sup> half FY16.</p>
<p><b>Network Top Level Architecture (TLA)</b></p> <p>The USDA requires a more robust highly available top level network architecture to increase availability and enable expanded capabilities for multi-tenancy for the further implementation of various private, hybrid or community virtual data centers within the cloud as well as the enablement of an active-active clustering of geographically separate data centers.</p>	<p>USDA SCAs and other organizations require the ability to utilize the EDCs in an active-active configuration to enhance their ability to ensure uptime of their applications so that their applications can reside in either data center or an outage of any one data center does not significantly impact their application or service.</p> <p>Additionally, a more robust TLA will enhance the EDCs ability to provision cloud services to various federal, state and local customers by way of providing a method to accept external connections while maintaining security and integrity within the network.</p>	<p>Support the Federal Data Center Consolidation Initiative.</p> <p>Implementation of a more robust TLA design will enable greater capabilities within the USDA cloud thereby garnering a greater adoption of FDCCI due to the fact that services will be increasingly available by way of offering a more comprehensive failover architecture to ensure uptime even in the event of a complete outage of a single data center's connections to the WAN.</p> <p>This design will also enable increased capabilities for active-active designs which preclude the need for failover or "Disaster Recovery" as the application or service will be running in production, live, in more than one data center so the outage of any one data center is minimally impactful to the performance of the application or service.</p> <p>Finally, this design will enable the USDA EDCs to more easily, and securely, accept connections from external organizations within federal, state or local governments.</p>	<p>Investigation of TLA technologies. Target: 2<sup>nd</sup> half FY13.</p> <p>Recommendations for TLA technical design and direction. Target: 2<sup>nd</sup> half FY13</p> <p>Procurement of initial hardware and software necessary to implement the approved technical design and direction. Target: 2<sup>nd</sup> half FY13</p> <p>Installation of procured hardware and software in order to implement the approved technical design and direction. Target: 1<sup>st</sup> half FY14.</p> <p>Production availability of initial TLA environment. Target: 2<sup>nd</sup> half FY14.</p> <p>Expanded production availability of TLA environment. Target: 1<sup>st</sup> half FY15.</p>

## USDA Enterprise Messaging System – Cloud Services (EMS-CS)

The Enterprise Messaging Systems – Cloud Services (EMS-CS) is one of USDA’s new Major IT Investments. The EMS-CS investment is managed by the International Technology Services (ITS) division within USDA’s Office of the Chief Information Officer (OCIO).

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
The software as a service deployment will include Exchange Online for messaging and calendaring, SharePoint Online for document collaboration, Office Communications Online/Lync for instant messaging and Office Live Meeting for web conferencing. USDA employees will benefit from having better access to information, improved collaboration and information sharing. Key Stakeholders are the CIO office and International Technology Service (ITS).	<i>No information.</i>	<i>No information.</i>	<i>No information.</i>

## USDA Enterprise Telecommunications Shared Services

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
UTN-NG provides the next generation of enterprise-wide services such as email, enterprise messaging, data center consolidation, and secure video conferencing, and common VPN usage.	<p>UTN-NG is consistent with the Departments enterprise architecture goal of replacing multiple, redundant systems and technology components with coordinated, enterprise-wide approaches.</p> <p>As the enterprise-wide telecommunications infrastructure for the Department, the UTN-NG is a key fundamental technology enabler of Department-wide efforts such as the USDA eGovernment initiatives and the USDA Continuity of Operations (COOP) network.</p>	<p>In FY14 OCIO has undertaken to develop an Enterprise Analysis Study using a third party vendor to review further modernization efforts, build an acquisition strategy for a future enterprise network, and enhance cost savings initiatives.</p> <p>This study is expected to be completed by the end of FY14 and follow-on activities will continue into BY15.</p>	<p>Providing economies of scale in information technology &amp; telecommunication services. Target: FY14.</p> <p>Processing and maintaining usage and billing data from invoices and other sources. Target: FY14.</p> <p>Providing Centralized Billing support, to include the coming GSA Network Contract. Target: FY14.</p> <p>Coordinating the Telecommunications Mission Area Control Officers (TMACOS). Target: FY14.</p>

	<p>Accomplished through USDA Agencies and Offices utilizing a consolidated shared service, individual agency costs are reduced through this collaborative effort. USDA utilized the General Service Administration Network Contract tools to develop and award these shared services, GSA estimates that Agencies like USDA saved 15% or better through the use of their Network contract.</p>		<p>Strengthen existing services and develop an alternative service model to include best of service providers' capabilities and exploit cost saving through these actions. Target: BY15.</p>
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## Office of Procurement and Property Management (OPPM)

### Integrated Acquisition System (IAS)

The Integrated Acquisition System (IAS) is an enterprise wide procurement system that has over 6,000 active users comprised of Budget Approvers, Contracting Officers, Receivers, and Payment Specialists across 10 agencies nationwide. This enterprise-wide system serves the vast USDA procurement community by providing significant efficiencies.

IAS is constantly analyzing its architecture so as to provide an efficient and effective service to its users by offering innovative, cost effective and efficient user functionalities to its users.

IAS aims to reduce future operational costs within the current environment by reducing the number of environments, downsizing training and by moving the training application to a more cost effective server.

IAS is also conducting analysis on moving from the multi COTS environment to a One COTS environment that will provide enhanced benefits to the users, more robust functionalities and a simplified architecture that will reduce security vulnerabilities and the effort to mitigate them. IAS is currently planning on providing.

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
IAS is analyzing the options to move IAS from multi COTS to a One COTS environment.	IAS aims to reduce duplicative IT and ensure that effective and efficient services are provided by targeting the following	IAS will implement and measure the following cost-saving BPIs: <ul style="list-style-type: none"> <li>Centralize invoicing in Financial Modernization</li> </ul>	The following list provides the major milestones planned for IAS over the next five years: <ul style="list-style-type: none"> <li>Discoverer Data</li> </ul>

<p>A move to One COTS includes the following benefits:</p> <ul style="list-style-type: none"> <li>• Simplifying an overly complex architecture with over 30 known issues negatively affecting users;</li> <li>• Enabling user enhancement requests to receive the requisite attention;</li> <li>• Implementing more robust requisition functionality; and</li> <li>• Simplifying architecture to reduce security vulnerabilities and the effort to mitigate.</li> </ul> <p>PSD is currently analyzing the cost/benefits analysis of different One COTS alternatives of moving from multi-COTS to One COTS.</p>	<p>improvements:</p> <ul style="list-style-type: none"> <li>• Reducing the number of environments from five to four;</li> <li>• Downsizing the training environment to replicate the functionality of production without requiring all the data in production; and,</li> <li>• Moving the Training PRISM database and the Oracle iProcurement application suite from IBM P595 AIX to Linux to reduce platform and maintenance costs.</li> </ul>	<p>Management Initiative (FMMI);</p> <ul style="list-style-type: none"> <li>• Enhance IAS functionality by removing Oracle-PRISM and IAS-FMMI interface limitations;</li> <li>• Increase user productivity;</li> <li>• Reduce calls to IAS and FMMI Help Desks;</li> <li>• Simplify architecture to improve system responsiveness for users;</li> </ul> <p>In addition, IAS is evaluating hosting solutions to identify opportunities to sustain reliability, improve current service levels, increase architecture scalability, comply with the Federal cloud-first policy, and reduce operating costs.</p>	<p>Integration</p> <ul style="list-style-type: none"> <li>• IPP Deployment</li> <li>• Message Queuing Software</li> <li>• Infrastructure Changes to the current environment</li> <li>• Perform analysis to move from the current multi COTS solution to a One COTS solution.</li> </ul>
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## Farm and Foreign Agriculture Service

### Consolidated Farm Loan Program Information & Delivery Systems#103

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>The conceptual target architecture for the CFLPIDS investment retires the PLAS system and migrates its transaction processing functionality and interface functionality currently performed by PLAS into the DLS system.</p> <p>Loan making and servicing processes, which currently require 1-2 days to process, should be processed in minutes.</p> <p>By reengineering redundant processes, centralizing and integrating data, and leveraging modern technology, FLPIDS will</p>	<p>As new CFLPIDS systems / components are implemented, the legacy processes are retired.</p> <p>With the elimination of PLAS and the migration of PLAS reporting to the Oracle FLP data mart there will be significant savings in Greenbook charges paid to NITC. The annual savings would be approximately 1.5 million dollars. There are also productivity increases in loan making and servicing functions that will be realized when DLS is performing all current PLAS functions.</p>	<p>The investment methodology is to utilize a modular approach to replace legacy processes.</p> <p>With the retirement of the PLAS mainframe system, FLP will be supported by an online real-time system that will provide loan making and servicing functions. The removal of a nightly batch process will result in a reduction in the time required to provide loan funds to farmers and ranchers.</p> <p>With the retirement of the PLAS mainframe system, FSA will see a significant</p>	<p>The CFLPIDS project began in 2002. It is anticipated that the new system will become fully functional by the end of 2017 with the replacement of the legacy PLAS system.</p>

<p>allow the FLPs business objectives to drive technology implementation, rather than allowing legacy technology to drive business operations.</p> <p>The CFPIDS investment has been specifically designed to achieve the following key IT benefits:</p> <ol style="list-style-type: none"> <li>1. Enable an integrated, timely view of the programs risk profile by creating a centralized data repository.</li> <li>2. Streamline and modernize business processes that eliminate redundant data entry.</li> <li>3. Faster delivery and obligation of loans to eligible farmers and ranchers.</li> <li>4. Automation of routine tasks that currently require substantial manual effort.</li> <li>5. Redeployment of some USDA Service Center staff to higher value added activities.</li> <li>6. Significantly reduce scheduled and unscheduled system outages and associated productivity losses.</li> <li>7. A return to regular work schedules for USDA Service Center staff due to improved system availability.</li> <li>8. More accurate, comprehensive, reliable and available data for reporting, research and inquiry.</li> <li>9. Reduce loan delinquency through improved system capability to ensure that official lending procedures are followed for each loan application.</li> </ol>		<p>reduction in charges paid to NITC, eliminating all mainframe Greenbook charges related to the PLAS system.</p>	
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## Farm Program Modernization (MIDAS) #097

MIDAS is managed by the Farm Service Agency (FSA).

