ACCOMPLISHMENTS AND CAPABILITIES

Office of the Chief Information Officer

USDA

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OVERVIEW

Message from the CIO

Each day, the U.S. Department of Agriculture (USDA) staff delivers on our mission of supporting the agricultural economy, strengthening rural communities, protecting and conserving our natural resources, and providing a safe, sufficient, and nutritious food supply for everyone.

Technology is a critical enabler of our mission, providing new approaches and opportunities for the government to realize unparalleled economies of scale in the delivery of constituent programs making our country a better place to live.

As Chief Information Officer, it is my role to lead and guide the members of my team in making this mission a reality through the creation, application, and delivery of innovative technology business solutions. Solutions that inform responsible expansion and management of agriculture, affect use and preservation of natural resources, and reduce the overall carbon footprint of the Department.

Sincerely,

Christopher L. Smith

Christopher L. Smith
USDA Chief Information Officer

Mission

To support achievement of the USDA mission, the Office of the Chief Information Officer (OCIO) will be a recognized federal leader in Information Technology (IT) transformation, offering agile world-class technology solutions to its stakeholders and applying innovative approaches to recruiting and developing a highly skilled workforce.

Values

The USDA OCIO develops, delivers, and defends the business information technologies that empower every aspect of the USDA mission.

OVERVIEW

The Office of the Chief Information Officer offers four core areas of expertise: skilled staff, innovation, technology, and program management. We combine these into a portfolio of expertise and capabilities that enables the OCIO to deliver business-driven solutions that directly support the USDA mission.

As a customer service organization, the OCIO is ***not*** in the business of simply providing technology (for its own sake). We ***are*** in the business of making sure technology serves as a platform for achieving the goals stated in the Secretary's Strategic Plan.

To that end, the OCIO has made significant investments in USDA's IT infrastructure and in resources for securing the agency's information, applications, and systems. The purpose of this report is to document the return on those investments—both as capabilities that are now available to USDA organizations and as concrete results.

The first section of the report focuses on the capabilities the OCIO provides to USDA components. These range from data center services to network security. The next section shines a "mission spotlight" on five achievements that exemplify the OCIO's strategic direction. The final section details successful results from specific initiatives.

The examples included in this report are as diverse as the USDA mission itself. Some are component building blocks of the Department's IT infrastructure. Others are strategic mission applications that are based on those building blocks and that draw upon the full gamut of capabilities the OCIO provides.

As different as they may be, all the examples in this report were delivered by the OCIO with one aim: to provide the best possible solution with the best possible customer service.

OVERVIEW

Building Business Value Through Agility

Deploying capabilities that only meet today's requirements doesn't ensure the viability of the mission. But it's not possible to anticipate all the requirements that might emerge in the future.

Therefore, the OCIO deploys capabilities as a layered stack of building blocks that can be assembled (or reassembled) into different solutions as things change. This means that the technologies we're deploying now to meet current mission needs will also serve as a platform for new capabilities as USDA's mission evolves.

This adaptability protects our IT investments. It also means that we can deliver a unified portfolio of OCIO capabilities to our customers—not individual offerings from multiple internal organizations.

For maximum flexibility, we've deployed two levels of capabilities in the layered stack depicted above.

Operational domains are the five categories of components that constitute the fundamental structure and substance of USDA's infrastructure. They include all the basic hardware, software, processes, people, and best practices the USDA needs to connect, secure, and provide services across its networks.

Multi-domain capabilities provide higher level enterprise services by integrating components and functionality from across the operational domains. They include both customer-facing capabilities (such as Unified Communications) and internal resources (such as Program Management Services).

OCIO CAPABILITIES

Operational Domains

The OCIO has defined five Operational Domains that anchor and energize USDA's infrastructure in these areas:

- **Enterprise Network Services**
- **Enterprise Data Center Services**
- **End User Services**
- **Enterprise Application Services**
- **Cyber Security Services**

Enterprise Network Services

Enterprise Network Services encompass a broad portfolio of telecommunication technologies that must support the scaling demands of USDA.

Today: Always-on Communications: OCIO engineers and technicians conduct all the day-to-day administrative tasks that ensure the performance, reliability, security, and availability of USDA networks.They also perform the constant enhancements and upgrades that are needed to keep pace with scaling requirements and to support new capabilities—without disruption to operations or end users.

Both functions require technical expertise, plus planning, acquisition, program management, and contract support. The OCIO provides all of these to USDA Agencies and Offices as one-stop, centralized solutions along with billing and end-user support.

Tomorrow: Next Generation Networking: The OCIO is working to strategically replace aging telecom infrastructure with scalable wired and wireless networks. The OCIO works with USDA Agencies and Offices to assess how their employees will work, where they will work from, and what network-based capabilities they will need to continue meeting evolving mission requirements.

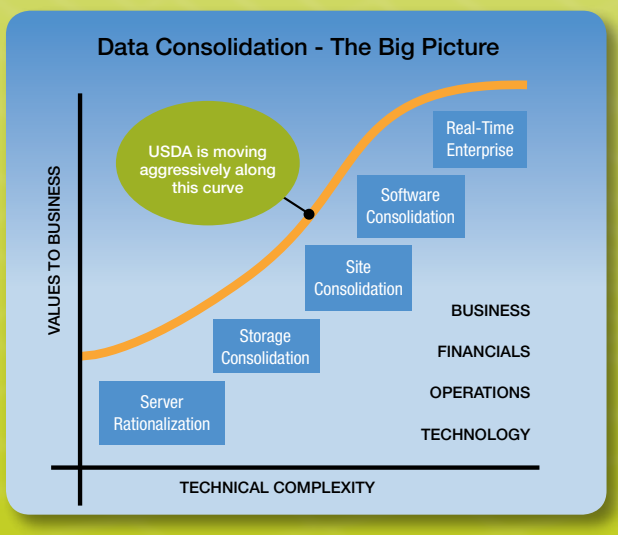
Enterprise Data Center Services

USDA Enterprise Data Centers (EDC) are the hub of the Department's IT applications, data storage, and thousands—if not millions—of daily transactions that might include authorizing a farm subsidy, acknowledging receipt of a grant application, or returning information from a USDA website.

Consolidating for Efficiency and the Environment: The OCIO continues to modernize and consolidate its data center in order to upgrade infrastructure, reduce redundancy, increase utilization, enhance security, cut energy use, improve cost efficiency, and implement environmental sustainability practices.

Data Center Services: However you use USDA information, OCIO ensures the transparent and seamless delivery and maintenance of USDA's online services through a portfolio of data center services that include:

- **Operations Management**
- **Hosting Services**
- **Infrastructure Services**
- **Data Architecture, Design, and Storage Services**
- **Business Continuity Planning Services**



End User Services

Effective and productive employees are critical to USDA and it is the mission of OCIO's end user support organizations to ensure personnel are fully operational and effective at all times.

To support the dynamic needs of end users, OCIO constantly evaluates and calibrates its service delivery capabilities—both technological and workforce capability—to ensure responsive, high-quality support. OCIO also employs a wealth of industry best practices, including the Information Technology Infrastructure Library (ITIL), which serves as the foundation for OCIO's Information Technology Service Management (ITSM) model to ensure high-quality, consistent, end-to-end, customer service.

Modern, Robust Support Services: OCIO Service Desks use a multifaceted support structure of software, hardware, processes, and talented human capital to deliver comprehensive desktop, application, and technology support directly to over 45,000 employees and contractors in over 3,400 USDA locations worldwide. OCIO also supports online government services for over six million producers and client organizations annually.

