



United States Department of Agriculture

National Information Technology Center

2011 Annual Report

"Partnering for Success"

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To Our Stakeholders

The National Information Technology Center (NITC) has a steadfast commitment to the business principles that have proven successful for over 35 years.

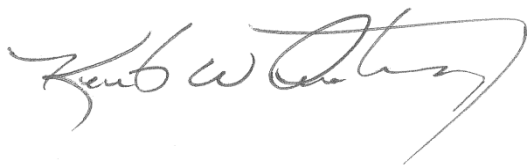
Our business approach – superior execution around three imperatives: we will sustain a strong portfolio of service offerings; we will drive common initiatives that expand performance; and, we will develop our people to grow a culture that is adaptive.

For our stakeholders, technological advances in 2011 and a commitment to excellence have allowed us to provide increased value in the form of additional service offerings and lower usage rates.

Of course, none of our technological advances would be possible without the talented men and women of the NITC. Our success and our innovations are driven by their ingenuity and dedication. Year after year, our people prove they care not just about results, but how these results are achieved.

We continue to pursue opportunities to enhance our service portfolio to ensure we remain well positioned to meet your business requirements. We recommit ourselves to meeting future demands through long-term planning, disciplined investment, operational excellence, and strong technological leadership.

On behalf of all of us working at the NITC, I sincerely thank our stakeholders who place their trust and confidence in us. We look forward to serving you in the future and partnering for your success.



Kent W. Armstrong
Associate CIO, Data Center Operations
and Director, National Information Technology Center

Performance Summary

The NITC's long-term goals are to sustain a viable organization and provide affordable rates to our customers by growing our customer base to achieve economies of scale.

The NITC Cloud Services are a welcome addition to our range of the hosting services offered. Customers receive secure, scalable, and standardized infrastructure and platform solutions to enable rapid application development and deployment. These new service offerings have proven invaluable to the overall Federal Data Center Consolidation Initiative, multiple Presidential and Secretarial initiatives and to any customers in need of robust, cost-effective hosting solutions.

The NITC received a Green Enterprise IT Award from the Uptime Institute. Furthermore, the NITC's efforts to promote Green Data Center initiatives have been formally recognized by the 7x24 Change International. The NITC's Kansas City Data Center met the qualifications for EPA's Energy Star certification.

For the 7th consecutive year, the NITC received an unqualified audit opinion, or 'clean audit,' for general information technology controls.

The NITC successfully 'spun off' the Software Development Division as an independent organization under USDA's Office of the Chief Information Officer (OCIO) known as the Enterprise Application Services organization.

Many of our rates continued to drop in 2011 while continuing service delivery excellence. Please see the financial section of this report for some specific details.

Serving Customers

The National Information Technology Center (NITC) is part of the United States Department of Agriculture's (USDA) Office of the Chief Information Officer (OCIO) and NITC is the centralized source for data center solutions.

The NITC headquarters is located in Kansas City, Missouri. The NITC organization includes a St. Louis, Missouri location for disaster recovery, and a Beltsville, Maryland location for disaster recovery, development and test systems only. The NITC specializes in Enterprise Information Technology (IT) Solutions that include products, services, and resources. The business delivery software applications deployed in the NITC environments are national and international in scope, mission critical, and essential for the operations of the United States government.

Services Delivered

The NITC hosting operations are delivered seven days a week, twenty-four hours a day, all year long at the Kansas City, St. Louis and Beltsville locations. Services consumed are reimbursed by NITC customers through competitive usage rates.

In 1972, the NITC introduced centralized, shared computing services to USDA agencies. The 'economies of scale' from centralized computing propelled NITC into a new role for USDA. The NITC has evolved and grown over the years; yet, it is reliable for keeping up with and introducing leading edge technologies to the federal space. The web-enabled technologies available today from NITC allow government and public users to access business delivery applications on a 24X7 basis. The mainframe infrastructure provides a reliable interactive processing environment with over 350 commercial off-the-shelf (COTS) vendor products to accomplish a customer's data processing needs. NITC assures the confidentiality, integrity, and availability on all server architectures. NITC customers are able to access facilities from their remote locations throughout the United States via secure private and public networks to support their business requirements and service needs. NITC services include Platform as a Service, Infrastructure as a Service and Professional Services.