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>This project will reduce the risk of hardware failure by replacing the farm program applications residing on the outdated AS400/S36 computing platform with an integrated COTS solution, SAP.</p> <p>It will accomplish increased compliance with modern internal control structures and effectively implement improved IT security.</p> <p>MIDAS will provide capability to meet the increasing demand for customer self-service and eliminate FSA's reliance on aging technology.</p>	<p>MIDAS will centralize data assets to support farm programs, eliminate program specific duplication of functionality and non-integrated, distributed data that exists between farm program software applications.</p>	<p>MIDAS will reengineer business processes to be common.</p> <p>The productivity impact of FSA's overall migration/modernization for helping to eliminate dependency on a proprietary and restrictive operating environment is dependent on the successful reengineering of business processes into an SAP ERP solution and movement of business operations to an Enterprise Hosting Environment. By improving business processes and leveraging SAP ERP core functionality and technical architecture, we expect gains in day to day tasks thus reducing the administrative burden on county office employees and allowing for improved customer service.</p> <p>Both county office employees and customers will see changes to common processes with MIDAS. Some immediate benefits include the integration of GIS updates and their automation in farm records, streamlining of the reconstitution process, modernization of producer name and address data (Business Partner), and integration of the compliance crop table (Product Master). MIDAS is also good for producers because it allows them to report significant amounts of information about their farm or ranch once, not multiple times for multiple programs. Also, MIDAS improvement means producers are no longer limited to conducting business in one specific FSA</p>	<p>MIDAS is being developed and deployed in a phased modular manner with multiple Deployments of functionality within each major Release.</p> <p>MIDAS is deploying Release 1 functionality in a three phased approach:</p> <p>Release 1.0 Farm Records went live in April 2013 and development of</p> <p>Release 1.0 Acreage Reporting and Inventory Reporting and 1.1 MAL and BIN functionality continues.</p> <p>MIDAS is the process of rebaselining, so the overall schedule is currently unavailable: The MIDAS program will undergo a rebaseline necessary to fully complete the mission-critical components of Farm Program Delivery. This is currently underway with extensive planning meetings ongoing that include all facets of the FSA business and the OCFO team supporting the MIDAS infrastructure.</p>

	service center	
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## RMA-13 Emerging Information Technology Architecture (EITA)

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>This investment will automate functions now performed manually:</p> <ul style="list-style-type: none"> <li>Manual underwriting;</li> <li>Post-SRA changes to accounting reports; and,</li> <li>Poor/cumbersome end-user reporting tools.</li> </ul>	<p>Expect \$1M-2M annual savings from legacy system license reductions.</p> <p>Expected rough order of magnitude of the performance improvement/productivity achieved from the investment is 200%.</p> <p>Rough positive ROI expected 6 years after implementation.</p> <p>This investment reduces duplication in terms of the number of databases and stove-piped processes found in legacy systems. To ensure effective and efficient use of IT infrastructure, agency utilizes governance boards.</p>	<p>This investment supports the reengineering of all business and financial systems associated with delivery of the crop insurance program.</p> <p>The RMA-13 investment has provided cost and time savings for stakeholders through improved processing and turnaround times of private sector data delivered to our partners.</p> <p>In terms of process improvements and customer satisfaction, the agency has implemented an Agile Development methodology that allows client stakeholders to fully participate in defining priorities, managing their backlogs, and working with IT personnel in the tracking of costs, this inclusiveness and transparency has led to greater user satisfaction.</p>	<p>Several major milestones planned during the next five years include:</p> <p>Program Education Mobile Capability. Target: Q4, FY14.</p> <p>Build Data Warehouse and Data Marts. Target: Q4, BY15.</p> <p>Policy Acceptance Leverage of Emerging Technologies. Target: Q2, BY16.</p> <p>Application Reengineering to Support Cloud. Target: Q4, BY18.</p>

## Food, Nutrition, and Consumer Services

The USDA FNCS leadership is looking at utilizing Federal-wide and USDA-wide Shared Services, where possible, to satisfy the business needs for all the FNCS programs. FNCS is utilizing the USDA Enterprise Data Center (EDC) for hosting 16 applications and looks to expand into other applications in the future. FNS is also looking at the implementation of an enterprise-wide content management system, improved asset management system, and enterprise-wide source code version control system. The agency is also looking at leveraging mobile technologies to provide the FNS constituency ubiquitous access to FNS services, programs, systems, and information.

## FNCS IT Infrastructure

Future IT	Reduction and/or	Areas of Business	Major Milestones
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Capabilities	Consolidation of Duplicative IT	Process Improvement	
<p>FNCS IT Infrastructure currently has several IT modernization efforts in progress:</p> <ul style="list-style-type: none"> <li>• FNS-wide Alfresco Implementation (Alfresco is hosted at National Technical Information Service);</li> <li>•</li> <li>• Drupal conversion of the ChooseMyPlate Site;</li> <li>•</li> <li>• Completed the implementation and deployment of the FNS Enterprise application – Enterprise Work Assignment Tracking (EWAT) for the Work Assignment Tracking (WAT) for Western Regional Office (WRO) SNAP;</li> <li>•</li> <li>• Enterprise Wireless Access Implementation;</li> <li>•</li> <li>• USDA Enterprise Active Directory (EAD) Server Migration;</li> <li>•</li> <li>• Wall to Wall Deployment of Wireless for NO;</li> <li>•</li> <li>• Information Security Initiatives - EnCase Cyber Security deployment, nCircle realignment, Encase upgrade, Nitro consolidation, Rapid 7 Enterprise Vulnerability Scanner (EVS) implementation, Web Sense deployment and AppScan implementation assistance.</li> </ul>	<p>FNS takes full advantage of cloud computing benefits to maximize capacity utilization, improve IT flexibility and responsiveness, and minimize cost by hosting at USDA's National Information Technology Center (NITC) all of the systems/ applications under the FNCS IT Infrastructure investment. FNS utilizes the USDA's Enterprise Mail System – Cloud Service, Enterprise Messaging System (EMS).</p>	<p>FNS is using the Alfresco platform to implement rules and custom document workflow actions for a number of the FNCS systems. The resultant custom workflow will automate the business processes and save FNS time and money.</p>	<p>The agency's efforts related to future IT capabilities are scheduled to be completed in FY15. Please see the table below for Alfresco Platform milestones.</p>

**Efforts include requirements, design, development and testing of individual applications/systems.**

FY 15 Milestones	Dates
Final 508 Compliance/Authorization completed	05/08/2015
Authority to Operate (ATO) Go-live Date	5/25/2015
Assessment and Authorization (A&A)	11/01/2014 –5/22/2015
Incorporate* SNAP Policy Wiki (SPW)	5/30/2015

Incorporate* Retail Management Modernization (RMM)	6/15/2015
Incorporate* Store Tracking And Redemption System (STARS)	5/30/2015
Incorporate* Anti-Fraud Locator for Electronic Benefit Transfer Transactions (ALERT)	7/31/2015
Deploy Pentaho reporting	August 31, 2015
Incorporate* Retailer File Solution 2.0	September 30, 2015

*\*Efforts include requirements, design, development and testing of individual applications/systems.*

## Food Safety

### FSIS Public Health Information System (PHIS)

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>FSIS has scheduled an implementation of the PHIS Traceback Tool for integration of data within the USDA data warehouse.</p>	<p>PHIS employs a shared first approach by consuming services from other applications (e.g. USDA authorization services, USDA e-authentication services, and e-certification from international partners).</p> <p>PHIS leverages consolidated data center infrastructure.</p> <p>PHIS employs the information centric, shared platform, customer centric, and security privacy Digital Strategy principles to provide services to citizens and government organizations that consume food inspection services.</p> <p>ROI is measured through the Agency's Strategic Plan Goals, performance measures and annual performance plan. Incremental increases in ROI achieved through system releases every 6 months.</p>	<p>PHIS integrated and automated FSIS paper-based business processes often found to be inefficient, time-consuming and limiting into one comprehensive and fully automated data-driven inspection system.</p> <p>PHIS was upgraded to interface between FSIS systems for technology refresh to improve data sharing. In addition, PHIS implemented O&amp;M processes and organizational changes to facilitate data sharing to external stakeholders for improved tracking and trace back to food illness problems.</p> <p>In FY14, FSIS continues to develop and deploy functionality for exports information. Deployment is contingent on finalization of the Export Rule.</p>	<p>The PHIS system implemented performance and data base management updates to allow for additional users to come on line.</p> <p>PHIS 2.0 Release enables State PHIS functions.</p> <p>PHIS 2.1 Release enhanced the DisConnected Users (DCU) functionality.</p> <p>PHIS 3.0 Establishment Profiles questionnaires, Lap Sampling questionnaires, Import Foreign Equivalency Verification part of the SRT module and Lab Sampling Enhancement.</p> <p>PHIS 4.0 Export functionality.</p>

### Public Health Data Communications Infrastructure (PHDCIS)

Future IT Capabilities	Reduction and/or Consolidation of	Areas of Business Process	Major Milestones
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	Duplicative IT	Improvement	
<p>FSIS expects to continue funding the PHDCIS O&amp;M services contract, telecommunication costs, hardware and software license renewals, and replacing end of life technologies.</p> <p>FSIS is currently exploring and implementing mobility and wireless technologies.</p>	<p>PHDCIS leverages telecommunication (network, video, and telephony) services from the USDA Network.</p> <p>PHDCIS uses USDA's consolidated Enterprise Data Centers and email collaboration services.</p> <p>FSIS will continue to review USDA's consolidated service offerings for efficiencies as they become available.</p>	<p>FSIS will continue to improve Business Processes related to the PHDCIS Helpdesk Customer Service response time to assist end users perform more efficiently the Mission Critical Needs of FSIS.</p>	<p>FSIS is currently deploying a laptop refresh based on the 4 year technology refresh cycle.</p> <p>FSIS is migrating from Windows XP to the Windows 7 desktop operating system.</p> <p>FSIS increased the security of its customer facing applications by implementing state-of-the-art firewall and network technology.</p>

## Marketing and Regulatory Programs

### Web-Based Supply Chain Management (WBSCM)

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>WBSCM is implementing a multisource; single-homed data repository with the capability to dynamically compile and distribute data in multiple formats will increase operational efficiencies based on user specific needs.</p>	<p>WBSCM consolidated 120 physical legacy application servers to 39 robust high capacity application servers resulting in reduced hosting cost by \$1.2million annually. Additionally, WBSCM hardware consolidation reduced system risk exposure originating from end of life hardware failures.</p>	<p>The investment will decrease total duration for commodity surplus removal efforts and increase the level of data integrity and accessibility currently available to WBSCM users.</p>	<p>Over the next 5 years, WBSCM will scale out to approximately 15,000 stakeholders in the following organizations:</p> <ul style="list-style-type: none"> <li>• State distributing agencies (SDAs); <ul style="list-style-type: none"> <li>○ State Agencies for Aging</li> <li>○ State Departments of Agriculture</li> <li>○ State Departments of Education</li> <li>○ State Departments of Health/Human/Social Services</li> </ul> </li> <li>• Recipient agencies (RAs); <ul style="list-style-type: none"> <li>○ School Food Authorities <ul style="list-style-type: none"> <li>▪ U.S. School Districts</li> <li>▪ U.S. Schools <ul style="list-style-type: none"> <li>○ Senior Centers</li> <li>○ Food Banks</li> <li>○ Soup Kitchen</li> </ul> </li> </ul> </li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>o National Food Warehouse uses</li> <li>• Indian tribal organizations (ITOs): <ul style="list-style-type: none"> <li>o Native American Tribes</li> </ul> </li> </ul> <p>In addition, WBSCM is planning the following milestones:</p> <p>Business Process Engineering Effort. Target: FY16.</p> <p>Data Reporting Strategy. Target: FY16.</p> <p>Functional Upgrade. Target: FY18-19.</p>
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### Animal Disease Traceability Information System

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
AEI is adding tablets to the supported workstation list. This provides field personnel better access to agency and Departmental systems from the field.	<p><b>Shared First:</b></p> <ul style="list-style-type: none"> <li>• APHIS is in the process of moving its systems to an EDC.</li> </ul> <p><b>Cloud First:</b> AEI's Domino platform moved to NITC cloud service. APHIS plans to Sunset the Domino platform 01-2014.</p> <p><b>Digital Strategy:</b> APHIS implemented Web Sphere's Portal to adhere to the President's Digital Strategy.</p> <p>AEI has a 12 year ROI compared to commercial provided solutions.</p>	APHIS strives to increase AEI availability from 99.97% to 99.999%.	<p>AEI's Domino platform moved to NITC cloud service.</p> <p>AEI has migrated all APHIS workstations to USDA's EAD</p>

### APHIS Enterprise Infrastructure

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
AEI is moving to new technologies to reduce overall Telecom costs i.e. (Session Initiated Protocol –	<p><b>Shared First:</b></p> <ul style="list-style-type: none"> <li>• APHIS has consolidated its mobile telecommunications</li> </ul>	APHIS strives to increase AEI availability from 99.97% to 99.999%.	APHIS has consolidated its mobile telecommunications contracts.

