

INFORMATION TECHNOLOGY STRATEGIC PLAN

FY 2007-2012



Cooperative State Research, Education, and Extension Service



U.S. Department of Agriculture

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Message from the CIO

No functional responsibility is liable to be more challenged today by rapid change than that of information technology. Change in information technology is constant and abrupt.

CSREES expectations for implementing new technologies have risen and more customers, including the Administration, our Land Grant Partners and CSREES users need easy to use, more efficient, better integrated, more timely and accurate information system solutions. In response to these demands the Information Systems Technology Management (ISTM) must continue to push the boundaries of change and be results driven to meet these needs. Technology is not an end in itself, it's about business first, but a tool that can help us meet the needs of our business users.

This Information Technology (IT) Plan is based on a shared vision and a collaborative environment with the Agency and the Department to more effectively capitalize on the technology expertise available as well as leverage its breadth and depth to reap the economies of scale. The IT Plan supports the initiatives of the Agency as well as the Department.

In response to the Presidents Management Agenda we have been working hard to provide services that are tightly integrated with the Department and strategically in the best interest of the Agency. Our work with AgLearn, Grants.gov and the Grants Management Line of Business our good examples of the successes in this area.

ISTM's areas of special focus within this plan are:

- Agency Business Process Improvement. Expand existing efforts to provide automated solutions for Agency processes.
- Leveraging the Land Grant Partnership. ISTM will continue to leverage and expand its partnership with the Land Grant system strategically using the unique knowledge and skills of IT within this community.
- Open source. Build on the extensive use of open source technology, creating cost effective solutions were practical.
- Train IT and Agency staff. Provide continual learning for IT staff and Agency users.
- Implement CIS Initiative. Rapidly deploy components of the CIS initiative including the OSTP standard report.
- IT process improvement. Improve on current IT business practices incorporating best practices.
- Presidents Management Agenda. Implement all applicable areas of the Presidents Management Agenda.

ISTM has been remarkably efficient in using its IT resources - less than 0.5% of the agency budget is allocated for IT, compared to 3% for USDA on average. Given the current uncertainties with funding, continued vigilance in this area is a must. Our funding has leveraged our commercial partners extensively to meet our needs and we will continue to do so in the future.

I am pleased to present the CSREES IT Strategic Plan, 2007-2011 and I am grateful for everyone in the Agency who gave their time and ideas to the planning process. The plan presented here creates a context and a framework for carrying out current and future technology goals. I look forward to your support in carrying out this plan, which will help assure the Agency's and the Department's continued success.

Michel Desbois, Chief Information Officer

A. Executive Summary

The mission of the Cooperative State Research, Education, and Extension Service (CSREES) is to advance knowledge for agriculture, the environment, human health and well-being, and communities. The Information Systems and Technology Management unit of CSREES supports this mission by providing information technology leadership and services.

This document details the Information Technology Strategic Plan for FY 2007-2012 that supports the accomplishment of the CSREES mission. The plan was prepared by the Information Systems and Technology Management (ISTM) unit.

In preparing the plan, extensive interviews were conducted of senior CSREES management, national program leaders, and staff to determine challenges facing the agency, business information needs, and issues arising from the CSREES mission. Through these interviews, ten key trends were identified that influence the ability of ITSM to provide service to CSREES.

The interviews also showed that CSREES has a unique culture in government that exhibits an open, collaborative, and academic style. This style in everyday activities is a strength that fosters cooperation and deliberative decision making.

ISTM then used the information collected to propose appropriate CSREES responses to the ten key trends. This work resulted in four goals, each with subordinate objectives. These goals are:

- Expand ISTM's Agency IT solution leadership
- Focus on increasing the efficiency and effectiveness of ISTM support to the Agency
- Expand electronic support for end-to-end Grants Management
- Expedite short-term solutions to common administrative tasks

ISTM strongly believes that these goals create the framework to align IT more completely with CSREES' core business, advancing knowledge management and continuing the improvement of IT services. This framework provides innovative and resilient responses to the challenges facing ISTM.

B. CSREES Today

The business of the Cooperative State Research, Education, and Extension Service (CSREES; the Agency) is to provide federal funding and program leadership to advance a global system of research, extension, and higher education in the food and agricultural sciences and related environmental and human sciences to benefit people, communities, and the Nation.

CSREES is one of the four agencies that comprise the Research, Education, and Economics (REE) mission area of USDA. REE is assigned federal leadership responsibility 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 and statistical analysis.

CSREES has primary responsibility for providing linkages between the Federal and State components of a broad-based, national agricultural research, extension, and higher education system. CSREES provides funding for projects conducted in partnership with the State Agricultural Experiment Stations, State Cooperative Extension Systems, land-grant universities, selected Historically Black and Native American colleges, and other research and education institutions. Federal funds are distributed to universities and institutions by statutory formula grants, competitive grants, special grants, and cooperative agricultural agreements.

The technological advances of the 20th century have made it possible, and our modern culture has made it imperative, that CSREES and its partners have the benefit of ready access to the information contained in the databases maintained by CSREES and its partners. Given societal change and the technological direction of the future, all citizens will expect ready access to research-based information. CSREES will be challenged to help all citizens interpret research information on topics in the food and agricultural arena; to enable policy makers to respond to critical concerns; and to link researchers, customers, organizations, and policy makers nationwide.

C. Information Systems and Technology Management

To help meet the mission requirements of CSREES, management has established Information Systems and Technology Management (ISTM) in 2002. ISTM is charged with the primary responsibility for developing and implementing a strategic approach to modernizing CSREES information technology resources.

C.1 Mission

The mission is to provide quality; business-, mission-, and customer-focused; and cost effective information management services.

