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Foreign Agricultural Service
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Strategic Plan FY07-11

Information Technology



Linking U.S. Agriculture to the World

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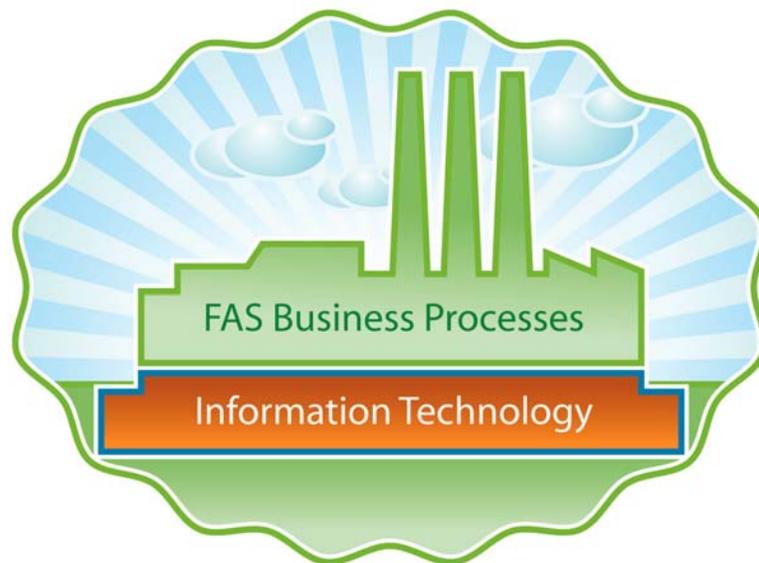
1 Executive Summary

The Foreign Agricultural Service (FAS) of the United States Department of Agriculture (USDA) works to improve the competitive position of U.S. agriculture in the global marketplace by helping to boost existing markets and build new markets, and by providing food aid and agricultural technical assistance to foreign countries.

FAS relies on information technology (IT) solutions to fulfill the Agency's mission and achieve its business goals. As our business evolves and becomes increasingly complex, so does its demand upon technology to keep it running effectively. Now, more than ever, it is vital that we make smart IT decisions that reduce the cost of maintaining our current and future systems. The IT staff must maintain an active partnership with the FAS business community to ensure that our IT systems remain aligned. We must provide integration through the continued refinement and development of the Enterprise Architecture (EA). We must ensure that our IT environments are secure. Finally, it is essential that we maintain an innovative and skilled workforce.

Like other facets of an organization, IT systems are best managed *proactively* rather than *reactively*. Only then can they predictably and effectively support an organization's business requirements and strategic direction.

The IT Strategic Plan is the Agency road map for using technology. It sets the goals and objectives to help meet its overall mission. This plan responds to FAS business needs and considers the guidance, direction, and legislation from Federal governing bodies. Our overall goal is to improve investment selections by aligning them with business processes; to enhance security and reduce risks; and to improve practices related to IT acquisition and performance measurement.



A strategically managed IT plan forms the foundation for the Agency mission and is integral to successful execution.

2 Mission

FAS is charged with creating economic opportunity for American agriculture by expanding global markets. The FAS IT mission is to:

Implement IT solutions and services that streamline and improve FAS business processes, enabling the expansion of global agricultural markets.

FAS has become increasingly dependent upon technology to support employee's work products, provide service to customers and improve work efficiencies. Additional IT challenges specific to FAS include supporting a geographically dispersed workforce and identifying, analyzing, and disseminating data used in complex agri-business decisions. The IT strategic mission is to meet these challenges, thereby enabling and expanding FAS business capabilities.

3 Vision

To bring FAS's vision of *"linking U.S. agriculture to the world"* to life, an innovative partnership must be forged between business and IT to build technological solutions that support policy making, managing trade issues, and implementing export programs. The FAS IT Vision is to:

Partner IT with the FAS business community to deliver products and services that meet business needs.

