Enterprise Architecture Transition Plan

March 2007
Version 1.5

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EXECUTIVE SUMMARY

The U.S. Department of Agriculture (USDA) provides leadership on food, agriculture, natural resources and related issues based on sound public policy, the best available science, and efficient management. USDA has a proud record of enhancing economic opportunities for agricultural producers, protecting the Nation's food supply, improving nutrition and health, protecting the Nation's natural resources and environment. We want to be recognized as a dynamic organization that is able to efficiently provide the integrated program delivery needed to lead a rapidly evolving food and agriculture system.

Over the past few decades, Information Technology (IT) has changed dramatically. IT continues to rapidly change the way in which USDA conducts its business. It is for this reason that attention to enterprise architecture becomes critical to the achievement of an organization's mission, in terms of both business performance and management. As agencies' IT becomes increasingly complex, processes must be put into place to increase efficiency and reduce the cost of maintaining IT.
In FY 2005, USDA spent about $87 billion –of this, USDA's IT budgets comprise approximately $2 billion. The Office of the Chief Information Officer (OCIO), along with the Agency CIOs, ensures that these funds are used to expand the capacities of the Department and its employees. With regard to IT, USDA is focused on the following themes:

- Investing in its most important IT asset – its IT employees;
- Ensuring that financial investments in IT improve the results of programs within the Department;
- Ensuring information is appropriately secure and protected;
- Identifying areas where optimization and/or common solutions can be leveraged across the Department; and
- Ensuring that IT projects are delivered on time, within budget, and produce expected results and outcomes.

This Enterprise Architecture (EA) Transition Plan is comprehensive, addressing all of USDA's organizational units and business operations. It prescribes a high-level roadmap for USDA to modernize its operations and computer systems. The EA Transition Plan is the result of analysis of:

- Architectural drivers, such as USDA strategic plans and priorities, milestone commitments to the Office of Management and Budget (OMB), and audit/report findings

- USDA Target enterprise architecture and other EA artifacts

- Improvement opportunities, such as potential opportunities for re-use and sharing of common services, business collaboration, and technology refresh

- Transition/implementation plans and other EA artifacts from across the Federal government

The EA Transition Plan represents a sequence of "transition activities" across Federal Enterprise Architecture (FEA) Performance Improvement L ifecycle phases. The duration of each phase is not predetermined. For the most part, the duration will depend on the level of commitment of stakeholders and the resources obtained to plan and execute each transition activity. There are four categories of modernization steps. They are:

- Oversight Activities - activities associated with fostering IT modernization through broad policy, governance and infrastructure efforts

- Core Mission Segments – unique areas defining the mission or purpose of USDA. Core mission areas are defined by the agency business reference model (BRM) (e.g. Industry Sector Income Stabilization, nutrition assistance or emergency response) that fully supports the FEA BRM

- Business Service Segments – common or business shared services supporting the common mission areas. Business services are defined by USDA BRM activities associated with developing and implement ing a detailed architecture for a Business Service (e.g. Grants Management or loan guarantees)

- Enterprise Shared Services Segments - activities associated with identifying, selecting, planning for, and implementing IT services (e.g. Document Management and Records Management) that can be shared across USDA's Core Mission and Business Services

Each transition activity within this plan is defined at a high level and typically represents a sustained and complex effort. Each transition activity is unique; however, each of the four categories of transition activities will typically follow a similar pattern of work activities and result in a similar set of work products.

The Core Mission, Business Service and Enterprise Shared Services segments begin with an architectural phase that first focuses on business transformation, then defines how information and enabling IT can support the transformation. After receiving funding through an investment phase, these segments are implemented. Implementation may include business-focused activities, such as business process reengineering, as well as IT-focused activities, such as steps encompassed in USDA's Systems Development Lifecycle (SDLC).

The Oversight Activities Segment is fundamentally different from the Core Mission, Business Services and Enterprise Shared Services. Also, it is unique and does not follow a common pattern. Such activities typically begin with the development of strategy, policy, or governance, then move into execution.

The proposed sequence of transition activities was selected through an evaluation of the activities against objective criteria for prioritization, as well as consideration of dependencies. The prioritization criteria include the following factors:

- Business transformation impact

- Financial impact

- Impact on execution of other high-priority transition activities (i.e. pre-requisite)

- Resource availability

- Opportunities for early successes

- Ability to leverage or build on work in progress

The EA Transition Plan is applicable to all USDA component agencies and staff offices. USDA executives, managers and staff are encouraged to read, discuss and comment on this document. While the plan represents

a complex and intensive modernization effort, it can be acc omplished by dividing the overall plan into man ageable increments.

USDA's EA offers extraordinary possibilities to deliver dynamic customer services, strengthen relationships with partners and stakeholders, share information across traditional boundaries and reduce operating costs. It fundamentally changes how USDA interacts with and provides information and services to its customers, stakeholders and employees.   EA plays a critical role in aligning the IT strategy and business mission, goals, objectives, and strategies.

EA is the explicit description and documentation of the current and desired relationships among business and management processes and informat ion technology. The EA should describe the "current" architecture and the "target" architecture. As we mature the EA program, it will provide a migration path and sequencing plan to help prioritize the IT projects and programs. The EA program will also inc lude the rules and standards to optimize and maintain IT investments and portfolios. The EA will change as the Department changes.

Putting EA to work as a management instrument requires that the USDA invest in process and technology to ensure the ready m anagement and dissemination of the EA to the various business domains throughout the Department.

As USDA continues to move forward, it must seek and commit resources to modernization. There will be many decision points alo ng the way and the EA Transition Plan will serve as a guide. The f irst steps will likely be the most challenging, as USDA establishes new ways to examine and manage its operations and supporting computer systems. To succeed, USDA must fully engage in proven management practi ces to achieve its IT modernization objectives.

1.0 Introduction

1.1   Definition and Purpose

The United States Department of Agriculture's (USDA) EA Transition Plan is a high-level strategic roadmap for information technology (IT) modernization. It is a plan for supporting the recently approved iteration of the target EA, which depicts the desired future state of USDA's performance goals, business, applications and services, technology, data, and security. A conceptual depiction is provided below:

Exhibit 1-1 – Conceptual EA Transition Plan
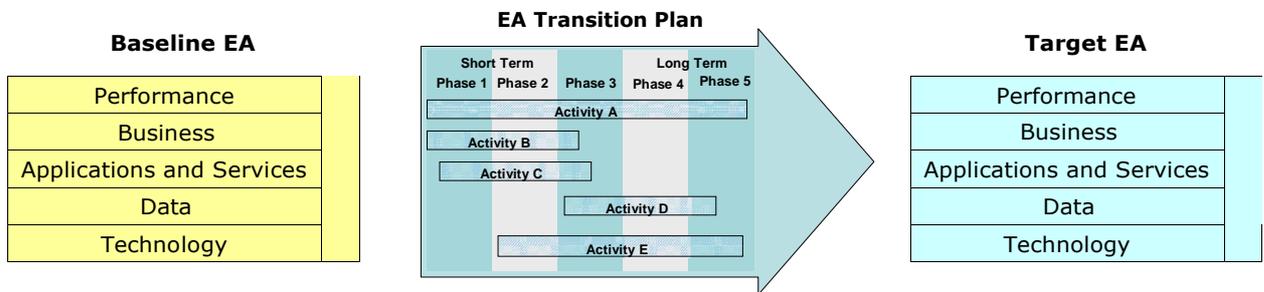
The primary purpose of the USDA EA Transition Plan is to define and sequence the activities needed to yield to the desired future state, according to priorities, dependencies, and constraints. It is the ***path*** for IT modernization, driving both investment in and implementation of syst ems and technologies that will transform USDA's business. The transition activities defined within this plan will become the programs USDA executes to achieve IT modernization. This plan defines and sequences transition activities within four categories:

- **Oversight** – These activities are associated with fostering IT modernization through broad policy, governance, and infrastructure efforts. These were identified based on an assessment of USDA's current IT management policies, practices, governance and infrastructure.

- **Core Mission Segments** – A Core Mission segment represents a strategic view of USDA's business. These activities are associated with developing and implementing a detailed architecture for a Core Mission (e.g. Industry Sector Income Stabilization or Global Trade).

- **Business Service Segments** – This segment represents a tactical view of USDA's business (i.e. how USDA delivers its goods and /or services). The 14 Business Services addressed in this EA Transition Plan were identified in USDA's Target EA which embraces the FEA Business Reference Model's (BRM) Mode of Delivery , Support Delivery Services and Management of Government Services business areas.

- **Enterprise Shared Services** – These activities are associated with identifying, selecting, planning and implementing IT services that can be shared across USDA's Core Mission and Business Services. Enterprise Shared Services (ESS) segment is a suite of development tools, platforms and applications that facilitate USDA's department - wide effort to deliver citizen-centric, online information and services. USDA developed ESS to leverage business, technology and data principles to provide agencies the capability to maximize efficiencies and reduce costs while improving customer service. The business applications are hosted in a shared environment at the National Information Technology Center (NITC) using controlled IT hosting and operations procedures designed to support applications on the ESS infrastructure.

  The Enterprise Shared Services segment was identified by the Office of the Chief Information Officer to logically link related services that may be potentially shared across USDA. The ESS segment components are classified as solutions, technology and infrastructure. Component examples include Enterprise Messaging as an e-mail solution, Stellent as enterprise technology, and Universal Telecommunications Network as an infrastructure component.

As Exhibit 1-2 shows, Core Mission can be seen as vertical views of USDA's business operations, while Business Services cut horizontally across one or more Core Mission. The ESS segment supports the business and typically spans the enterprise. Oversight activities are foundational enablers of the other transition activities.

Figure 1-2 –Transition Activity Relationships
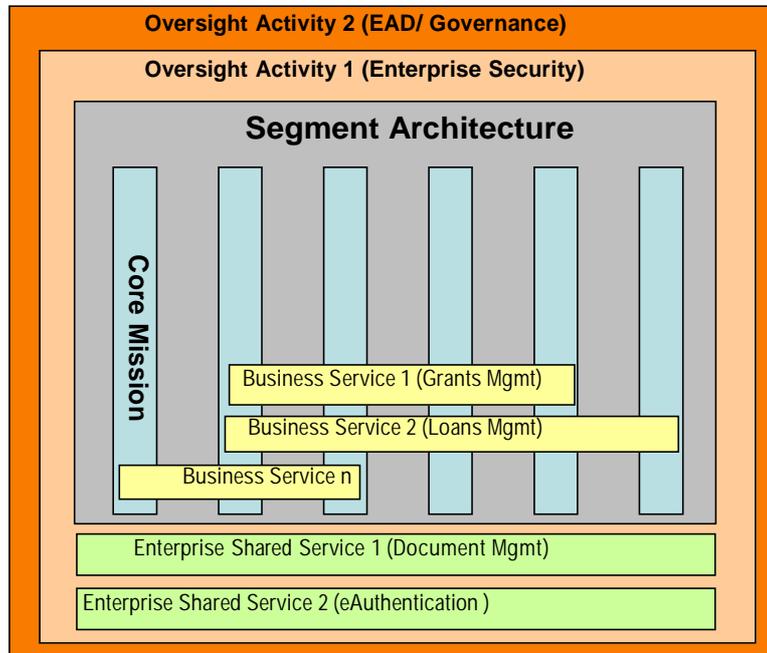
As the exhibit shows, Core Mission can be seen as vertical views of USDA's business operations, while Business Services cut horizontally across one or more Core Mission. Enterprise Shared Services support the business and typically span the enterprise. Oversight activities are foundational enablers of the other transition activities.

1.2 Business Value

USDA has over 300 major and nonmajor investments supported by hundreds of applications and systems. Many of the applications and systems have overlapping business processes and rely on diverse technologies that are expensive to maintain. Over the past several years, the degree of overlapping applications has diminished primarily due to efforts to establish enterprise shared services and to consolidate business services. An example of this is AgLearn, USDA's enterprise electronic delivery which replaced 7 agency applications pe rforming much of the same functions. To reduce costs and streamline operations, USDA has created policies to enforce the IT acquisition moratorium to ensure the

adoption of a service-oriented and component-based approach to architecture. This approach, consistent with government and industry best practice, enables USDA to reuse components. This EA Transition Plan sets the course for realizing this vision. The value of the USDA EA Transition Plan includes:

- **Improved Program Performance** – The business value of the EA Transition Plan is that it provides opportunities to improve the efficiency and effectiveness of USDA's programs. It ensures that Business Services support strategic goals and priorities, data is optimized in support of the business and applications and technology solutions are driven by business needs. Also, it allows USDA to expand shared services across organizational and functional lines.

- **Improved IT Resource Planning and Allocation** – USDA's IT modernization efforts inherently involve trade-offs among competing ideas and interests. Traditionally, projects and initiatives have been funded based on their individual merits, without full consideration of the needs and priorities of the Department. For the first time with this EA Transition Plan, USDA has a single plan that encompasses all of the activities needed to achieve the IT modernization vision. Moreover, the plan sequences these activities based on priorities, dependencies and constraints.

- **Improved Interoperability -** The EA Transition Plan drives USDA toward enterprise-wide standards that promote platform and vendor independence, hence, enabling greater interoperability.

- **Improved Utilization of Resources** – The EA Transition Plan reduces system development, operation and maintenance costs by eliminating redundant investments, promoting sharing of common services and establishing Department-wide standards.

- **Accelerated System Implementation** – The EA Transition Plan equips the Department's system developers and architects with a repertoire of component-based services that provides well defined functionality, hence maximizing reuse and portability of previously developed processes, components and codes.