NITC Service Desk

To better serve NITC customers, the NITC Service Desk is the single Point of Contact (POC) for managing incidents through to resolution. The Service Desk facilitates the restoration of normal operational service to minimize business impact to the customer. Available 24 hours a day, 7 days a week, the NITC Service Desk utilizes Information Technology Service Management (ITSM) best practices to record, route, and manage the timely response to all incident reports and service requests. Contact information: NITCServiceDesk@ocio.usda.gov or 888-USE-NITC or 816-926-6660.

Customer Feedback Number One:

NITC TEAM:

I would like to offer my sincere Thank You to the team at NITC who worked last week on the FDW copy [replication] project... It was great teamwork, and I appreciate the effort and coordination that was required to pull it off, at somewhat short notice.

...I understand that you all have other customers and priorities to respond to, not to mention personal lives. Your effort is a credit to you as dedicated USDA employees and IT professionals. I know that some of you have maintained and supported FDW for several years, and your pride in ownership was obvious and well-deserved. We value the advice and documentation you have provided. We will take good care of it here at NFC. I welcome future opportunities to work with the NITC team members again.

Office of the Chief Financial Officer

Customer Feedback Number Two:

On Sept 28, 2010, the new LincPass – eAuthentication single sign-on (SSO) service went live. This service provides USDA employees and contractors with SSO to 375 web applications at USDA... if they use their LincPass.

Herculean effort you and your folks just accomplished. This puts the USDA LincPass program miles ahead of any other Federal Department/Agency.

*Excellent and a big thank you,
Office of Homeland Security and Emergency Coordination*

Creating Value

The NITC-managed, Enterprise Data Centers (EDC) are state-of-the-art, highly available, secure facilities located in Kansas City and St. Louis, Missouri for production data processing.

The EDC customers can focus on program delivery while the NITC provides expertise and capital investment for infrastructure refreshment. When customers bring business to the NITC EDC, business executives can rest assured that production business operations are in a secured facility.

Enterprise Data Center (EDC) equivalent Uptime Institute Ratings*

NITC Kansas City EDC—Tier IV
NITC St. Louis EDC—Tier III
NITC Beltsville —Tier I

Department of Justice Secure Facility Ratings**

NITC Kansas City EDC—Level IV
NITC St. Louis EDC— Level IV
NITC Beltsville— Level IV

***Summary of Uptime Institute Tier Ratings:**

Tier IV: Multiple active power and cooling distribution paths, redundant components, fault-tolerant, providing 99.995% availability, highly available local area network.

Tier III: Multiple active power and cooling distribution paths but only one path active, redundant components, concurrently maintainable, providing 99.982% availability.

Tier II: A single path for power and cooling distribution, with redundant components, providing 99.741% availability.

Tier I: A basic data center with non-redundant capacity components and a single, non-redundant distribution path serving the computer equipment. The site is susceptible to disruption from both planned and unplanned activities providing 99.671% availability.

****Summary of Department of Justice Secure Facility Ratings**

Level V: A building that contains mission functions critical to national security, such as the Pentagon or CIA Headquarters. A Level-V building should be similar to a Level-IV building in terms of number of employees and square footage. It should have at least the security features of a Level-IV building. The missions of Level-V buildings require that tenant agencies secure the site according to their own requirements.

Level IV: A building that has 451 or more federal employees; high volume of public contact; more than 150,000 square feet of space; and tenant agencies that may include high-risk law enforcement and intelligence agencies, courts, and judicial offices, and highly sensitive government records.

Level III: A building with 151 to 450 federal employees; moderate/high volume of public contact; 80,000 to 150,000 square feet of space; and tenant agencies that may include law enforcement agencies, court/related agencies and functions, and government records and archives. (According to GSA, at the request of the Judiciary, GSA changed the designation of the number of buildings housing agencies with court and court-related functions from Level III to Level IV.)

Level II: A building that has 11 to 150 federal employees; moderate volume of public contact; 2,500 to 80,000 square feet of space; and federal activities that are routine in nature, similar to commercial activities.

Level I: A building that has 10 or fewer federal employees; low volume of public contact or contact with only a small segment of the population; and 2,500 or less square feet of space, such as a small “store front” type of operation.

NITC Network Services

The NITC network services provide reliable connectivity between EDC locations. Redundant connectivity is provided using two separate (access/distribution layer) network switches. The Layer 2 spanning tree protocol is configured such that one connection is in ‘*active mode*’ and the other is in ‘*standby/failover*’ mode. Additionally, the Layer 3 interface is configured for failover between two core routing devices.