A strong partnership between IT and the business community will drive the streamlining of operations and business processes, identify the "right" information, and deliver systems that provide results.



4 Guiding Principles

Guiding principles are broad concepts that provide the overarching theme and the basis for consistency in integrated decision making by IT Staff at FAS. They articulate the shared organizational values. These guiding principles are:

- Utilize the EA to integrate systems, promote reuse of IT services and data sharing, and prioritize projects across FAS.
- Evaluate current business practices to eliminate outdated, inefficient processes before building application systems.
- “Reuse before buy; buy before build.” Identify reusable services before building similar services.
- Use Commercial-off-the-Shelf (COTS) solutions before building from scratch.
- Develop reusable “modular” or component-based solutions.
- Develop and maintain standards to provide consistency in development and maintenance, interoperability between IT tools and services, and allow for enterprise licensing.
- Share data across FAS and other government agencies to reduce duplicate entry and data redundancy.
- Provide a secure environment for infrastructure, networks, and applications.
- Remain customer focused to ensure value.

5 Strategic Goals

To be successful in achieving Department and Agency goals it is crucial that a plan be developed with ambitious, but realistic, goals and objectives. The four overarching IT strategic goals are:

- **Goal 1: Enhance IT to support the FAS mission of expanding global trade**
Align IT with the business processes to enable the expansion of agricultural trade.
- **Goal 2: Implement integrated and effective IT processes and standards**
Integrate IT processes and standards to achieve excellence in application delivery and support, meeting or exceeding user needs.
- **Goal 3: Maximize the effectiveness of the IT workforce**
Provide a highly skilled, innovative, and diverse workforce.
- **Goal 4: Implement an architecture that provides a secure and robust system**
Maintain a secure infrastructure that supports reliable communications, and provides a robust computer system.

5.1 Goal 1: Enhance IT to support the FAS mission of expanding global trade

FAS has the primary responsibility for USDA's international activities that include market development, support of trade agreements and negotiations, and the collection and analysis of agricultural statistics and market information. FAS also administers USDA's Export Credit Guarantee and food aid programs, and helps increase income and food availability in developing nations by mobilizing expertise for agriculturally led economic growth. IT applications and services must directly support these business processes.

The objectives to support this goal are:

- Identify and document Agency business processes;
- Partner business expertise with IT; and
- Leverage IT solutions across FAS, USDA, and partner agencies.

5.1.1 Identify and document agency business processes

The Office of Management and Budget (OMB) requires that IT investments be business-driven and identified through the development of an EA. This dictates that FAS conduct business process reengineering (BPR) prior to IT development and implementation.

Modeling business processes is the first step in developing a *business architecture*. In the business architecture, processes are represented by workflow diagrams and other BPR process mapping techniques. Architected processes identify stakeholders, Information used to support the processes, and the data it produces. As the workflows are completed, they may reveal inefficiencies that can be reduced through the elimination of redundancies and extraneous activities, and the sharing of data between processes.

IT staff develop the business architecture in partnership with the business community. The architecture lays the groundwork for the development of application systems that meet business needs.

While modeling the entire enterprise can be a monumental task, it becomes manageable when the enterprise is segmented into business areas, which are prioritized and then modeled individually. As segments are completed, the EA allows for intelligent decision making on an even broader level. Technology products may then be assessed based upon the needs of the Agency as a whole, rather than one business area or system.

Actionable Strategies

- Develop and document the workflows for major business processes
- Identify data exchanges between business processes
- Set business process goals, objectives, and performance metrics
- Develop reporting that assists business in better managing their processes

Measures

- # of processes documented
- # of data exchanges across FAS
- # of data exchanges with other agencies

5.1.2 Partner business personnel with IT

If technology is to be a true asset for an agency, it must be aligned with the business strategic goals by means of a formalized system of strategic planning, maturity of development process, technology management and corporate vision.

The partnership between IT and the business community will drive the development of application systems that meet business needs. Business personnel who are involved in business planning and day-to-day business operations contribute significantly when they participate in the planning of IT.