1.3   Audience and Use

The EA Transition Plan is applicable to all USDA component agencies and staff offices, as it represents a proposed roadmap for achieving the desired future state of the department's performance goals, business, applications, systems and services, technology, data and security. USDA executives, managers and staff are encouraged to read, discuss and comment on this document.

This initial version of the EA Transition Plan is intended as a concept document to foster discussion and awareness within the Department. Business leaders across USDA should review the transition activities, to determine whether the proposed priorities and sequencing of activities are the best choices for the Department and are attainable with available resources. After stakeholders across USDA have scrutinized this version of the EA Transition Plan and provided comments, it will be revised and put forward to the Executive Information Technology Investment Review Board Executive (E-Board) for adoption.

The EA Transition Plan describes a range of activities to support business transformation and IT modernization throughout the Department, with a sequencing plan for undertaking these activities. It identifies, at a high level, the core transition activities USDA will undertake to achieve the target architecture. It is not a substitute for the Capital Planning and Investment Control (CPIC) Guide. Once adopted, the EA Transition Plan can be used in conjunction with other planning processes to enable business transformation and IT modernization.

The EA Transition Plan defines and sequences a broad range of transition activities ranging from strategic, oversight activities (e.g. establishing Department-wide governance) to activities that are specific to a single Core Mission or Business Service. Therefore, individual readers may find that selective reading of certain sections and appendices is more useful than an end-to-end review. The use of this plan for specific USDA stakeholder groups is summarized below:

- **Program Area Executives** – As the key decision-makers within USDA responsible for ensuring that the Department fulfills its mission and progresses toward its vision, USDA executives must understand and support the path toward IT modernization and participate in efforts to implement it. In particular, the E-Board has responsibility for:

    – Approving the EA Transition Plan

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- Structuring the IT investment portfolio to support IT modernization in line with the EA Transition Plan

- Leading the cultural change, within their program areas and across the Department, that is required to execute the EA Transition Plan

- **Chief Information Officer (CIO)** – The USDA CIO plays a unique and important role in executing the EA Transition Plan. The CIO must advocate both within USDA and externally, for the resources required to execute the plan and must educate stakeholders on the value of IT modernization.

- **IT Staff** – All USDA IT staff, including both Office of the Chief Information Officer (OCIO) and program area IT staff, should be familiar with the EA Transition Plan. As the staff with primary responsibility for planning and deploying systems and technology in support of the Department's business, IT staff needs to understand the IT modernization vision and the plan for achieving it. Key subsets of USDA's IT staff for which the EA Transition Plan has particular relevance include:

  - **IT Capital Planning Staff** – This staff must understand the EA Transition Plan and be able to apply that understanding in the evaluation of USDA's IT investment portfolio.

  - **Program/Project Managers** – Program and project managers responsible for IT initiatives must ensure that the initiatives comply with the Target EA and EA Transition Plan. Specific criteria for compliance are developed and published in conjunction with the Department's CPIC and integrated governance guidance.

- **Business Managers** – Managers supporting USDA's Core Mission and Business Services should understand how the EA Transition Plan will support their business needs. They should closely review the sections of the document that address their Core Mission and Business Services, as well as the services and technologies that will support them.

- **Integrated Program Teams (IPTs)** – IPTs, consisting of both business and IT staff from across the Department, will be the core units responsible for executing many of the transition activities in this plan. As an IPT forms around a specific transition activity, the

EA Transition Plan serves as a frame of reference for the activity's scope and focus, and identifies an initial set of opportunities that the IPT should explore further.

- **The Office of Management and Budget (OMB)** – As part of the budget submission process, USDA will submit this EA Transition Plan and other EA artifacts to OMB. OMB will use the EA Transition Plan to determine whether USDA has a cohesive plan for modernizing IT in support of its business, and whether individual IT initiatives are aligned with the transition plan. All initiatives must be aligned with EA in order to receive funding. Also, OMB may use USDA's Target EA and EA Transition Plan to identify opportunities for USDA to participate in government-wide initiatives.

- **Other Peer Agencies –** USDA collaborates with other Federal agencies, such as the Department of Interior, Department of Health and Human Services and the Department of Commerce in the implementation of its programs. The EA Transition Plan, in conjunction with the Target EA, will help these partnering entities understand USDA's plans for IT modernization in support of its business.

1.4   Background

The Clinger-Cohen Act of 1996 mandates the implementation of an effective EA policy and an associated EA practice. This act requires Federal Agency CIOs to develop, maintain, and facilitate "a sound and integrated information technology layer for the executive agency." Subsequently, OMB, in its Circular A-130, issued explicit guidance that requires agency information system initiatives to be consistent with the Agency's EA.

While the development and maintenance of an EA is mandated by OMB, USDA approaches EA as a tool for business transformation and IT modernization. Since the passage of these mandates, USDA has steadily built an active EA practice to meet the business needs of the Department. This EA Transition Plan builds on prior work and advances upon recent efforts to move USDA toward IT modernization, including:

- **USDA IT Strategic Plan 2007-2011**– The USDA IT Strategic Plan establishes a vision for how information and technology will be used to fulfill the overall strategies and objectives of the Department.

- **Target EA –** The Target EA is a living framework that will be developed incrementally. It defines the desired future state of USDA's performance, business, applications and services, technology, data and security. The Target EA is the end-state for the EA Transition Plan.

- **Capital Planning Investment Control Guide / Integrated IT Governance** – The *USDA Information Technology Capital Planning and Investment Control (CPIC) Guide* identifies the processes and activities necessary to ensure that USDA's investments in IT are well thought out, cost effective, and support the missions and business goals of the organization. It is based on guidance from both the Office of Management and Budget (OMB) and the Government Accounting Office (GAO). At the highest level, the CPIC process is a circular flow of USDA's IT investments through five sequential phases.

- **Segment Architecture(s) –** Recently, USDA has started to advance its architecture through definition of several architectural "segments." USDA has focused on gradually defining and incrementing architectures for individual Core Mission segments (e.g. Industry Sector Income Stabilization) and Business Services (e.g. Loan Management) in an effort to make the architectural endeavor more manageable . These segment architectures are represented as transition activities within this EA Transition Plan.

The desired relationships among these efforts are depicted in Exhibit 1-3. As the dashed lines and arrows show, the pattern is cyclical and iterative. The sequence encompasses the following relat ionships, moving from left to right through the graphic:

- The USDA IT Strategic Plan 2007 -2011 provides the strategic direction for development of the Target EA.

- The Target EA defines the desired future state for USDA. In addition to being the primary input to the EA Transition Plan, the Target EA is also an important input to both the CPIC and Segment Architecture efforts.

- The EA Transition Plan is developed to define the path forward (from the current environment) toward achieving the Target EA. It dire ctly feeds the CPIC process, providing the direction in which USDA will

advance the IT portfolio. It also defines the priorities and sequence for developing and implementing Segment Architectures.

- The Agency Portfolio Review (APR) or Strategic Portfolio Review (SPR) process includes evaluations of initiatives and makes recommendations to align initiatives with the Target EA and Transition Plan to support initiative participation in Segment Architecture efforts.

- Finally, Segment Architectures are developed and implemented to operationalize the architecture.

- Dashed lines represent a number of feedback loops in the pattern, indicating its cyclical nature. The EA Transition Plan supports the USDA IT Strategic Plan 2007-2011 and as the strategic plan is revised so too will the direction defined in the EA Transition Plan. Likewise, as Segment Architectures are developed and implemented, USDA will re-evaluate and update the IT Strategic Plan and Target EA as appropriate.

Exhibit 1-3 – EA Transition Plan and Related Planning Efforts
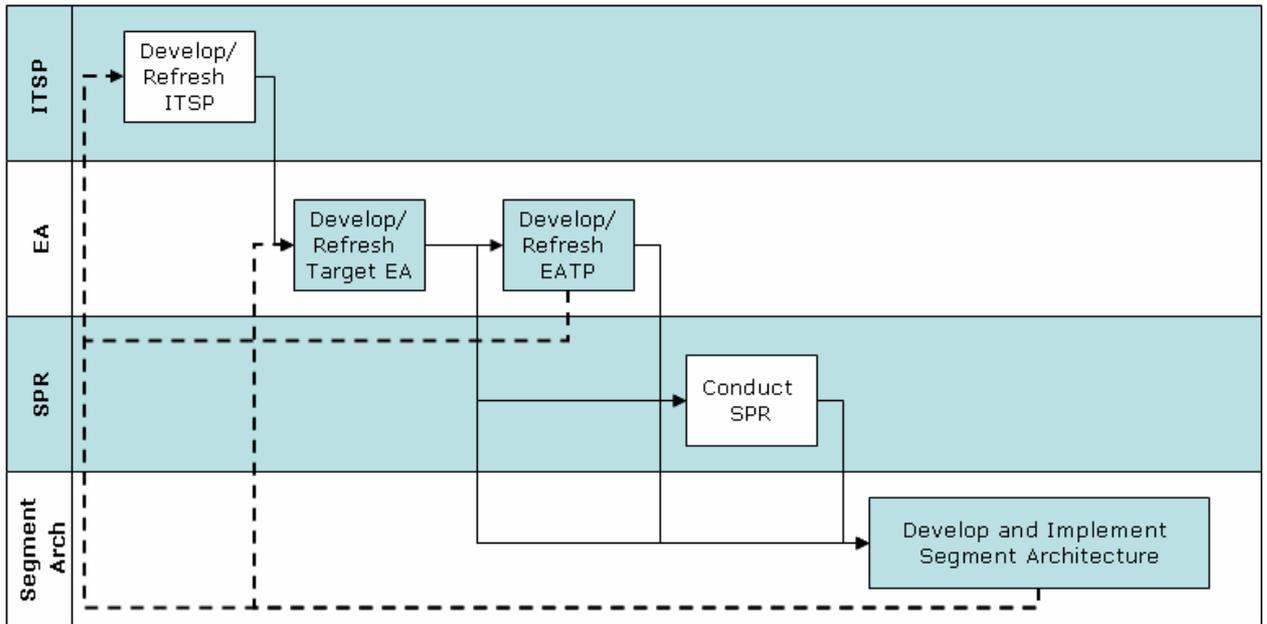
1.5   Scope

The organizational scope of the EA Transition Plan Version 1.0 is the entire USDA enterprise. It represents a path toward IT modernization for the Department and touches all of USDA's agencies, staff offices, Core Mission, Business Services, and supporting services and technologies. It is driven by USDA's IT Strategic Plan which supports and aligns with USDA's mission, vision, goals and objectives.

The EA Transition Plan identifies and sequences transition activities at the strategic level. It is not a detailed project plan and does not encompass a work breakdown structure for all of the operational activities required to realize the desired future state. Detailed implementation planning for individual transition activities (e.g. Core Mission or Business Service segment architectures) is the responsibility of the respective agencies and staff offices.

1.6   Relationship with Performance Improvement Lifecycle

This EA Transition Plan plays an important role within a broader framework for managing IT within USDA. USDA supports the OMB FEA representation of the Performance Improvement IT Lifecycle Framework consisting of three key phases: Architecture, Investment and Implement. Exhibit 1-4 below depicts this conceptual framework and shows how the EA Transition Plan fits within it.

Role of EA Transition Plan
Exhibit 1-4 – in the Performance Improvement Lifecycle
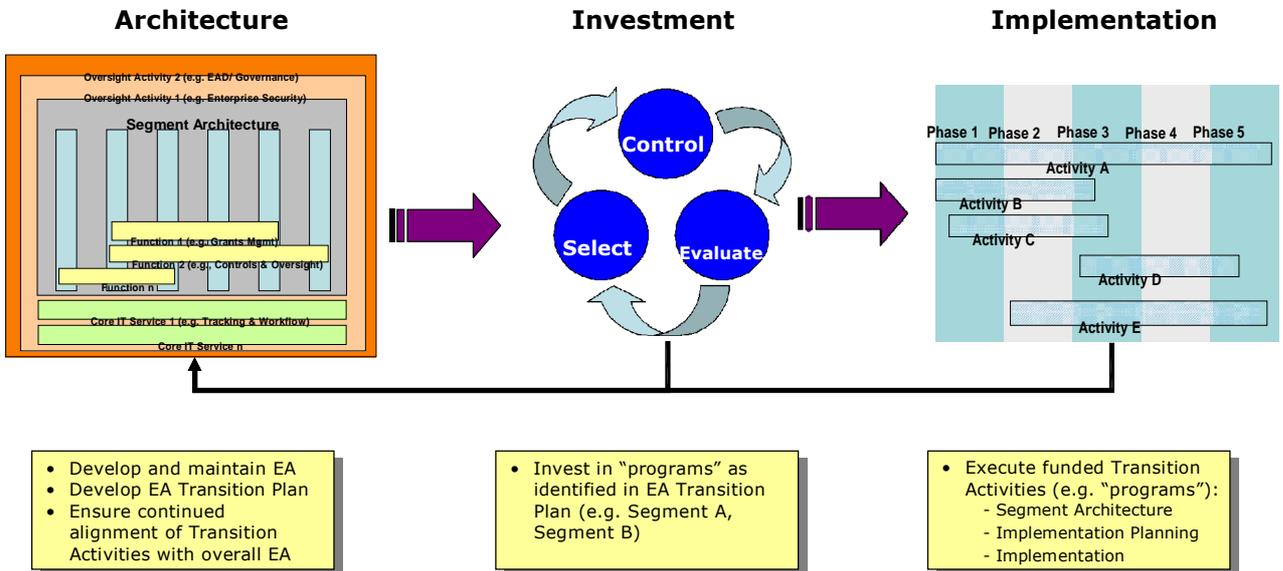
The primary theme throughout the Performance Improvement Lifecycle is that architecture (Target EA, EA Transition Plan) drives all IT investments, which in turn enables implementation. However, as the graphic depicts, the relationship between Architecture, Investment and Implementation is cyclical rather than linear. The Target EA and EA Transition Plan are continuously maintained throughout USDA's integrated governance process which involves local change control Boards (CCB), an executive CCB, CPIC, IT project management and EA management. As segment architectures and other transition activities are executed in the implementation phase, they are reviewed for alignment with the Target EA, which may adapt and be updated accordingly.