Local Area Network (LAN) connectivity, within the data center, primarily operates at 1 gigabyte connectivity with plans to move to 10 gigabyte connectivity where required. Connectivity to USDA’s Wide Area Network (WAN) and Internet is accomplished through 4 OC12 circuits to USDA’s UTN. When utilizing the NITC network services offerings, network engineering, design consultation, network utilization monitoring, capacity planning, network load balancing, network cabling consultation and other specialized professional services can support customers to architect solutions that comply with required NITC EDC standards.

NITC Security Services Recognized

FedTech, a quarterly magazine designed to assist IT managers in making decisions, interviewed the NITC's Security Division Director, Greg Schmitz, regarding secure flash drives. The NITC has invested, between \$5,000-\$10,000 in portable drives as a disaster preparedness strategy. With the increased portability comes an added management challenge. According to Schmitz,

“having the information readily available for our essential personnel to deploy immediately would justify the investment many times over.”

The ability to recover quickly, should a disaster strike, is a critical capability for an EDC. NITC customers can rest assured that disaster preparedness is a top priority at the Kansas City and St. Louis, MO sites. The entire article can be accessed at the following link: http://fedtechmagazine.com/article.asp?item_id=695.

NITC Storage Services Recognized

FedTech, a quarterly magazine designed to assist IT managers in making decisions, interviewed the NITC's Business Division Director, Clay Cole, regarding the advantages of Storage Area Networks (SAN). According to Cole,

“We strive to achieve near-100 percent availability. Hosted applications at NITC vary in criticality from one end of the spectrum to the other, up to and including applications that support emergency personnel in life-threatening situations. The cost of infrastructure wide failure would be catastrophic to us and our customers. The SAN has helped reduce downtime associated with the availability of disk storage, provided high-performance capacity and enabled economies of scale to limit the overall cost.”

At the NITC EDC, the Fibre Channel SAN infrastructure combines servers from HP, IBM, Sun Microsystems and Unisys with a Hitachi Data Systems disk array and a StorageTek tape library — all linked by Brocade SilkWorm switches. The EDC has a primary SAN and an alternate SAN, at the St. Louis facility, which replicates data between the sites to assure continuity of operations. USDA organizations and other federal agencies receive the value-added benefits from this superior, reliable storage solution. The entire article can be accessed at the following link: http://fedtechmagazine.com/article.asp?item_id=796&sv=eo.

Growing Markets

The NITC EDC customer base continues to grow! USDA organizations and other federal agencies have discovered our cost effective solutions.

The NITC is experiencing significant growth in hosted application solutions for customer mission critical business delivery due to the Federal Data Center Consolidation Initiative.

New Application Hosting Solutions

- Virtual World applications for the Department of Homeland Security;
- Virtual World applications for the US Air Force;
- EmpowHR Development/Test Environment for USDA's National Finance Center;
- Network Modeling and Performance Initiative hosting environment for the USDA's Agriculture Security Operations Center;
- Disaster Recovery Food and Nutrition Service public-facing websites for USDA's National Agriculture Statistics Service;
- "talktoaphis" and "uptheChain" public and internal online spaces for USDA's Animal and Plant Health Inspection Service;
- Migration of the Department of Labor's govbenefits.gov website to cloud services;
- USDA's Energy Programs Geospatial Mapping;
- Enterprise Identify Management System (EIMS) is USDA's solution for the Homeland Security Presidential Directive (HSPD-12);
- LincPass – eAuthentication Single Sign On;
- USDA.gov Open – The Open Gov Initiative's effort to transform how USDA interacts with the public to be more open, transparent and collaborative;
- Food Safety Working Group Information Technology Task Force –This project establishes an Information Technology Task Force to make recommendations to the Secretaries of Health and Human Services and Agriculture about ways in which the agencies can achieve greater interoperability and harmonize electronic data collection standards between the federal agencies, State and local authorities;
- America's Great Outdoors Idea Jam – This project solicits and gathers public input and feedback about the America's Great Outdoors initiative;
- Redesign of the Whitehouse's Letsmove.gov website – The "Let's Move" website is a resource for solutions to improve the health, nutrition, and fitness of America's kids. The site combines the positive, inspirational messaging from the First Lady with the energy from a network of participants. The website aggregates existing governmental resources and highlights individual successes and community participation;
- Chefs Move to Schools – As a part of the Let's Move.gov initiative, an interactive map was created to find a chef or school participating in the "Chefs Move to Schools" Program; and,

- Office of the Communication Blogs – the “Know Your Farmer-Know Your Food” website and the Secretary’s blog were launched. These blogs have been visited by 26,022 visitors from 111 countries/territories. The popular blog posts include conversations on “Reflections on Civil Rights at USDA,” “ARRA Funds Help Keep Washington Farmers Afloat,” and “Direct USDA Recovery Act Home Loans Assist Dozens.”