In addition to its centralized support operations, OCIO locates technical staff at remote sites to support personnel in field-based duty stations. OCIO support services include:

- Asset provisioning, management, and tracking for 500,000 pieces of equipment
- Service Desk support—deskside support for a wide variety of devices including desktops, laptops, tablets, smart phones, cell phones, etc.
- New service and change service orders—add, delete, move, or upgrade operating systems, software tools, or technology for individuals or entire offices
- Notification of new services, problems, or planned outages to a particular service
- Support for the procurement of IT services offered by the OCIO

Support Operations

During FY11, end-user support operations processed 355,967 service requests with first call resolution provided at 58% of all service requests. Over 117,828 deployments of hardware and software items were completed for USDA Mission Areas. The total work effort relating to the 473,795 requests earned an 88% favorable customer service rating.

OCIO also provides proactive support for USDA's increasingly mobile and disparate workforce. Quick desktop access instantly connects users with a Service Desk specialist who uses remote access capabilities to quickly resolve issues, no matter where that employee is located.

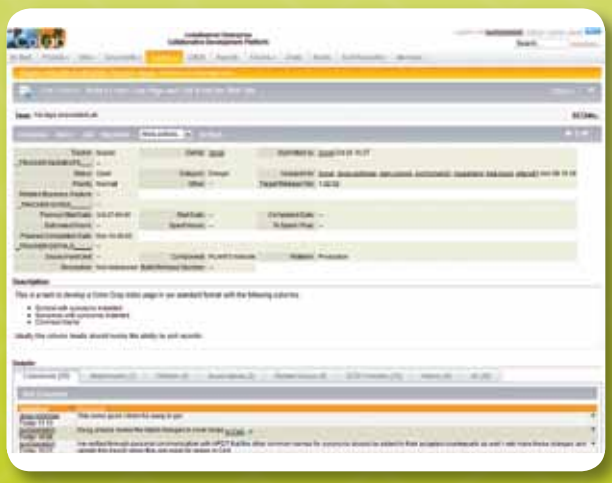
OCIO CAPABILITIES

Enterprise Application Services

OCIO Enterprise Application Services support the lifecycle process of transforming customer needs into cost-effective, high-performance IT solutions based on common architectures, technologies, platforms, and devices. Through its Center of Excellence (COE), the OCIO provides business intelligence and analytics, enterprise resource planning, customer relationship management, financial management, and other applications to USDA offices and other federal agencies.

Our commitment to delivering world-class, mission-centric applications is reflected in our portfolio of IT development best practices for business process analysis, project management, data management, information security, prototyping, training, and rollout planning with the flexibility to respond to changing customer requirements.

Working directly with stakeholders, OCIO project teams use proven, end-to-end development methodologies that include identifying business and technical requirements; developing business cases; roadmapping project phases; determining appropriate hardware and software needs; and defining operational and maintenance functions. Depending on the scope of the requirement, OCIO may develop a packaged solution, a custom solution, or a hybrid of the two.



Cyber Security Services

Regardless of its sensitivity, protecting all information as it is created, shared, and stored across the Department is a foremost priority for OCIO and is supported by an enterprise-wide USDA Security Strategy under the management of the Agriculture Security Operation Center (ASOC).

Layered Security: To aggressively address any vulnerabilities and protect critical systems, OCIO has deployed a comprehensive, integrated, and layered stack of security management and monitoring tools throughout USDA's network infrastructure.

Using a state-of-the-art software and operational analytics, OCIO coordinates enterprise-wide corrective actions to thwart exploits, vulnerabilities and intrusions, leaks, and unintentional harm that may impair USDA from delivering on its mission.

OCIO's security capabilities include:

- **Enterprise Messaging Solution**
- **Endpoint Protection**
- **Security Monitoring**
- **Intrusion Detection**
- **Identity Credential and Access Management (ICAM)**
- **Network Modeling and Performance**

Multi-Domain Capabilities

High-performance solutions are a combination of many umbrella components that enable capabilities to function with each other. The Multi-Domain Capabilities supplement the Operational Domains enabling efficiency and effectiveness.

- **Unified Communications**
- **Business Intelligence/Business Information Management**
- **Program Management, Architecture, and Capital Planning**
- **Security Integration**

Unified Communications

Working at hundreds of sites (or often outside the office entirely), USDA employees increasingly need integrated and mobile technologies to do their jobs.

In the past, enabling employees to communicate productively with one another has been a challenge for USDA. At one time it was supporting 21 email systems in addition to multiple video conferencing systems and no single collaboration system.

Integrated Communications Tools: Starting in 2010, the OCIO implemented a strategy to address these issues with a Unified Communications (UC) strategy. The goal was to provide USDA users with a seamless, simpler way to communicate. To that end, the strategy integrated:

- **Wired and wireless networks to transport voice, data, and video communications**
- **End user network devices such as smart phones, laptops, and electronic notebooks**
- **Communications technologies using multiple protocols such as email, SMS, fax, voice, and video or web conferencing**
- **Tools that enable collaboration and problem solving regardless of time and distance**
- **Presence and location services, publishing contact preferences and availability, as well as search based on skill and availability**

These technologies work together, allowing users to manage their communications exactly as they prefer. From a single interface on their desktop or mobile device—the Real Time Communications Dashboard—users can collaborate via live video conferencing, email, phone, document sharing, or SMS, whether they're in the office or on the road.

Forward Looking Technologies

OCIO is already investigating technologies to meet the emerging requirements of tomorrow. As an example, Enterprise Data Center Services will soon expand to offer industry-leading Business Intelligence (BI) products that will run on USDA's infrastructure.

The OCIO also envisions **a mobile "USDA Anywhere" infrastructure**—where remote users can access all the same capabilities as their colleagues back in the office. OCIO is already making progress toward this goal. Many technologies built into the USDA Security Stack will facilitate secure, mobile access. That, in turn, will ensure continuity of operations, enable more teleworking, reduce space requirements, and cut travel costs.

OCIO CAPABILITIES

Program Management

Architecture and Capital Planning: When projects with requirements for IT support are initiated, OCIO must fulfill two sets of requirements. First, we must meet our customer's mission-driven needs. At the same time, we must comply with policies for managing expenses, using established architectural frameworks, and other forms of governance. To balance these requirements, OCIO employs best practices for program management, enterprise architecture, and capital planning. These functions work in tandem to guide and govern projects toward measurably successful results.

Program Management: OCIO provides program management services based on enterprise-wide resources and tools to make sure IT projects stay on track, on schedule, and on budget.

Enterprise Architecture: Enterprise Architecture principles comprehensively express the present and future state of the organization across five essential elements: business, data, applications, technology, and security. This sets current and future baselines for improving management, planning, and decision making related to infrastructure investments across USDA's Mission Areas.

Capital Planning: Capital Planning determines the long-term investment direction for all new major IT expenditures. Given the growing demand for technology enablement, moving forward with significant capital investments requires objective due diligence. OCIO has invested in a consensus-building tool which efficiently and effectively aids in decision making among diverse stakeholders. This tool is available for evaluating all capital investments across USDA, not just technology. All OCIO capital investment requests for FY11 and beyond have been determined based on the results of analyses performed using this tool.