1.7 Methodology

This EA Transition Plan was developed through a logical sequence of steps focused on identifying, prioritizing, and sequencing the transition activities that will be necessary to achieve USDA's Target EA. This methodology is depicted graphically in Exhibit 1-5 and summarized below. Note that while the development of the EA Transition Plan largely flowed sequentially as depicted below, there was some iteration between steps.

Exhibit 1-5 – EA Transition Plan Development Methodology

Define & Scope Transition Activities	Analyze Transition Activities	Prioritize Transition Activities	Conduct Opportunities Analysis	Sequence Transition Activities	Develop Transition Plan
• Determine categories • Develop list • Create profiles	• Determine relationships among LOBs, BFs, apps, svc components, & technologies	• Develop prioritization criteria • Assign weights • Score activities	• Consolidation opportunities • Technology refresh, retire	• Identify dependencies • Define assumptions • Sequence activities	• Create transition views • Draft EATP

Define and Scope Transition Activities – Developing the EA Transition Plan began with defining the "universe" of activities that would have to be undertaken to transition to the Target EA. As described in Section 1, transition activities were grouped into four categories: Core Mission Segments, Business Service Segments, Enterprise Shared Services Segments and Oversight Activities. Core Mission and Business Service Segments are already defined within the Target EA. A set of Enterprise Shared Services was derived from previous versions of USDA's EA Traceability Matrix including adherence to the Service Component Reference Model (SRM). Finally, a set of enabling governance, policy and

infrastructure activities were defined to lay the foundation for traversing the other transition activities. These activities were identified based on an assessment and gap analysis of USDA's current IT management policies, practices, governance, and infrastructure.

Preliminary profiles were created for each transition activity to assist in scoping the activities and to capture a common set of information for each, including a description, sponsors, status and other data. In some cases, not all profile data is known, so the initial profiles should be updated by the domain experts with the support of the EA Division.

Analyze Transition Activities – Expanding on analysis conducted during development of the Target EA, key relationships among and within the transition activities were examined, including:

- Target Core Mission as compared to the Target Business Service

- Target Core Mission as compared to Current IT Initiatives

- Current IT Initiatives as compared to Current Applications

- Current Applications as compared to the Target Core Mission

- Current Applications as compared to the Target Business Service

- Current Applications as compared to the Service Components

- Current Applications as compared to the Technical service specifications and products

Such analysis is necessary to prioritize and sequence transition activities and as an input to the opportunities analysis discussed below.

Prioritize Transition Activities – Prior to determining an appropriate sequence for executing the transition activities, the activities were prioritized based on potential business impact, resource availability, and other criteria. For each of the four categories of activities, a set of criteria was developed and weighted. Each activity was then scored, resulting in a priority ordered list of activities within each category. Note that this prioritization provides a starting point for the sequencing and is one input to the sequencing of the activities as discussed below.

Conduct Opportunities Analysis – USDA's EA principles were the framework for conducting a limited opportunities analysis within select transition activities. This analysis sought to identify some initial potential "quick wins" that should be further explored by the program and IT staffs responsible for executing a particular transition activity. Examples of potential opportunities include sharing and re-use of common service components, consolidation of redundant applications and initiatives and refresh or replacement of non-standard technologies.

Sequence Transition Activities – USDA analyzed the interdependencies of transition activities and identified those activities that should logically be conducted in sequence or in parallel. An overall sequence of the transition activities was determine by combining this perceived logical order with the prioritization and opportunities analysis. A final step in sequencing the activities will be the consideration of resources and assumptions about the extent to which multiple activities can be performed in parallel. Note that in this iteration of the EA Transition Plan, there are significant unknowns in terms of both the resources available to execute the transition activities and the resources required. For example, it would be very difficult to project the cost and timeframe required for both architecting and implementing a Core Mission segment that has not yet been clearly scoped.

Develop Transition Plan – Finally, the overall EA Transition Plan was drafted, incorporating all of the elements previously discussed, and adding more detailed consideration of strategic transition issues, risks and mitigation factors and next steps.

The process of developing the EA Transition Plan is not complete. The current version is intended as a discussion draft for the Department. Additional work is needed before finalizing and implementing the plan.

The following activities are recommended to ensure that the plan reflects the interests and needs of the Department. The Chief Architect will:

- Provide EA Transition Plan Briefings to Key Stakeholders;
- Disseminate EA Transition Plan for Department-wide Review;
- Consolidate Comments and Refine EA Transition Plan; and
- Obtain approval for the USDA EA Transition Plan.

2.0 Transition Plan and Sequencing Views

The EA Transition Plan provides the details of the transition activities and the proposed sequence in which they should be addressed. This section focuses on the proposed sequencing of the transition activities by presenting a series of views: Overview; Oversight Activities View; Core Mission and Business Service View and Enterprise Shared Services View. Each view will be discussed below. Each of the transition activities represented in the following graphics are summarized in Section 3 and detailed in the activity profiles in the appendix. The proposed sequencing across phases was determined based on priorities, dependencies and constraints, which are addressed for each transition activity in the appendix.

Each transition activity within this plan is defined at a high level and typically represents a sustained and complex effort. Each transition activity is unique; however, each category of transition activities will typically follow a similar pattern of work activities and result in a similar set of work products. Each of the four categories is discussed briefly below:

Core Mission Segments

At the highest level, a Core Mission segment consists of an architecture / planning phase and an implementation phase. The architecture phase begins with a focus on business transformation. A business owner or executive recommends the formation of an Integrated Program Team (IPT) with business and systems experts from participating program areas to analyze the existing business model and processes that support the delivery of USDA services within the given Core Mission. This analysis results in a **Business Profile** that details how USDA can most effectively and efficiently provide these business services in the future. The Business Profile encompasses statements of vision and mission for the Core Mission, descriptions of the business services provided, business success/performance measures, process workflows and information flows, a concept of operations (CONOPS), and business rules.

Once the foundation of business transformation has been set, the Core Mission segment effort shifts its focus toward defining how information and enabling IT can support the transformation. The **Architectural Profile** defines a set of reference models (performance, business, service component, data, and technology) and the inter-relationships among them. This ensures that the Core Mission segment is properly aligned within the broader Departmental EA framework. Once the alignment has

been established, a **System Profile** is created to detail the enabling IT that will support the business. Business and system experts will consider alternative solutions and determine how best to employ information and automation to effectively serve customers. The last major work product in the architecture phase is the **Implementation Plan**, which defines the path toward attainment of the desired segment architecture.

At the end of the architecture phase, USDA creates a business case, typically in the form of an OMB Exhibit 300, to obtain funding for the implementation of the architecture. The work products discussed above provide the input to the development of the business case. Once funding has been obtained, USDA initiates implementation. The specific activities undertaken during implementation will vary considerably depending on the nature of the architecture. If significant business transformation is desired, USDA may execute a business process reengineering effort. In most cases, there will be activities that fall within USDA's System Development Lifecycle (SDLC), such as acquisition, requirements definition, and systems design and development.

Business Service Segments
The Business Service segments consist of the same major phases as Core Mission segments. Likewise, the primary work products and sequence of activities are the same. The only significant difference is the focus and scope. For example, a Business Service segment focuses more deeply on a narrower set of business activities, while a Core Mission segment looks at how multiple functions will be integrated to deliver a particular set of services.

Enterprise Shared Services Segments
The Enterprise Shared Services segments also consist of an architecture, invest and an implementation phase. However, unlike the Core Mission and Business Service segments, the work products produced during the architecture / planning phase for Enterprise Services may vary considerably depending on the nature of the service. For example, in cases where the application of the IT service is different depending on the business process being supported (e.g., Tracking and Workflow), the architecture may heavily explore business rules and requirements. On the other hand, an IT service that is applied consistently regardless of the business process being supported (e.g. Reporting) may simply require an analysis and selection of appropriate Commercial Off-The-Shelf (COTS) solution(s) that align with USDA's Target EA. As with Core Mission and Business Service segments, the implementation phase typically encompasses activities that fall within USDA's SDLC.

Oversight Activities Segment

The Oversight Activities Segment, which encompasses policy, governance and infrastructure efforts, are substantially different in their execution from the three other categories of activities. Moreover, each of the Oversight Activities is distinct, and they do not all follow a similar pattern.

2.1   Transition Plan Overview

The overview, as illustrated in Exhibit 2-1, shows the high-level view of all 28 activities addressed in this EA Transition Plan. The overview binds the transition activities within their appropriate category (the vertical axis, i.e. "swim lane"), and phase (the horizontal axis).

Exhibit 2-1 – EA Transition Plan Overview

Architecture Domain	Target Architecture Item Name / Investment / UPI Code	Performance Improvement Life Cycle	Segment Type	Primary LoB / Subfunction
●	**AgLearn** *eLearning/AgLearn* 005-03-02-01-02-8005-04	Implement Operate	→	403 / 258
●	**Asset Management** *Corporate Property Automated Information System (CPAIS)* 005-03-01-01-01-1000-00	Implement Operate	→	402 / 124
●	**Civil Rights Enterprise System** *Civil Rights Enterprise System* 005-05-01-81-02-0001-00	Implement Operate	→	401 / 123
●	**Computer Emergency Notification System (CENS)** *Emergency Programs* 005-03-01-81-02-9700-00	Implement Operate	→	401 / 119
●	**Configuration Management Systems** *USDA-Wide Consolidated Infrastructure (IOAT)* 005-00-02-01-01-9999-00	Invest Define	⇄	404 / 139
●	**Corporate Financial Management System (CFMS) - "Current"** *Corporate Financial Management System (CFMS)* 005-03-01-01-01-1020-00	Implement Operate	→	402 / 124
	Financial Managagement Modernization Initiative(FMMI) - "Target" *Financial Management Modernization Initiative (FMMI)* 005-03-01-01-01-1102-00	Invest Define		
●	**Document Management** *Enterprise Content Management* 005-55-01-81-04-2004-24	Implement Operate	⇄	404 / 142
●	**Enterprise Correspondence Management Module (ECMM)** *e-ECMM Enterprise Correspondence Management Module* 005-03-02-01-02-8010-04	Implement Operate	→	404 / 142
●	**Enterprise HR Applications** *Human Resources LoB* 005-03-01-81-02-9850-24	Implement Operate	→	403 / 250
●	**Enterprise Identity Management (EIM)** *Enterprise Identity Management (EIM)* 005-03-02-01-02-8003-04	Implement Operate	⇄	404 / 140
●	**Enterprise Messaging** *USDA-Wide Consolidated Infrastructure (IOAT)* 005-00-02-01-01-9999-00	Architect Analyze	⇄	404 / 139
●	**Integrated Acquisition System (IAS)** *Integrated Acquisition System (IAS)* 005-03-01-81-01-1020-00	Implement Operate	→	405 / 143
●	**Living Disaster Recovery Planning System (LDRPS)** *Enterprise Contingency Planning Program (ECPP) (Formerly LDRPS)* 005-03-02-01-02-0251-04	Architect Operate	→	104 / 008

● - Common

Please note: Based on the investment, common Enterprise-wide elements may be multiple elements in a single investment

→ - Business Service
⇄ - Enterprise Shared Service

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Architecture Domain	Target Architecture Item Name / Investment / UPI Code	Performance Improvement Life Cycle	Segment Type	Primary LoB / Subfunction
●	**Portal** / *e-Enterprise Shared Services* / 005-03-02-01-02-8004-04	Implement Operate	→	404 / 142
●	**USDA Common Customer Statement** / *Service Center Modernization Initiative - InformationTechnology (SCMI-IT)* / 005-03-02-01-02-0113-04	Implement Operate	→	404 / 142
●	**USDA EA Repository** / *USDA Enterprise Architecture* / 005-03-03-81-02-1020-00	Implement Operate	→	304 / 103
●	**USDA e-Grants System** / *To Be Determined*	Architect Analyze	→	205 / 081
●	**USDA Travel System** / *Human Resources LoB* / 005-03-01-81-02-9850-24	Invest Define	→	405 / 143
●	**Web Content Management Tool** / *Enterprise Content Management* / 005-55-01-81-04-2004-24	Implement Operate	⇄	404 / 142
●	**Web-based Supply Chain Management (WBSCM)** / *Web-based Supply Chain Management (WBSCM)* / 005-45-01-61-01-8012-00	Invest Define	↑	405 / 143
●	**WorkLenz Portfolio Manager** / *USDA Capital Planning & Investment Control* / 005-03-03-01-02-1010-00	Implement Operate	→	304 / 102
◉	**ePermits** / *Comprehensive Electronic Permits System (ePermits)* / 005-32-01-61-01-2001-00	Implement Operate	↑	114 / 043
◉	**Farm Program Modernization (MIDAS)** / *Farm Program Modernization (MIDAS)* / 005-49-01-51-01-0097-00	Architect Define	↑	105 / 014
●	**IT Infrastructure** / *USDA-Wide Consolidated Infrastructure (IOAT)* / 005-00-02-01-01-9999-00	Implement Operate	⇄	404 / 139
●	**Universal Telecommunications Network** / *USDA-Wide Consolidated Infrastructure (IOAT)* / 005-00-02-01-01-9999-00	Implement Operate	⇄	404 / 139
●	**Web Farms** / *Service Center Modernization Initiative - Information Technology (SCMI-IT)* / 005-03-02-01-02-0113-04	Implement Operate	⇄	404 / 139
●	**IPv6**	Architect Define	◉	404 / 139
●	**Security Profile** / *USDA-Wide Consolidated Infrastructure (IOAT)* / 005-00-02-01-01-9999-00	Architect Define	◉	404 / 140

● - Common
◉ - Agency

Please note: Based on the investment, common Enterprise-wide elements may be multiple elements in a single investment

→ - *Business Service*
⇄ - *Enterprise Shared Service*
↑ - *Core Mission*
◉ - *Oversight*

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The following segment architectures have completed at l east one iteration of the performance improvement life cycle:

- AgLearn
- Asset Management
- Civil Rights Enterprise System
- Computer Emergency Notification System (CENS)
- Document Management
- Electronic Permits (ePermits)
- Enterprise Correspondence Management Modu le (ECMM)
- Integrated Acquisition System (IAS)
- Living Disaster Recovery Planning System (LDPRS)
- Portal, Enterprise Shared Services (ESS)
- USDA Common Customer Statement
- USDA EA Repository
- Web Content Management Tool, Enterprise Content Management (ECM)
- WorkLenz Portfolio Manager
- Universal Telecommunications Network (UTN)
- Web Farms

The following segment architectures are underway and are at within the first iteration of the performance improvement life cycle:

- Corporate Financial Management System
- Configuration Management Systems
- Enterprise HR Applications
- Enterprise Identity Management
- Enterprise Messaging
- USDA Grants System
- IT Infrastructure
- Industry Sector Income Stabilization
- Security Profile
- USDA Travel System
- Web-Based Supply Chain Management (WBSC M)

Refer to Appendix E – Segment Architecture Summaries, for information on each of the above segment architectures.