<p>SIP). SIP allows APHIS to eliminate Primary Rate Interface (PRI) circuits used at each location. The voice traffic will then be run across the existing wide-area-network (WAN) circuits. As a result, APHIS is saving costs on over 135 PRI circuits across the agency.</p>	<p>contracts.</p> <ul style="list-style-type: none"> <li>APHIS has migrated its email to the USDA Outlook email.</li> <li>APHIS is in the process of moving its systems to an EDC.</li> </ul> <p><b>Cloud First:</b> AEI's Domino platform moved to NITC cloud service. APHIS plans to Sunset the Domino platform 01-2014. Oracle is currently under review for move to the NITC Cloud service.</p> <p><b>Digital Strategy:</b> APHIS implemented Web Sphere's Portal to adhere to the President's Digital Strategy.</p> <p>AEI has a 12 year ROI compared to commercial provided solutions.</p>		<p>APHIS has migrated its email to the USDA Outlook email, and is in the process of moving its systems to an EDC.</p> <p>APHIS is currently analyzing moving its Oracle infrastructure to the NITC Cloud service.</p> <p>APHIS implemented Web Sphere's Portal to adhere to the President's Digital Strategy.</p>
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## Natural Resources and Environment

### USDA Land Public Safety Radio System (AgPRS)

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p><b>LMR Mobile Apps</b> Asset Management Ticket Management Remote Site Monitoring.</p> <p><b>Performance Monitoring</b> Performance monitoring allows the service provider as well as the customer to know proactively.</p> <p><b>Tower/Shelter Initiative</b> Communication Sites that is collaborative in construction and use to the extent possible.</p> <p><b>APCO P25 Digital Migration</b> P25 capability enables multi agency collaboration.</p>	<p><b>LMR Mobile Apps</b> Increase in system operation time and reliability Decrease in travel and overtime.</p> <p><b>Performance Monitoring</b> Enables Remote Site Monitoring.</p> <p><b>Tower/Shelter Initiative</b> Reduction in tower and shelter site fund requirement through partnering and sharing.</p> <p><b>APCO P25 Digital Migration</b> Consolidation, single platform for all land mobile radio communications.</p>	<p><b>LMR Mobile Apps</b> Operations: System Sustainment (Break/Fix) Field Employee: System Awareness</p> <p><b>Performance Monitoring</b> Operations: System Sustainment (Break/Fix) Field Employee: System Awareness.</p> <p><b>Tower/Shelter Initiative</b> C10 Sustainment and Life Cycle Replacement.</p> <p><b>APCO P25 Digital Migration</b> Operations: Smart system allows inventory mgmt., use analysis and low data transfer. Field Employee: provides</p>	<p><b>LMR Mobile Apps</b> FY14 Application Pilot and proof of concept testing FY15 Regional level testing FY16 National level roll out.</p> <p><b>Performance Monitoring</b> FY14 additional sites added. FY14 Discuss vendor</p>

<p><b>Law Enforcement</b> Multi-band and AES Encryption.</p> <p><b>FirstNet/PSBN</b> FirstNet is directed to “ensure the establishment of a nationwide, interoperable Public Safety Broadband Network.”</p>	<p><b>Law Enforcement</b> Multi-band and AES Encryption.</p> <p><b>FirstNet/PSBN</b> Potential consolidation of all public safety responders nationally.</p>	<p>multi-agency communication, greater capabilities and awareness.</p> <p><b>Law Enforcement</b> Multi-band and AES Encryption.</p> <p><b>FirstNet/PSBN</b> Administration, Research, Fire and Law Enforcement in the urban interface areas.</p>	<p>provision off the shelf.</p> <p><b>Tower/Shelter Initiative</b></p> <p>FY14 Develop master plan process.</p> <p>FY14 Provide partner before build governance proposal.</p> <p><b>APCO P25 Digital Migration</b></p> <p>FY14 Create P25 migration guide.</p> <p>FY15 Pilot test full migration in a particular geography.</p> <p><b>Law Enforcement</b></p> <p>Multi-band and AES Encryption.</p> <p><b>FirstNet/PSBN</b></p> <p>FS is partnering with DHS and the Emergency Communication Preparedness Center (ECPC) on this initiative.</p>
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## Forest Service Computer Base (FSCB)

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
Virtual Data Center	The Forest Service needs technology-agnostic applications.	User applications are free of any dependence on specific hardware, operating systems, or location.	NRM and Forest Service KC data centers will be consolidated in the USDA NITC data center.

Virtual Voice Services	Consolidation of FS voice services with USDA voice services.	Cost savings will result from consolidation of services.	Planning meeting January 2014  Strategy for consolidation being refined 2 <sup>nd</sup> quarter 2014.
Virtual Computing Capability	Forest Service Users need mobile information resource support for field activities.	Reduce dependence on outdated and expensive-to-maintain computing devices.	Mobile strategy documented 4 <sup>th</sup> quarter 2013.

## Resource Ordering and Status System (ROSS)

ROSS supports several of the high priority action items in the FS Action Plan. These include safety, risk management, cultural transformation, and the Landscape Conservation Framework.

- **Safety**: ROSS enables resources to be mobilized more rapidly than using paper based manual processes. This provides resources to incidents faster often improving the safety of our citizens and fire fighters while reducing the impact to public lands. ROSS more efficiently manages resources and lets the user community know where resources are located.
- **Risk Management**: ROSS contributes to risk management capacities and skills by providing systems that automate processes. ROSS helps users manage data about incidents to help the interagency community make informed decisions (e.g., ROSS helps users see all the resources and track them). Historical information is used to derive trends to reduce risks for future incidents.
- **Cultural Transformation**: The Cohesive Wildfire Management Strategy is the beginning of a significant cultural transformation in wildland fire management. ROSS directly supports the vision articulated in the Strategy to: “safely and effectively extinguish fire, when needed; use fire where allowable, manage our natural resources; and as a Nation, live with wildland fire.” ROSS also supports one of three primary factors in the Strategy: “responding to wildfires.”
- **Landscape Conservation Framework**: ROSS supports this via the inclusion of the next phase of the Cohesive Wildfire Management Strategy into the Landscape Conservation Framework.

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
ROSS is an interagency software application which will link approximately 400	Shared Services: Next-Gen ROSS offers the perfect opportunity to	Cloud Computing: The current ROSS system has issues with performance	No further milestones reported at this time.

interagency wildland incident dispatch offices to share resource and incident status information, provide a means to order resources, and provide for order confirmation.	share services. Consolidated identity management Shared infrastructure Business intelligence tools Capacity management	during peak fire season. It is believed that moving to a Cloud infrastructure for Next-Gen ROSS would be ideal.  ROSS is working with the host General Support system, Fire National Enterprise Support System (NESS) to explore cloud alternatives.	
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## Conservation Delivery Streamlining Initiative (CDSI)

In 2015, NRCS will continue to improve technical assistance delivery to agricultural producers with continued development of key elements of the Conservation Delivery Streamlining Initiative (CDSI). The 2015 Budget includes a total of \$15.7 million for CDSI. New capabilities under CDSI will increase flexibility by allowing NRCS staff to perform the administrative functions of conservation work from the field rather than the office. Full implementation of CDSI will result in faster service for customers and streamlined business processes for planners. NRCS estimates that when fully implemented it will allow the Agency to refocus over 1,500 staff years on customer service and improved conservation assistance. NRCS is in the process of implementing CDSI, which will improve data quality. These efforts include updating processes for geospatial data entry for conservation activities as well as requirements for consistency.

CDSI will streamline business processes across the NRCS lines of business in order to achieve the following benefits:

1. Simplify Conservation Delivery – make conservation easier for customers and employees.
2. Streamline Business Processes – increase efficiency and be integrated across NRCS business lines.
3. Ensure Science-based Assistance – continue delivery of technically-sound products and services.

These CDSI objectives will result in NRCS field staff spending more time in the field working with clients developing science-based conservation plans and less time on administrative tasks associated with program delivery. Additionally, NRCS clients will have the ability to perform “on-demand” tasks online, such as requesting assistance, reviewing conservation plans or approving contractual documents.

When implemented, CDSI will leverage three browser-based user interface views into a common middle-tier business logic/workflow layer, along with a supplementary install of

ESRI geospatial desktop software as needed by NRCS field planners. These views include Client Gateway, Conservation Desktop with technical and financial functionality, and a flexible Mobile Planning Tool with integrated resource inventory and decision support components. It will provide critical IT functionality to implement a redesigned business model, processes and the ability for users the ability to have the same experience in the office as well as out of the office, allowing them to work with or without connection (it should be noted that there may be a reduced set of functionality available while offline). The results will include a much more science-based conservation planning and application delivery system, a tight alignment between NRCS' technical and financial assistance processes, the elimination of duplicate data entry between systems, expedited financial assistance contracting through streamlined and nationally consistent processes. Mobile Planning Tool technology is a critical component, because it allows NRCS' 8000 planners to efficiently conduct their field-based processes without the requirement to duplicate steps and data entry back in an office setting. Mobile Planning Tool also reduces the number of trips to the field by NRCS, as well as office visits by the clients.

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
Please see description above.	As the Conservation Delivery Streamlining Initiative (CDSI) comes online over several fiscal years, initially five legacy systems will be replaced or retired. As functions currently implemented via legacy applications are deployed under the CDSI Conservation Desktop, those legacy applications will be deprecated and decommissioned.	New business processes that replace existing ones may also result in retirement of legacy applications.	CG v1 Deployment complete June 2015  CG v2 Deployment complete June 2016  CD v2 Deployment complete May 2016  MP v1 Deployment complete Jan 2017  CG v3 Deployment complete Aug 2017  MP v2 Deployment complete Aug 2017  CD v3 Deployment complete Oct 2017  CDSI O&M complete September 2023

## Research, Education, and Economics

The Research, Education, and Economics Mission Area does not oversee any major investments, and is not reporting a future architecture at this time; however, REE is

focused on developing systems and data management tools that will support the USDA and its stakeholders and have a positive impact on the public health and the agricultural economy.

As a changing climate drives increases of temperature, atmospheric carbon dioxide, and predictions of extreme weather events, one of the priorities within the Research, Education, and Economics (REE) mission area is to better understand the effects of climate change and develop adaptive strategies and technologies to address its impacts. This priority, which is carried out through Agricultural Research Service (ARS), will address the risk of climate change to agriculture by developing more climate resilient agriculture production systems. Specifically, the agency will take a three-pronged approach to this issue:

1. Develop decision support systems and data management tools that enable users to compare production systems under various climate change scenarios;
2. Build new knowledge on the exposure and sensitivities of agro-ecosystems to climate change; and
3. Develop management technologies and strategies to enhance sustainability, including more precise delivery of agricultural inputs and more resilient plant varieties and animal breeds.

ARS will leverage the Long Term Agroecosystem Research Network and investments in cyber infrastructure for big data to expand collaboration, accelerate the development and access to new knowledge, and deploy climate adaptation technology to the field. Additionally, ARS will engage the network of USDA Regional Climate Hubs to accelerate region-specific research on climate effects and ensure the transfer and adaptation of new technology.