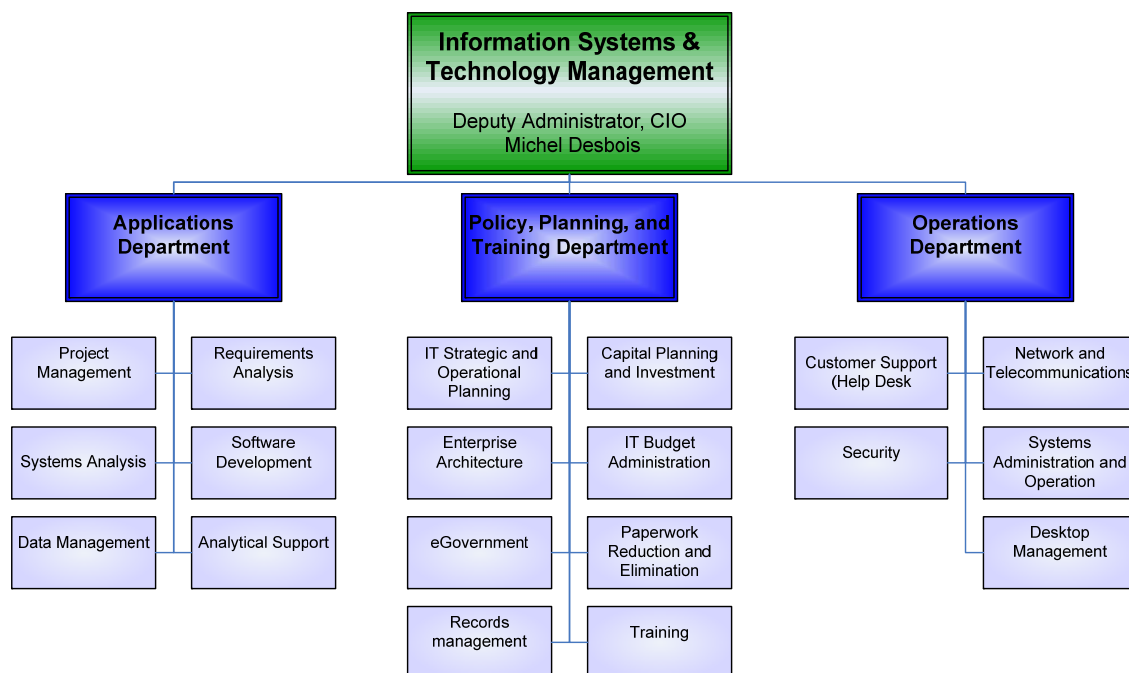
C.2 Vision

The vision is to provide reliable, responsive, and accurate information systems support, which satisfies the business requirements through a one-solution approach.

C.3 Structure

The following figure outlines the ISTM Organizational Structure:

Figure 1 - ISTM Organizational Structure



C.4 Progress since the last IT Strategic Plan

CSREES created their previous IT Strategic Plan in 2003; a year after the creation of ISTM. Since that time, significant progress has been achieved in maturing the ISTM unit and the IT services offered. Furthermore, the impact IT has on CSREES's business functions continues to grow.

C.4.1 *Growing maturity of IT services provided*

IT services have matured since the last IT strategic plan, including:

- A stable, consolidated data network - The data network has been redesigned and implemented. This provides connectivity from the standard desktop workstations to any of the agency applications and to outside resources.
- A desktop equipment and software refresh - New, more powerful, and standardized desktops have been installed for CSREES employees. This provides computing resources that enable the employees to do their duties and provides productivity tools to improve how routine tasks are performed.
- Improved Help Desk services - The Help Desk function has improved responsiveness to the business customers and improved the capabilities image of ISTM.
- Improved remote access to CSREES network and applications - A faster and more secure approach to remotely accessing the network has been implemented using Virtual Private Networking technology. This permits the connecting of remote computers across the internet to our network in a secure connection. Particularly, employees can use their house internet connections and connections from hotels or conference locations to access needed information at CSREES.
- Personal digital assistant (PDA) devices – PDAs have been acquired to link the selected employees to their email, calendaring, and other information. This has improved productivity and responsiveness to business needs.
- Improved computing capacity - New hardware equipment has been acquired to improve the transaction performance of the key business applications. This has provided improvement agency productivity and lessened maintenance disruptions for hardware outages.
- Advances in security - The implementation of IT security processes, software, and hardware have materially decreased the risks and occurrences associated with non-agency disruption events. This has prevented substantial disruption to our email, network, and application platforms.
- Migration to the eGrant and eGovernment mandated initiatives - CSREES is completely implementing its grant process through these initiatives. Substantial agency effort has been invested in working in business-technology teams and resolving any issues that impeded completion of this accomplishment.
- A Prototype for an initial deployment of the CIS (CSREES Information System – One Solution) function - The prototype of the National Program Leader (NPL) Leadership module of CIS will be deployed in April/May 2007. Analysis, design, and testing have occurred to provide an integrated DASHBOARD to NPL associates. This prototype will deliver significant benefits by enabling access and observation into key information stored across CSREES applications. This marks the first accomplishment of deploying a more integrated use of CSREES business information.
- A Capital Planning and Investment Control (CPIC) process - A management planning and investment review process has been implemented for information technology projects. This complies with USDA and OMB guidance and strengthens the CSREES decision-making process for deciding appropriate investments in IT projects.

- An Enterprise Architecture (EA) Program - The establishment of the IT EA program has permitted the documentation of CSREES business processes and the "as is" state of the current IT infrastructure. This information has been distributed to the business units of CSREES, and efforts are underway to use this information to discuss potential improvement to business process functions.
- An enhanced records management program - This program, working with the business units, has now developed approximately 40 percent of the record retention schedules needed by the agency.
- An IT training resource - ISTM has added a dedicated training resource to provide designated training on office productivity tools and new application functions. This effort has improved the comfort, skill set, and productivity of trained employees.
- A customer satisfaction outreach program - ISTM has established a recurring customer satisfaction outreach effort by the Operations Director to meet regularly with the business unit management. This liaison provides a forum to receive feedback of IT services, concerns, and suggestions. It also allows ISTM to communicate forthcoming events and situations that may impact the business units.