2.1.1 Transition Activity Categories

The EA Transition Plan Overview segregates transition activities into four categories: Oversight; Core Mission; Business Service s: Supporting Business Services and Mode of Delivery; and Enterprise Shared Services. E ach category is represented by a bordered box or "swim lane" and contains the

appropriate transition activities within the swim lane. The swim lanes intersect with the OMB Performance Improvement Lifecycle to illustrate the activity status (e.g. architecture, invest and implement) across the phases. Later in this section, detailed views of e ach category are presented and discussed.

Oversight: these activities represent the policy and governance necessary to support and execute IT modernization. These activities occur independently of other categories, however they do have dependencies in and among them (e.g. Define Technical Standards relies on Standards Governance). This EA Transition Plan identifies 9 Oversight transition activities (e.g. Security, IPv6 and Specific Standards).

Core Mission: this category represents the 7 USDA Mission Areas, Internet Protocol Version 6 (IPv6) comprising a total of 3 core mission segments for this iteration. Each Core Mission develops and implements segment architecture ("blueprint") specific to its business. USDA's Core Mission represents a **strategic view** of USDA's business (i.e. why USDA exists). Each Core Mission provides a unique set of business services to c ustomers and plays a unique role in fulfillment of USDA's mission. Core Mission segments provide business services to customers either directly or through a partner. In order to provide b usiness services, Core Mission segments carry out a set of Business Services.

Business Service: this category constitutes a **tactical view** of USDA's business (i.e. how USDA delivers its goods and serv ices). The 14 Business Services are divided into M ode of Delivery and Supporting sub- categories to differentiate the unique implementation str ategies between them. Business Services (e.g. Financial Management) are those that most directly enable the mission of the Core Mission. Thus, these services have uni que implementations within each Core Mission. The Supporting Business Services sub-category encompasses functions in the "Support Delivery of Services" and "Management of Government Resources" business areas of USDA's FEA EA BRM. These functions (e.g. Hu man Resource Management) a re not specific to USDA, but are common to many other government agencies and businesses. They support all Core Mission segments and are typically implement ed independently of Core Missio n.

Enterprise Shared Services: The three Enterprise Services encompass the activities associated with identifying, selecting, planning for, and implementing IT services that can be shared across USDA's Core Mission and Business Services. These services are complementary to Core Mission and Business Service implementation. Therefore, these transition activities are sequenced to support related efforts within Core Mission and Business Services.

2.1.2 Relationships Among Core Mission, Business Service and Core IT Service Transition Activities

In order to understand the EA Transition Plan views, it is important to understand the interrelationships among Core Mission, Business Services and Enterprise Shared Services. While they appear as discrete parallel activities in the overview graphic in Exhibit 2-1, they are actually inextricably related. These relationships are summarized briefly here.

The Core Mission to Business Service Relationship
A single Core Mission is typically supported by multiple Business Services. Likewise, a single service is typically performed in support of more than one Core Mission segment. The Business Services are uniquely related to individual Core Mission, whereas the Supporting services are performed in support of the Department as a whole. In other words, a Business Service such as Contact and Profile Management may be performed one way within the Economic Development Core Mission and a somewhat different way within the Supply Chain Management Core Mission. On the other hand, a Supporting Business Service, such as HR Management, is a Department-wide function that is not performed uniquely within different Core Mission segments.

Therefore, in thinking about the transition activities in terms of both blueprint and implementation phases, the implementation phase for Supporting services is treated differently from that of Mode of Delivery. In the case of the former, a single implementation of the business and automation solutions can be performed for the Department. In contrast, Business Services require unique implementations within each of the impacted Core Mission to allow for differences in business processes and business rules. Exhibit 2-1 illustrates this concept by showing that the Business Services do not have an implementation phase
reflected in the Business Service swim lane, while the Supporting services do. The implementation of the Business Service segments in the Core Mission segment is detailed in Section 2.2.2.

**Enterprise Shared Service to Business Service
and Core Mission Relationship**

Enterprise Shared Services are enterprise-wide in nature and are intended to be shared across USDA's Core Mission and Business Services. A single enterprise service (e.g. Document Management) will be both architected and implemented by a central IPT with representation from impacted Core Mission and Business Services segments. The architecture plans will need to have the flexibility to address the unique processes and business rules of the supported Core Mission and functions.

Because certain Enterprise Shared Services are more closely related to particular Business Services and Core Mission than others, USDA may be able to embed some Enterprise Shared Services within the Core Mission and Business Service segments. This would have the benefit of an existing funding source for the effort. Enterprise Shared Services will be planned and implemented in separate enterprise-wide efforts and coordinated with the impacted Core Mission and Business Services.

2.1.3 Transition Phases

The EA Transition Plan views incorporate "phases" to demonstrate the sequence and priority of transition activities across a conceptual timeline. The phases represent significant business transformation and IT modernization milestones. The views illustrate time (the horizontal axis) in terms of phases of progress rather than dimensions of time (e.g. months or years). The duration of IT modernization efforts is largely dependent on internal and external resource constraints and investment planning activities. Because the majority of the transition activities are defined at a conceptual level, there is insufficient detail available to make accurate estimations of resource and time requirements to complete these activities. As IPTs form to initiate the transition activities, their scoping and planning efforts will bring greater clarity on resource and time requirements, and the EA transition plan will be updated.

2.1.4 Cyclical Nature of Transition Activities

The Target EA and EA Transition Plan will evolve in iterative cycles. For each of the Core Mission, Business Services and Enterprise Shared Services segments identified in this document, the focus of the views and discussion is on the first cycle of architecture, investment and implementation for each. Beyond the initial cycle, transition activities will continue to evolve gradually

over time. Compared to the initial architecture -investment-implementation cycle, the maintenance and refresh over time should be significantly less resource intensive.

2.2 Plan Detail Views

This section provides a more focused view for each category of Transition Activity. These views provide further insight and detail of the transition activities. As mentioned above, the phases are driven by milestone, rather than by time.

2.2.1 Oversight Activity View

The Oversight Activity View (Exhibit 2-2) focuses on the Oversight transition activities. As the view demonstrates, the first phase of t hese activities typically focuses on defining policies, governance, or infrastructure. Once they have been initially defined or established, the remaining phases focus on executing, implementing or institutionalizing the activities.

Exhibit 2-2 – Oversight Activity View

Phase 1 2003-2004	Phase 2 2005-2006	Phase 3 2007	Phase 4 2008 +
Develop Integrated IT Governance	Maintain, Refine and Enforce IT Governance ---→		
Establish EA Program	Maintain, Refine and Enforce EA Discipline --→		
Establish EA & CPIC Integration	Maintain, Refine and Enforce CPIC Integration --→		
	Develop Communications Plan		
	Establish EA Repository	Maintain and Refine EA Data	
		Develop USDA Systems Development Lifecycle Methodology	
		Develop EA Configuration Management Plan	
	Develop Data Management Strategy	Data Mgmt Governance	Maintain, Refine, and Enforce IT Governance
	Develop IPv6 Transition Strategy	Refine and Update IPv6 Transition Strategy	

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2.2.2 Core Mission and Business Service View

The Core Mission and Business Service View (Exhibit 2-3) expounds on the EA Transition Plan Overview (Exhibit 2-1) by showing the parallel sequencing of Core Mission and Business Service segments.

Core Mission Segments

For each Core Mission segment, the view depicts a single phase for blueprint development (i.e. architecture), followed by one or more phases of implementation. As described in Section 2.2.1 above, implementation of the Core Mission segment is further delineated as implementation of the relevant Business Services. While the Exhibit 2-3 illustrates that the services have unique implementations in the Core Mission segment, it is important to note that segment architecture for this segment is not simply a series of Business Service implementations. Each Core Mission blueprint focuses on how all of the associated functions will work collectively to deliver services to USDA's partners and customers.

The Core Mission implementation cycle is not complete until all of the associated Business Services have been architected, integrated in the Core Mission architecture and implemented. Therefore, the phased implementation of a Core Mission segment is driven in part by the sequencing of the associated Business Services.

Business Services

As described previously, following development of the segment architectures, the implementation phase for Supporting services is treated differently from that of Core Mission segments. Typically, the Supporting services are implemented at the Departmental level, outside of the Core Mission, due to their cross-cutting nature. The exceptions to this general rule are the Financial Management and Controls and Oversight Business Services. Because these functions do have processes that are unique to specific Core Mission, they will be implemented through specific Core Mission segments.

Business Services are all implemented through the Core Mission. This process is depicted in Exhibit 2-4 with an example using the Industry Sector Income Stabilization Core Mission and Loan Management/Loan Guarantee Business Service. In this example, the Industry Sector Income Stabilization segment architecture is developed by an IPT with representation from participants from each impacted Core Mission. The Core Mission implements its unique business processes and business rules by leveraging the output of the segment architecture (e.g. common architecture, external initiatives such as eGrants.gov, or internal/acquired automation) and adapting it to the business purpose of Industry Sector Income Stabilization.

Exhibit 2-3 – Example of Business Service implementation within all Core Mission

		FY2003	FY2004	FY2005		FY2006	FY2007
Business Services	**USDA eLearning**	LCMS			**Cutover**		
		ICAMS					
		mGen					
		TIPS/VTA					
		Other					
		AgLearn--------------Upgrade--------------Upgrade-----------→					

Baseline	Before AgLearn
RMA	Learning Content Management System
APHIS	Learning Content Management System
NRCS	Internet Combined Administrative Management System
FSA	Internet Combined Administrative Management System
RD	Internet Combined Administrative Management System
AMS	Internet Combined Administrative Management System
FS	Training Integrated Personnel System / Virtual Training Assistant
FSIS	Training Integrated Personnel System / Virtual Training Assistant
RMA	mGen
APHIS	mGen
OC	mGen
GIPSA	Training Management System
NRCS	eLearning Center
NFC	TRAI
Other	Instructor lead classroom training

2.2.3 Enterprise Shared Services View

The Enterprise Shared Services View comprises 9 Enterprise Services, illustrated in Exhibit 2-5. These transition activities represent potential Department-wide, re-useable service/technology offerings. The activities require architecture/planning prior to implementation. The sequence of t he Enterprise Shared Services transition activities address relationships between other transition activities, where appropria te, for example: the Compliance business function may leverage the Tracking a nd Workflow Enterprise Shared Services to enable automated case management.

Exhibit 2-4 – Enterprise Shared Services View

Enterprise Shared Services	Architect/Analyze	Implement /Operate
		Configuration Management System
		Document Management
		Enterprise Identity Management
	Enterprise Messaging	
		Portal
		Web Content Management
		IT Infrastructure Optimization
		Universal Telecommunications Network
		Web Farms

2.3   Assumptions and Resource Considerations

This transition plan describes, prioritizes, and sequences numerous transition activities, each requiring varying degrees of duration and effort. Resources, both human and investment capital, are critical factors in achieving business transformation and IT modernization. Internal staff and contractors are necessary to design and implement the transition activities. In addition, investment infusion, whether through re-allocation or new requests, must be planned and executed.

The sequencing of the transition activities reflects current resources available to the Department. USDA's Office of the Chief Information Officer architects bear the responsibility to participate with IPTs for each Core Mission, Business Service and Enterprise Shared Services architecture effort. This EA Transition Plan assumes that a small number of segment architecture efforts can occur at any given time, due to: dependencies among transition activities; the high degree of interaction and collaboration among the business and systems owners, IPTs, external entities (e.g., E-Gov initiatives, regulatory entities), and consultants; and current staffing level of segment architects.