## Rural Development

### Comprehensive Loan Program (CLP)

Future IT Capabilities	Reduction and/or Consolidation of Duplicative IT	Areas of Business Process Improvement	Major Milestones
<p>This investment will modernize systems for stream-lined, automated processes for the end user:</p> <ul style="list-style-type: none"> <li>• System Modernization – This effort includes the modernization of</li> </ul>	<p>CLP helps reduce duplicative IT by the following efforts:</p> <ul style="list-style-type: none"> <li>• Consolidation of like processes such as cash management, loan</li> </ul>	<p>CLP assists the mission owners by improving the following end-user processes:</p> <ul style="list-style-type: none"> <li>• Develop an Automated Loan Application document intake and</li> </ul>	<p>The CLP Major Milestones are currently planned to be completed:</p> <ul style="list-style-type: none"> <li>• System Modernization - Complete by 9/29/2017</li> <li>• Core Services</li> </ul>

<p>existing RD systems, creation of a centralized loan origination system/process, and modernizing the security infrastructure by concentrating on access and system intrusion.</p> <ul style="list-style-type: none"> <li>• Core Services Modernization - This effort includes the modernization of the Tabular Data and Geospatial Warehouse, creating a single port of entry web portal for systems and establishing Service Oriented Architecture (SOA) services accessible to all systems.</li> <li>• System Retirement - This effort includes the retirement of legacy mainframe systems that include the Automated Multi-Family Housing Accounting System (AMAS), RUS-Legacy and the Program Loan Accounting System.</li> </ul>	<p>eligibility rules engine, and loan document repository into a shared services platform;</p> <ul style="list-style-type: none"> <li>• Integration to the FMMI platform; and</li> </ul> <p>Sharing of common systems as needed with Farm Service Agency, such as the Guaranteed Loan System.</p>	<p>processing system for all loan programs utilizing a common framework;</p> <ul style="list-style-type: none"> <li>• Develop an Enterprise Cash Management portal for all RD cash receipts and disbursements;</li> <li>• Develop mobile applications such as the Multi-Family Housing inspection application;</li> <li>• Develop a Common Customer entry portal for all share services and systems; and</li> <li>• Develop an Electronic Case File for the loan application and servicing systems to serve as a common document repository.</li> </ul>	<p>Modernization - Complete by 9/29/2016</p> <ul style="list-style-type: none"> <li>• Legacy Systems Retirement - Complete by 12/29/2017</li> </ul>
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## Transition Plan

The previous sections provided a holistic overview of USDA's Current and Future Architectures, and accounted for all of the Major Investment's within the Department's recently re-aligned IT portfolio, which resulted in the reduction of the USDA major IT portfolio from 38 major investments in FY13 to 24 major investments for FY14. The following section addresses USDA's Transition Plans - the activities needed to yield the desired future state, according to USDA priorities, dependencies, and constraints. These plans form the basis for IT modernization within the USDA and its Agencies, driving both investment and implementation of systems and technologies that will transform USDA's business. The transition activities identified in this Roadmap will become the plans USDA implements to achieve IT modernization.

USDA places particular emphasis on eleven (11) high priority modernization initiatives for FY 2015:

1. Modernize and Innovate the Delivery of Agricultural Systems (MIDAS)

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2. Conservation Delivery Streamlining Initiative (CDSI)
  3. Comprehensive Loan Program (CLP)
  4. Financial Management Modernization Initiative (FMMI)
  5. Food Safety Modernization - Public Health Information System (PHIS)
  6. RMA-13 Emerging Information Technology Architecture (EITA)
  7. Web Based Supply Chain Management (WBSCM)
  8. Animal Disease Traceability Information System (ADTIS)
  9. Resource Ordering Status System (ROSS)
  10. Homeland Security Presidential Directive-12 (HSPD-12)
  11. Internet Protocol version 6 (IPv6)

These high priority modernization initiatives ensure a line of sight across strategic planning, budget planning, and CPIC. Additionally, they identify opportunities for intra-departmental collaboration.

USDA's high priority modernization initiatives are revolutionizing the way the USDA interacts with other government agencies, businesses, and citizens. By optimizing information systems and content for mobile use, using open data principles and web Application Programming Interfaces (APIs), USDA strives to build capacity for public service innovation, and encourage creative consumption and application of USDA's extensive resources, including high-value data, services or systems, and content. USDA will continue to modernize information systems to maximize interoperability and information accessibility by establishing a baseline portfolio, and identifying high-value and priority data sets, systems, and services. Furthermore, USDA will engage with internal and external customers to gather feedback and better prioritize information system modernization.

The Transition Plan section of the Roadmap presents USDA's High-Priority Modernization Initiatives (HPMIs) and High-Priority Administrative Initiatives (HPAIs). Although many of these initiatives are also covered under the Current and Future Architecture sections of the Agency to which they belong, additional information for these investments is provided in the Transition Plan section of the Roadmap. The transition activities identified in the section of the Roadmap define and sequence the activities needed to yield the Department's desired future state and form the basis for the Department's greater IT modernization efforts, driving its investment in and implementation strategies for new services, technologies, and systems.

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The Transition Plan presents the following subsections for each High Priority Initiative:

- **Description:** The Description section provides a general overview of the investment. Unlike the Current Architecture and Future Architecture sections, which present a tabular layout, the Transition Plan descriptions are presented in paragraph format.
- **Transition Schedule and Milestones:** The Transition Schedule and Milestones section provides a high-level, five year overview of the planned activities for the initiative. Agencies that oversee a High Priority Initiative have provided schedules that show dependencies between major activities and/or milestones. For the purposes of the Enterprise Roadmap, these schedules have been amended to show only high-level tasks and dependencies.

The timelines for USDA's modernization and administration initiatives are provided on the pages that follow.

## High Priority Modernization Plans

### Modernize and Innovate the Delivery of Agricultural Systems (MIDAS) Timeline

FSA is the business owner of Modernize and Innovate the Delivery of Agricultural Systems (MIDAS) initiative. This initiative will transform FSA's delivery of Farm Program benefits, on behalf of the Commodity Credit Corporation (CCC).

#### Description

MIDAS is using a phased-deployment plan, starting with the management of farming operations data common to all programs and followed by the establishment of the core grant management processes. Iterative releases will deliver specific farm programs capabilities. The order in which programs are to be released will be determined based on criteria including program commonality, annual application deadlines, and payment cycles. This modular approach allows USDA to be responsive to its business cycle and to roll out functionality in a way that supports both field office and producer needs.

The MIDAS initiative will:

- 
- Reengineer business processes fostering commonality.
  - Centralize data assets to support all farm programs.
  - Eliminate program specific duplication of functionality and non-integrated, distributed data that exists between farm program software applications.
  - Accomplish increased compliance with improved IT security.

FSA will install commitment-based accounting practices (e.g., obligations, commitments, outlays, funds control) to upgrade both the program and financial management business practices of the CCC. As they are transitioned to the new system, FSA's Farm Programs will become compliant with federal financial accounting standards, such as, the Federal Information Security Management Act (FISMA) and the Federal Managers Financial Integrity Act (FMFIA). The MIDAS initiative is aligned with the OCFO's FMFI.

MIDAS Release 1 will establish a platform to support core business processes common across farm programs, and begin the phased transition of prioritized programs to that new platform. This will help move FSA away from program-specific systems and towards a repeatable, horizontal process-based approach to program delivery. Existing functionality in FSA's portfolio of Java web applications and web services will be leveraged and reused where practical. Functions which cannot be easily or economically implemented in the ERP will be delivered as services in the custom Java portfolio, as determined by a risk-adjusted cost/benefit analysis.

The solution will be designed to identify and establish a set of common processes and data that support all farm programs, such as the basic lifecycle processes of a benefits application or the data related to producer, land and acreage reporting; and then implement them as a common platform.

The MIDAS initiative finished its Release 1 Deployment 1.0 and Deployment 1.1 "Blueprint" phases in FY 2012. These design phases arrived at a set of common processes and master data. With blueprinting completed, the initiative has passed into the "Realization" phase. The overall purposes of realization are to:

- Build and test a complete business and system environment.
- Develop training material and end-user documentation.
- Obtain business approval.

Several overlapping deployment phases will add functionality and programs incrementally.

## Transition Schedule and Milestones

FSA did not report any changes to its transition schedule or its milestones; however, it should be noted that in August 2014, the MIDAS investment rebaselined its schedule for the following reasons:

<b>Rebaseline Reasons Defined</b>	
<b>External - Direct Mandate</b>	Rebaselined due to investment -specific budget changes mandated by Congress or OMB(e.g., Congressional rescissions or OMB budget decisions).
<b>External - Agency Mandate</b>	Rebaselined due to agency budget changes resulting from OMB, Congressional, or legislative action (e.g., Fund disaster recovery efforts, legislation directing all agencies to take across -the-board reduction, leaving each agency with discretion to make the cut).
<b>External - Phase Gate</b>	Rebaselined due to a change from one investment life -cycle phase to another (i.e., planning, acquisition, mixed life cycle, operations and maintenance) where cost and schedule milestones are expected to change significantly.
<b>External – Protest</b>	Rebaselined due to sustained long-term protest of contract.
<b>Internal - Bureau Mandate</b>	Rebaselined due to Department to bureau budget changes (e.g., Department passback) that necessitates a change to the previously approved baseline.
<b>Internal - IRB Mandate</b>	Rebaselined due to agency investment review board approved changes in requirements, performance measures or scope (including enhancements and changes to functionality) or due to agency investment review board approved business alignment change (e.g., project mergers or business realignments).
<b>Internal - Technological Change</b>	Rebaselined due to major technology changes or process innovations requiring changes to investment's cost, schedule or performance (usually to reduce cost/time to deployment).
<b>Internal - Poor Performance</b>	Rebaselined due to significant poor project performance and leadership change.
<b>Internal - Contractor Performance</b>	Rebaselined due to poor contractor performance requiring contractor change.
<b>Internal - Inaccurate Baseline</b>	Rebaselined due to original baseline being significantly inaccurate or rebaselined due to significant changes to requirements.

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## **MIDAS Path Forward**

- Improve Value to Customer:  
Provides producers flexibility to have business partner information updated at any County Office
- Automates manual processes, such as notification to multi-county offices of changes to customer records
- Improves accuracy of customer records and reduces improper payments through automated validation of address and tax information
- Provides program eligibility information through a single consolidated view, eliminating the need to toggle between multiple systems

## **Overall Progress:**

- Hypercare Status as of 1/29/2015 is GREEN; with the successful stabilization of the Release 2 deployment, Hypercare activities were informally moved to Sustainment.
- Formal closure of MIDAS Hypercare was completed with Decision Gate 7 presentation held on 2/9/2015.
- Developed MIDAS Sustainment Plan; in finalization process.
- Support for activities coming out of Hypercare is transitioning to the MIDAS Sustainment teams.
- Infrastructure issues in resolution process:
- Unexpected database reboots forcing Customer Relationship Management (CRM) database to come down.
- Database failover processes not occurring properly.
- Application reconnect after failover not working correctly.
- Data remediation efforts underway for identified incidents.

## **Next Steps:**

- With achievement of Decision Gate 7, there are no ongoing major development efforts in the MIDAS investment.
  - The MIDAS system - the SAP platform and associated modules (Farm Records, Business Partner, and Product Master) - will enter Sustainment.
  - There will be small projects to maintain (fix defects), stabilize (technical upgrades), and improve (enhancements) MIDAS.
- Development of Lessons Learned in progress.
- FSA must still implement solutions for Acreage Report and Customer Self Service.

- 
- ACRSI - Acreage Crop Reporting Streamlining Initiative is a Farm Bill requirement for USDA to standardize the acreage reporting processes, program dates, and data definitions across the various USDA programs.
  - Customer Self Service (CSS), previously designated as the final MIDAS release, will be implemented as part of the USDA Service Center Client Gateway.