C.4.2 *Growing impact of IT on CSREES business*

As ISTM has matured and its IT services have stabilized, IT systems have moved to the heart of CSREES's ability to succeed in its core business. CSREES staff and executives acknowledge that the role of IT systems is critical in supporting the accomplishment of their business goals and objectives. This acknowledgment is evidence of the growing appreciation throughout CSREES for the role IT plays in helping CSREES achieve its mission. Information analysis for decision support has caught the attention of ISTM customers, more so than simple data entry and retrieval. ISTM is now being asked to provide more sophisticated tools with their IT systems such as data mining, reporting, and business intelligence. The urgency that the program areas feel about acquiring these capabilities is increasing the demand on the ISTM staff, methods, and infrastructure to support the rapid implementation of improved IT systems.

D. External Trends and Challenges Affecting ISTM

CSREES’s implementation of information technology is responsive to its stakeholders’ needs within the context of the trends and challenges in the agency’s external and internal environments. These trends and challenges are experienced as expectations, opportunities, constraints, and threats that shape the types, and in some cases the content, of the responses available to CSREES. During the IT Strategic planning sessions, CSREES staff was asked to identify the key trends and challenges, from both business and IT perspectives) that most influenced their ability to provide services to CSREES customers. Ten trends and challenges were identified.

Figure 2 - Trends and Challenges



D.1 The Government is increasing its demand for efficiency

The Presidents Management Agenda (PMA) has called for all agencies to increase operational efficiencies, improve services, decrease duplication, and improve financial management. This aggressive strategy, coupled by decreasing budgets and limited resources, relies on information technology and consolidation of government practices as the way for agencies to succeed in the future government environment.

The growing recognition that standard functions are shared by agencies government wide is leading to the standardizing and outsourcing of common business functions. Specifically, the Office of Management and Budget (OMB) has propagated a series of 9 "lines of businesses" and 18 other initiatives that move the federal departments and agencies toward a more centralized use of "shared computing and processing activities." USDA is involved in the majority of these initiatives, including Grants.gov, Email, eAuthentication, Financial Management, and other items. This places constraints on CSREES as to what it must consolidate and support through these OMB and USDA mandates. New mandates will grow in number in the next 2 to 5 years.

D.2 OMB mandates on research results

In response to Congressional and Presidential mandates for greater accountability and transparency in all federal activities, OMB is requiring that the administrative tracking and the results of grant research be measured in more definitive ways. While some of this requirement is still in formulation, it is apparent that measurements will require CSREES to implement more stringent administrative management of any grant awarded and report on the grant findings/results in a manner that demonstrates research knowledge advancement. These issues have significant impact on how research findings are tracked and how knowledge from research is shared and incorporated into practical solutions for society. These requirements will drive new requirements for new or modified systems within CSREES.

D.3 Increasing attention in government for alignment of IT departments with business units

Over the past few years, Government organizations have increased internal collaboration as part of the push for efficiency in the development of products and services. A key challenge has surfaced with these processes—a communication gap between IT departments and business units exists and has slowed down development and in some cases has been the cause of inadequate delivery of products and services. CSREES faces these same challenges as ISTM and the CSREES business units struggle to find a common understanding and language that will allow them to communicate and work collaboratively to develop business solutions. The trend in government to help close this gap has been the alignment of the IT department with the business units.

D.4 Communities of practice becoming the focal point for knowledge advancement and management

The practice of extension is core to the success of CSREES's work and innovation through research in their program areas. Without an audience to utilize the information, CSREES research will never meet its goal of transforming into practical application. The extension community, CSREES, and others in Government, have faced challenges caused by their audiences changing the way they want to be exposed to information over the past few years. Communities of practice have become a key model for how extension should operate. With communities of practice, extensionists are able to discover who their audiences are, how they want to learn and be exposed to information, what issues they face, and how research could influence their decision making. This information is critical for the design, development, and distribution of educational programs and materials. Understanding the audience's needs has allowed for more success in managing the delivery of research to targeted groups of people that can transform it into applicable knowledge.

D.5 Retirement eligibility increases the importance of human capital planning.

Within the next five years, a significant number of CSREES professionals will become retirement eligible. The potential loss of CSREES workers represents a challenge; they carry with them a wealth of skills and organizational knowledge about business issues that CSREES will need to replace to operate at its current level. The current generation of CSREES IT workers possesses critical knowledge about the operation of older, legacy systems that the next generation of CSREES IT workers will have to learn to ensure that these systems are maintained and remain operational. Additionally, the next generation of CSREES workers will bring new skills, new technological models, and new enthusiasm for the continuous learning that has become a critical requirement for professional in today's rapidly changing technological environment. Future CSREES human capital strategies will need to acknowledge and plan for the loss of knowledge on critical systems and business practices as well as for the increase in IT competencies that will be brought in with the next generation.

D.6 Customers are beginning to realize IT benefits, causing expectations to expand.

As ISTM continues to improve the reliability, usability, and functionality of their systems and services, their customers have begun to realize the benefits IT can have for CSREES business. IT success builds its own

expectations. As ISTM success continues, customer expectations will rise quickly and the business units will become increasingly more reliant on ISTM systems and services. Several key customer demands stand out:

- More and more customers are desiring the modernization of core CSREES applications and web based services to be more functional, easier to use, and easier to train new employees on.
- Customers dream about up-to-the-minute, accurate, and timely information precisely formatted to meet their specific needs so they can report upwards more effectively.
- Customers expect One-solution to solve many of their business process inefficiencies and are demanding priority with regards to receiving the dashboard functions.