New, supplemental or reprogrammed investment funding will be needed to architect segments, build or acquire systems, integrate Enterprise Shared Services, and institutionalize governance, policy, infrastructure, and standards across the Department. As new automation is brought to fruition, antiquated systems and processes can be retired to offset the cost of new investments. In this same line of thinking, the re-use of Enterprise Shared Services (i.e. "buy once-use many") will promote cost-avoidance and standardization. This EA Transition Plan assumes that investment allocation will be executed in a timely manner to ensure continuity from architecture to implementation.

The EA Transition Plan sequences the transition activities in terms of phases rather than time. The length of time necessary to complete a phase is directly impacted by variances in: resource allocation, complexity, cost, external drivers and commitments, and investment cycle.   The length of a phase could range from months to years. The EA Transition Plan assumes implementation efforts constitute equal or greater time than their blueprint counterparts.

2.4 Risks And Mitigation Strategies

There are many risks inherent in large scale business transformation and IT modernization efforts. However, this plan has been structured to mitigate risks to the extent possible. The risks identified below are general risks applicable to the plan as a whole, not transition activity-specific. Exhibit 2-5 lists each risk and provides corresponding rationale and mitigation strategies/actions.

Exhibit 2-5 – Risks and Mitigation Strategies

Risk	Potential Impact	Rationale	Mitigation Strategies/Actions
Limited resources available to initiate and complete transition activities	High	Limited resources, including people and funding, will hinder USDA's ability to complete projects in a timely manner	EATransition Plan sequences activities based on priorities, dependencies, and constraints Comprehensive IT Lifecycle Governance addresses investment structure that ensures IT funding driven by architecture Establishment of program management responsibilities across all segment/program efforts
Management and coordination of multiple, concurrent transition activities	High	- Multiple segment blueprint or implementations will be occurring simultaneously - Transition activities have numerous interdependencies and constraints that add complexity	The establishment of a central organization responsible for coordinating individual projects to larger and more complex programs focused around segments and Enterprise Shared Services. Providing necessary resources for the USDA OCIO EAD to assume responsibility for Program Management and coordination across programs/segments

Risk	Potential Impact	Rationale	Mitigation Strategies/Actions
Inadequate expertise or unavailable skill sets to execute transition activities	High	- A large percentage of USDA's workforce is nearing retirement - A broad portfolio of transition activities require varying degrees of skill sets across both functional and technical dimensions to ensure program success - Move toward service oriented and component-based methodologies requires re-focusing of IT	Workforce planning process that anticipates skill set requirements and implements an appropriate workforce development/acquisition strategy. IT Workforce Strategy, Planning, and Management Oversight activity addresses the acquisition of labor resources/skill sets in the short term and in-house development of skills through appropriate training for the long term
A lack of effective security and privacy measures	High	Adequate security and privacy policies, processes, and technologies are needed to protect valuable information resources	Establish a security strategy that ensures that security is addressed throughout the architecture and modernization effort - Security and Privacy Architecture Oversight activity develops security and privacy profiles and ensures that it is integrated into each USDA architectural layer (i.e. performance, business, data, services and technology)

Risk	Potential Impact	Rationale	Mitigation Strategies/Actions
Lack of acceptance for modernization strategy	High	Reengineered processes, consolidated systems, and new technologies can cause: - Resistance to change from a lack of desire or buy-in - Inability to adapt to new working conditions	Change Management strategy that includes: A communications strategy to share information with workforce, engaging them early in the process to gain early buy in by establishing unique value propositions and demonstrating clear benefits (e.g., cost/benefit analysis). The Communications Plan helps USDA IT customers navigate through the changes and understand how they uniquely impact them A training program that educates staff on new processes and systems, shortening the learning curve and dampening the impact of the transition. The IT Workforce Strategy, Planning, and Management Oversight activity includes developing a training strategy, preparing curriculum and materials, and delivering training
Lack of leadership to champion modernization efforts or support a project's initiation and long-term needs	High	Executives who are engaged in the process must act as project advocates to enforce participation and cooperation from their staffs	Establishment of executive level bodies to set strategic direction, and project sponsors to champion transition activity blueprint and implementation efforts - IT Lifecycle Governance Oversight activity establishes executive-level governance bodies comprised of senior managers from across the enterprise that set the strategic vision for modernization efforts - The EA Transition Plan identifies specific program offices that should serve as sponsors to champion segment development and deployment activities

Risk	Potential Impact	Rationale	Mitigation Strategies/Actions
Insufficient integration of independent segment efforts (i.e. new stovepipes drawn around segment lines)	Medium	- Multiple segment blueprint or implementations will be occurring simultaneously - Limited resources may hinder participation from key stakeholders	Each Core Mission segment IPT comprised of members from each core Business Service that supports it. Likewise, the IPTs for each Business Service segment consist of participants from the impacted Core Mission Providing necessary resources for the USDA OCIO EAD to assume responsibility for Program Management and coordination across programs/segments Participation of segment architects with view toward integration across segments
Unclear roles and responsibilities among governance bodies	Medium	There are many transition activities requiring governance, decision-making, and enforcement through different mechanisms and at different levels of the organization	Institute a governance structure with clearly defined roles and responsibilities of governance bodies across USDA - IT Lifecycle Governance Oversight activity clearly defines roles and responsibilities for managing all key IT Lifecycle activities within existing or new bodies

3.0 Transition Strategies

3.1 Introduction

IT modernization is a large, complex effort that represents a significant paradigm shift in the way USDA architects, invests in, plans for, develops, and implements enabling IT in support of its business. The EA Transition Plan, which is detailed in Sections 2 and 3, identifies and sequences the specific activities USDA will accomplish to achieve the Target EA. However, there are many broader strategic and tactical considerations that should be addressed for successful execution of the EA Transition Plan. The purpose of this section is to introduce these strategic issues as points of consideration for USDA decision-makers and recommend some general strategies for addressing them.

3.2 Investment

The transition toward the Target EA requires a re-evaluation and possibly revision of the model for how IT activities (programs, projects, and initiatives) are funded. Over the past five years, USDA has responded to legislative changes and built a mature and highly successful IT Investment Management (CPIC) practice. However, the emphasis in this EA Transition Plan on IT activities that are pursued jointly by multiple program areas and, in some cases, the entire enterprise, means that the flow of initiatives through the CPIC selection process could change.

Portfolio Selection Process
The CPIC processes at USDA have focused on reviewing and funding individual IT initiatives as part of an enterprise portfolio of IT investments. While this model has taken USDA a long way toward scrutinizing individual investments in the context of a broader set of enterprise priorities, it has not yet moved USDA toward fulfillment of the "architecture drives investment" principle. It also does not adequately define an appropriate model for investments that involve multiple program areas.

Exhibit 3-1 below presents a simple conceptual depiction of how IT initiatives are currently defined and moved through the CPIC selection process to execution. This is not intended to be a graphic representation of the CPIC Select process itself, but rather an illustration of the flow of initiatives into and out of the process intended to highlight several tactical issues.

Exhibit 3-1 – Current IT Portfolio Selection Process
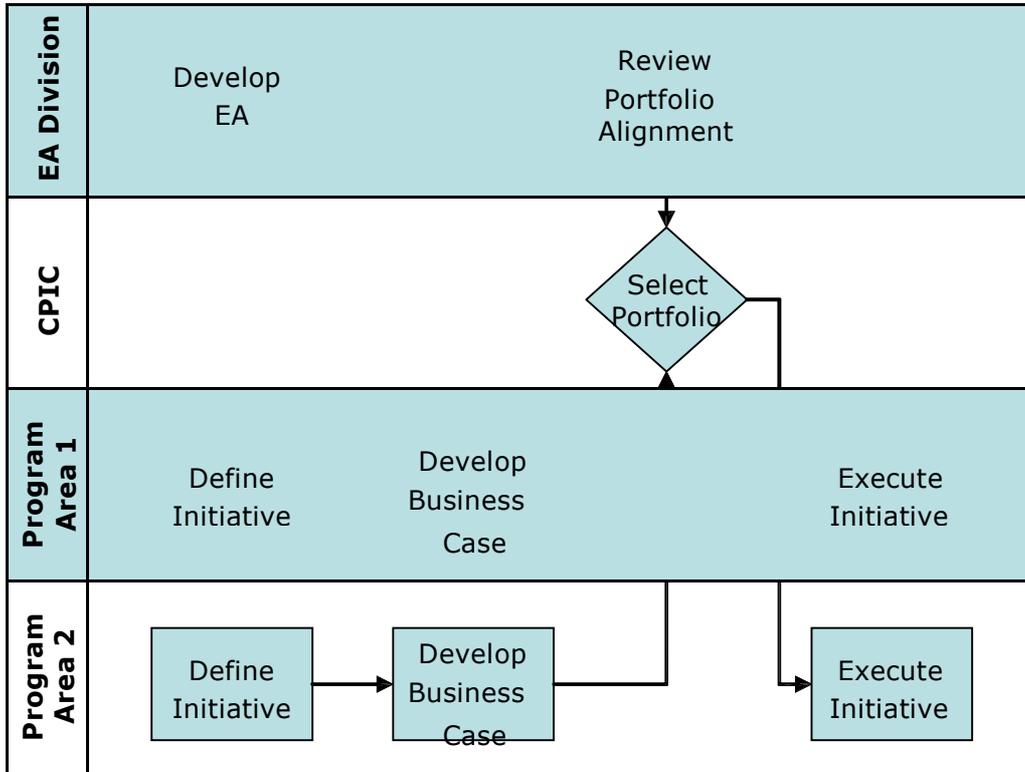
This illustration highlights two key limitations of the current process:

1.   EA development is going on in parallel with, rather than prior to, the definition of IT initiatives. Individual program areas are defining initiatives based on their unique program needs, with little or no consideration of a broader Department-wide business and IT vision. EA is being brought into consideration after the fact to determine whether the initiatives defined in isolation make sense in the broader context of the EA (i.e. alignment).

2.   In this model, there is no clear mechanism for enterprise-wide IT initiatives to be defined and funded.
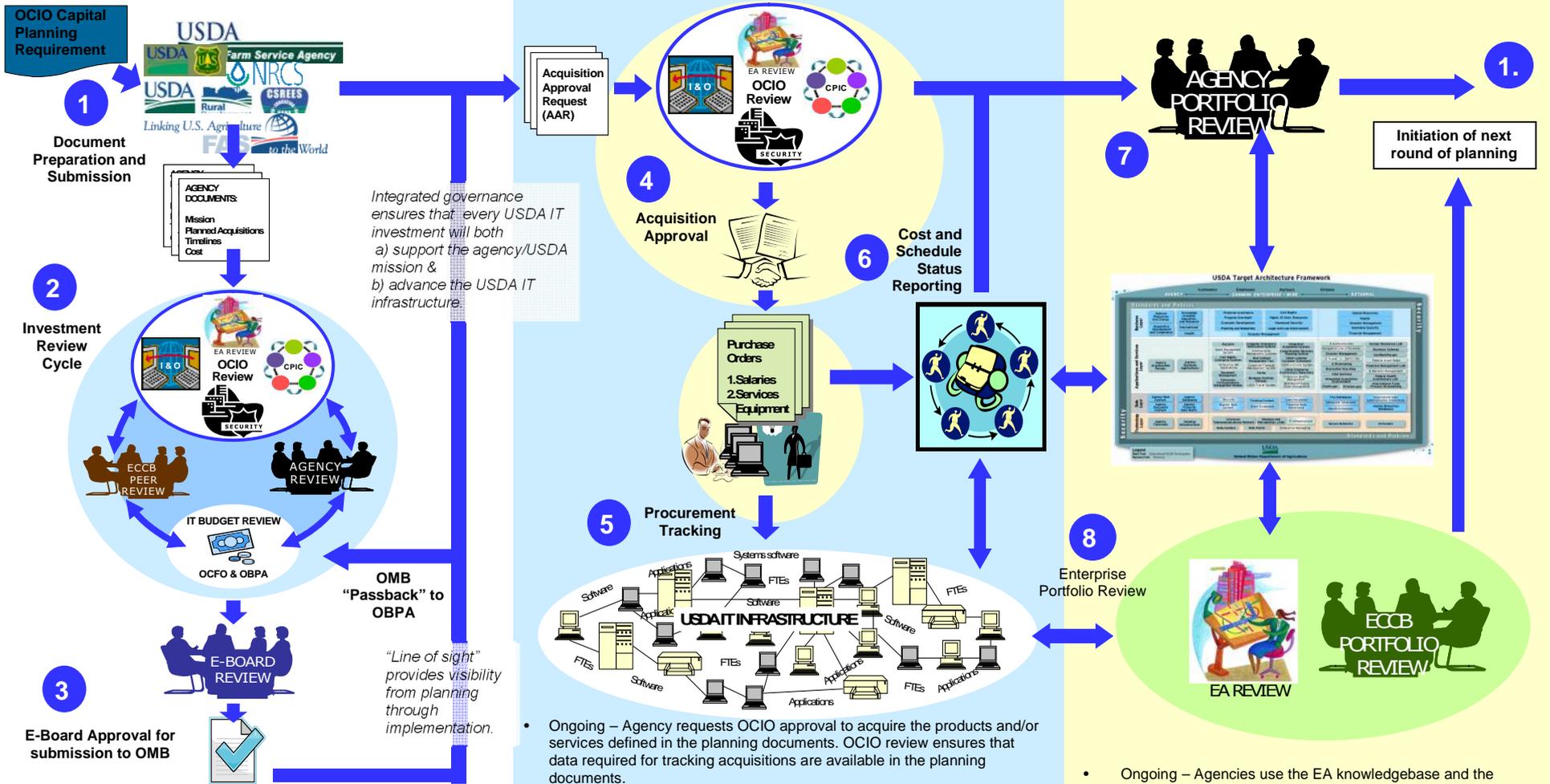
Exhibit 3-2 below attempts to address these limitations with a conceptual depiction of how IT initiatives could be defined and moved through the CPIC selection process in support of the IT modernization. Again, this is not intended to be a graphic representation of the CPIC Select process itself, but rather an illustration of the flow of initiatives into and out of the process.