Federal Data Center Consolidation Initiative

Out of 32 agencies and offices in the USDA, 13 have consolidated to the Enterprise Data Centers; 16 are underway; and, 3 remain to start the consolidation process. In Fiscal Year 2011, the consolidation and migration of 5 individual agency computer rooms/data centers were either completed or substantially completed.

Disaster Recovery and Continuity of Government Operations

The NITC established a departmental Disaster Recovery (DR) Enterprise Data Center in St. Louis, Missouri, for the benefit of all USDA agencies. A fully operational DR capability is now available from the installation of a mainframe, SAN, network connectivity, network security protocol, physical security and redundant power supply. Readiness testing proved that the NITC EDC architecture is fully able to remotely recover mainframe hosting, at the St. Louis facility, from mirrored system volumes from the primary site. Customers can realize a new level of confidence in their mainframe computing services acquired through the NITC EDCs.

The DR EDC benefits customers with lower costs for DR testing. Historically, the NITC DR Technical Team, comprised of a compliment of 30 staff members, traveled to a commercial hosting facility in Boulder, Colorado, for the annual DR testing. With the DR EDC capability ‘on-line,’ these travel costs have been eliminated. The new capability allowed the NITC to successfully conduct more rigorous mainframe and mid-range recovery exercises in FY11 to the benefit of customers working to meet their annual Federal Information Security Management Act (FISMA) and OMB Circular A-123 testing requirements. The new recovery solution from mirrored system volumes significantly reduced the recovery time versus traditional recovery from tape backup media providing NITC customers with a more robust continuity for their government operations.

Solving Challenges

The NITC EDC has been actively evaluating new technologies and implementing energy efficient (i.e., “green”) solutions for infrastructure systems and computing environments.

With the enactment of the Energy Policy Act of 2005, Congress accelerated the energy consumption goal with reductions targeted at 2% annually. The NITC EDC reconsidered many infrastructure upgrades to ensure that this goal was met. Energy efficient solutions have served to reduce NITC’s average Power Usage Effectiveness (PUE) ratio to 1.64.

Pursuing “Green” Data Centers

To implement the best practices for energy efficient management of servers and data centers, the USDA contracted for the services of the Lawrence Berkley Laboratories (LBL). The purpose of this engagement was to evaluate USDA’s EDCs and make recommendations for energy savings through investment strategies in “green” technologies. The LBL recommendations include:

- Replacement of data center lighting with high efficiency electronic ballasts utilizing low wattage lamps;
- Installation of a virtual tape system that allows for the decommissioning and removal of many outdated and inefficient tape drives;
- Replacement of outdated and inefficient Computer Room Air Conditioning (CRAC) units with newer technology CRAC Units that are rated at greater than 90% efficiency;
- Replacement of Uninterruptible Power Supply (UPS) units with higher efficiency modular units that allow for the ‘right sizing’ of supply power to load while operating at greater than 93% efficiency;
- Replacement of the main electrical distribution system transformers with newer technology;
- Replacement of rooftop mounted air conditioning dry-coolers with new units rated to operate at greater than 90% efficiency;
- Installing an air economizer feature allowing the data center to utilize “free-cooling” when the outside air temperatures drop below 40 degrees Fahrenheit;
- Implementing virtualization across shared computing environments allowing the physical number of servers to be reduced;

- Optimizing the data center's raised floor layout by relocating equipment and realigning it to create a 'hot row-cold row' concept of operations; and,
- Analyzing the layout and location of vented floor tiles, resulting in the realignment of vented floor tiles to ensure that the static air pressure is maintained and that conditioned air is directed to the heat loads.

The entire report is available at <http://greening.usda.gov/USDASSPP09-07-10.pdf>.

Actions Taken to “Green” NITC EDCs

The NITC implemented many energy savings recommendations provided by the Lawrence Berkley Laboratories. The most significant changes are as follows:

Computer Room Air Conditioning (CRAC) units: At the EDC-Kansas City location, 16 new, 22 ton, glycol CRAC units were installed.

Air economizer feature: At the EDC-Kansas City location, “free-cooling” is utilized anytime the outside temperature drops below 50 degrees Fahrenheit. The compressors are no longer needed to cool the glycol within the CRAC units.