## **Conservation Delivery Streamlining Initiative (CDSI)**

The NRCS is developing IT services for the Conservation Delivery Streamlining Initiative (CDSI). In support of this initiative, NRCS outlined a Roadmap of development and discovery activities for updating current conservation planning techniques, technical assistance delivery systems, and business applications across the agency.

The CDSI will be the main driver for NRCS IT software development over the next five years. The CDSI has identified three over-arching objectives that form the framework for developing the next generation of IT applications:

- Simplify conservation delivery.
- Streamline business processes.
- Ensure science-based technical assistance.

The following summarizes the planned IT response to the CDSI in terms of how the new IT approaches and application architecture will save time, reduce effort, and optimize costs:

- Define, streamline, and integrate formalized conservation assistance processes across Agency business lines.
- Prioritize and deploy IT that effectively supports and aligns with the delivery of conservation assistance.
- Provide field technical staff with natural resource science and technology focused to support conservation planning and application.
- Implement programs through alternative staffing and delivery approaches designed around more efficient business processes.
- Establish tools and processes for interacting with clients that are resource-centric, enhance customer service, and increase NRCS' efficiency.

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The CDSI, initiated in April 2011, will provide conservation desktop technical assistance and financial assistance, a client gateway to improve data access, and a mobile planner providing resource inventory and decision support tools to support environmental compliance, conservation effects, etc.

## **Description**

In April 2013, the Conservation Delivery Streamlining Initiative (CDSI) contractor delivering a version of the Conservation Desktop (CD) that could not be deployed. The CD v.1 as it was delivered by the former vendor was not releasable and was not be available for the MPT or other CDSI related projects to integrate with or connect to. Gartner recommended a complete rewrite of the CD in Pega as the path forward. ITC fully agreed with this assessment.

NRCS completed a root-cause analysis to determine the primary reasons behind the failure, which resulted in the identification of approximately 40 issues that were identified as root causes and grouped into four categories:

- Pre-contract preparation
- Contracting approach
- Contract execution and management
- Government testing were

Following the root cause analysis, the CDSI Business Team and OCIO IT identified and analyzed additional issues and risks, collaborated on an alternatives analysis, and agreed on the following path forward:

- Terminate the Mobile Planning Tool (MPT) contract upon acceptance of the Requirements Document & Requirement Tradability Matrix (RTM).
- Proceed with a new solicitation package that combines CD v.2 and Mobile Planner (MP) requirements, design & architecture, and development with the focus on CDSI Foundation and all recommended Mobile Planner (MO)-related requirements.

The new approach has also introduced additional oversight and reduced the overall risk or parallel/separate efforts for CD v.2 and MPT. For example, NRCS recently established a new Project Management Office (PMO) whose primary purpose is to develop and use standardized project management policies, processes and methods. To date, the PMO has introduced project management best practices and enhanced oversight activities. As a result, NRCS has seen a number of improvements in the execution of the CDSI project, which include the following benefits:

- Alignment with the CDSI Roadmap and the NRCS OCIO IT Strategic Plan.

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- Full integration of CD v.2 and MPT, which ensures continuity between the field office and mobile field work.
  - Enablement of NRCS to combine the requirements of CD v.2 and MPT, which results in an acquisition solution that targets 75% of CDSI within one solicitation and contract.
  - Provides long term sustainability and adaptability based on the fact that the code base will be more compatible between CD and MPT.
  - Ensures that MPT requirements, coupled with CD v.2 requirements, are integrated and reduces overall O&M costs (both hardware and resources) for the final CD & MPT solutions.

The core components of the CD were and are critical to the entire CDSI ecosystem, and NRCS plans to improve its foundational IT systems under other existing investments prior to the release of CD v.2. The objective of these improvements are to move the Agency forward in improving access to Geo-data, improving the management of financial and technical assistance documents, enabling further CDSI development, supporting national performance reporting, and beginning to migrate the National Conservation Planning Database (NCP) to the CDSI National Planning and Agreements Database (NPAD).

The release of the CDSI CD is planned for completion in October 2015.

## Transition Timeline and Milestones

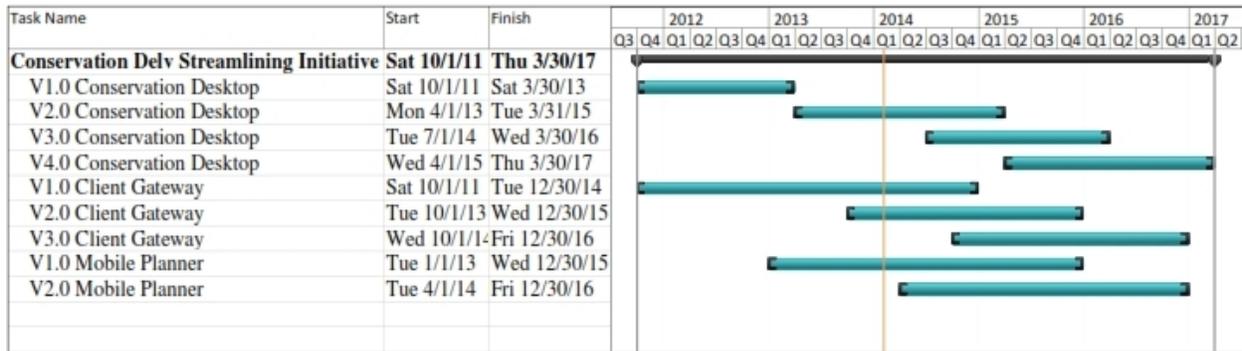


Figure 14: Conservation Delivery Streamlining Initiative Timeline

## Comprehensive Loan Program

As a primary provider of loans and grants for rural Americans, Rural Development (RD) is sponsoring the Comprehensive Loan Program (CLP) initiative to meet the challenges of a rapidly changing environment.

### Description

RD continues to seek opportunities to operate more efficiently through improved and shared platforms; to better understand the needs of internal and external customers; and to equip its IT organization with the information and agility to effectively respond to the requirements of its business stakeholders. The current challenges for RD include:

- Reduce long development timelines and legacy system limitations that make it difficult to rapidly support new and changing programs.
- Improve agility for coding of business rules and logic that can be used across systems and loan programs.
- Improve transparency in portfolio performance for better financial reporting and investment management.
- Increase business efficiencies by reducing paper-based processes and the number of processing hand-offs.
- Increase system integrations that reduce stakeholder input of data into multiple locations.
- Improve automation support for field office staff to increase productivity and customer-facing activities.

# Transition Schedule and Milestones

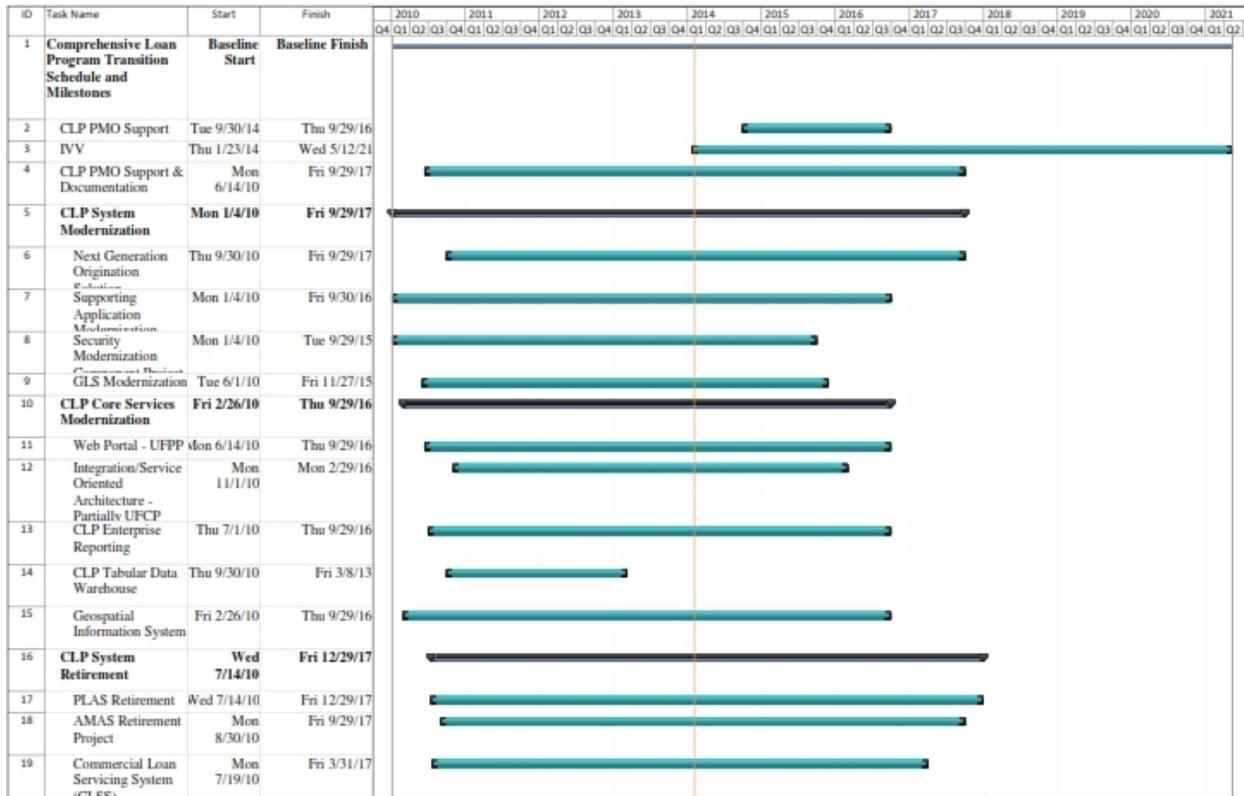


Figure 15: Comprehensive Loan Program Timeline

## National Finance Center Shared Services – IT Systems

National Finance Center Shared Services is supporting the business owner USDA OCFO with strategic services, processes, and technology upgrades to increase cost savings and cost avoidance. The initiatives are stated within the National Finance Center Shared Services investment and the Tech Refresh/Tech Insertion Plan.

### Description

The Tech Refresh/Tech Insertion Plan identifies several technology refreshes and insertions that address the future National Finance Center Shared Services service offerings and service capabilities. These high priority modernization projects include but are not limited to:

- IT infrastructure to support IPv6
- Voice over Internet Protocol (VoIP)/ Video Collaboration technology insertion

- 
- Network
  - Storage Area Network (SAN) End-to-End Monitoring

## **Financial Management Modernization Initiative (FMMI)**

The Office of the Chief Financial Officer (OCFO) is the business owner of the Financial Management Modernization Initiative (FMMI). The primary objective of the USDA Financial Management Modernization Initiative is to improve financial management performance by providing USDA agencies with a modern, efficient core financial management system that complies with Federal accounting and systems standards.

In FMMI, Foreign Agricultural Service (FAS) has partnered with OCFO to extend the Enterprise Resource Planning (ERP) implementation to include a comprehensive, integrated solution that provides financial assistance programs to citizens and businesses. The solution standardizes and supports the end-to-end process of planning, selection, management, and evaluation of Grant Programs with a single integrated platform. This single integrated solution can support all program types eliminating data redundancy and inefficiencies

## **Description**

FMMI enables agency-wide implementation of expanded functional capability, full integration of critical system components, continued business process reengineering, and continued high-quality production and customer support. FMMI also ensures better integration of program, financial, and budgetary information to support more efficient and effective management of USDA's mission and programs aligned to established performance goals and objectives.

FMMI will replace the mainframe-based Foundation Financial Information System (FFIS), within the Corporate Financial Management System (CFMS), with an ERP solution. FMMI will enable migrating the current distributed, multi-instance mainframe system to a federally compliant, consolidated, single-instance web-based system.