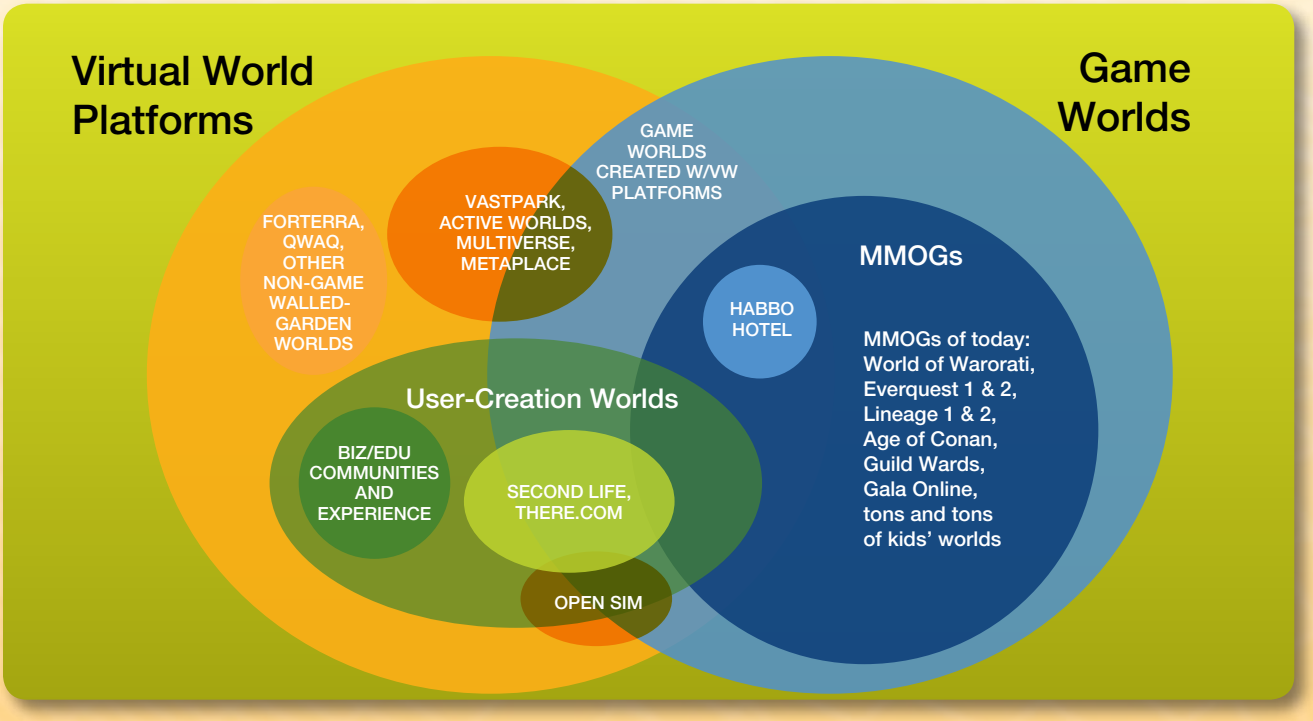
By thoughtfully applying program management, architecture, and capital planning principles, USDA can fully exert its fiduciary responsibility for tax payer dollars, reap the benefits of improved governance, employ repeatable processes, and comply with all reporting requirements.

Electronic Government/ Information Management/Privacy

The OCIO provides management and oversight for USDA's Electronic Government (E-Gov) program. The program is dedicated to implementing IT solutions to improve effectiveness, efficiency, and service to citizens and other government entities.

Critical information management functions such as records management, information collections, Section 508 compliance, privacy, and Freedom of Information Act (FOIA) are at the core of implementing laws, regulations, and policies governing information technology.

The CIO, serving as Chief Privacy Officer, provides policy for USDA in these areas. In that role, the OCIO is responsible for responding to privacy issues and threats to Personally Identifiable Information (PII). A thorough review of Privacy Threshold Analyses, Privacy Impact Assessments (PIA), and System of Records Notices (SORN) helps to ensure the integrity of information resources.



Virtual Worlds: Serious Environments for Collaboration

Virtual worlds are online communities and computer-based simulated environments. By enabling people to interact in a 3D space, they can be very effective in facilitating remote collaboration and decision making. Unlike "game worlds," virtual worlds are not for play. They're serious tools for boosting productivity and achieving mission goals.

Despite these advantages, the Federal Government faces significant challenges in deploying virtual worlds for mission purposes. Interagency access is limited. Functional requirements have yet to be established.

USDA is helping to surmount these barriers by offering interagency professional services for virtual worlds, including application development, secure hosting, user authentication, administrative support, operations, and maintenance. The OCIO can help agencies and federal partners plan and tailor virtual worlds to their mission requirements on established industry-leading platforms.

Agencies can use such platforms to promote telework, reduce travel, eliminate time and distance limits on collaboration, establish communities of interest, and conduct training more cost effectively.

The OCIO already supports the development and deployment of virtual worlds for the USDA Virtual University, USAF Medical Education and Training Campus, DHS Cyber Security Training, and the NDU iCollege. Future use cases may include collaboration and distance learning for the Forest Service, emergency response preparedness training, and other applications.

Cloud Computing: Improving Services, Lowering Costs

Cloud computing will enable USDA agencies to respond more effectively to the changing business needs by providing agency users access to incremental, secure computing resources at a significantly lower cost. This new computing service model yields tremendous advantage for agency users, especially those with applications that support dynamic workloads. OCIO has identified three key drivers for cloud computing adoption across USDA agencies:

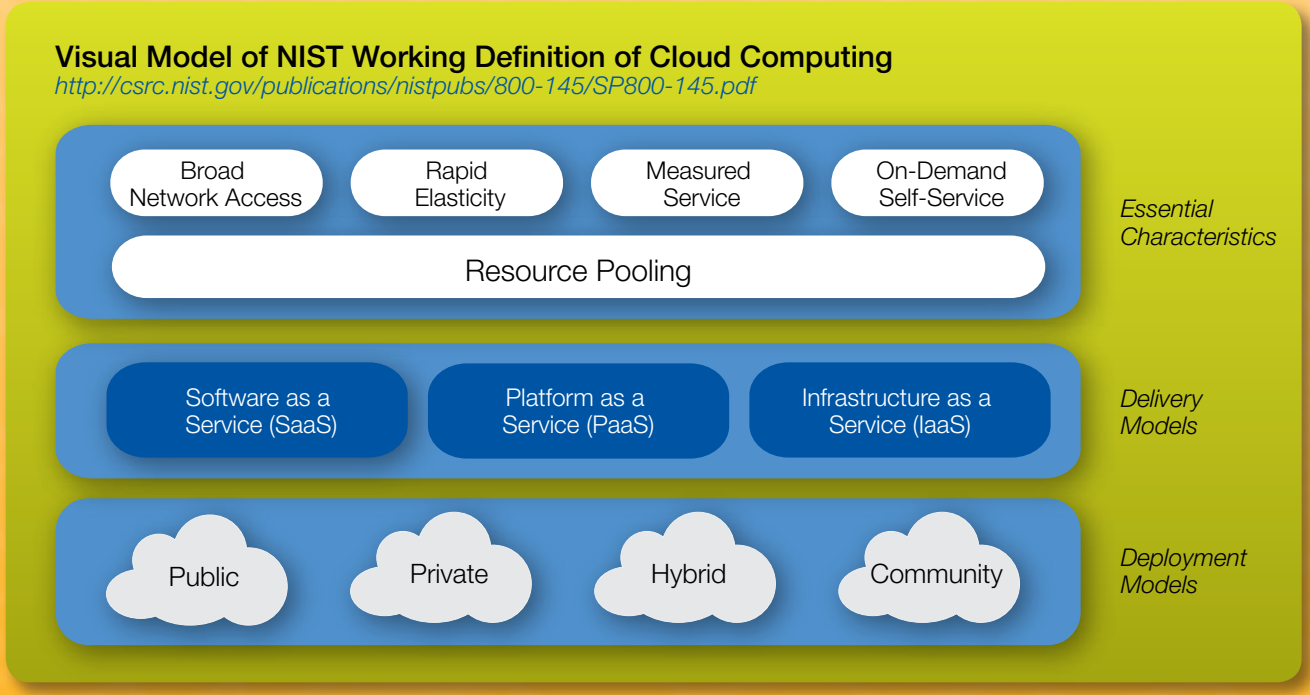
- **Lower IT cost and improved transparency**
- **Improved business agility**
- **Innovation and creation of new value drivers**