Actionable Strategies

- Engage the business community in IT teams

Measures

- # of projects with a documented partnership between business and IT

5.1.3 Leverage IT solutions across FAS, USDA, and partner agencies

OMB requires that synergy be developed not only across the Department, but across the Federal Government. Electronic Government (E-Gov)—a President's Management Agenda (PMA) initiative—calls for sharing IT initiatives to:

- Improve collaboration;
- Improve consistency and interoperability;
- Reduce development and maintenance costs;
- Eliminate duplicate entry and data redundancy;
- Provide accurate and consistent information;
- Improve performance; and
- Provide additional public access.

The USDA has identified enterprise-wide initiatives in its EA. These initiatives include implementation of a standard email system, a standard content/document management system, a standard single sign-on across all applications, and use of common network data center capabilities.

Actionable Strategies

- Implement USDA enterprise solutions
- Use the FAS EA to identify opportunities for enterprise solutions across agencies
- Use the FAS EA to identify data that can be shared, and technologies to streamline and secure the sharing of that data

Measures:

- Implemented Departmental enterprise mail system
- Implemented Department content management system
- # of IT initiatives shared across FAS's organizations, the Department, and other Federal Agencies

Goal 2: Implement integrated and effective IT processes and standards

Business aligned IT management and governance contribute to operational improvements. This translates into lower costs, the mitigation of risks; and compliance with legislation from governing bodies such as OMB, Office of Personnel Management (OPM), the Government Accountability Office (GAO), and Congress.

The objectives to support this goal are:

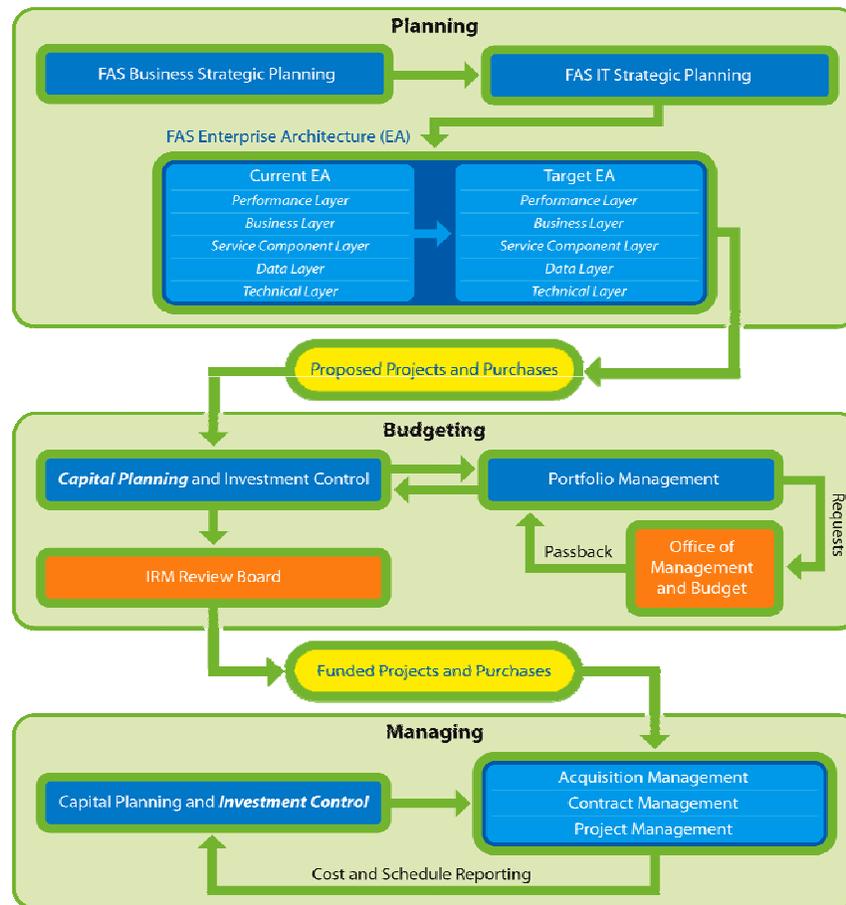
- Refine the relationships among governance processes;
- Implement a System Development Life Cycle (SDLC) methodology;
- Improve IT contract management to maximize value; and
- Measure the performance of IT investments.