Exhibit 3-2

Investment Planning	Investment Management	Portfolio Evaluation Focus = Portfolio performance to

OCIO Capital Planning Requirement

1 Document Preparation and Submission

USDA — USDA — Farm Service Agency — NRCS — Rural — CSREES — Linking U.S. Agriculture — FAS — to the World

AGENCY DOCUMENTS:
Mission
Planned Acquisitions
Timelines
Cost

Integrated governance ensures that every USDA IT investment will both a) support the agency/USDA mission & b) advance the USDA IT infrastructure.

2 Investment Review Cycle

EA REVIEW — I & O — OCIO Review — CPIC — SECURITY

ECCB PEER REVIEW

AGENCY REVIEW

IT BUDGET REVIEW

OCFO & OBPA

OMB "Passback" to OBPA

"Line of sight" provides visibility from planning through implementation.

3 E-BOARD REVIEW

E-Board Approval for submission to OMB

- January – July – OCIO updates investment planning instructions defining requirements for all IT investments: major and non -major; new and existing; and all components (hardware, software, services). Agencies prepare/update documentation.
- January thru July – OCIO and partners review & update the documentation for compliance with CPIC, FEA, PI, LoB requirements and determine alignment with USDA's strategic plans, agency mission, and target EA; re view includes peer reviews and OCIO meetings with agency leadership to discuss status.
- August—Investment package forwarded to E -Board for final review before submission to OMB.

Acquisition Approval Request (AAR)

EA REVIEW — I & O — OCIO Review — CPIC — SECURITY

4 Acquisition Approval

6 Cost and Schedule Status Reporting

Purchase Orders
1. Salaries
2. Services Equipment

5 Procurement Tracking

USDA IT INFRASTRUCTURE
Systems software — Applications — FTEs — Software — Software — FTEs — Application — Software — USDA IT INFRASTRUCTURE — Software — Software — FTEs — Applications — FTEs — Applications — Software — Applications

- Ongoing – Agency requests OCIO approval to acquire the products and/or services defined in the planning documents. OCIO review ensures that data required for tracking acquisitions are available in the planning documents.
  Agency and USDA architects review the latest data in the EA knowledgebase. OCIO approval to proceed is dependen t upon compliance with architectural policies (leveraging existing products, services, infrastructure, etc.), acquisition strategy, and completeness of the documentation.
- Agencies provide details on actual purchases and suppliers, and their business, technical and data architectures in order to provide line of sight from the approved plan through implementation.
- Monthly – Agency captures and records cost, schedule, and performance information for investment management. OCIO monitors security compliance, cost, schedule, and performance information and provides feedback to agencies and the E -Board

7 AGENCY PORTFOLIO REVIEW

1.

Initiation of next round of planning

USDA Target Architecture Framework

8 Enterprise Portfolio Review

EA REVIEW — ECCB PORTFOLIO REVIEW

- Ongoing – Agencies use the EA knowledgebase and the results of investment management to review their current investment portfolio in light of the USDA target architecture. Performance of current projects is an element of the review. The results of the portfolio review become input to the next iteration of investment planning.
- Summer – USDA conducts enterprise-level portfolio analysis, considering the current infrastructure with the target architecture. Performance of current projects is an element of the review. The review identifies business transformation opportunities for USDA—opportunities to save money, reduce redundancy, consolidate similar functions, enhance services, and so on. Recommendations are forwarded to the next iteration of investment planning.

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In this conceptual model, the Target EA and EA Transition Plan drive the definition of "programs," which in turn l to the definition of initiatives. An IT program, in this context, is a logical g rouping of IT activities focused around a common set of business objectives. A program could consist of one or more initiatives, funded thr ough the CPIC process. For example, programs could be established for the develop ment and implementation of segment architectures or Enterprise Shared Services. This presents an opportunity to consolidate business cases.

In this model, current program area -specific initiatives that clearly fit within the Target EA and EA Transition Plan may continue to independently develop business cases for those initiatives. Other c urrent initiatives may be bundled into programs to be addressed by an Integrated Program Team (IPT) consisting of multiple program areas. Through the plann ing of the IPT, the portfolio of individual initiati ves may change. For example, certain current initiatives may be phased out, while other new initiatives are defined.

Funding Allocation
USDA's FY 2005-2006 IT portfolio is comprised largely of st eady state initiatives, with 80% of the portfolio in the po st-implementation phase of the System Development Life Cycle (SDLC). The post-implementation phase includes mainten ance and operations to sustain current system capabilities

and performance. Implicit in USDA's drive toward IT modernization is a near-term increase in development, modernization and enhancement (DME) spending to build modular and re-usable components.

3.3   Implementation

As described in the section above, the focus of USDA's IT modernization on shared, re-usable enterprise services means that the transition activities described in Sections 2 and 3 of this EA Transition Plan (i.e. segment architectures and Enterprise Shared Services) will often be architected and implemented by IPTs with staff from multiple program areas. These IPTs will support the execution of the "programs," as defined previou sly, which encompass one or more initiatives. This model for architecting, developing, and implementing solutions differs from USDA's traditional systems development models on several dimensions, as described below.

Program Participation
The IPTs will consist of staff from acr oss program areas, with both business and IT backgrounds. The IPTs will be led by a program manager capable of managing multiple large scale initiativ es. In addition, a segment architect from the EA Practice will participa te with each IPT to ensure that architectural principles are fo llowed and that there is architectural alignment across programs. Contractor support will be applied as needed throughout implementation. The nature of program participation raises several key issues to be addressed by decision -makers:

- **Enterprise Program and Project Management** – The scope of effort for these enterprise IPTs requires skilled program and project management. Because the EA Transition Plan requires numerous enterprise programs to run in parallel over an extended period of time, USDA should establish a single organizational body to coordinate these efforts. This notion was discussed in more detail in Section 3.2.2.

- **Staffing the IPTs** – USDA will need to ensure that the right workforce is in place to plan and execute the programs defined in th is EA Transition Plan. USDA will need to determine appropr iate procedures for assigning staff from participating program areas , determining appropriate levels of participation, and determining responsibilities within the team. One specific challenge to be addressed is that the number of segment architects available within the EA Division to support the transition activities is e xtremely limited. In order to

maintain the plan detailed
in Sections 2 and 3, USDA should consider increasing the number of segment architects.

- **Segment Architecture Methodology** – In order to ensure that USDA staff and contractor resources supporting these efforts are operating within a common set of guidelines, USDA will develop and propagate documentation of standard practices, procedures and work product definitions.

- **IT Lifecycle Policies and Governance** – USDA will update IT policies and governance to ensure that mechanisms are in place to support a focus on collaboration across program areas.

Program Execution Scope and Processes

Unlike traditional systems development IPTs, the teams addressing transition activities will often focus as much on business as on IT issues. Programs are defined within the Target EA and EA Transition Plan. After a program is defined and is in line for initiation based on the EA Transition Plan sequencing, an IPT forms for architectural analysis. During architectural analysis, the IPT will scope program activities and develops a business case. In addition to developing a business case, the IPT should assess the resources of participating initiatives to determine the level of available funding in support of program objectives. This could alleviate the delay of the budget cycle and allow blueprint development to proceed more quickly.

Once funding is secured, the IPT and USDA Chief Architect develop a blueprint (i.e. architecture). Each blueprint encompasses a business profile, architectural profile mapping, system profile, and implementation plan. Following the creation and approval of the blueprint, the blueprint is reconciled with and incorporated into the Target EA. The EA Transition Plan is updated accordingly. The development of the blueprint also feeds back to the development (or refinement) of the business case. Depending on the scope of implementation activities defined in the blueprint, the existing business case may be updated for the following CPIC Select cycle, or new business cases may need to be developed for one or more initiatives within the program. The implementation of the blueprint will involve a single IPT, but possibly multiple project teams.

3.4   Infrastructure

The EA is the blueprint for the way information technology enables USDA to better serve its customers. One of the goals of the Department's EA efforts is to achieve a highly-scalable infrastructure that offers high usability, strong security, robust tools and services and fully developed web capabilities.

Much of USDA's desktop, hosting and telecommunications infrastructure is managed and operated by OCIO's Information Technology Services (ITS) Office, National Information Technology Center (NITC) and Telecommunications Services Office (TSO). TSO is well underway in implementing the Universal Telecommunications Network which is the common USDA backbone for telecommunications. At the time of this publication, ITS and NITC were analyzing their hosting environments to establish common process and technology standards as they look to optimize service delivery.

For further information, please contact Chris Wren, USDA Chief Architect , at www.Christopher.Wren@usda.gov or (202) 690-2118.

Appendix A – USDA Target Architecture

USDA Target Architecture Framework
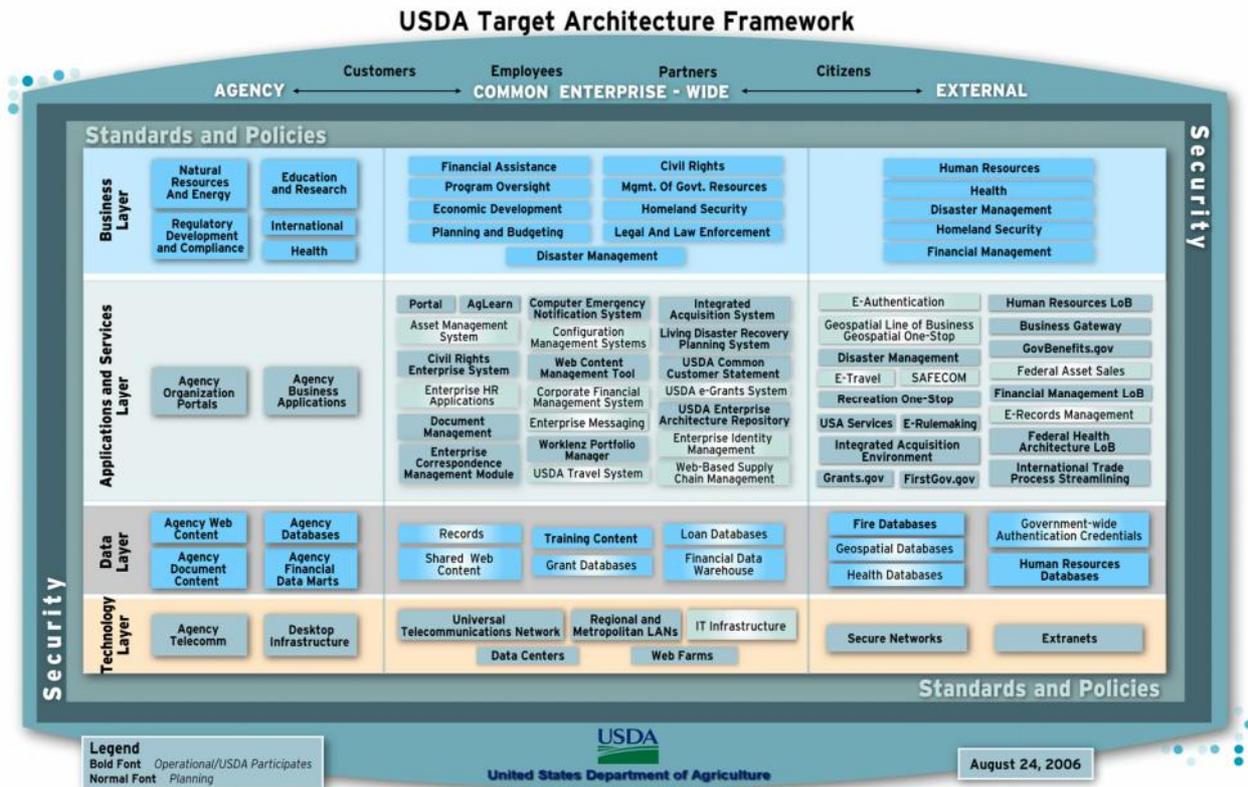
Appendix B – USDA Target Architecture Definitions

USDA

Target Architecture Definitions
September 2006

DOCUMENT HISTORY

Subject	Enterprise Architecture Target Architecture
Summary	This document defines the USDA Target Enterprise Architecture elements.
Author(s)	Tracey Ambeau, USDA Enterprise Architecture Division
	Jay Pelletier - Headstrong, Incorporated
Release date	August 24, 2006
Release number	1.2

History of changes

Release No.	Release Date	Description
1.1	06/27/06	Preliminary draft document for comment and approval.
1.2	08/24/06	Approved by the OCIO Policy Execution Board

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Table 1: EA Layout & Layers

USDA Target Architecture Framework	The interim target architecture describes the high-level, enterprise-wide future state for the Department within the context of strategic business direction of major IT systems that are in turn, supported by a set of common technologies, reusable services, and shared data.
Customer	Groups or individuals who have a business relationship with the organization --those who receive and use or are directly affected by the products and services of the organization. Customers include direct recipients of products and services, internal customers who produce services and products for final recipients, and other organizations and entities that interact with an organization to produce products and services. [GAO]
Employee	Any person employed by the Government of the United States or any branch, unit, or instrumentality thereof, including persons in the civil service, uniformed service, Foreign Service, and the postal service.
Partners	Collaborator or stakeholder. An individual or group with an interest in the success of an organization in delivering intended results and maintaining the viability of the organization's products and services. Stakeholders influence programs, products, and services. [GAO]
Citizens	Citizen describes the mission and purpose of the United States government in terms of the services it provides both to and on behalf of the American citizen. It includes the delivery of citizen-focused, public, and collective goods and/or benefits as a service and/or obligation of the Federal Government to the benefit and protection of the nation's general population.
Agency	Any executive department, military department, government corporation, government controlled corporation, or other establishment in the executive branch of the Federal government, or any independent regulatory agency. Within the Executive Office of the President, the term includes only OMB and the Office of Admini stration. [OMB Circular A-130]
Common Enterprise-Wide	Regards usage business functions, applications or

	systems, databases and data warehouses, and technology, by more than one USDA agency or staff office. [EAD]
External	Regards support and usage of Federal initiatives [EAD]
Business Layer	USDA's depiction of its business priorities and mission, Lines of Business, business functions and sub-functions. [EAD]
Applications & Services Layer	Describes the capabilities and functionalities of USDA's IT applications. It describes the comprehensive view of USDA's current capabilities as well as target capabilities that will fully support the OMB Service Reference Model.
Data Layer	Depicts storage and retrieval of USDA information mostly via databases, data marts, and data warehouses.
Technology Layer	Functional characteristics, capabilities, and interconnections of the hardware, software, and telecommunications [OMB Circular A-130].
Security	Enterprise-wide Security on all levels – USDA – OCIO-Cyber Security has established a level of security for all information systems that is commensurate to the risk and magnitude of the harm resulting from the loss, misuse, unauthorized access to, or modification of the information stored or flowing through these systems [OMB Circular A-130].
Standards & Policies	Standards refer to all standards, guidelines, and best practices that are developed by USDA and used within the architecture either at USDA or elsewhere, or are developed elsewhere and used by USDA. Per OMB Circular A-130, USDA is expected to adopt standards necessary to support the entire EA, which must be enforced consistently throughout the agency. Example: HSPD-12 –Policy for common ID system for all Federal Employees and contractors and Internet Protocol version 6 a network layer IP standard used by electronic devices to exchange data across a packet-switched internetwork.