Like most large organizations, consolidation and virtualization is a best practice adopted by USDA. OCIO focused on reducing capital expenses (hardware), cutting energy costs, and avoiding the need to build out new data centers or computer rooms. But as it forged a path toward virtualization, the OCIO also found new ways to improve services, operations, flexibility, speed, and downtime managment.

These resulted in new, value-add capabilities like rapid provisioning and cloning of environments. These capabilities, coupled with improvements in our measurement and chargeback approaches, now enable us to introduce secure, private cloud services to USDA and other U.S. Federal Government agencies at very competitive prices.

OCIO currently offers its customers several flavors of cloud computing and storage services. Cloud computing services allow customers to deploy applications in a highly resilient environment that offers high availability, sizing options, and performance comparable to the best in the industry. At the same time, OCIO is embracing the FedRAMP cloud security standards to ensure that our customers' trust in technology remains unshaken. A shared environment allows OCIO customers to leverage this enterprise scale infrastructure without paying high premiums often associated with dedicated, high-end infrastructures.

Visual Model of NIST Working Definition of Cloud Computing
http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf



Cyber Security: An Enterprise Approach

The Challenge: Stovepiped Security

A lack of an enterprise focus for operational security capabilities left the USDA with highly fragmented toolsets (both within and across components), a significant number of areas with little or no security coverage, and an overall lack of visibility.

As a result, the USDA could not cohesively monitor entire networks or detect incidents with any degree of reliability, especially for traffic between components. The Department had no way to scan messages passing through its email systems. It sometimes took months to respond to incidents that could be detected.

Moreover, disparities in toolsets and coverage made it nearly impossible to conduct regular, reliable security assessments. Because they lacked the resources to collect data manually, many USDA organizations could only estimate and assert their security status. Without timely, trustworthy data, there was no way to determine the accuracy of these estimates.

The Plan: Achieving a Common Picture of Security Operations

In response to these challenges, OCIO developed plans for securing the USDA's systems and networks. It made a request to Congress for funding to implement the first stage of the plan in FY11. The foremost priorities of the plan were to develop an enterprise-level approach to security and to address the acute lack of visibility into traffic traversing USDA networks.

To achieve these priorities, the OCIO took several key actions. It initiated and completed rigorous security assessments in 11 primary USDA components. It began to consolidate USDA systems within a trusted environment serviced by enterprise messaging, enterprise data centers, and a single, global network.

It partnered with DHS to improve monitoring. It stood up and implemented critical infrastructure for an Agriculture Security Operations Center (ASOC). It deployed protections for endpoint devices and enterprise applications. The OCIO's ASOC is now responsible for the ongoing security management and operations of USDA.

Most importantly, the OCIO squarely addressed the challenge of visibility by designing, acquiring, and commencing deployment of an enterprise Security Sensor Array that provides a common operating picture for USDA management, IT, and security managers.

The Solution: The USDA Security Array

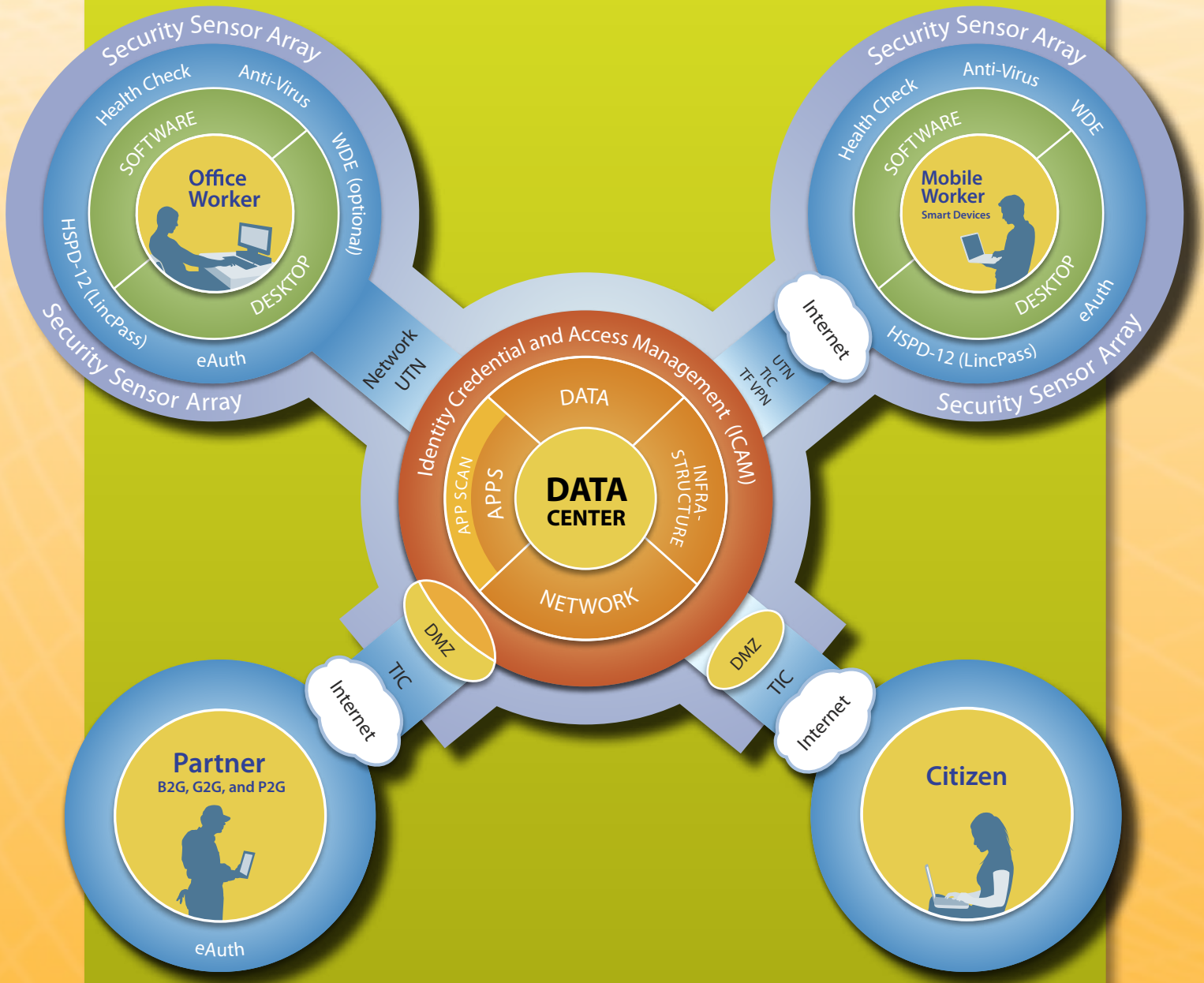
The USDA Security Sensor Array serves as the core security platform within the ASOC for 24x7 monitoring, intrusion detection, threat analysis, and incident response. It also supports an ongoing program of continuous assessments in order to help USDA agencies maintain security levels that comply with policy. Component capabilities of the USDA Security Sensor Array include:

- **Security Information and Event Management (SIEM)**
- **Intrusion Detection System (IDS)**
- **Data Loss Prevention (DLP)**
- **Network Behavior Analysis (NBA)**
- **Secure Socket Layer (SSL) Decryption**
- **Malware Detection System/Malware Protection System (MDS/MPS)**
- **Packet Analysis**
- **Net Flow**
- **Network Mapping and Modeling**
- **Enterprise Access Management and Health Check**

Through the USDA Security Sensor Array, the ASOC now has comprehensive visibility into the traffic and endpoints on USDA networks.

MISSION SPOTLIGHT

USDA Security - The Users' View
Appropriate Security for All Points of Entry



Protecting all technology assets and information, the Security Sensor Array shields the USDA network keeping unwanted intruders from infecting the environment, gaining access to intellectual property, or releasing information to cyber criminals.

Attempts to access USDA networks are monitored by the tools within the Security Sensor Array. Transparent to users, the ability to complete a transaction—whether generated by a device or person—is transparently determined by the Array.

Geospatial Applications: An "Energy Map" for Enabling a Renewable Transportation Energy Future for America

There are many opportunities to save both costs and energy with biofuels. But whether a biofuel actually generates savings depends on a complex set of factors. Many of these relate to geographic proximity between different components of the bio fuel production process. If, for example, a biofuel production plant is located far away from available raw materials, savings will be lost to transportation costs and energy use.

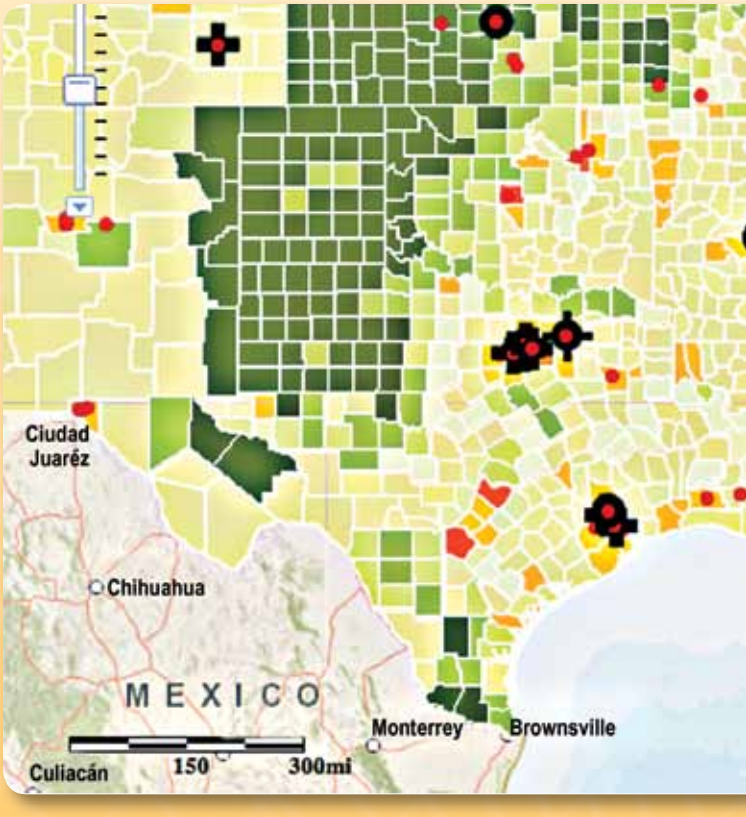
These factors can make it complicated to evaluate and approve grant requests for the development of biofuel production. How can evaluators determine whether there is a sound environmental and economic business case for producing a particular type of biofuel in a particular location? The answer lies in using existing USDA data to clearly see the big picture.

USDA's Green Affinity Project

In response to this challenge, OCIO developed the Renewable Energy Transportation Tool. This dynamic web-based application provides a visual representation of environmental and socio-economic data that helps stakeholders evaluate biofuel energy opportunities in their community.

It gives those responsible for evaluating biofuel grant requests an intuitive, visual interface for accessing an integrated view of data pertaining to land type and current use, crop yields, commodity prices, production cost models, greenhouse gas reductions, labor pool, and other factors. This data is trustworthy because it comes from sources such as the Forest Service, Economic Research Service, National Renewable Energy Laboratory, National Agricultural Services, and the Database of State Incentives for Renewable Energy.

With a clear, accurate, and timely picture of how biofuel feedstock production, energy production, and energy supplies align, evaluators now can fairly assess the merits of each grant application.

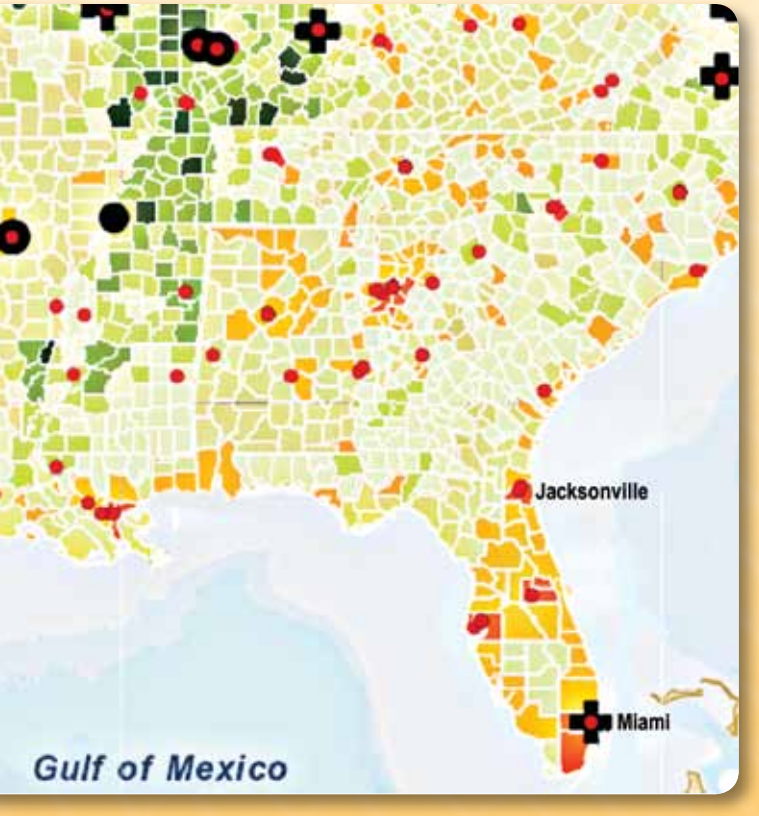


For example, evaluators can use the Renewable Energy Transportation Tool to determine if:

- It makes sense to produce a biofuel feedstock such as miscanthus or leave fallow land in the Conservation Reserve Program
- A community should consider building a new biorefinery or retrofitting an existing one
- Refueling stations will significantly benefit from adding blender pumps

Evaluators aren't the only ones who can use the tool. Citizens can also access it to get sound data for business planning or managing their operations. Such uses exemplify participatory government by helping to create transparency in the marketplace and boost public confidence. The tool can grow with such use—it's designed to be almost infinitely scalable.