The processes used to govern and manage investments include:

- **IT Strategic Planning** is the development of a plan that identifies long-term goals, objectives, actionable strategies, and performance measures for IT programs. It is aligned with the business strategic plan.
- **EA** is a tool that assists organizations in the optimization of IT resources to achieve maximum business results and delivery of services. The EA is business-driven, ensuring that technology investments support the mission of the business.
- **Capital Planning and Investment Control (CPIC)** is a structured, integrated approach to managing IT investments. It ensures that all IT investments align with the USDA and agency mission, support business needs, minimize risks and maximize returns throughout the investment's lifecycle. The Clinger-Cohen Act requires agencies to develop a CPIC process for making technology, budget, financial and program management decisions.
- **Portfolio Management** is an approach to managing IT projects that provides a comprehensive view of all concurrent and completed projects. While initial steps towards a portfolio management approach have been taken by implementing the CPIC process, portfolio management takes a holistic view of an organization's overall IT strategy. A strong portfolio management program can maximize value of IT investments, improve communication and alignment between IT and business leaders, and encourage business leaders to take ownership for IT projects.
- **Project Management** is the process of planning, organizing, staffing, directing and controlling a project to ensure success.
- **Acquisition Management** is the process of acquiring the "best services". It involves soliciting services and evaluating responses to solicitations.
- **Contract Management** is the monitoring of a contract (as performance work statements are often inexact, resulting in the need for technical instructions as the work progresses) to ensure that the Government pays only for the services, materials, and travel authorized and delivered under the contract.

5.1.4 Refine the relationship between governance processes

IT governance processes should not be considered in isolation but must be integrated and considered from planning through execution. These processes should be documented and refined to ensure that investments are planned to achieve the best performance for each IT dollar. The management and execution of the investment should be measured against the plan. Governing boards or personnel responsible for the process should be identified with roles and responsibilities in documented charters. The integration of these processes is depicted below.



Actionable Strategies

- Document interrelation of IT governance processes
- Refine and integrate processes
- Communicate processes

Measures

- # of documented processes
- # of communicated processes
- Exhibit 300s with passing scores

5.1.5 Implement a System Development Life Cycle (SDLC) methodology

Development of complex application software remains a difficult problem despite recent advances. Teams of architects, analysts, programmers, testers, and users must work together to create the applications that support our business. A standard approach and methodology for developing systems will allow for a predictable development process, and provide metrics to determine the status of application development. Standard techniques and diagrams can provide assistance in bridging the gap between the business users, government IT staff, and contractor IT staff.

The SDLC should provide a structure but also provide flexibility based upon the type of project. For example, the SDLC may follow a “waterfall” approach (where development is phased and each successive phase is completed before the next is started), and still allow for an iterative design process, or modifications to the original design based on an updated requirement. When the project is initiated, users, government IT, and contractor IT staff identify the approach to be used, the involvement required by the users, and the deliverables to be produced.

The SDLC will also enhance communications between business users, government IT personnel, and contractor IT staff.

Actionable Strategies

- Identify and implement an SDLC
- Communicate the SDLC

Measures

- SDLC methodology identified and implemented

5.1.6 Improve IT contract management to maximize value

IT Staff is supported by contract staff with specialized skills in the full range of IT operations including software development, Local Area Network (LAN) and Wide Area Network (WAN), and email system management. The Office of Federal Procurement Policy (OFPP) has made recommendations to use performance-based service acquisition and contract management. Performance-based contract management refers to measuring contract deliverables against predetermined performance expectations. It also includes the discipline to discretely and accurately track time and expense against performance for all projects within a contract. This discipline will provide cost savings, maximize the value of investments, and improve user satisfaction with improved on-time delivery.