FMMI is currently operational in all USDA Department Staff Offices and the Office of the Inspector General (OIG), as well as, the following agencies: Foreign Agricultural Service (FAS), Agricultural Research Service (ARS), Economics Research Service (ERS), National Agricultural Statistics Service (NASS), National Institute of Food and Agriculture (NIFA), Food Safety and Inspection Service (FSIS) and NRCS. The Forest

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Service (FS) was deployed in 2012. Food and Nutrition Service (FNS) Integrated Program Accounting System (IPAS) will be integrated into FMMI around 2015.

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## Transition Schedule and Milestones

None Provided for FMMI.

## RMA-13 Emerging Information Technology Architecture Timeline

The Risk Management Agency (RMA)-13 Emerging Information Technology Architecture initiative supports the replacement of current legacy systems that are at or past end-of-life cycle and unable to meet the demands of the current risk management program.

### Description

This initiative supports the strategic plan of USDA's Risk Management Agency (RMA) by applying electronic commerce technology to integrate RMA and its insurance delivery partners into one electronic community that supports day-to-day operations, and provides a source of ongoing and reliable business intelligence for managing and continuously improving all aspects of the program.

The goal is to strategically align IT to support USDA core business processes that in turn successfully support its mission, strategic goals, and objectives. Modernization drivers are those factors that create a compelling case to drive change and impact the business performance. The following list identifies some of RMA's primary modernization drivers:

- Improve services to business partners and citizens.
- Respond to legislative changes and mandates.
- Respond to increased demand for services amid reduced budgetary resources.
- Fulfill information security requirements.
- Collaborate with relevant cross-agency initiatives; reduce fraud, waste, and abuse.

The RMA-13 Emerging Information Technology Architecture initiative is following a transition strategy to move RMA to utilizing Commercial-Off-the-Shelf (COTS) tools for enterprise reporting and information sharing, and geospatial services.

RMA's EITA initiative is guided by the following design principles:

- Enterprise web-centric applications.
- Common look and feel.
- Shared and common services utilizing a common infrastructure.

RMA-13 utilizes Shared First services procured and managed/monitored through RMA-04 IMST investment. Specifically RMA-13 utilizes SAS and GIS for multiple business applications. RMA-13 also aligns with Cloud First objectives by using Microsoft communication and collaboration cloud services provided by the USDA OCIO. These services includes: Exchange, SharePoint, and Lync. RMA is migrating the internal-facing portions of two SharePoint-based EITA applications, CARS and eRecords Management System, to the USDA cloud service. RMA has developed the Escrow application using a platform-as-a-service development platform in a private cloud.

Replace second paragraph with the following: RMA has moved the majority of user home and shared drives to Azure via StoreSimple and is developing an BizTalk instance using Azure IaaS to be completed during the 3Q FY15.

## Transition Schedule and Milestones

Task Name	Start	Actual Finish
[-] Development Projects	Tue 1/31/12	NA
[+] FY12-1047 RO Exceptions	Tue 1/31/12	Wed 1/29/14
[+] RMA Information Reporting System (RIRS) 1 & 2	Tue 1/31/12	Wed 1/29/14
[+] FY12-1061 Corporate Reporting & Business Intelligence (CRBI)	Mon 2/6/12	Wed 1/29/14
[+] FY12-1064 FIPS to ANSI County Code Conversion	Mon 3/26/12	Mon 12/31/12
[+] FY12-1065 Auto CLUs to Actuarial Maps Cross-Reference	Tue 4/17/12	Wed 1/29/14
[+] FY12-1066 AIB/ITM Admin Tool	Thu 5/3/12	Mon 12/31/12
[+] FY12-1069 Price Discovery Overhaul	Tue 1/31/12	Mon 9/1/14
[+] FY12-1071 - Escrow	Mon 5/21/12	Thu 1/1/15
[+] FY12-1087 Accounting AIP Setup	Mon 9/24/12	Fri 8/1/14
[+] FY12-1088 Accounting Ineligible Tracking System	Tue 1/31/12	NA
[+] Settlement Applications Group	Tue 1/31/12	NA
[+] Actuarial Applications Group	Tue 9/2/14	NA
[+] Management Information Application Group	Tue 1/31/12	NA
[+] Policy Application Group	Thu 1/30/14	NA
[+] ITM Phase 3 Suspended Projects	Fri 2/3/12	Wed 10/3/12
[+] Common Development Resources	Tue 1/31/12	Wed 10/1/14

Figure 16: Emerging Information Technology Architecture Timeline

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## Public Health Information System (PHIS) - Food Safety Modernization

The Food Safety Modernization initiative supports an effective food safety system that collects, assesses, and responds to hazards and risks.

### Description

FSIS is the business owner of this initiative. This initiative will facilitate the replacement of current legacy systems that are at or past end-of-life. The Public Health Information System (PHIS) investment is the focus of the Food Safety Modernization initiative which consists of 15 key applications and supporting software, which directly affects FSIS' ability to achieve improvements in mission performance, management decision-making, and operational efficiencies.

PHIS and the other FSIS applications/systems are primarily used to support mission critical FSIS business functions such as inspection, import/export activities, surveillance, auditing, and enforcement, and have the same primary Business Reference Model (BRM) classification. PHIS moves towards a Service Oriented Architecture (SOA) and provides a single source for mission critical data, uses predictive models to analyze real time data from FSIS and other Federal, state, and local agencies, and uses a common web-based user interface.

FSIS goals for PHIS include:

- Leverage technology to automate procedures throughout agency programs.
- Share information with other government agencies (DHS, FDA, and CDC), and within USDA (Animal and Plant Health Inspection Service (APHIS) and Agricultural Marketing Service (AMS)) and with international trading partners (Netherlands, Australia, and New Zealand).
- Continue to eliminate duplicate efforts for various system functions, data, and integration points.
- Establish Electronic Export Certification Eligibility to Foreign Countries.
- Modernize the State Inspection System to PHIS.

The PHIS and the other FSIS applications/systems help close agency performance gaps by providing more effective and cost efficient services to better detect and prevent food safety threats. For example, PHIS and its support systems will:

- 
- Provide an analytical tool and data to improve the agency's ability to detect the introduction of intentional/unintentional food borne threats.
  - Enable near real-time data collection for reporting and analysis.
  - Provide the ability to collect information to assist FSIS with trace back and trace forward investigations for identifying product disposition and/or the origins of hazards.
  - Provide the ability to collaborate with DHS, FDA, international trading partners and with other USDA agencies to improve mission critical performance in inspections, surveillance, tracking, auditing, and enforcement.

As part of its consolidation efforts, FSIS plans to incorporate the following improvements:

- Service Oriented Architecture: This approach includes development of a common application framework for FSIS to standardize applications across the enterprise supporting different mission needs.
- Technology Modernization: This effort describes FSIS initiatives to modernize legacy systems consolidating them under new technologies supporting an enterprise-wide standard.
- Business Intelligence: To further the FSIS IT investment goals for PHIS, the Agency has strengthened definitive data sharing agreements with other internal partner agencies (i.e., AMS, National Agricultural Statistics Service (NASS) and Agricultural Research Service (ARS)) and the CDC to support policy development and research activities.
- Application Consolidation: Within this EA initiative, FSIS is in the process of consolidating numerous legacy applications on a wide variety of platforms into fewer, more robust applications.

## **Web Based Supply Chain Management (WBSCM) Timeline**

AMS leads the Supply Chain Management initiative, which is supported by the Web Based Supply Chain Management (WBSCM) system.

### **Description**

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WBSCM is a modern, integrated Internet-based commodity acquisition, distribution, and tracking system, built on commercial software, that was implemented by USDA agencies and United States Agency for International Development (USAID) to replace the aging Processed Commodity Inventory Management System (PCIMS). WBSCM leverages commercial and government best practices by using COTS, also being utilized by USDA's FMMI and the MIDAS initiative. The Supply Chain Management initiative provides the opportunity to streamline all processes into one integrated system; providing efficiencies.

This integrated system reduces time needed for monthly and yearly account close-out. Standard financial processes and structures allow all participating agencies to apply consistent financial management practices to business activities. These standard structures provide flexibility, creating new accounting categories to meet tracking and reporting requirements for special programs or situations such as the American Recovery and Reinvestment Act (ARRA) or the Farm Bill. WBSCM allows quick reaction to supply and demand changes resulting in better forecasting and planning in the value chain, yielding increased productivity and lower operating costs.

In Fiscal Year 2013, WBSCM directly supported the order, procurement and delivery of 8,435,646,758 pounds of farm food commodities at a cost of \$2,902,689,302 to the following programs: Commodity Supplemental Food Program (CSFP), The Emergency Food Assistance Program (TEFAP), Food Assistance in Disaster Situations, Food Distribution Program on Indian Reservations (FDPIR), National School Lunch Program (NSLP), School Breakfast Program, Summer Food Service Program (SFSP), Child and Adult Care Food Program (CACFP), Titles II and III of Public Law 480, Food for Progress, Section 416(b) of the Agriculture Act of 1949, McGovern-Dole International Food for Education and Child Nutrition Program and the United Nation's World Food Programme. (NOTE: Reporting commodities in pounds.)

## Transition Schedule and Milestones

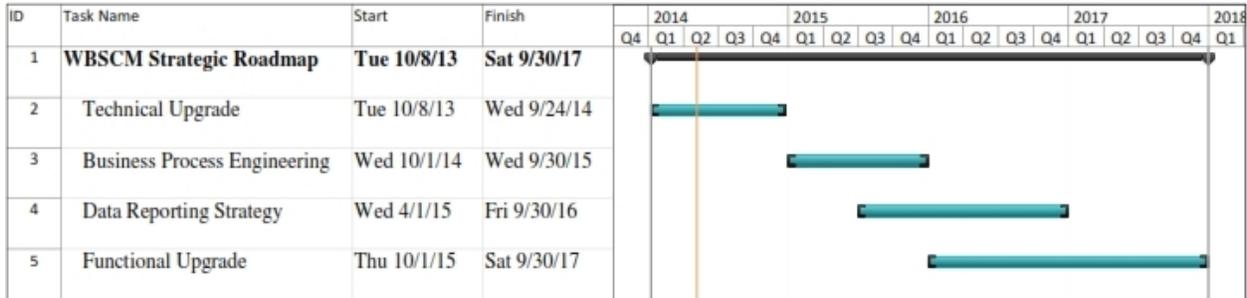


Figure 17: Web Based Supply Chain Management (WBSCM) Timeline

## Animal Disease Traceability Information System

### Description

The Animal Disease Traceability Information System (ADTIS) [formerly NAIS] supports animal disease traceability activities related to animal identification, movements and locations where animals are managed. It is implemented by the USDA and State agencies in cooperation with industry - to enable timely trace back of the movement of diseased or exposed animal. Animal disease traceability helps to ensure rapid disease containment and maximum protection of America s animals.

ADTIS needs to move to a cloud environment to keep up with USDA enterprise architecture goals. Additional funding will be required to revamp ADTIS to be fully cloud compliant.

### Transition Schedule and Milestones

None Provided for ADTIS.

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## Resource Ordering and Status System

### Description

The Resource Ordering and Status System (ROSS) mobilizes and shows status of resources for disaster response.

The objective of the planned Technical Refresh of ROSS is to replace obsolete technical components. Technical refresh is necessary because ROSS is built on older technology that causes performance issues and risks technological obsolescence.