MISSION SPOTLIGHT



IT Internship Program: Preparing Young Men and Women for Careers in Public Service

The USDA Information Technology Intern Program (ITIP) will prepare exceptional men and women for careers in public service. The program provides an opportunity for undergraduate and graduate-level students pursuing a bachelor's degree or master's degree with a major or minor in Information Technology, Computer Science, Computer Information Systems, Cyber Security, Geospatial Information Systems, or other related IT programs to participate in challenging work assignments and formal training opportunities directly related to the intern's academic program and career goals.

The IT Intern Program allows the OCIO to:

- Recruit, train, hire, and retain the most qualified, diverse team of IT professionals
- Develop and deliver the very best in IT services to the USDA and the citizens it serves
- Ensure that USDA maintains a quality IT job force, capable of leading the Department to meet its' mission and objectives

The ITIP provides training alongside some of the most qualified and diverse IT professionals in the field. The Chief Information Officers (CIOs) provide supervisors and mentors to formally train interns as if they were new employees. Other benefits include:

- Getting paid while they learn
- Free housing in Washington, D.C.
- Eligibility for employment upon completion
- Opportunities to apply academic knowledge to real world IT challenges

Introduction

Daily, the OCIO strives to achieve its goals leading down a path to fulfilling USDA mission goals. There is a sense of pride exhibited by the teams and communities of people who make IT work.

In this section of the book, select accomplishments are highlighted. Many projects operate entirely behind the scenes, but they still power USDA toward its mission goals.

A New Telecom Backbone

USDA has successfully migrated thousands of individual USDA sites to a centrally managed network. The Universal Telecommunications Network-Next Generation (UTN-NG) backbone allows the USDA to interconnect government buildings in a cost-effective way while increasing security, improving quality of service, and eliminating costly duplications.

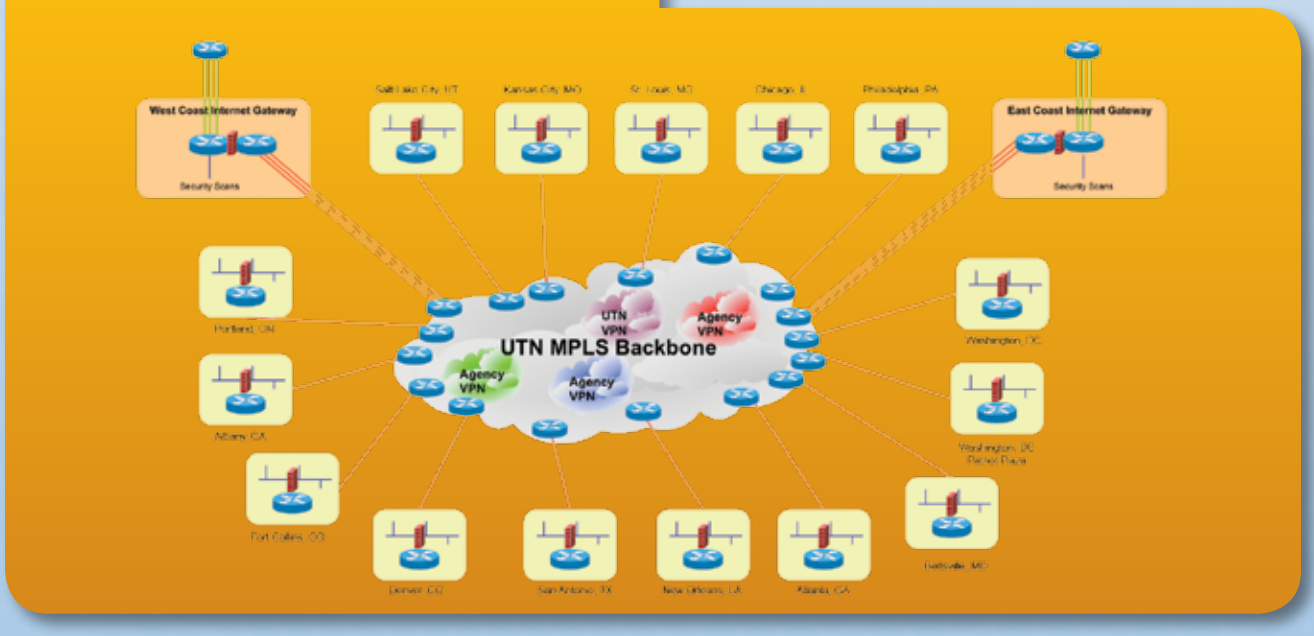
Defining a New USDA Enterprise Architecture

USDA's mission requirements are creating an urgent need for cross-agency solutions that are standards-based and interoperable. At the same time, policies like the Federal Desktop Core Configuration (FDCC) are driving efforts to set standards and control federal IT environments more effectively. To address such requirements, OCIO initiated a program to define key USDA technology standards.

The outcome of the program will be a Technology Architecture Guidebook and Technology Standards Guidebooks that will serve as a shared authoritative source for the future direction of USDA technology. The Technology Architecture is defined as a series of bricks, patterns, and principles. These components provide guidance implementing technologies that are proven to work well together. The standards are defined in a form that:

- **Uses illustrations to clearly explain "how" technologies are to be used to deliver capabilities to USDA users and systems**
- **Addresses the full lifecycle of technology standards from "Emerging" to "Retirement"**
- **Is easy to maintain and adjust over time as mission needs and technologies change**

USDA Enterprise Network



ACCOMPLISHMENTS

People's Garden Database

The People's Garden was established in February 2009, by Agriculture Secretary Tom Vilsack, during a ceremony commemorating the 200th birthday of Abraham Lincoln. The People's Garden Initiative has grown from the original garden on the grounds of USDA's Whitten Building to more than 1,500 gardens worldwide.

The People's Garden database, which was developed and maintained by OCIO, initially included only USDA employee sponsored gardens. It has blossomed to more than a thousand of USDA gardens and public gardens sponsored by a variety of organizations which collectively donated over 1,000,000 pounds of foodstuffs to charitable organizations in 2011. Nationwide, 48,000 volunteer hours have been donated in 2011. The general public may view the locations of all the People's Gardens at *www.thepeoplesgarden.gov*.