D.7 Training expectations and delivery types are expanding.

CSREES employees' every day business practices are evolving with the utilization of technology and the merging of government business practices. This expansion challenges CSREES to develop effective training methods and materials that allow rapid learning and assimilation of new knowledge. The expanding delivery mechanisms that are emerging in training circles—CD-based training, hybrid types of delivery, and so on—offer great potential in terms of meeting the needs of users who wish to explore the tools that are available to them.

D.8 Funding constraints continue.

Funding is a constant challenge in all federal agencies. The CSREES allocation of funding administrative activities is generally tied to a percentage of "grant funding". As this "grant funding" fluctuates, the ability to provide staffing, the prorating of work to the NPLs, and the allocation of funding to ISTM becomes a challenge. Looking at this funding area in three dimensions shows certain challenges for ISTM.

- General staff impact - If Congress moderately or substantially decreases grant funding, then the funding for staff salaries will be substantially affected. This could result in staff reductions. The end result will be that the remaining staff will have to perform many of the same activities for mid- and long-term grant administrative as before. This will drive a need for increased task automation for recurring administrative tasks.
- NPL workload - Should Congress moderately or substantially decrease grant funding, there will be a reallocation of workload to available NPLs. If the number of NPLs decreases, then over time, the administrative tools needed by NPLs to administer their workload will increase.
- IT system management - If general agency funding decreases, there is likelihood that ISTM funding will diminish. Many of ISTM expenses are tied to fixed investments. Many of these, such as hardware maintenance and software maintenance, directly underpin the running production systems. While there are techniques to lessen these expenses, risks grow as an organization moves rapidly to "make up" for these funding shortfalls.

D.9 Demand for improved, reliable, and accountable IT services and continues to rise

Events over the past three years have sensitized CSREES to the need to have the IT infrastructure, service, and support be reliable and resilient. These demands are very much in line with the increasing pressure on CSREES and other federal agencies to manage IT resources with ever greater degrees of responsibility. As IT demands continue to increase, ISTM has seen the need to adopt management best practices and to develop and document successful and repeatable processes and procedures. These processes and procedures are created to ensure a high level of customer service delivery. As new and evolving technologies emerge, ISTM must continue this improvement. Achieving these best practices requires a diversified staff with broad capabilities and skills in many disciplines. Retaining and acquiring skilled personal to deliver the IT services a critical challenge for any IT organization.

D.10 Growing concern for security and privacy

Technology is become increasingly involved with business processes allowing for more information, including sensitive or classified, to be disseminated through electronic mediums. This trend coupled with more abundant and sophisticated cyber and internet threats have increased concerns over privacy and security. At CSREES, ISTM will need to continue to enable their customers and partners with the tools and policies necessary to conduct their business safely. ISTM must also continue to maintain technology with up to date security measures and plan for increasing amounts of requirements and reporting being driven down from Congress, GAO, OMB, and. USDA.

E. Response to the Trends and Challenges

The progress made by ISTM during its last strategic plan has increased its ability to manage an infrastructure that is stable and useable, to develop applications that support core CSREES business functions, and to begin to integrate planning and architecture in IT decision making processes. The trends and challenges described above will drive this progress over the next 3 to 5 years.

How does ISTM plan to meet these trends and challenges?

ISTM will organize its efforts around the basic concept themes of:

- Leadership
- Program Administration Support

ISTM will lead CSREES in a continuing integration of IT with the core CSREES mission. ISTM will integrate the new eGovernment and line of business initiatives into a cohesive framework of practical usage inside CSREES. ISTM also will engage its internal business partners in discussions about the potential benefits and uses of new solutions and techniques surfacing in industry and the traditional CSREES community.

Program Administration Support focuses attention on the needs of the grants management process. By solving the process needs, support will facilitate a richer information environment to manage grants and will enable daily tasks efficiencies that, at present, consume ever increasing work-hours.

To provide structure to these leadership and program administration support themes, this plan organizes the work around four goals. These goals are:

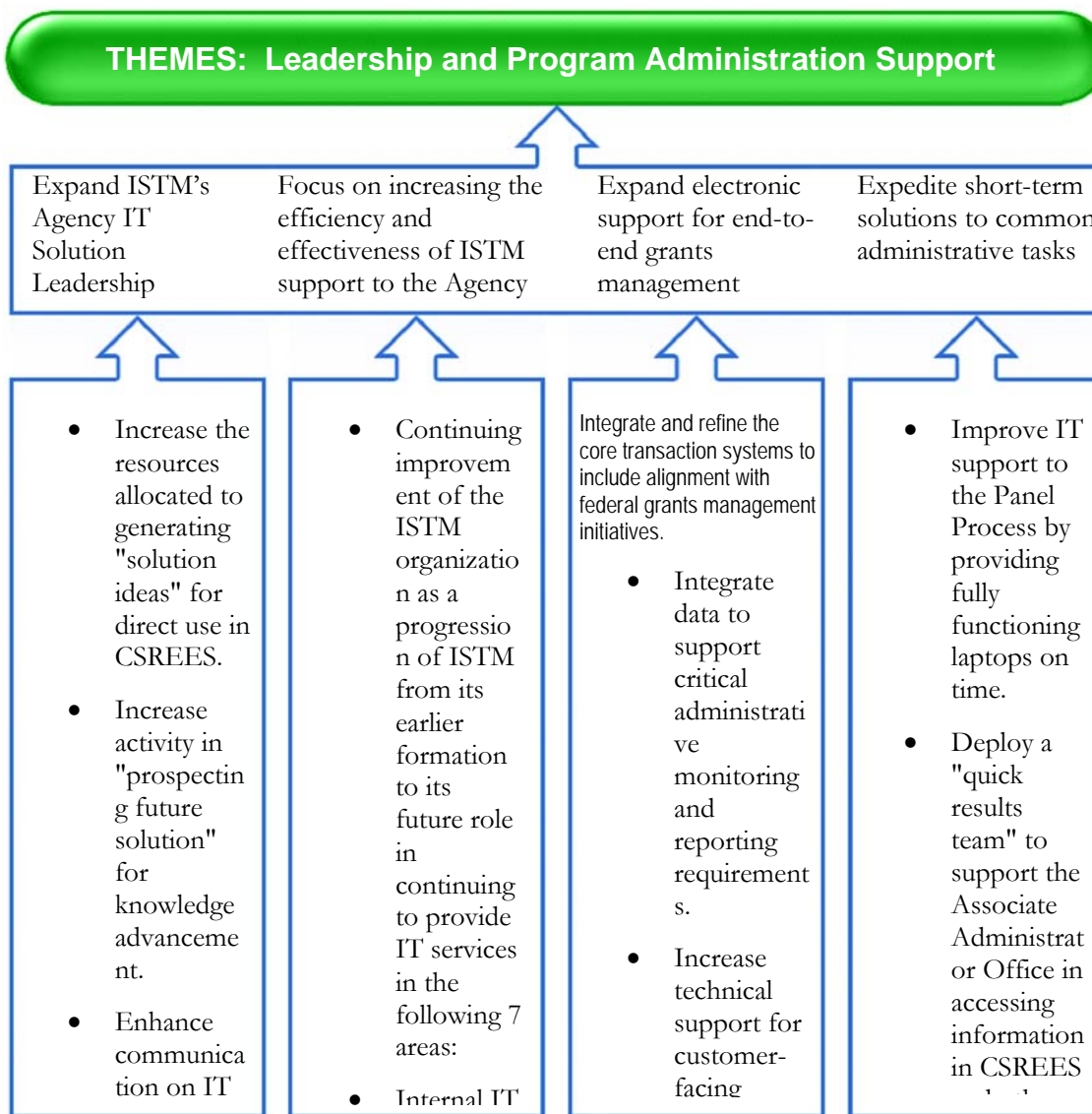
- Expand ISTM's Agency IT Solution Leadership
- Focus on increasing the efficiency and effectiveness of ISTM support to the Agency
- Expand electronic support for end-to-end Grants Management
- Expedite short-term solutions to common administrative tasks

These goals are supported by objectives that identify discrete opportunities for advancement of IT practice within CSREES. By achieving these objectives, CSREES will produce useful solutions to long-, medium-, and short-term opportunities.

F. IT Goals and Objectives

Goals are achieved through the execution of objectives. Section F identifies each goal with the objectives associated with it. The ISTM operational plan will define the activities, milestones, and resources required to execute the objectives and to achieve the overall goals of the strategic plan.

Figure 3 - Themes, Goals, and Objectives





F.1 Goal 1: Expand ISTM's IT solution leadership for CSREES

This goal focuses on the expansion of ISTM's efforts in finding solutions to agency needs. CSREES trusts ISTM to provide worthy ideas and investments. ISTM should respond to this trust by leading CSREES into the next generation of IT solutions.

- Objective 1 - Increase the resources allocated to generating "solution ideas" for direct use in CSREES.

More time must be spent in the business areas observing the business processes, learning the needs, and translating those needs into technical alternatives. These alternatives can then to be shown to the business area for iterative refinement, analysis, prioritization, and finally, business case development.

- Objective 2 - Increase activity in "prospecting future solutions" for knowledge advancement.

ISTM leadership needs to become more involved in knowledge advancement. As OMB mandates on research results extend the demands for accountability throughout the entire research process, new approaches and possibilities for tracking and measuring the results of knowledge advancement activities must be explored. ISTM should be an engaged collaborator with the business units in this area.

- Objective 3 - Enhance communication throughout CSREES by involving all ISTM line managers in designated service areas.
- All ISTM units should have assigned customer coverage to bring different perspectives to customer liaison. The present approach to regular customer satisfaction awareness is performed primarily by the Operations unit.
- Objective 4 - Create a quality assurance process that highlights, assists, and monitors the execution of the records retention schedules.

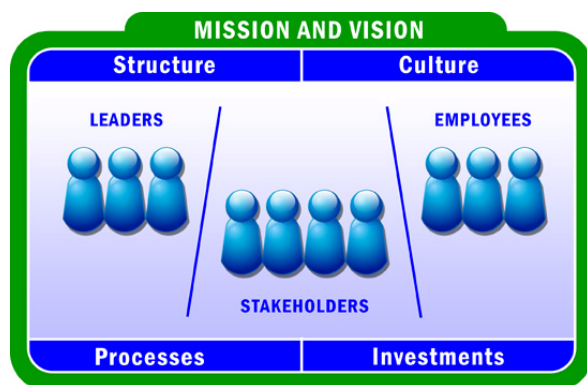
The purpose of this objective is to promote effective records management throughout CSREES. As more of the grant life cycle is moved to electronic media, the disposition of remaining paper files offers a chance to "free up" building floor space now occupied by paper filings.



F.2 Goal 2: Focus on increasing the efficiency and effectiveness of ISTM support to the Agency

Over the life of this strategic plan, ISTM will continue to evolve from its early form into its emerging role as a strong leader of IT support for CSREES. This evolution can be encouraged by conscious attention to critical areas of the ISTM organization. Objectives for this goal are organized within the organizational framework presented in Figure 4.