Table 2: Agency Area

(*Business Layer*)	
Natural Resources & Energy	Combination of 3 Business Reference Model Lines of Business: Natural Resources, Environmental Management, and Energy http://www.whitehouse.gov/omb/egov/a-3-2-services.html. Natural Resources LoB functions involve conservation planning, land management, and national park/monument tourism that affect the nation's natural and recreational resources, both private and federal. Environmental Management LoB activities require monitoring the environment and weather, determining proper environmental standards and ensuring their compliance, and addressing environmental hazards and contamination. Energy refers to actions performed by the government to ensure the procurement and management of energy resources, including the production, sale and distribution of energy, as well as the management of spent fuel resources. Energy management includes all types of mass-produced energy (e.g., hydroelectric, nuclear, wind, solar, or fossil fuels). Also included in this Line of Business is the oversight of private industry.
Regulatory Development & Compliance	Combination of two lines of business that represents the Marketing and Inspection Programs mission areas of USDA. Regulatory Development involves activities associated developing regulations, policies, and guidance to implement laws. http://www.whitehouse.gov/omb/egov/a-3-4-support-reg.html Regulatory Compliance and Enforcement involves the direct monitoring and oversight of a specific individual, group, industry, or community participating in a regulated activity via market mechanisms, com-mand and control features, or other means to control or govern conduct or behavior. http://www.whitehouse.gov/omb/egov/a-3-3-mode-reg.html
Education & Research	Combination of two lines of business : Knowledge Creation and Management involves the programs and activities in which the Federal Government creates or develops a body or set of knowledge, the manipulation and analysis of which can provide inherent benefits for both the Federal and private sector. http://www.whitehouse.gov/omb/egov/a-3-3-mode-know.html Education refers to those activities that impart knowledge or understanding of a particular subject to

	the public. Education can take place at a formal school, college, university or other training program. This Line of Business includes all government programs that promote the education of the public, including both earned and unearned benefit programs. http://www.whitehouse.gov/omb/egov/a-3-2-services-education.html
International	Refers to the International Affairs and Commerce LoB that involves non-military activities that promote U.S. policies and interests beyond our national borders, including the negotiation of conflict resolution, treaties, and agreements. In addition, this function includes: foreign economic development and social/political development; diplomatic relations with other Nations; humanitarian, technical and other developmental assistance to key Nations; and global trade. http://www.whitehouse.gov/omb/egov/a-3-2-services-internation.html
Health	Health involves Federal programs and activities to ensure and provide for the health and well being of the public. This includes the direct provision of health care services and immunizations as well as the monitoring and tracking of public health indicators for the detection of trends and identification of wide-spread illnesses/diseases. http://www.whitehouse.gov/omb/egov/a-3-2-services-health.html USDA, APHIS's responsibilities under the Animal Welfare Act are covered, as well as the Marine Mammal Act. USDA, Rural Development's responsibilities Telemedicine is covered under this line of business. It provides access to care. USDA's definition of Health also includes Nutrition Assistance provided by Food and Nutrition Service and Human Nutrition research provided by the Agricultural Research Service.
(Applications and Services Layer)	
Agency Organization Portals	Agency specific portals that have not been moved to the USDA portal
Agency Business Applications	Agency specific business applications that cannot be moved to the common
(Data Layer)	
Agency Web Content	Agency specific web content
Agency Databases	Agency specific that have not migrated to common solution
Agency Document Content	Agency specific document content
Agency Financial Data marts	Agency specific that have not migrated to common

	solution
(Technology Layer)	
Agency Telecomm	Agency specific telecommunications that have not moved to Universal Telecommunications Backbone
Desktop Infrastructure	Agency specific desktop infrastructure. An enterprise infrastructure configuration is under development.

Table 3: Common Area

(*Business Layer*)	
Financial Assistance	Includes all USDA payment utilities: grants, loans, subsidies, transfers to states. Federal Financial Assistance. The provision of earned and unearned financial or monetary-like benefits to individuals, groups, or corporations. http://www.whitehouse.gov/omb/egov/a-3-3-mode-fed.html Credit and Insurance involves the use of government funds to cover the subsidy cost of a direct loan or loan guarantee or to protect/indemnify members of the public from financial losses. http://www.whitehouse.gov/omb/egov/a-3-3-mode-credit.html Transfers to States and Local Governments involves the transfer of funds or financial assistance from the Federal government to State and Local governments and Indian tribes. http://www.whitehouse.gov/omb/egov/a-3-3-mode-transfers.html
Civil Rights	USDA uses the Workforce Management LoB for Civil Rights. It is the closest line of business similar to our activities. Workforce Management includes those activities that promote the welfare of the Nation's workforce by improving their working conditions, advancing opportunities for profitable employment, and strengthening free collective bargaining. http://www.whitehouse.gov/omb/egov/a-3-2-services-workforce.html
Program Oversight	USDA uses the Support Delivery of Services Business Area to address Program Oversight. Controls and Oversight ensures that the operations and programs of the Federal government and its external business partners comply with applicable laws and regulations and prevent waste, fraud, and abuse. http://www.whitehouse.gov/omb/egov/a-3-4-support-controls.html Internal Risk Management and Mitigation involves all activities relating to the processes of analyzing exposure to risk and determining appropriate counter-measures. It includes Contingency Planning, Continuity of Operations, and Service Recovery. http://www.whitehouse.gov/omb/egov/a-3-4-support-internal.html
Management of Government Resources	Management of Government Resources refers to the back office support activities that enable the government to

	operate effectively. http://www.whitehouse.gov/omb/egov/a-3-5-management.html It includes: Human Resource Management, Financial Management, Administrative Management, Supply Chain Management, and Information Technology Management.
Economic	Economic Development includes the activities required to promote commercial/industrial development and to regulate the American financial industry to protect investors. It also includes the management and control of the domestic economy and the money supply, and the protection of intellectual property and innovation. http://www.whitehouse.gov/omb/egov/a-3-2-services-economic.html
Homeland Security	Homeland Security involves protecting the nation against terrorist attacks. This includes analyzing threats and intelligence, guarding borders and airports, protecting critical infrastructure, and coordinating the response emergencies. The Homeland Security Line of Business is defined by the President's Strategy on Homeland Security. Note: Some of the Critical Mission Areas from the President's strategy have already been identified in other Lines of Business in the BRM. http://www.whitehouse.gov/omb/egov/a-3-2-services-homeland.html
Planning and Budgeting	Formerly the Planning and Resource Allocation line of business. Planning and Budgeting involves activities of determining strategic direction, identifying and establishing programs and processes, allocating resources (capital and labor) among those programs and processes. The corresponding subfunctions include: budget formulation, capital planning, enterprise architecture, strategic planning, budget execution, workforce planning, management improvement, budget and performance integration, and tax and fiscal policy. http://www.whitehouse.gov/omb/egov/documents/FEA_CRM_v20_Final_June_2006.pdf
Legal & Law Enforcement	USDA combined two lines of business Litigation and Judicial Services and Law Enforcement to create this line of business. Per the BRM, Litigation and Judicial services refer to those

	activities associated with the administration of justice. USDA has Adjudication Law Judges, a National Appeals Division, and an Office of General Counsel which support several of the related subfunctions: judicial hearings, legal defense, legal investigation, legal prosecution and lit igation, and resolution facilitation. http://www.whitehouse.gov/omb/egov/documents/FEA_CRM_v20_Final_June_2006.pdf Per the BRM, Law Enforcement involves activitie s to protect people, places, and things from criminal activity resulting from non-compliance with U.S. laws. This includes patrols, undercover operations, response to emergency calls, as well as arrests, raids, and seizures of property. http://www.whitehouse.gov/omb/egov/a -3-2-services-law.html
Disaster Management	Disaster Management involves the activities required to prepare for, mitigate, respond to, and repair the effects of all disasters whether natural or man-made. It includes the following subfunctions: • Emergency Response • Disaster Monitoring and Prediction • Disaster Preparedness and Planning • Disaster Repair and Restore http://www.whitehouse.gov/omb/egov/a -3-2-services-disaster.html
(Applications and Services Layer)	
AgLearn	USDA's enterprise learning management system that supports the development of the Federal workforce and advances the accomplishment of agency missions through simplified and one-stop access to learning products and services. AgLearn is USDA's single system of record for employee training and the single system for feeding training information to OPM.
Asset Management System	USDA-wide asset management solution that meets all financial management, information security, and internal control requirements. USDA expects this system to provide online access to property management information and source data entry, and the ability to provide financial data integrity that will maintain an unqualified, or "clean," opinion on an audit of the consolidated financial statements.
Civil Rights Enterprise System	Enterprise System supporting Civil Rights

Enterprise HR Applications	Initiative to develop policies and tools to streamline and automate the electronic exchange of standardized HR data needed for creation of an official employee record across the Executive Branch. The EHRI tool set and central data repository will provide comprehensive knowledge management workforce analysis, forecasting, and reporting across the Executive Branch for the strategic management of human capital.
Document Management	Enterprise product (Stellent) to manage information in electronic form including classification capability, workflow management, and records management.
Enterprise Correspondence Management Module	USDA's enterprise application for managing correspondence. The application is developed on the Stellent platform and may be easily tailored to support management of other types of electronic files.
Computer Emergency Notification System	The Computer Emergency Notification System (CENS) application to enhance existing procedures for emergency planning and notification. The CENS application utilizes the internet/intranet to notify personnel of emergencies, building-related alerts and messages in a designated environment.
Configuration Management Systems	The Configuration Management Information Tracking System (CMITS) is an interim Configuration Management Database (CMDB) that helps NITC personnel document hardware, hardware relationships (infrastructure), installed software and some limited financial information throughout the life-cycle of the stored items. [Source: EA Repository]
Web Content Management Tool	Departmental solution for managing the publishing, sharing, and classification of Web pages, documents, official records, and correspondence. [eGov Strat Plan]
Corporate Financial Management System	It is a corporate-wide solution for financial management reform and systems integration at the USDA. The Foundation Financial Information System (FFIS) is at the core of the portfolio supporting the Department's core financial management functions.
Portal	USDA's enterprise Web delivery architecture that allows users to navigate USDA information and services based on their desired tasks or topics, rather than by the organizational structure of the Department. USDA's redesigned and restructured web sites in the portal utilize standard user-interface guidelines. The result is a consistent look and intuitive navigation across all USDA sites and web-based applications. The initiative also includes the definition of a portal strategy to migrate all agency Web sites into the

	common infrastructure.
WorkLenz Portfolio Manager	USDA's implementation of a capital planning and investment control (CPIC) process to manage its IT investments and support IT budget preparation via use of the WorkLenz project and portfolio management system. As such, it provides a repository for management information (e.g., Exhibit 53 summary financial data, Exhibit 300 business case summaries) and other reports as determined by USDA and OCIO managers. Also, WorkLenz provides support for earned value management (EVM)—a technique for tracking actual project and portfolio performance against estimates so as to determine progress toward pre-determined expectations at any point in time
USDA Travel System	TRVL is used to process travel authorizations, travel advances, travel vouchers for temporary duty (TDY) and relocation travel
Integrated Acquisition System	A USDA Smart Choice to implement the Presidential Initiative, Integrated Acquisition Environment, and provide a web-based solution to streamline and automate contract management and acquisition processes throughout USDA.
Contingency Planning Suite (CPS) formerly Living Disaster Recovery Planning System	The United States Department of Agriculture (USDA) Contingency Planning Suite (CPS) of software enables USDA to develop readily-available, centralized contingency plans and perform management and recovery functions in disaster situations. The objective of this investment is to employ a Department-wide technology solution to improve the efficiency, quality, and success of USDA contingency planning and management efforts and to eliminate paper-intensive and often redundant efforts by various elements within the Department. The CPS comprises three Commercial Off-The-Shelf (COTS) products developed by Strohl Systems: Business Impact Analysis (BIA) Professional, Living Disaster Recovery Planning System (LDRPS), and Incident Manager (IM).
USDA Common Customer Statement	The USDA Customer Statement is part of the USDA's eGovernment Initiative and brings to the farmer and rancher unprecedented online access to their business activities with USDA 24 hours a day, 7 days a week.