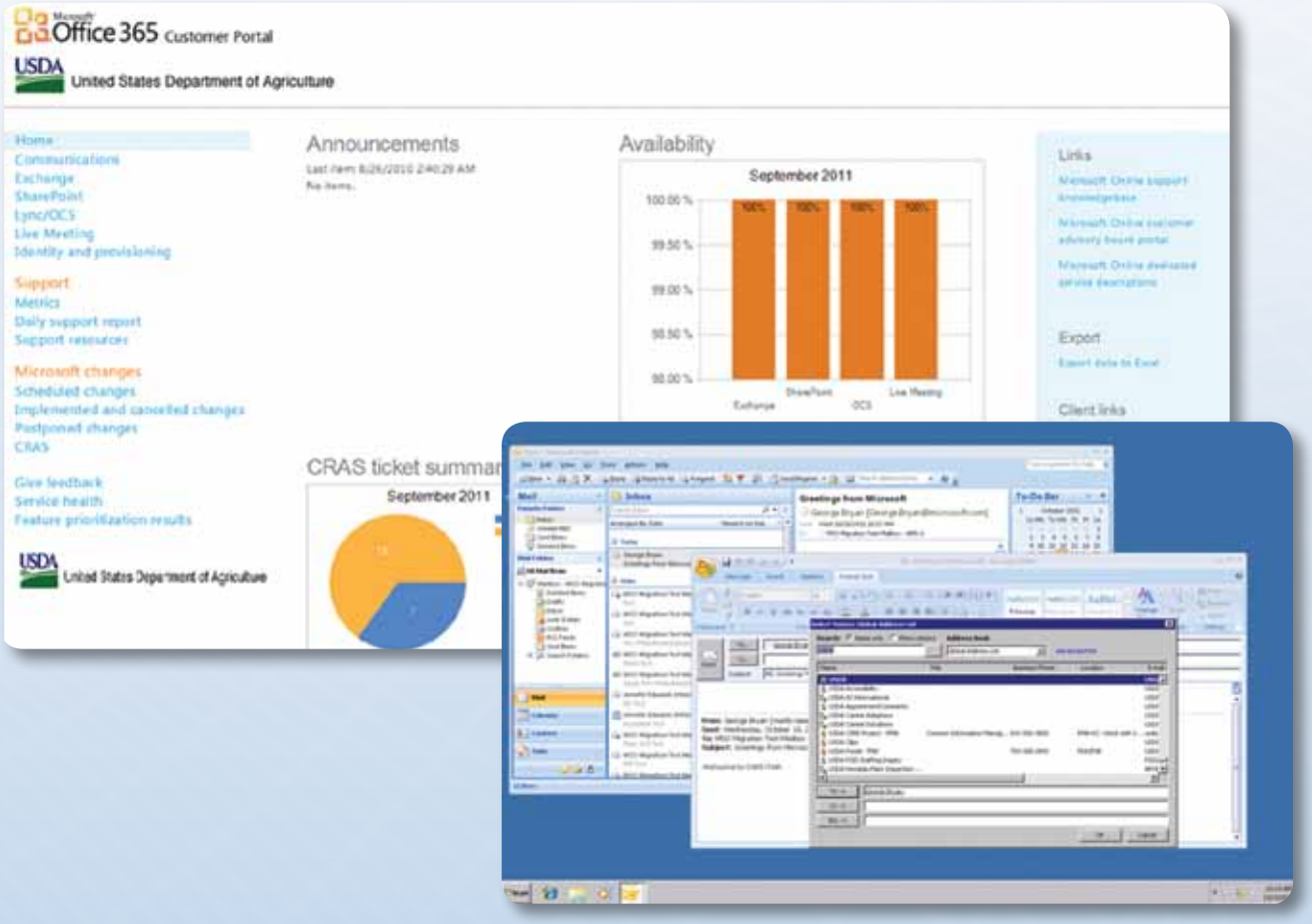
Center of Excellence

In response to emerging threats against federal computing, OCIO created a Center of Excellence to augment its Cyber Security Service offerings. The mission of the COE was to design, implement, and manage an outstanding federal Risk Management Framework (RMF) process in FY11.

Beginning in FY11, the COE managed and assisted the agencies in remediating deficiencies documented in 1,699 findings from FY10, reducing the number of outstanding vulnerabilities 47% to 893 by the end of FY11. In FY11, the COE began offering managed services to the agencies providing expert personnel to complete all components of the USDA/National Institute of Standards and Technology (NIST) six-step RMF process. For FY12, a new, consolidated, continuous monitoring program will be phased in, reducing the overall cost of compliance while improving USDA's IT security posture.

USDA Connect

Collaboration—Anytime, Anywhere, Anyone—USDA Connect is now accessible by all USDA employees and contractors and provides a variety of social interaction applications. There are interactive communities, such as USDA Webmasters and Sustainable Operations, for sharing techniques and best practices. Information portals, such as Enterprise Messaging Service (EMS), inform end users about service features. Work profiles can be used to highlight professional capabilities and experiences that may be of value to others looking for subject matter experts to contact. Through capabilities such as social networking, blogging, and file sharing, USDA Connect will allow us to reach across the geographical limitations and technological constraints that we faced in the past, and communicate efficiently in the 21st century.



Cloud-Based Email:
One System, More Capabilities, For Less

In 2008, USDA was operating numerous separate email systems with unique functionality, settings, and firewall settings. The decision to consolidate these systems was driven by sound business practices based on cost, operational efficiency, and a more productive workforce.

Though the Department began to move in the direction of an on-premise solution, the option that made the clearest business sense in the end was moving the USDA email system to the cloud.

In spring 2010, USDA conducted an acquisition for collaboration and communications Software as a Service (SaaS) to support its internally hosted Enterprise Messaging Service (EMS) solution. These cloud services were initially deployed to augment the EMS solution. Eventually they will replace it as the OCIO consolidates 21 email systems serving over 120,000 USDA employees and contractors into one integrated system.

This new cloud-based, enterprise-wide service will reduce the cost of mail messaging to less than $8 a month per USDA user, including all operating costs. Once the new system is fully operational, the Department expects to realize cost savings of approximately $6 million per year while providing greatly enhanced capabilities.

In addition to these lower costs, the new solution gives USDA more control over managing email settings across the enterprise—leading to secure and better records management.

ACCOMPLISHMENTS

Cellular Plan

In January 2011, there were 843 plans across USDA for voice and data cellular services. The OCIO Enterprise Network Services team worked with service providers to review and consolidate 843 plans down to 27. A recent review has identified further opportunities for consolidation.Three blanket purchase agreements (BPAs) reflecting a final set of 10 service plans were signed at the end of FY11. Transition to the new consolidated service plans begins in early FY12.