Figure 4 - Organization Model



Internal IT Leadership

- Objective 1 - Lead a climate of openness and collaboration that enables cross-unit teaming, communications, and solution resolution.

All units in ISTM should exemplify collegial collaboration for the Agency.

- Publish the findings and action items of meetings held with customers to increase open communication between ISTM.
- Objective 2 - Implement IT requirements gathering processes and techniques that expedite the prototyping of solutions.

ISTM approaches should emphasize the timely, effective acquisition of business requirements and the quick translation of these requirements into prototype solutions that can be presented to the clients. Such processes will help overcome the prevailing belief that only the personal interactions of the ISTM leadership will produce business unit improvement ideas.

- Objective 3 - Promote and exhibit adherence to defined procedures for all IT services.

Procedures without implementation are valueless. However, when procedures are actually used, opportunities emerge for improving the procedures and/or the services associated with them. The process improvement aspect of defined procedures leads to a more mature delivery of IT services.

- Objective 4 - Develop a leadership succession plan.

The next generation of ISTM leaders should result from intentional planning and formation.

Employees

- Objective 1 – Improve short-term human capital skills management.

Potential tactics that might be included in the operational plan for achieving this objective include:

- Construct a skills matrix that reflects the emerging skills needed in ISTM (Complete)
- Inventory the skills needed in ISTM for the next 3 to 5 years and construct a "gap analysis" of shortcomings of presently processed skills to needed skills
- Conduct staff training to fill gaps as appropriate.
- Recruit, when needed, skilled IT staff and assure that their assignments are compatible with their expertise.

- Objective 2 – Improve long-term IT workforce planning and prepare for the transition of retiring IT personnel in critical skill areas.

Potential tactics that might be included in the operational plan for achieving this objective include:

- Conduct "reverse engineering debriefs" on selected, critical components of the targeted applications to retain critical knowledge from employees who will be retiring in the next 3 years. This will permit the documenting of knowledge that is not written down.
- Use "application logic discovery tools" to document the present business and logic. Have retiring staff review the logic to validate its correctness.

Stakeholders

- Objective 1 - Conduct regular customer service meetings using Service Level Agreements to review ISTM service delivery performance.

A customer service meeting focused on the monitored results of IT services is an effective approach to engaging the customer in on-going dialog. These discussions are conducted using "facts" from the published performance that clearly document ISTM service performance.

- Objective 2 - Proactively survey stakeholders on CSREES IT services satisfaction.

Processes

- Objective 1 – Improve management of IT services.

Potential tactics that might be included in the operational plan for achieving this objective include:

- Publish a catalog of IT Services. Publishing a customer-focused document that defines and articulates IT services, describes how the services are obtained, and outlines basic procedures for the services is a milestone in process maturity. (Complete)
- Develop, negotiate, and publish Service Level Agreements for all IT services. The establishment and publication of metrics for each IT service permit the measurement and communication of actual IT service performance to ISTM and the customers.
- Publish the targeted implementations for the period on a quarterly basis to CSREES management and staff. This will notify customers what to expect and keep them informed on progress.
- Improve incident management processes to include help desk and calls to ISTM staff. All reports of service incidents should be logged, tracked, and analyzed. Calls that go straight to Applications should be documented and rolled into the overall incident reporting process. (Complete)

- Objective 2 - Develop and publish an abbreviated systems development and operations life cycle process for ISTM. (Complete)

This basic management process will add clarity to the stages of solution development and operations and will facilitate functional communications within the ISTM organization for roles, responsibilities, and interdependencies.

Potential tactics that might be included in the operational plan for achieving this objective include:

- Strengthen the review participation of the architecture function in the various stages of the project development cycle. This improvement will facilitate the incorporation of more architecture process components into a new or enhanced service or solution.
- Strengthen the adherence to the defined process. Procedures are not just to be written. They are to be lived in every day activity. Improvement in IT service quality can not occur if the procedures are not followed.

- Objective 3 - Strengthen the conduct of actual execution of disaster recovery and contingency of operations plans.

Potential tactics that might be included in the operational plan for achieving this objective include:

- Conduct actual disaster recovery exercises of "shared drive" environment.
- Strengthen the conduct of actual execution of disaster recovery and contingency of operations plans for the core systems.
- Publish an IT Continuity of Operations Plan (COOP) (Complete)

- Objective 4 – Seek ways to improve change control among the ISTM organizations.

Potential tactics that might be included in the operational plan for achieving this objective include:

- Strengthening the participation of all ISTM functions in the project development cycle to enhance communications and expected execution of roles as the project goes into production.

- Objective 5 – Continue virtualization of computing resources where appropriate.

- Areas of focus include disaster recovery, server consolidation, thin client and others.

Investments

- Objective 1 – Optimize resources by incorporating more open source products into Agency solutions.

Potential tactics that might be included in the operational plan for achieving this objective include:

- Work to get more open source software added to the USDA approved technology
- Research and implement a robust, open source work-flow in CIS.
- Research and implement a scalable, information aggregation search tool.

- Objective 2 - Upgrade the operating environment.

Potential tactics that might be included in the operational plan for achieving this objective include:

- Consolidate the computer rooms into a single operation. This will achieve operating efficiency and reduce costs.
- Research, acquire, and implement application and infrastructure monitoring tools to better manage and measure the service availability of the applications and infrastructure.

- Migrate the CSREES network to an IPv6 infrastructure.
- Objective 3 - Implement the HSPD-12 program within CSREES as it becomes available from USDA.



F.3 Goal 3 - Expand electronic support for end-to-end grants management

This goal strives to improve technology support and usage to the grant management activities as the core CSREES function.

- Objective 1 - Integrate and refine the core transaction systems to include alignment with federal grants management initiatives.