In addition to IT staff, financial savings can be reaped with procurements of hardware and software through enterprise licensing and volume discounts. Where feasible, purchases should be grouped across FAS and across the Department to leverage the most economical pricing.

Actionable Strategies

- Achieve OMB’s target to award 50% of IT acquisitions as “performance-based”
- Identify opportunities for grouping purchases for volume discounts and enterprise licensing

Measures

- # of performance based contracts
- # of purchases that take advantage of group discounts and enterprise licensing

5.1.7 Evaluate performance of IT investments

Incorporating IT measurements can be a complex and difficult task. IT projects may not deliver the intended results due to changes in scope or direction, inadequate requirements definition, and/or poor planning. One cause of unexpected results is failure to apply measurement models which provide objective pointers to assess how effective the IT strategies used have actually been considering the strategic business goals.

Performance measures are ways to characterize and define performance. They provide a tool for organizations to manage progress towards achieving predetermined goals, defining key indicators of performance and customer satisfaction.

Performance measures must be identified for all IT investments. Reviews should be performed at each stage of a project's development life cycle to ensure that the project is on track (cost, schedule, earned value), as well as to ensure that the project will deliver the intended Return on Investment (ROI) or other value(s) identified.

Actionable Strategies

- Identify and implement performance measures for IT investments
- Gauge performance measures at each stage of the life cycle and/or at least quarterly

Measures

- # of applications with performance measures identified
- # of applications in development meeting performance measures quarterly

5.2 Goal 3: Maximize the effectiveness of the IT workforce

One of the PMA government-wide initiatives is the strategic management of human capital. Staffing and personnel management as they relate to IT projects is a critical aspect of successfully supporting business goals and strategy. Maintaining an appropriately skilled IT shop becomes increasingly challenging as personnel near their retirement age and as technological change accelerates.

The objectives to support this goal are:

- Enhance skill levels of IT workforce;
- Close skill gaps in project and contract management; and
- Provide for backup support and institute succession planning.

5.2.1 Enhance skill levels of IT workforce

Technology is continually evolving to provide faster, better, and more economical solutions. The last decade has seen quantum leaps in the accessibility of real-time data, anywhere and at any time; new interoperability technologies that facilitate data exchanges between businesses; and a vast increase in connection speeds. A significant challenge is keeping IT personnel trained in the newer technologies to reap the rewards of newer technology.

Actionable Strategies

- Identify mentorship approaches to training in new technologies
- Identify training profiles for each technology (to include AGLearn training) that are economical
- Provide “just in time” training to personnel as they are about to use the technology rather than broad training of many personnel
- Provide opportunities for third party certifications of personnel, such as Capability Maturity Model Integration (CMMI), International Standards Organization (ISO) 9000, Microsoft Certified Systems Engineer (MCSE), etc.

Measures

- Training profiles developed
- # of personnel trained just in time
- # of personnel with certifications

5.2.2 Close skill gaps in project and contract management

FAS IT Staff manage the delivery of FAS developed applications and support tasks, manage delivery of services, and manage outsourced projects. FAS employees with project management and contractual technical representation duties must be well-trained and well-prepared to execute these efforts.

The discipline of Project management helps ensure that projects are delivered within defined constraints and development resources are allocated efficiently to meet the project’s objectives. Project management involves assessing and managing risks and predictably anticipating required work efforts. Using (Project Management Institute) PMI techniques to control a project saves time and money in the long term. Properly applied, it allows IT to meet the expectations of the stakeholders and make sure projects meet their requirements.

Each year, additional FAS personnel will be targeted for PMI training and certification. FAS will also target specific FAS personnel for the Contracting Officer's Technical Representative (COTR) certification program.