Vented floor tiles: At the EDC-St. Louis location, GSA and an energy audit contractor, SynapSense, performed an energy audit at the data center. As a result of the audit, 6 of the 21 CRAC units were turned off. Blanking plates were installed in racks and 50 vented floor tiles were replaced. The data center is now being continuously monitored with additional energy savings expected in the future.

Optimizing floor layouts: At both EDC locations, the NITC has adopted a modular data center design. With this approach, the NITC utilizes the most current technology; limits the amount of floor space impacted by build-outs; and employs efficient power utilization for 'green' energy consumption. The modular design also reduces single points of failure, since each modular unit has dedicated, self-contained mechanical and electrical components. The modular data center design approach is allowing the NITC to 'build-out' smaller increments of floor space (e.g., 5,000 square feet) which reduces the initial outlay of funds required.

Results from Efforts to “Green” NITC EDCs

The Environmental Protection Agency (EPA) targeted a 1.7 PUE ratio for data centers in 2011. NITC EDCs met this requirement and actually achieved a minimum PUE of 1.64 as additional investments were made to achieve an even better PUE ratio. Customers can be assured that the NITC will continue to be a leader in data center energy conservation to reduce operational costs for everyone.

Meeting Customer Needs

NITC's customer-centric approach to providing enterprise-class data center hosting solutions has proven to be the key to our success and repeat business.

Customer Satisfaction Survey

The NITC contracted with Gartner Inc. (Gartner) to conduct the FY2010 Annual Customer Satisfaction Survey. Gartner reported an overall satisfaction rating of 3.99 out of 5.00 with NITC. The NITC score surpassed the average commercial and government data center score of 3.72 that was calculated from the results of 419 organizations rated by Gartner.

Overall, customer reported satisfaction with NITC Account Managers was rated highly and showed an upward trend. In 2010, a satisfaction score of 4.18 was achieved in comparison to the 2009 score of 4.03, representing an increase of 3.75%.

When comparing NITC's Service Delivery criteria to the full Gartner organizational database, the NITC scores consistently higher than the Gartner database average. For example, in the category of System Performance, the NITC actually exceeded the 'best-in-class' scores reported for commercial and government data centers. NITC is proud that our 2010 composite score is significantly higher than the Gartner average for our nearest commercially outsourced and government peer group.

Staying Competitive

NITC is committed to being the data center of choice for our customers. We invite your comparisons.

Public/Private Competition for New Business

The NITC actively seeks new business opportunities among the public sector's requests for invitations and requests for proposals. Responding to these requests has allowed the NITC to validate our competitiveness with other private and public sector service providers for data center hosting requirements.

Independent Verification & Validation

In addition to several required federal audits, the NITC funds independent verification and validation studies to ensure our competitiveness. On a biennial basis, the NITC contracts with a third party vendor to perform benchmarking against similar types of data centers in the federal and commercial sectors. The third party vendor benchmarks the NITC's rate structure and operational service levels against our closest peer organizations. Benchmarking is an effective feedback mechanism to validate our competitiveness and assess that customers' expectations are being met.

Business Case for Consolidation to the Enterprise Data Center

The Federal Data Center Consolidation Initiative (FDCCI) was established by the Office of Management and Budget's (OMB) Federal CIO in early 2010. The FDCCI is a government-wide initiative designed to reduce the cost and energy 'footprint' of federal data centers while increasing efficiency, strengthening their security posture, and promoting 'Green' IT practices.

The OMB accepted the USDA's Business Case which was based on a consolidation strategy leveraging the assets and rate structure of the NITC. The NITC is working closely with USDA agencies to migrate their business operations to the cloud service offerings available from the data center.

Data Center Security – Personnel

The NITC has implemented rigorous controls and checkpoints that govern personnel access to the grounds of the data center, entry within the building, and movement of equipment within the data centers. Customers can rely on data center personnel having passed elevated security background checks.

Data Center Security – Internal Controls and Audit Requirements

Since the terrorists' attacks of September 11, 2001, the OMB and Congress have mandated that civilian federal agencies improve their security posture and ability to continue government operations in the event of an emergency. The NITC is proud that our Enterprise Data Centers offer customers a fully compliant environment for their mission essential and mission critical business delivery systems.

Responding to these requirements has resulted in significant improvements in the implementation of policies, technical security controls, and manual control processes to comply with these heightened security requirements. We have made organizational changes to develop an Internal Audit Program capability that tests the effectiveness of our policies, processes and controls. The result is an increased level of management assurance for our customers and us that our data centers meet, and at times exceed, the expectations of OMB and Congress to be known as Enterprise Data Centers.