Sample technical refresh activities include:

- 1) Making ROSS a Web based application that can work on multiple browsers and different devices; eliminating the need for users to download a ROSS client.
- 2) Working with the Fire National Enterprise Support System team to move to a cloud infrastructure.
- 3) Providing full visibility of deployed resources, including State and Canadian-owned, that were dispatched outside of Federal channels.
- 4) Replacing manually entered contract data with an interface to FS contracting systems to ensure best value and lessen vendor lawsuits.
- 5) Reducing the architectural complexity and maintenance costs.

For the DME portion, ROSS needs to respond to critical business needs to support interagency wildland fire and all hazard business communities. Example improvements include:

- 1) Providing geospatial display, providing visual context to the closest and most effective resource to protect life and property.
- 2) Providing mobile functionality for self-stat using of resources' availability.
- 3) Providing "Safety Checklists" to help users ensure safety standards are met.

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## Transition Schedule and Milestones

None Provided for ROSS.

## Homeland Security Presidential Directive-12 Timeline

### Description

HSPD-12 was issued on August 12, 2004, by President George W. Bush. HSPD-12 calls for a mandatory, government-wide standard for secure and reliable forms of identification (ID) issued by the Federal government to its employees and employees of federal contractors for access to federally-controlled facilities and networks. Based upon this directive, the National Institute for Standards and Technology (NIST) developed Federal Information Processing Standards Publication (FIPS Pub) 201 including a description of the minimum requirements for Federal personal identification verification (PIV) system. USDA's Homeland Security Presidential Directive 12 compliant ID is called the LincPass, as it is designed to link a person's identity to an ID credential and the credential to a person's ability to physically and logically access federally controlled buildings and information systems, respectively.

The LincPass is used not only for identification purposes, but also for access to both federal computer systems (Logical Access Computer System (LACS) and federal facilities (Physical Access Control System (PACS)). The LincPass issuance and credentialing process utilize the General Services Administration (GSA) Managed Service Offices (MSO) Shared Services solution called USAccess. The LincPass issuance process is managed by USDA Office of Homeland Security and Emergency Coordination. Issuing a LincPass is a multi-step process involving several Homeland Security Presidential Directive 12 role holders in addition to the LincPass applicant.

USDA is making progress toward meeting OMB and its own goals for physical and logical access control. Since FY2008, USDA has used GSA's HSPD 12 PIV issuance services to provide cards for its staff. USDA was the first Federal Agency to implement a connection between its authoritative systems and the HSPD-12 service to synchronize digital identity data. This connection was improved and augmented with the implementation of the Enterprise Entitlement Management System (EEMS) project in FY2012. USDA has implemented the interface between GSA's HSPD-12 US Access system and Office of Personnel Management (OPM) to allow for immediate submission of fingerprints captured at PIV enrollment stations.

USDA OCIO has issued multiple memorandums including October 6, 2010 entitled “Preparing to Implement Identity, Credential, and Access Management (ICAM) as Directed by the Office of Management and Budget (OMB)” and a follow up memorandum dated March 7, 2011. The memorandums provide deadlines to USDA’s mission areas and agencies to meet ICAM-related milestones. USDA also issued policy mandating the use of the LincPass in Departmental Regulation (DR) 3170-001 and DR 3640-001. USDA is now implementing aggressive but realistic plans for PIV compliance and interoperability initiatives. Implementation of these initiatives at USDA must proceed in a manner that supports USDA business units and achieves OMB expectations.

**Future Goals:** Full compliance with HSPD-12 and FIPS 201. ICAM as a Service (Inter-Department interoperability) allowing other federal Department users to access authorized USDA applications using their own credentials. Ability to accept authorized commercially issued credentials from members of the public doing business with USDA. Reduce the backlog of investigations and move requirements for submission of required documentation for investigations to a pre-hire requirement. Start date of employment contingent upon submission of a completed package to Personnel Security.

## Transition Schedule and Milestones

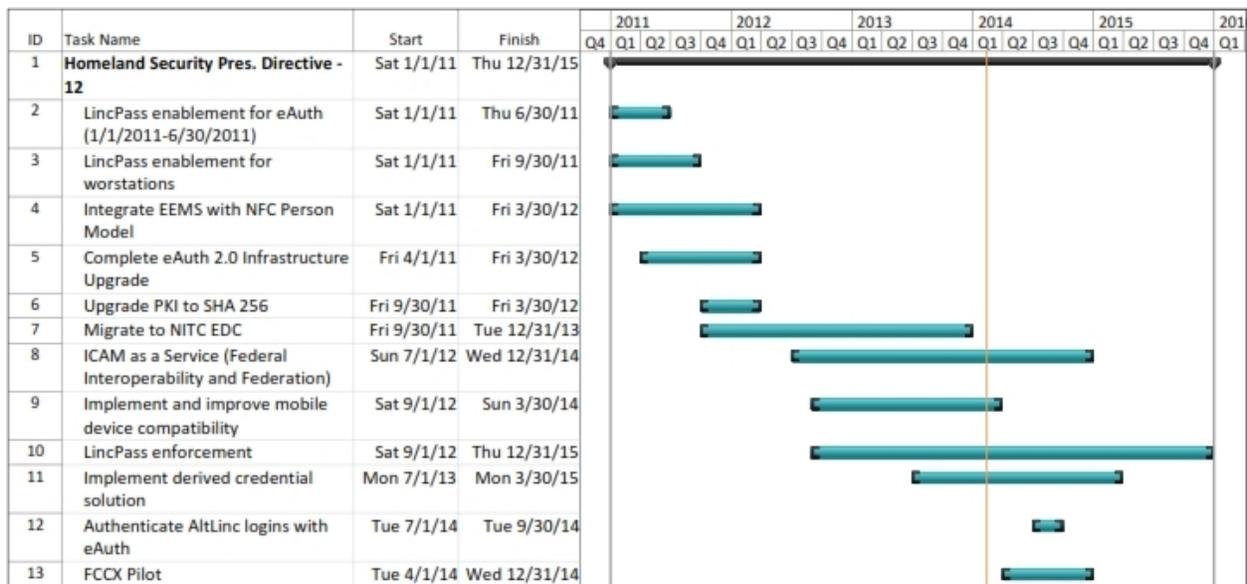


Figure 18: Homeland Security Presidential Directive-12 (HSPD-12) Timeline

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## **Internet Protocol version 6 (IPv6)**

### **Description**

In March 2008, the OCIO completed Phase 1 of the Internet Protocol Version 6 Implementation Project by demonstrating Internet Protocol Version 6 compliance with OMB memorandum (M-05-22). The memorandum stated that by June 2008, all agencies' infrastructure (network backbones) must be Internet Protocol Version 6 compliant and agency networks must interface with this infrastructure. In order to fulfill this OMB request, OCIO performed testing to demonstrate performance of the following functions, without compromising Internet Protocol version 4 (IPv4) capabilities or network security:

- Transmit Internet Protocol Version 6 traffic from an external network, through the Core, to the Access and Distribution networks.
- Transmit Internet Protocol Version 6 traffic from an Access or Distribution network, through the Core, out to an external network.
- Transmit Internet Protocol Version 6 traffic from an Access or Distribution network, through the Core to another Access or Distribution network (or another node on the same Access or Distribution network).

### **Phase II – September 2012 OMB Mandate (in progress)**

In response to the September 28, 2010 memorandum from the OMB regarding the federal government's commitment to the operational deployment and use of Internet Protocol Version 6 (IPv6), USDA's OCIO is working to facilitate timely and effective adoption of Internet Protocol Version 6 by planning and executing against the following requirements;

- Ensure that public/external facing servers and services (e.g. web, email, Domain Name System (DNS), Internet Service Provider (ISP) services, etc.) operationally use native Internet Protocol Version 6 by the end of FY 2012.
- Ensure that internal client applications communicate with public Internet servers and support enterprise networks to operationally use native Internet Protocol Version 6 by the end of FY 2014.
- Designate an Internet Protocol Version 6 transition manager to serve as the person responsible for leading the agency's Internet Protocol Version 6 transition activities, and liaison with the wider Federal Internet Protocol Version 6 effort as necessary.

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- Ensure that agency procurements of networked IT comply with the Federal Acquisition Regulation (FAR) requirements for use of the United States Government version 6 (USGv6) Profile and Test program for the completeness and quality of their Internet Protocol Version 6 capabilities.

In 2011, the OCIO began meeting OMB mandates by designating an Internet Protocol Version 6 transition manager to lead transition implementation activities:

- Defined functional organization structure and updated charter for the Executive Steering Committee to establish Agency Internet Protocol Version 6 leads. Also developed charters, rosters and meeting schedules for the Internet Protocol Version 6 Steering Committee, Technical and Policy Working Groups.
- Developed an Internet Protocol Version 6 Intranet site for cataloging USDA and Federal Internet Protocol Version 6 documents from the Federal Internet Protocol Version 6 Interagency Working Group.
- Established a tool for gathering and reporting on the inventory of USDA public facing servers and services for each agency utilizing the EA Repository.
- Compiled inventory roll -up of all USDA External/Public Facing Servers and Services, Email and DNS. Validated through Internet Protocol Version 6 Agency Leads and submitted to OMB as initial inventory in accordance with the 2012 Mandate.
- Collaborated with outside federal agencies (Department of Transportation (DOT), Department of Interior (DOI), and Veterans Administration (VA)) to exchange information and experiences with varying Internet Protocol Version 6 transition methods including NATing, Protocol Translators, Tunneling and Dual Stack.
- Worked with American Telephone & Telegraph (AT&T) to develop initial Internet Protocol Version 6 transition strategy and implementation steps.
- Coordinated Internet Protocol Version 6 transition steps and dependencies with external stakeholders, including Managed Network Services (MNS) provider, AT&T, and the USDA enterprise email service provider, Microsoft.
- Communicated strategies and project plans with internal stakeholders through functional organizational structure including Steering Committee, Technical Working Groups and EA groups.
- Redesigned USDA Internet Protocol Version 6 address plan after procuring a new and larger Internet Protocol Version 6 address space from the American Registry for Internet Numbers (ARIN).

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In first quarter 2013, USDA will complete the Network Transition initiative. This will enable Internet Protocol Version 6 capability on the USDA backbone network. The Department continues to work with agencies on development of their plans for implementing Internet Protocol Version 6 network transport for all USDA agency connections in support of the September 30, 2012 OMB mandate utilizing the new Departmental Internet Protocol Version 6 address allocations. In parallel, USDA agencies are preparing and executing transition plans for the network services provided by them, such as web pages and DNS resolution.