Actionable Strategies

- Identify personnel for PMI training
- Identify personnel for COTR training

Measures

- # of personnel with current PMI certification
- # of personnel with current COTR certification

5.2.3 Provide backup support and institute succession planning

FAS is dependent on IT systems for its day-to-day operations. Knowledge and skills cross training to provide backup for personnel on leave, retiring, etc. is required to ensure continuity of IT operations.

Actionable Strategies

- Identify backup support for all IT functions and operations
- Implement knowledge and skills cross training and mentorship programs
- Identify succession plan for retiring personnel

Measures

- # of functions and operations with identified backups
- # of mentors in place

5.3 Goal 4: Implement an architecture that provides a secure and robust system

To effectively support policy, manage trade issues, and implement export programs, employees must have around-the-clock access to email and network resources. To maintain its value and relevance, FAS requires a reliable, up-to-date IT infrastructure.

The objectives to support this goal are:

- Develop a migration plan to implement the target technical architecture;
- Implement standards to achieve interoperability of technologies and services;
- Build an effective information security management program; and
- Use enterprise licensing to achieve cost savings.

5.3.1 Develop a migration plan to implement the target technical architecture

An EA provides a modernization “blueprint” of an organization that documents what you have and what you plan to do with it. EA is not just about mapping and standardizing hardware and software, it provides a systematic approach to aligning organizational mission and strategic goals with IT investments and projects.

The architecture serves as a reference point to facilitate the efficient and effective coordination of common business processes, information flows, systems, and investments.

A migration plan should be developed to implement the target architecture, and retire outdated technologies that are difficult to integrate as well as expensive to maintain. The migration plan must consider the life of applications using outdated technologies, and the costs and risks of reverse engineering applications to use new technologies.

Actionable Strategies

- Identify new standard technologies to achieve business goals
- Develop migration plan to target technical architecture

Measures

- Target technical architecture identified
- Migration plan in place

5.3.2 Implement standards to achieve interoperability of technologies and services

Standards are developed, documented, and communicated to allow for effective use of technology, compatibility and interoperability with other technologies, and security practices specific to the technology. Topics include hardware, software, graphical user interface, data naming, service-oriented architecture, etc.

Actionable Strategies

- Identify and prioritize standards for development
- Develop standards for implementation and use of technologies

Measures

- Development standardized
- # of technologies in use at FAS with documented standards for use

5.3.3 Build an effective information security management program

Having timely internal and external access to data and information is essential to making intelligent and informed decisions. However, securing data is even more critical to global trade. Our customers must be confident that the information we provide is both valid and well-protected.

A managed approach is required for developing and implementing security policies, procedures, and plans. FAS will formalize policies, and provide continual improvement in security procedures; comply with current legislation, and participate in the USDA Security Program.

Legislation related to security includes the Federal Information Security Management Act (FISMA) and HSPD-12, the Policy for a Common Identification Standard for Federal Employees and Contractors.

Actionable Strategies

- Identify a security officer
- Develop a security plan
- Continue to participate in the USDA Security Program

Measures

- Security officer in place
- Security plan in place
- # of systems that have completed the Certification and Accreditation (C&A) process
- Continued satisfactory scores and or improvements to scores in USDA Security self-assessment program

5.3.4 Use enterprise licensing to achieve cost savings

FAS can achieve cost savings by negotiating the purchase of technology with volume discounts and/or using enterprise licensing. Enterprise licensing may be available through USDA and/or FAS teaming with one or more agencies within USDA.

Actionable Strategies

- Negotiate volume discounts with vendors for purchases of technology
- Work with USDA and other agencies in USDA to negotiate enterprise licenses with vendors

Measures

- Cost savings due to volume discounts and enterprise licenses

6 Conclusion

The management of IT is vast and complex. Telecommunications, data access and security, ensuring IT and business personnel remain technically competent and providing continual support for current applications are only a few of the myriad challenges facing FAS IT in meeting its mission of serving a global workforce. Additionally, FAS must implement USDA and Presidential Management initiatives while complying with and responding to OMB and other legislated programs.