Potential tactics that might be included in the operational plan for achieving this objective include:

- Analyze, with input from stakeholders, approaches and methods that would enhance the "ease of use" for grant seekers and applicants and recommend approaches for implementation.
- Adopt Grants Management Line of Business technical best practices in the CSREES technical architecture.

- Objective 2 - Integrate data to support critical administrative monitoring and reporting requirements.

Potential tactics that might be included in the operational plan for achieving this objective include:

- Provide application refinements to support the deficiency findings from A-123.

- Objective 3 - Support improvements in communication and collaboration capabilities with external partners

Potential tactics that might be included in the operational plan for achieving this objective include:

- Explore and offer solutions that may improve how CSREES can improve communications with its external partners.
- Market and support communication tools to ensure maximum utilization of the resource.



F.4 Goal 4 - Expedite short-term solutions to common administrative tasks

This goal identifies potential short-term solutions to meet immediate IT needs in the Agency.

- Objective 1 - Improve IT support to the Panel Process by providing fully functioning laptops on time. (Complete)
- Objective 2 - Frequently assess the needs of the Associate Administrator Office and offer solutions or alternatives.
- Objective 3 - Continue to adopt USDA OCIO services and OMB Line of Business services as they mature. Particular attention should be paid to the Grant.gov initiative since there are many recommendations in OMB that may directly impact how CSREES would solicit and manage grants.
- Objective 4 - Conduct expanded training on desktop productivity suite incorporating a unit by unit inventory of needs. (Complete)
- Objective 5 - Complete the development and publication of record retention schedules. (Complete)

APPENDICES

Appendix 1. Linkage to CSREES Strategic Plan

USDA is working to strengthen its management practices through vigorous execution of the President’s Management Agenda (PMA). The CSREES Strategic Plan FY2007-2012 addresses the management initiatives with strategies to work towards strengthening their own management practices. IT plays a large role in accomplishing these strategies. The following Matrix shows how the CSREES IT Strategic goals are linked to 7 management initiatives.

CSREES Strategic Management Initiatives → CSREES IT Strategic Goals and Objectives ↓	Improve Human Capital Planning	Improve Financial Management	Expand Electronic Government	Establish Budget and Performance Integration	Implement Competitive Sourcing	Eliminate Improper Payments	Enhance Research and Development Criteria
Goal 1 - Expand ability to be Agency IT Solution Leaders		✓	✓			✓	✓
Goal 2 - Focus on increasing the efficiency and effectiveness of ISTM support to the Agency	✓	✓	✓	✓	✓		
Goal 3 - Expand electronic support for end-to-end grants management		✓	✓	✓		✓	✓
Goal 4 - Expedite Short-term solutions to common administrative tasks		✓	✓	✓		✓	

Appendix 2. Performance Measures

This table identifies high level performance indicators for each of the four goals in this strategic plan. These indicators will be further developed, including the specification of targets and data collection mechanisms, in the ISTM operational plan.

Performance Measures
Goal 1 - Expand ISTM's IT solution leadership for CSREES
Objective 1 - Increase the resources allocated to generating "solution ideas" for direct use in CSREES.
<ul style="list-style-type: none"> ▪ Additional staff are assigned to directly work with the business units to improve grants management processes and application functionality.
Objective 2 - Increase activity in "prospecting future solutions" for knowledge advancement.
<ul style="list-style-type: none"> ▪ An Agency joint knowledge advancement team exists and shaped enhanced IT enablement technology support to Agency mission. ▪ Participation in regional university IT committees seeking solutions to knowledge advancement implementations is occurring. ▪ Semi-annual Technology Scanning Report that monitors development and usage of knowledge advancement solutions in the government, universities, and industry is developed and producing input for CPIC management decisions.
Objective 3 - Enhance communication throughout CSREES by involving all ISTM line managers in designated service areas.
<ul style="list-style-type: none"> ▪ ISTM Directors attend assigned customer liaison meetings on a regular basis. ▪ Customers affirm that ISTM Directors are helping them articulate needed improvements to customer processes.
Objective 4 - Create a quality assurance process that highlights, assists, and monitors the execution of the records retention schedules.
<ul style="list-style-type: none"> ▪ A quality assurance procedure for records retention schedules and an associated disposition procedure is implemented by the Agency. ▪ Records are regularly moved from CSREES to the appropriate, long-term storage facility.

Performance Measures

Goal 2 - Focus on increasing the efficiency and effectiveness of ISTM support to the Agency

Internal IT Leadership

Objective 1 - Lead a climate of openness and collaboration that enables cross-unit teaming, communications, and solution resolution.

- The expected "hand-offs" or interactions of processes inside ISTM are documented and agreed upon by ISTM managers and staff.
- ISTM managers confront behavior that does not contribute to openness and collaboration inside the unit.
- Public postings of meeting notes, actions, and status occur regularly as agreed to by the meeting schedule.

Objective 2 - Implement IT requirements gathering processes and techniques that expedite the prototyping of solutions.

- A prototyping process and associated tools exist that enable rapid facilitation of requirements and prototyping to achieve solutions to business needs.

Objective 3 - Promote and exhibit the adherence to defined procedures for all IT services.

- Periodic, structured reports on system development activities document that ISTM units actually use the processes established inside the unit.

Objective 4 - Develop a leadership succession plan.

- A process is in place and used to encourage, gain experience, and demonstrate leadership of IT functions.
- The next generation of ISTM leaders is identified and is being educated to assume IT leadership when the time requires.

Employees

Objective 1 – Improve short-term human capital skills management.

- A skills inventory demonstrates that employees have the skills needed to fulfill the short-term mission of ISTM.
- Designated training occurred to specific employees to enhance targeted skills.
- 100% of ISTM employees have an official Individual Development Plan (IDP)

Performance Measures

Objective 2 – Improve long-term IT workforce planning and prepare for the transition of retiring IT personnel in critical skill areas.