Data Center Security – System-level Controls

The NITC protects USDA mission essential and mission critical systems through a layered defense that includes physical protection, access controls, intrusion detection, firewalls, anti-virus software, server hardening, systems scans, and infrastructure patching. The layered protection provides highly available defenses to ensure the confidentiality, availability, and integrity of customer data stores. This security protection has resulted in no known compromises of systems hosted on NITC-managed environments.

Data Center Automation

The NITC has partnered with a commercial software vendor to implement data center automation technologies to improve IT Service Management. When fully deployed across the data center, tool suites will automatically discover physical and virtual IT assets and applications; their relationships between them; and update inventories of discovered assets. This implementation reduces overhead costs while dramatically simplifying critical data center operations such as server deployment, server virtualization, change management, software license management, data center consolidation, disaster recovery and cloud computing monitoring.

Financial Section

Management's Discussion of Financial Responsibility

We believe that successful data center service providers are built on a foundation of quality service and reliable financial information. For NITC, that foundation includes rigorous management oversight of, and an unyielding dedication to internal controls and procedures. The financial information in this report is one product of our commitment to high quality financial reporting. In addition, we devote our full resources to ensuring that accounting policies are applied properly and consistently and we do our best to fairly present our financial results in a manner that is complete and understandable.

Rigorous Management Oversight

Members of the NITC leadership team review each of our service offerings routinely on matters that range from overall strategy and financial performance to staffing and compliance. We continually examine our governance practices in an effort to enhance stakeholder trust and improve NITC's overall effectiveness.

Dedication to Internal Controls and Procedures

We maintain a dynamic system of internal controls and procedures — including internal control over financial reporting - designed to ensure reliable financial record-keeping, transparent financial reporting and disclosure, and protection of physical property and personal information. We recruit, develop and retain a world-class financial team.

Visibility to Customers

We are keenly aware of the importance of full and open presentation of our rates and operating results. NITC is committed to provide customers the best services at an economical rate. Rates are a high priority and are continuously reviewed and updated.

Segment Operations

In FY2010, NITC developed and published its first Service Catalog that serves as the foundation for formal service delivery management practices; including the establishment of service portfolios, operating level agreements, and cost allocation models. The NITC Service Catalog continues to be revised as new service offerings are introduced or when existing offerings are enhanced or changed.

The four main segments of NITC provided services are: Platform as a Service (PaaS), Infrastructure as a Service (IaaS), Professional Services, and Other Hosting Services. While NITC is focused on providing cloud computing solutions based on PaaS and IaaS offerings, key data center services for traditional Managed Hosting and Collocation Hosting customers continue. Analysis of our revenue shows that 42% is derived from PaaS; 14% is derived from IaaS; 2% is derived from Professional Services; and, 42% is derived from Other Hosting Services. From Fiscal Year 2004 through Fiscal Year 2011, the two revenue growth areas are supporting customer needs for IaaS and Other Hosting Services.

Platform as a Service (PaaS)

The NITC PaaS service offerings provide key enabling cloud computing solutions to support rapid application development and deployment. By combining the NITC IaaS solutions with the licensing, management, and deployment of key fundamental application software, NITC can provide scalable, secure application hosting environments.

USDA Connect (Social Networking Suite) - NITC provides a social networking software solution to empower USDA employees to develop and maintain a network of colleagues and nurture creativity with communities of coworkers, partners and customers.

Web Server - NITC provides an enterprise-class web server solution that meets agency requirements for light-weight web applications that require very little dynamic data. This offering includes simple scripting capable of supporting light-weight database updates and data retrieval.

Web Application Server - NITC provides an enterprise-class web application server environment for robust, fault-tolerant web application hosting.

Web Portal - NITC provides an enterprise-class portal solution for web application hosting that allows aggregation of applications and content for delivery as a single, role-based application.

Database - The NITC Database Platform as a Service offering provides a fully managed platform solution for use as an integral part of an overall customer application hosting environment. The offering provides scalable database services that provide required performance, reliability, and functionality while also providing cost savings associated with the overall ease of management and the economies of scale associated with a common, standardized solution.

Web Content Management - The NITC Web Content Management solution enables all authorized users within an organization to create, capture, store, manage, publish, view, search, archive all types of documents, and provides the ability to support the entire content management lifecycle. Contributors are granted the ability to publish content directly, without a web masters intervention, vastly increasing the speed of making information available on the web.