The Chief Information Officer (CIO) must convince top-level executives to view IT as a strategic partner, not merely a cost center, and must instill an understanding of the business value of the initiatives with the IT workforce.

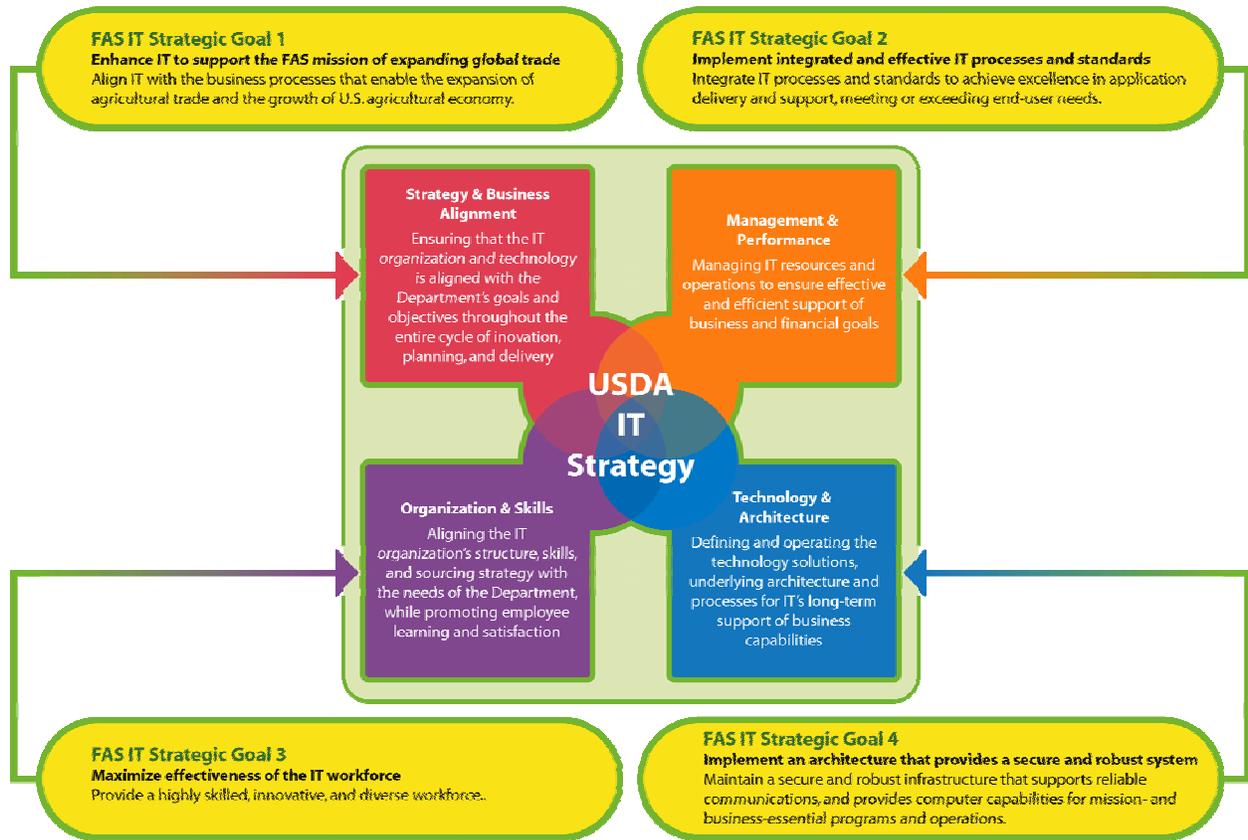
IT planning is critical to achieving an organization's mission in terms of business management and performance. The FAS IT Strategic Plan for Fiscal Years 2007-2011 provides the foundation for developing and extending FAS's IT Program, and is fundamental in transforming our Agency into a high-performance organization.