## Transition Schedule and Milestones

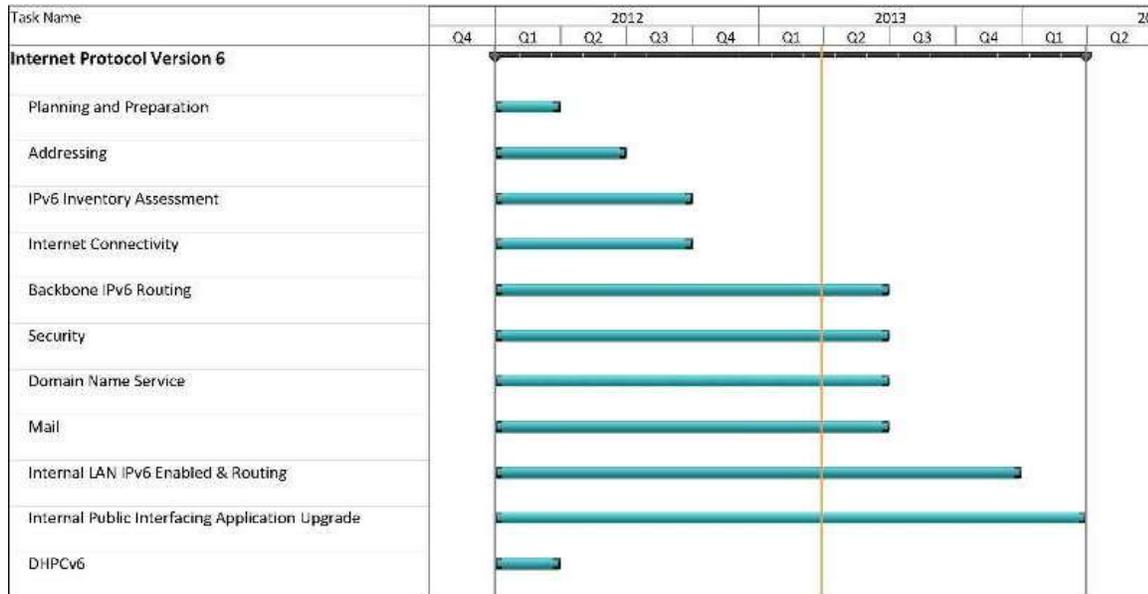


Figure 19: Internet Protocol version 6 (IPv6) Timeline

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## **4.0 IT Asset Inventory**

Given the sensitive nature of the data contained the IT Asset Inventory Matrix is available upon request but is not provided with the base submission.

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## 5.0 Conclusion

The USDA Enterprise Roadmap presents a high-level, integrated description of the agency's IT-related strategic goals, business objectives, and enabling IT capabilities across all mission areas, agencies, and operating units. The description follows the enterprise architecture methods provided in the *Common Approach to Federal Enterprise Architecture* (OMB, May 2012) for the agency-wide current architecture, future architecture, and transition plans - including the modernization of existing systems to leverage web services, mobile optimization, and improved digital services (Digital Government Strategy sections 3.2). In addition, this Roadmap provides USDA's Business and Technology Architecture, which includes the following activities and measurements:

- Enterprise Architecture (EA) Maturity Measurement: A self-evaluation of the maturity of the Agency's EA Program.
- EA Outcomes and Measurements: A self-evaluation of the effectiveness of the agency's enterprise architecture program, examples of contributions to beneficial outcomes, areas for improvement, and measurement of value using the attached template.
- IT Asset Inventory collection: The IT Asset Inventory is a list of IT systems and applications that support mission, administrative, and commodity IT services.

Working with the Secretary, OCIO has prioritized the necessary investments to enable their most effective delivery and has developed a thoughtful and deliberate approach to implement these improvements. OCIO has identified the key initiatives upon which USDA will modernize its service offerings to ensure open, transparent and collaborative avenues through which USDA employees, farmers, ranchers, and all citizens can easily access USDA information from wherever they may be.

USDA is continuously evolving to meet organizational and stakeholder requirements. This evolution is built on a purposeful process-driven approach that has been developed in accordance with the guidance passed down by OMB and other governance bodies and in the context of current identified best practices. USDA's evolution is mission driven to ensure that the specific needs of the business community and the overall goals and objectives of the Department and its agencies are met. USDA has placed a high priority on facilitating its ability to leverage technology in a way that is responsible and ensures that acquisition and capability development occurs in a manner that ensures the government gets the best value from its IT commitments and delivers real value to the business community.

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The 2015 USDA ER reflects the business driven approach of the Department and the priorities identified within the Roadmap reflect the alignment of USDA IT strategy to the higher-level goals and objectives of the Department. The Roadmap has been developed in accordance with OMB submission requirements and reflects the overall maturity of the USDA as it transitions to meet the challenges it will face in the coming years.

Lastly, this Roadmap addresses the major areas required to help the Department continue to provide leadership on food, agriculture, natural resources, and related issues based on sound public policy, the best available science, and efficient management. The Roadmap is a major part of ensuring that USDA continues to be recognized as a dynamic organization that is able to efficiently provide the integrated program delivery needed to lead a rapidly evolving food and agriculture system.

## Appendix A: Acronyms and Abbreviations

The table below describes the acronyms and abbreviations used in this document.

<b>Acronym</b>	<b>Description</b>
ACIO	Associate Chief Information Officer
ACRSI	Acreage/Crop Reporting Streamlining Initiative
AIS	Automatic Identification System
AIX	Advanced Interactive eExecutive
AMS	Agricultural Marketing Service
ANI	Automatic Number Identification
APHIS	Animal and Plant Health Inspection Service
API	Application Program Interface
ARIN	American Registry for Internet Numbers
ARRA	American Recovery and Reinvestment Act
ARS	Agricultural Research Service
AT&T	American Telephone & Telegraph
BI	Business Intelligence
BOT	Back-Office Transition
BPA	Blanket Purchase Agreement
BPMS	Budget and Performance Management System
BPOS	Business Productivity On-line Suite
BRM	Business Reference Model
CCC	Commodity Credit Corporation
CCCBF	Commodity Credit Corporation Budget Formulation
CCE	Common Computing Environment
CCV	Critical Control Validation
CDC	Center for Disease Control
CDD	Custom Design Document
CDMS	Correspondence and Document Management System
CDSI	Conservation Delivery Streamlining Initiative
CFMS	Corporate Financial Management System
CIMS	Comprehensive Information Management System
CIO	Chief Information Officer
CLP	Comprehensive Loan Program
CLU	Common Land Unit
CONOPS	Concept of Operations
COO	Chief Operating Officer

Acronym	Description
CACFP	Child and Adult Care Food Program
COTS	Commercial Off-The-Shelf
CPD	Capital Planning Division
CPIC	Capital Planning and Investment Control
CPO	Cyber Policy and Oversight
CRM	Customer Relationship Management
CSAM	Cyber Security Assessment and Management
CSDS	Common Survey Data Structure
CSFP	Commodity Supplemental Food Program
DAS	Data Acceptance System
DBaaS	Data Base as a Service
DHCP	Dynamic Host Configuration Protocol
DHS	Department of Homeland Security
DKIM	Domain Keys Identified Mail
DM	Departmental Management
DNS	Domain Name System
DNSSEC	Domain Name System Security Extensions
DOC	Department of Commerce
DOI	Department of Interior
DOL	Department of Labor
DOT	Department of Transportation
DR	Departmental Regulation
DTS	Data Transmission
EA	Enterprise Architecture
EAR	Enterprise Architecture Repository
EAS	Exchange Active Sync
ECM	Enterprise Content Management
ECMM	Enterprise Correspondence Management Module
EDC	Enterprise Data Center
EDCO	Enterprise Data Center Operations
EEMS	Enterprise Entitlement Management System
Efax	Electronic Facsimile
EITA	Emerging Information Technology Architecture
ELA	Enterprise License Agreement
ENS	Enterprise Network Services
EPA	Environmental Protection Agency
EPACS	Enterprise Physical Access Control System
ER	Enterprise Roadmap

Acronym	Description
ERP	Enterprise Resource Planning
ERS	Economics Research Service
ESRI	Environmental Systems Research Institute
FADS	Food Assistance in Disaster Situations
FAR	Federal Acquisition Regulation
FAS	Foreign Agricultural Service
FDA	Food and Drug Administration
FDCCI	Federal Data Center Consolidation Initiative
FDPRI	Food Distribution Program on Indian Reservations
FFIS	Foundation Financial Information System
FIPS Pub	Federal Information Processing Standards Publication
FISMA	Federal Information Security Management Act
FMFIA	Federal Managers Financial Integrity Act
FMMI	Financial Management Modernization Initiative
FADS	Food Assistance in Disaster Situations
FOIA	Freedom of Information Act
FS	Forest Service
FSA	Farm Service Agency
FSC	Field Service Center
FSIS	Food Safety and Inspection Service
FSS	Federal Supply Schedule
FSSI	Federal Strategic Sourcing Initiative
FTS	Frame Relay
FY	Fiscal Year
GIPSA	Grain Inspection, Packers & Stockyards Administration
GIS	Geographical Information System
GISaaS	Geographical Information Software as a Service
GSA	General Services Administration
HHS	Health and Human Services
HR	Human Resources
HSPD-12	Homeland Security Presidential Directive-12
IaaS	Infrastructure as a Service
IAS	Integrated Acquisition System
ICAM	Identity Credential Access Management
ID	Identification
IEPD	Information Exchange Package Documentation
IPAS	Integrated Program Accounting System
IPS	Internet Protocol

<b>Acronym</b>	<b>Description</b>
IPT	Integrated Project Team
IPV4	Internet Protocol Version 4
IPv6	Internet Protocol Version 6
ISO	International Organization for Standardization
ISP	Internet Service Provider
IT	Information Technology
ITIL	Information Technology Infrastructure Library
ITO	Indian Tribal Organization
ITS	International Technology Services
ITSM	Information Technology Services Management
LACS	Logical Access Control System
LAN	Local Area Network
LCM	Life Cycle Management
LMPRS	Livestock Management Price Reporting System
LRP	Livestock Risk Protection
MDM	Mobile Device Management
MIDAS	Modernize and Innovate the Delivery of Agricultural Systems
MNS	Managed Network Services
MOA	Memorandum of Agreement
MPS	Management Print Service
MS	Microsoft
MSC	Management Service Center
MSO	Managed Service Offices
NASS	National Agricultural Statistics Service
NCSD	National Cyber Security Division
NFC	National Finance Center
NIEM	National Information Exchange Model
NIFA	National Institute of Food and Agriculture
NIST	National Institute for Standards and Technology
NITC	National Information Technology Center
NRCS	Natural Resources Conservation Service
NSLP	National School Lunch Program
OAO	Office of Advocacy & Outreach
OBPA	Office of Budget & Program Analysis
OC	Office of Communications
OC	Optical Carriers
OCE	Optimized Computing Environment
OCFO	Office of the Chief Financial Officer

Acronym	Description
OCIO	Office of the Chief information Officer
OCIO-ENS	Office of the Chief information Officer - Enterprise Network Services
OES	Office of the Executive Secretariat
OIG	Office of the Inspector General
OMB	Office of Management and Budget
OPM	Office of Personnel Management
PAAS	Platform as a Service
PACS	Physical Access Control System
PC	Personal Computers
PCIMS	Processed Commodity Inventory Management System
PHICP	Public Health Information Consolidated Project
PHIS	Public Health Information System
PIV	Personal Identification Verification
PKI	Public Key Infrastructure
PLS	Private Line
PMP	Project Manager Professional
RD	Rural Development
RIRS	RMA Information Reporting System
RMA	Risk Management Agency
ROE	Regional Office Exceptions
SaaS	Software as a Service
SAP	Systems Applications and Products
SAS	Statistical Analysis System
SCA	Service Center Agency
SDA	State Distributing Agencies
SDS	Switched Data
SED	Service Enabling Device
SFSP	Summer Food Service Program
SHA	Secure Hash Algorithm
SLA	Service Level Agreement
SMOC	Senior Management Oversight Council
SOA	Service Oriented Architecture
SQL	Structured Query Language
SVS	Switched Voice
TEFAP	The Emergency Food Assistance Program
TEMS	Telecommunications Expense Management Services
TFS	Toll-Free
TIC	Trusted Internet Connection

<b>Acronym</b>	<b>Description</b>
TSO	Telecommunications Services and Operations
USAID	United States Agency for International Development
USDA	United States Department Of Agriculture
USGv6	United States Government Version 6
UTN	Universal Telecommunications Network
UTN-NG	Universal Telecommunications Network - Next Generation
VA	Veterans Administration
VAS	Value Added
VPN	Virtual Private Network
WAN	Wide-Area Network
WBSCM	Web Based Supply Chain Management
XML	Extensible Mark-up Language