Document Management - The NITC document management solution allows organizations to effectively and efficiently capture, secure, share and distribute digital and paper-based documents. The solution includes a workflow process to mirror the review of information and supports process automation for document creation, review, and revision.

Web Search - The NITC Enterprise Search offering provides customizable, web search-engine functionality for web applications. The solution can be configured to search collections of web pages that are customized per application. These collections can include anything from the entire domain to a single web page. The search catalog offers services for public facing and protected sites using USDA's SSO (eAuthentication) system.

Virtual Desktop (Citrix) - The NITC Virtual Desktop service provides the technology necessary to enable the hosting of workstation-centric business applications remotely in the NITC Enterprise Data Center. Combined with other key enabling NITC cloud services, the Virtual Desktop service can provide a practically identical end user experience for workstation-centric applications while simplifying the management of desktop software installation and maintenance as well as providing a secure remote access solution.

Mainframe - The NITC Mainframe Platform as a Service includes a fully managed operating platform for mainframe-based applications. This fully-managed service includes system engineering services, software tools, storage services, technology refresh, and disaster recovery.

Between Fiscal Year 2007 to Fiscal Year 2011, NITC has reduced the central processing unit (CPU) minute rate from \$44.50 to \$33.60. Customers have realized significant cost savings.

Between Fiscal Year 2008 to Fiscal Year 2011, NITC has reduced the mainframe disk storage rate from \$0.0031 per gigabyte per month to \$0.00159 per gigabyte per month.

Between Fiscal Year 2007 to Fiscal Year 2011, NITC has held steady the mainframe tape storage rate for on-site and off-site tape storage while experiencing a steady annual tape usage increase from 224,491 tapes to 281,141 tapes.

Infrastructure as a Service (IaaS)

The NITC IaaS service offerings provide robust, secure, fully-managed data center infrastructure solutions for the development and deployment of customer application software. By including technology refresh and inheritable security controls, NITC can provide customers with cost-effective, just-in-time capacity for the business applications and allow them to focus on their core mission.

Midrange - The NITC Midrange Infrastructure as a Service (IaaS) offering provides standard virtualized operating platforms to securely host customer applications. NITC utilizes advanced server virtualization technologies, strict standards, and economies of scale to enable rapid delivery of cost-effective, fully-managed operating platforms with expanded inheritable security controls.

Transitional - The NITC Transitional Infrastructure as a Service (IaaS) offering provides customers with the necessary platform services to support the development and transition of business applications into standardized Enterprise Data Center (EDC) service offerings. With server infrastructure already integrated with other key IaaS offerings, customers need only to configure NITC-provided virtual Operating Systems as well as install and configure their respective application software to enable rapid application development and EDC migration solution delivery.

SAN/NAS Storage - The NITC Storage Area Network (SAN) / Network Attached Storage (NAS) service provides a robust disk storage infrastructure for Collocation, Managed Hosting, and Cloud Service customers. NITC exploits storage virtualization technologies, strict standards, and economies of scale to enable rapid delivery of cost-effective, fully-managed disk storage cost/performance options.

NITC has provided this key service while dramatically reducing customer costs through economies of scale and advancement in technology. The introduction of three virtual tiers of disk storage that vary in price and performance has dramatically impacted the overall cost of NITC business application hosting. For instance in Fiscal Year 2004, the Tier 1 storage rate was \$3.10 per gigabyte per month compared with the Fiscal Year 2011 rate of \$1.10 per gigabyte per month. In Fiscal Year 2011, the offering of Tier 2 and Tier 3 storage options afford customers the options to archive data at even lower monthly storage charges.

Backup/ Archive Storage - The NITC Backup / Archive Storage service provides a robust combination of hardware and software technologies for Collocation, Managed Hosting, and Cloud Service customers' data protection and archive requirements. NITC exploits tape virtualization and automation technologies to enable the delivery of cost-effective, fully-managed data protection and data lifecycle storage solutions.

Video Tele-Conferencing (VTC) – The NITC provides a fully managed VTC infrastructure to enable connectivity between customer-owned endpoints.

Web Accelerator – The NITC can provide 3rd party Web Accelerator services to further enhance web application performance and availability as well as deliver static websites. Front end redundancy and geographically dispersed nodes for last loop efficiency are included.

Other Hosting Services

The NITC continues to provide traditional data center hosting services for customer-owned equipment.