The strategic goals spotlight actionable strategies that are concrete and measurable, and when fulfilled, lead to improved performance. Providing the agency with a reliable IT infrastructure and effective tools enables employees to perform with effectiveness, which translates directly to supporting the Agency's mission to the highest degree possible.

The CIO pledges to implement the IT Strategic Plan through leadership, a clear vision for the future, and by building a strong partnership with the business community.

Alignment of FAS and USDA IT Strategic Goals

The illustration below depicts the aspects of USDA's IT Strategy and how FAS's IT Strategic Goals align with, and support them.



Appendix A Legislative and Government Drivers

Over the past few years, the Congress has passed an unprecedented amount of legislation aimed at improving agency performance through implementation of more effective strategic, financial, and acquisition management policies. The Clinger-Cohen Act (CCA) of 1996, the Government Information Security Reform Act (GISRA) of 2000, the Government Performance and Results Act (GPRA) of 1993, the Chief Financial Officer’s Act (CFOA) of 1990, the Paperwork Reduction Act (PRA) of 1995 and the E-Government Act of 2002 are relevant legislation that direct agencies to improve the uses and efficiency of IT within their organizations. The table below provides a summary description of each act.

Business Process	Description
Clinger-Cohen Act, 1996	Improves the productivity, efficiency, and effectiveness of federal programs through improved acquisition, use, and disposal of IT resources.
Government Information Security Reform Act, 2000	Focuses on the program management, implementation, and evaluation aspects of the security of systems.
Government Performance and Results Act, 1993	Holds federal agencies accountable for achieving program results and requires them to clarify their missions, set program goals, and measure (and report) performance related to meeting those goals.
Paperwork Reduction Act, 1995	Ensures that operations and decisions are integrated with organization planning, budget, financial management, human resources management, and program decisions.
E-Government Act of 2002	Codifies the President’s Management Agenda (PMA) to expand E-Government initiatives, sets new OMB reporting requirements and codifies the existence of the CIO Council.
Chief Financial Officer’s Act, 1990	Manages the strategy for developing and integrating individual agency accounting, financial information and other financial management systems to ensure adequacy, consistency, and timeliness of financial information.
Section 508	Section 508 requires that Federal agencies’ electronic and information technology is accessible to people with disabilities. IT Accessibility and Workforce Division, in the U.S. General Services Administration’s Office of Government wide Policy, has been charged with the task of educating Federal employees and building the infrastructure necessary to support Section 508 implementation.

Business Process	Description
<p>President's Management Agenda (PMA)</p>	<p>The President's Management Agenda, announced in the summer of 2001, is an aggressive strategy for improving the management of the Federal government. The PMA contains government-wide goals to improve Federal management and deliver results that matter to the American people. It reflects the Administration's commitment to achieve immediate, concrete, and measurable results in the near term. The five government-wide goals to improve Federal management and deliver measurable results include:</p> <ul style="list-style-type: none"> ▪ Strategic Management of Human Capital; ▪ Competitive Sourcing; ▪ Improved Financial Performance; ▪ Expanded Electronic Government; and ▪ Budget and Performance Integration.

Appendix B Glossary

Acronym/Term	Definition
C&A	Certification and Accreditation
CCA	Clinger Cohen Act
CIO	Chief Information Officer
CMMI	Capability Maturity Model Integration
COTS	Commercial Off the Shelf Software
CPIC	Capital Planning and Investment Control
EA	Enterprise Architecture
FAS	Foreign Agricultural Service
FISMA	Federal Information Security Management Act
GAO	Government Accountability Office
GPRA	Government Performance and Results Act
ISO	International Organization for Standardization
IT	Information Technology
LAN	Local Area Network
OMB	Office of Management and Budget
OFPP	Office of Federal Procurement Policy
OPM	Office of Personnel Management
PMA	President's Management Agenda
PMI	Project Management Institute
ROI	Return on Investment
SDLC	System Development Life Cycle
USDA	United States Department of Agriculture
WAN	Wide Area Network