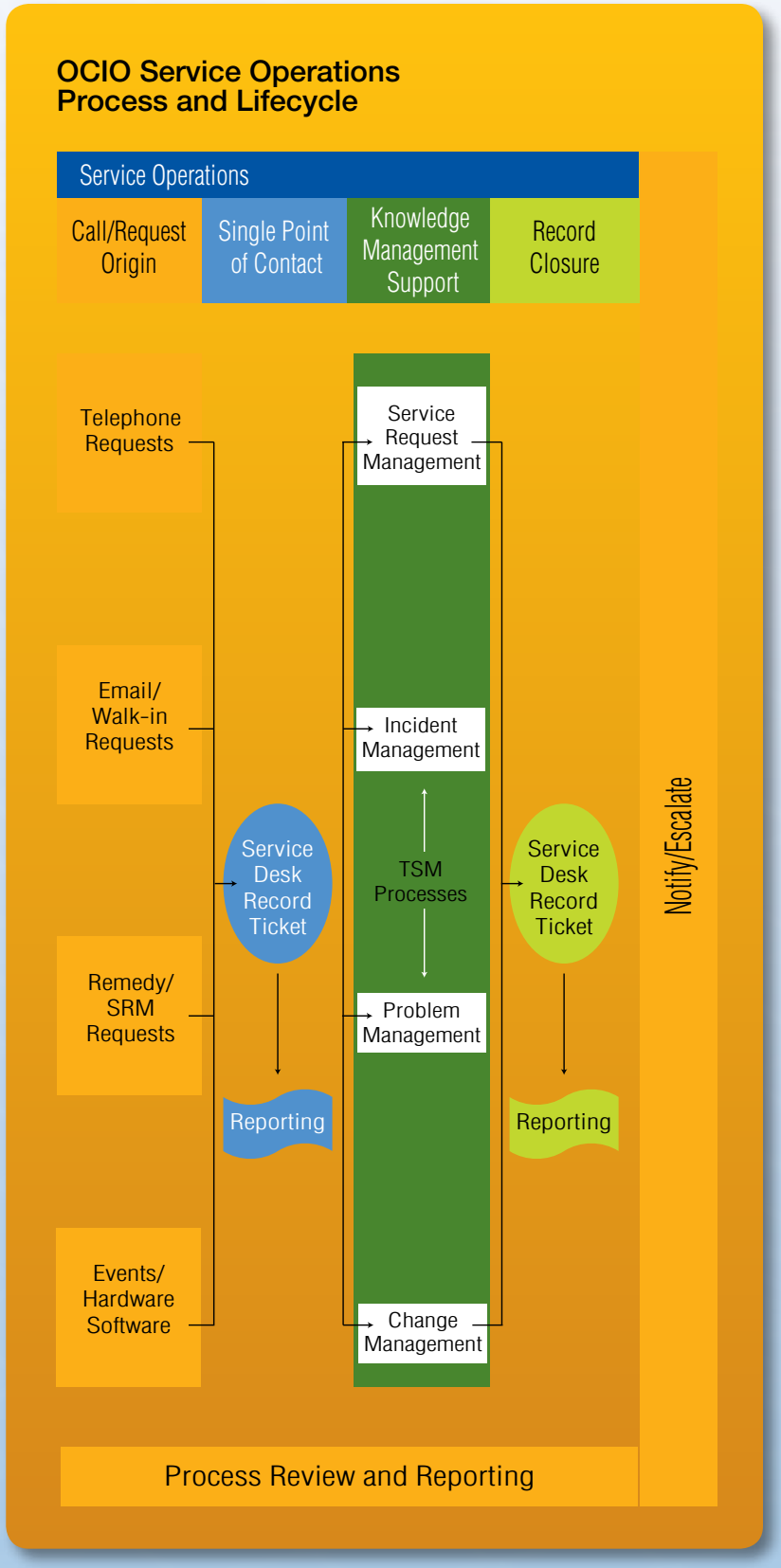
ITSM Service Desk

OCIO offers many different ways for customers to obtain IT support. They can request help desk services through:

- USDA's local customer service centers
- An extended hour 877 Service Desk number for IT support
- An automated Service Request Management (SRM) module

The Service Request Management (SRM) module provides user-friendly access to services with an easy-to-use web-based interface. Users can access the module to request assistance and information or to make a purchase.

The module is configured to notify the customer via an email message when an International Technology Services (ITS) support staff is assigned to work on the request. Users are notified when the IT staff opens a ticket on their request or issue. They receive another notification when their request or issue has been addressed and closed.



Who We Serve

The ultimate (but indirect) customers of the OCIO are the nation's citizens and their representatives in Congress. Our direct customers are the Secretary, IT organizations, and employees who are responsible for achieving the mission of the U.S. Department of Agriculture.

In that regard, the OCIO functions as a customer service organization and business partner for those with direct mission responsibilities. Our job is to provide information technologies, resources, and capabilities that make it easier (and in some cases, possible) to fulfill those responsibilities.

Perhaps our most important function is maximizing the useful value of USDA's data—by making sure it's readily available *and* absolutely secure. That's how we most directly serve all of our individual customers. We help them access and use the vast information resources USDA possesses in all of its Mission Areas to do their jobs more effectively.

That's equally true for OCIO customers who lead USDA organizations, who work in operational areas, or who manage USDA's IT infrastructure, hardware, software, and support capabilities.

What's Next

Like many large federal civilian agencies, USDA has implemented a variety of new technologies to support mission delivery. But as we move to new cloud models and other platforms, we must also be sure we continue to support existing requirements and make cost-effective use of current capabilities.

To bridge this transition, it's essential to have an effective, consensus framework for ensuring all of our technologies and capabilities will work together. That framework is the USDA Service Oriented Architecture (SOA) Roadmap.

USDA OCIO, through its Enterprise Data Centers, will design and incrementally implement the infrastructure needed to support SOA-based application integration across USDA's application and data environments. By providing this shared SOA infrastructure, OCIO will help USDA agencies deploy the mission capabilities they need while making most effective use of their investments.

This approach will eliminate costly, redundant infrastructure while ensuring agencies have the control and flexibility they need to meet their individual mission requirements.

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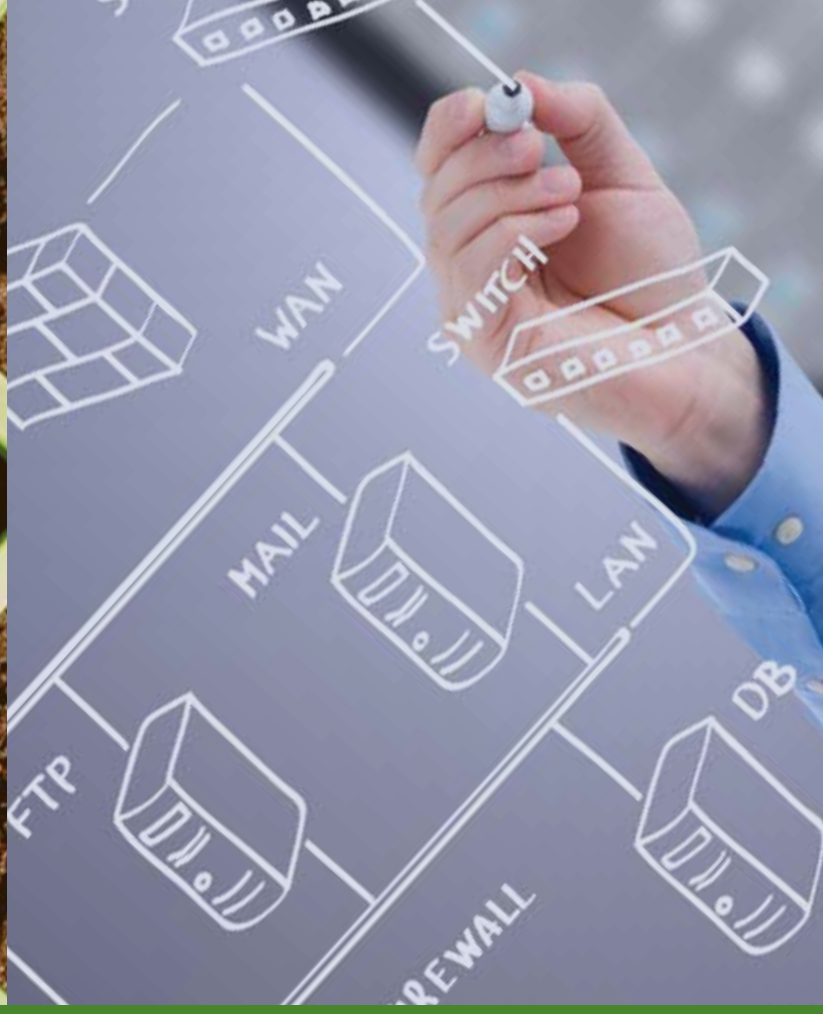

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