- Specific application knowledge is “debriefed” and inventoried for core application knowledgeable employees.
- Selected employees are mentored in specific application knowledge for core applications.

Stakeholders

Objective 1 - Conduct regular customer service meetings using Service Level Agreements to review ISTM service delivery performance.

- Regularly produced service metrics are used and compared against published SLAs in the quarterly customer liaison meetings.

Objective 2 - Proactively survey stakeholders on CSREES IT services satisfaction.

- Formal feedback is acquired from stakeholders on an annual basis.

Processes

Objective 1 – Improve management of IT service.

- Service level agreements are published
- Services are measured to report service levels.
- Quarterly implementation schedules are published for any change in IT service or application implementation.
- Incident management data is analyzed to determine targets for process or service improvements.
- Customers place 95 percent of all calls for IT assistance through the Help Desk function.

Objective 2 - Develop and publish an abbreviated systems development and operations life cycle process for ISTM.

- Publication and usage occurs of the system development and operation life cycle procedures.
- The entire ISTM functions are integrated into the appropriate phase of the process.
- All ISTM functions know what to expect for any new IT service implementation and what role their functions play in the new service.

Objective 3 - Strengthen the conduct of actual execution of disaster recovery and contingency of operations plans.

Performance Measures

- Backup and recovery procedures for core applications are in place and executed.
- Backup and recovery procedures for LAN "shared drives" are in place and executed.
- Backup and recovery procedures for critical network functions are in place and executed.
- Published an annually updated COOP

Objective 4 - Seek ways to improve change management within ISTM.

- Change management program implemented and adhered to.

Investments

Objective 1 - Incorporate a broader discussion of where IT investments are needed based on the business processes.

- The CPIC process is upgraded by the Agency decision to use more senior management as the decision-makers.
- By using the Enterprise Architecture mapping of processes to business mission support, investments decisions are made based on process gap analysis and priority of business support required.

Objective 2 – Optimize resources by Incorporating more open source products into Agency solutions.

- New components in application solutions incorporate more open source software.
- Costs decrease for commercial software licensing, when compared with the FY2007 base year.

Objective 3 - Upgrade the operating environment.

- The computer room complex is operating with fewer work-hours.
- Alert and performance monitoring/reporting software is implemented for core applications.
- CSREES networks are using the new IPv6 protocol standard.

Objective 4 - Implement the HSPD-12 program within CSREES as it becomes available from USDA.

- CSREES employees use the HSPD-12 badge system as implemented by USDA.
- CSREES employees use the HSPD-12 credentials for access to computer assets at CSREES.

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Goal 3 - Expand electronic support for end-to-end grants management

Performance Measures

Objective 1 - Integrate and refine the core transaction systems to include alignment with federal grants management initiatives.

- Improvements in the "ease of use" by external and internal users occur to the core applications.
- Two common software components from the Grants Management LOB are incorporated into the CSREES technical architecture.

Objective 2 - Integrate data to support critical administrative monitoring and reporting requirements.

- The first four components of CIS are implemented earlier than originally planned in the FY2007 baseline schedule.
- Improvements in key application components reduce the deficiencies normally reported by the IG/Oversight process.

- Objective 3 - Support improvements in communication and collaboration capabilities with external partners

- New IT components enable improvements in the communications and collaboration for CSREES employees and Partners.

Goal 4 - Expedite Short-term solutions to common administrative tasks

Objective 1 - Improve IT support to the Panel Process by providing fully functioning laptops on time.

- Fully tested and functioning laptops or other IT devices are deployed on-time to panels.
- Access to authorized applications by panel members occurs without disruption during the panel process.

Objective 2 - Deploy a "quick results team" to support the Associate Administrator Office in accessing information in CSREES and other agencies data repositories.

- New solution tools are enabled and self-used by the Associate Administrator Office to access needed data.

Objective 3 – Continue to adopt USDA OCIO services and OMB Line of Business services as they mature. Particular attention should be paid to the Grant.gov initiative since there are many recommendations in OMB that may directly impact how CSREES would solicit and award grants.

- One or more new OCIO and/or OMB Line of Business services are incorporated into the mainstream of ISTM solutions.

Objective 4 – Conduct expanded training on desktop productivity suite incorporating a unit by unit inventory of needs.

Performance Measures

- Improved and expanded ISTM self-guided training material is available for desktop productivity tools.
- Business units conduct assessment of unit personnel and schedule and monitor completion of skill enhancement training without involvement of ISTM.
- All records have an officially published records retention schedule.

Objective 5 - Complete the development and publication of record retention schedules.

- All records have an officially published records retention schedule.
- Floor space required for overall records storage decreases.

Appendix 3. Acronyms Index

ABBREVIATION	DEFINITION
AgLearn	Agriculture Learning Service
CD	Compact Disk
CIS	CSREES Information System
CIPIC	Capital Planning and Investment Control
COOP	Continuity of Operations Plan
CSREES	Cooperative State Research, Education, and Extension Service
EA	Enterprise Architecture
FTE	Full Time Employee
FY	Fiscal Year
GAO	Government Accountability Office
GMLOB	Grants Management Lines of Business
HSPD-12	Homeland Security Presidential Directive 12
IG	Investigator General
IPv6	Internet Protocol version 6
ISTM	Information System Technology Management
IT	Information Technology
LAN	Local Area Network
NPL	National Program Leader
OSTP	Office of Science and Technology Policy
OCIO	Office of the Chief Information Officer
OMB	Office of Management and Budget
PMA	Presidents Management Agenda
PDA	Personal Digital Assistant
REE	Research, Education, and Economics
SLA	Service Level Agreement
USDA	U.S. Department of Agriculture