Managed Hosting - NITC will manage customer-provided servers up through the Operating System (OS) in a secure operating environment including systems installation, engineering, administration, and support.

Collocation Hosting - NITC will provide a secure enterprise-class computing facility for the physical hosting of customer managed servers and equipment. This service is no longer offered to new customers but will remain an option for those customers with adequate security requirements that justify infrastructure isolation.

Washington DC Computing Facility - NITC provides basic Computing Facility Services in the downtown Washington DC area for consolidation of customer Office Automation solutions.

Professional Services

The Professional Services NITC offers can help ensure customer program success by providing critical expertise as necessary.

Application Integration - NITC can provide the professional services required for integrating and administering Enterprise-Class business applications.

Database Management - NITC Database Management services can provide the necessary professional expertise to install, configure, operate, and maintain industry standard database software.

Project Management - Project managers work closely with customers, vendors, and NITC functional areas to coordinate efforts and provide necessary project management functions to ensure timely project success.

Disaster Recovery - NITC can provide assistance to customers with their Disaster Recovery (DR) planning, coordination, and incident response based on the Customer's Business Impact Analysis (BIA), Recover Point Objectives (RPO), Recovery Time Objectives (RTO), and overall recovery priority.

Planning and Integration - NITC can provide key professional services to assist customers in the design, planning, and integration of enterprise-class solutions. These key services help eliminate project risk and deliver robust technology solutions based on industry-best practices.

World-class Workforce

People are the most important asset of our organization. Our business success depends on the knowledge and skills of our employees.

For the NITC to remain competitive, it is critical that we create and maintain a workforce with world-class skills. The NITC is focused on technology and process improvements. We attract the best and brightest talent and empower them to design competitive solutions for our customers. Our federal and contract workforce encompasses a global diversity that brings the best ideas to the table.

Employee Group Award

A *2010 Secretary's Honors Award* was given to a group of NITC staff for their work on the USDA Geospatial Interface Team. The team was honored for their outstanding leadership in the implementation of a mapping technology that allows the public to see how tax dollars are creating jobs, building infrastructure and rejuvenating the Nation's economy.

Government Computer News (GCN) 2011 Rising Star Award

The NITC is proud that Matthew W. Reiss was honored as a *2011 GCN Rising Star Award* recipient. Matt was recognized for his role in deploying private cloud computing services within USDA's EDCs.

Low Turnover

The NITC averages an annual turnover of about 1%. This workforce stability has helped the organization capitalize on the technical expertise of its employees. Customers have grown to appreciate this continuity. Today, the NITC's steady growth is providing opportunities for continuous professional growth and development of our employees.

Service to Our Community

We believe that service is in our DNA. Service is our signature of excellence and way of giving back.

Combined Federal Campaign (CFC)

The NITC received the *Bronze Achieving Campaign Excellence Award* and the *2010 Caring for Community Award* at the conclusion of the CFC campaign. The NITC employees surpassed our 2010 giving goal of \$48,000 with a total pledged amount of \$58,839.68.

CFC Day of Caring

This year's Day of Caring was held June 4, 2011, and it involved more than 3,000 volunteers (over 1,200 being federal employees), for what has become one of the largest single-day volunteer efforts anywhere in the country. Together, both public and private sector employees tackled more than 165 projects throughout the Kansas City metropolitan area.

The federal community, again, led the way with by working on 87 different projects throughout the city. The value of the service provided on this day is estimated at \$254,000 —what an incredible accomplishment for the community!

For the seventh (7) year, employees of the NITC worked at the Mastin House. The Mastin House is a group home in Kansas for 'mentally and physically challenged individuals.' This year's tasks included general cleanup, mulching and beautification of the grounds.

Blood Drives

The Community Blood Center of Greater Kansas City conducts quarterly blood drives at the Kansas City facility. Our goal of 23 donors is usually reached or exceeded every quarter. Our staff does their part to help save lives by donating blood.

Harvesters Community Food Network

The Kansas City facility supports the Secretary's "Feds Feed Families Food Drive" through food donations to the Harvesters Community Food Network. The NITC, USDA-OIG and Department of Education employees have donated over 8 tons of food to Harvesters over the past 4 years.

Heart of America Annual Stand Down

Concerned employees of the NITC participated in the 18th Annual “Stand Down” for homeless and struggling veterans. The event provides ID cards, clothing, medical help, warm meals, entertainment, tax preparation and housing assistance for those in need. Employees are always generous with clothing donations during the annual clothing drive.

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