The Customer Statement allows USDA customers to view: |

	- their participation, application and payment status in various commodity and conservation programs, - information on farm loans, and - conservation plan and land unit information.
Enterprise Messaging	Enterprise Messaging is a transport mechanism or conveyance to provide information or data to end-users. Enterprise Messaging will include : - Outlook Exchange - Collaboration (SharePoint) will likely replace current Collaboration Tools - Peer 2 Peer (Instant Messaging) creates awareness, monitors calendars, ability to move large files - Rights Management – security for messaging; controls messages so they are encrypted; ability to set expiration dates and delete capability - Mobile Messaging
Enterprise Identity Management	A suite of applications that support USDA's eAuthentication Service and HSPD-12.
USDA e-Grants System	A common back-office system that supports all grant-making agencies review and approval decision functions and provides a standard interface with reporting and financial systems.
USDA Enterprise Architecture Repository	USDA's repository which contains known information about agency and staff office investments. This information includes: - The Federal Enterprise Architecture Reference Models - Agency or staff office information technology investments - Strategic goals, objectives, and strategies, - Related projects, applications/systems or outcomes, - Related underlying technical components.
Web-Based Supply Chain Management	This initiative will leverage supply chain management technologies to enable USDA agencies (i.e., FAS, FSA, AMS, FNS) and their partners (primarily USAID, US school districts, domestic producers, State agencies and industry), to manage commodity purchasing and food distribution seamlessly for USDA programs. Isolated

	USDA initiatives will be consolidated and supported by flexible new technologies that provide real-time inventory management, food tracking and estimated delivery cycles, order fulfillment, and financial management and allocation.
(Data Layer)	
Records	All processes of managing official records data.
Shared Web Content	Web content that is in a standardized format in the Stellent Web content repository. This content may be seamlessly redeployed on any web page.
Training Content	Documents and presentation material that is used to educate users through a learning management system.
Grant Databases	A common form of distributive systems that supports agency wide grants functions in multiple locations.H/W hosted by NITC.
Loan Databases	A common form of distributive systems that supports agency wide loan functions in multiple locations.
Financial Data Warehouse	An on-demand reporting application that is built upon the nightly financial extracts from the Foundation Financial Information System (FFIS) applications and the biweekly payroll detail for each agency. Hosted at NITC. [Source: EA Repository]
(Technology Layer)	
Universal Telecommunications Network	USDA's corporate data network backbone for providing customers with more secure, robust, and flexible telecommunications capabilities and enhanced network support services. The UTN is envisioned to be a robust telecommunications wide area network backbone that provides scalable, reliable, secure, and cost effective services 24X7X365 to enable USDA agencies to meet Departmental missions and goals.
Data Centers	ITS Data Centers are an enterprise-wide solution to analyze large quantities of data from numerous data sources and produce quality data for SCA business applications.[Source: EA Repository] A centralized IT operations facility that hosts computer and telecommunications systems and the personnel required to operate them. To meet Federal standards, such facilities have robust physical, system, and personnel security, advanced fire suppression capabilities, on-site electrical generation capabilities, and as few single sources of failure as is feasible. The USDA Enterprise Computer Center is the National Information Technology Center, which is designated

	by Departmental Regulation 3200-001 as the "first source of supply" for IT operational services within the USDA.
Regional and Metropolitan LANs	A communications system that links computers into a network, usually via a wiring-based cabling scheme. LANs connect PCs, workstations and servers together to allow users to communicate and share resources like hard disk storage and printers. Devices linked by a LAN may be on the same floor or within a building or campus. It is user-owned and does not run over leased lines, though a LAN may have gateways to the PSTN or other, private, networks. Source: Source: www.wtcs.org/snmp4tpc/jton.htm A metropolitan area network (MAN) is a network that interconnects users with computer resources in a geographic area or region larger than that covered by even a large local area network (LAN) but smaller than the area covered by a wide area network (WAN). The term is applied to the interconnection of networks in a city into a single larger network (which may then also offer efficient connection to a wide area network). It is also used to mean the interconnection of several local area networks by bridging them with backbone lines. The latter usage is also sometimes referred to as a campus network. Source: www.techtarget.com
Web Farms	Centralized hosting environment for the Service Center Agencies. Designed to enable secure web access and utilize a common infrastructure, the Web Farms provide a medium to take advantage of electronic web access. This support system provides customers the ability to conduct self-service transactions, electronic procurement, access to information, and dissemination of electronic information. The ITS Web Farms share a common infrastructure design. The FSA web farm is located in Kansas City, the NRCS web farm is in Fort Collins, and RD web farm is in St. Louis.
IT Infrastructure	USDA's IT Infrastructure Configuration

Table 4: External Area

(*Business Layer*)	
Human Resources	Human Resources provides exceptional leadership and support through human resources best practices and programs that enable USDA to attract, develop, and retain the people who provide quality services to USDA and all activities associated with the recruitment and management of USDA personnel.
Health	Health involves Federal programs and activities to ensure and provide for the health and well being of the public.
Disaster Management	Disaster Management involves the activities required to prepare for, mitigate, respond to, and repair the effects of all disasters whether natural or man-made.
Homeland Security	Homeland Security involves protecting the nation against terrorist attacks. This includes analyzing threats and intelligence, guarding borders and airports, protecting critical infrastructure, and coordinating the response emergencies. The Homeland Security Line of Business is defined by the President's Strategy on Homeland Security. Note: Some of the Critical Mission Areas from the President's strategy have already been identified in other Lines of Business in the BRM.
Financial Management	The use of financial information to measure, operate and predict the effectiveness and efficiency of an entity's activities in relation to its objectives. The ability to obtain and use such information is usually characterized by having in place policies, practices, standards, and a system of controls that reliably capture and report activity in a consistent manner.
(*Applications and Services Layer*)	
E-Authentication	eAuthentication is an enabling technology and process foundation that helps USDA achieve its goals and objectives for eGovernment by supporting all USDA eGovernment initiatives and applications. The eAuthentication initiative is, and will continue to be, fully integrated with the Presidential Initiative for eAuthentication
Geospatial Line of Business	Provides an accurate representation of land use location for decision-making. By mapping, surveying or other spatial data collection for cartographic, earth science or public land use. "Core business processes are currently in draft form and will be presented to FEAPMO soon"
Disaster Management	The Disaster Management eGovernment Presidential Initiative will help citizens and members of the emergency management community at the local, tribal, state, and Federal levels by improving public safety

	response through more effective and efficient interoperable data communications and to serve as a unified point of access to disaster preparedness, mitigation, response and recovery information.
E-Travel	The eTravel initiative provides a government-wide Web-based service that applies world-class travel management practices to consolidate federal travel, minimize cost, and produce superior customer satisfaction. From travel planning and authorization to reimbursement, the eTravel Service will leverage administrative, financial and information technology best practices to realize significant cost savings and improved employee productivity.
Grants.gov	The grants.gov initiative creates a single, online portal for all federal grant customers to find and apply for federal grants.
SAFECOM	The Wireless Public Safety Communications initiative provides interoperable wireless solutions for local, tribal, state and federal public safety agencies and ensures they can communicate and share information effectively, efficiently, and across agencies and jurisdictions as they respond to emergency incidents.
USA Services	The USA Services initiative is designed to develop and deploy government-wide citizen customer service processes using industry best practices that will provide citizens with timely, consistent responses about government information and services.
E-Loans	The eLoans initiative creates a single point of access for citizens to locate l application will improve efficiency and understanding of loan programs.
Integrated Acquisition Environment	This initiative creates a secure business environment that will facilitate and support cost-effective acquisition of goods and services by agencies, while eliminating inefficiencies in the current acquisition environment.
FirstGov.gov	FirstGov.gov, the official U.S. gateway to all government information, is the catalyst for a growing electronic government. Our work transcends the traditional boundaries of government and our vision is global–connecting the world to all U.S. government information and services.
E-Rulemaking	eRulemaking enables citizens to easily access and participate in the rulemaking process. The initiative improves the access to, and quality of, the rulemaking process for individuals, businesses, and other government entities while streamlining and increasing

	the efficiency of internal agency processes.
Human Resource LoB	HR Line of Business includes all activities associated with the recruitment and management of personnel . Newly incorporated Presidential Initiatives include Recruitment One-Stop, E-Training, E-Payroll, E-Clearance, and Enterprise HR Integration.
Recreation One-Stop	Presidential Recreation One-Stop (R1S) & within that framework modernization of FS provisioning of Recreation Information and Services. The R1S project is one of the e-Government initiatives in the Presidential Management Agenda to improve the effectiveness, efficiency, and customer service of the Federal Government. It is the "executive agent" designated by OMB to manage the tourism and recreation sub-function of the Natural Resources line of business in the Federal Enterprise Architecture (FEA). The R1S initiative is intended to improve access to recreation-related information generated by the various levels of government (Federal, tribal, state, and local), to streamline the systems used to manage that information, and to enhance the sharing of recreation-related information among government and non-government organizations. The project will include the procurement of a new contract to integrate the separate recreation-related reservation systems, including the National Park Reservation Service and the National Recreation Reservation System (NRRS).
Business Gateway	This eGovernment Presidential initiative will reduce the burden on businesses by making it easy to find, understand, and comply with relevant laws and regulations at all levels of government. The Business Gateway will provide the Nation's businesses with a single, internet-based access point to government services and information to help businesses with their operations
GovBenefits.gov	The GovBenefits initiative provides a single point of access for citizens to locate and determine potential eligibility for government benefits and services. E-Loans incorporated into this Presidential Initiative July 2006.
Federal Asset Sales	This presidential initiative is designed to identify, recommend, and implement improvements for asset recovery and disposition, making it easier for agencies, businesses, and citizens to find and acquire federal assets.
Financial Management LoB	The Financial Management Line of Business seeks to

	find a government-wide financial management solution that is efficient and improves business performance while ensuring integrity in accountability, financial controls and mission effectiveness.
E-Records Management	The eRecords Management initiative provides policy guidance to help agencies to better manage their electronic records, so that records information can be effectively used to support timely and effective decision making, enhance service delivery, and ensure accountability. The four major issue areas are correspondence management, enterprise-wide electronic records management, electronic information management standards, and transferring permanent records to NARA
Federal Health Architecture LoB	The Federal Health Architecture Initiative aims to incorporate all health-related activities into one federal architecture. Specifically, the architecture's focus involves: • Identification of collaborative business opportunities that leverage existing efforts and investments • Development of a performance measurement and outcome strategy • Adoption of technical and data standards Development of specifications for implementing those standards
International Trade Processing Streamlining	This eGovernment solution makes it easy for Small and Medium Enterprises (SMEs) to obtain the information and documents needed to conduct business abroad. Also, Export.gov has been merged into this line of business.
(Data Layer)	
Fire Databases	Interagency fire databases
Geospatial Databases	Interagency geospatial databases. USDA has 3 major geospatial data warehouses: two in Salt Lake City, Utah, and one in Fort Worth, Texas.
Health Databases	Interagency health databases
Government-Wide Authentication Credentials	Authenticated credentials that allow individuals to get only the information they need at the time that they need it.
Human Resources Databases	Interagency databases that interface with OPM databases
(Technology Layer)	
Secure Networks	A network (whether a standalone network or a virtual

	network within the Internet), which is only accessible to Authorized Users whose identity is authenticated at the time of login and periodically thereafter consistent with then-current best practice and security procedures. Source: http://www.jimmunol.org A device that acts as a gateway between a protected enclave and the outside world. Source: http://www.tsl.state.tx.us
Extranets	Secure web-based sites with Interior and Forest Service, AMS and others. An extranet is a private network that uses the Internet protocol and the public telecommunication system to securely share part of a business's information or operations with suppliers, vendors, partne rs, customers, or other businesses. An extranet can be viewed as part of a company's intranet that is extended to users outside the company. An extranet requires sec urity and privacy, including firewall server management, the issuance and use of digital ce rtificates or similar means of user authentication, encryption of messages, and the use of virtual private networks (VPN) that tunnel through the public network. Source: http://www.mariosalexandrou.com

Appendix C – USDA Mission Areas

Acronym	Agency / Staff Office Name
FFAS	Farm and Foreign Agricultural Service
FNCS	Food, Nutrition and Consumer Services
FS	Food Safety
MRP	Marketing and Regulatory Programs
NRE	Natural Resources and Environment
REE	Research, Extension and Economics
RD	Rural Development

Appendix D – USDA Agencies and Staff Offices

Acronym	Agency / Staff Office Name
AMS	Agricultural Marketing Service
ARS	Agricultural Research Service
APHIS	Animal and Plant Health Inspection Service
CNPP	Center for Nutrition Policy and Promotion
CSREES	Cooperative State Research, Extension and Education
ERS	Economic Research Service
FNS	Food Nutrition Service
FSA	Farm Service Agency
FSIS	Food Safety and Inspection Service
FAS	Foreign Agricultural Service
FS	Forest Service
GIPSA	Grain Inspection, Packers and Stockyards Administration
NASS	National Agricultural Statistics Service
NRCS	Natural Resources Conservation Service
RMA	Risk Management Agency
RD	Rural Development
DA	Departmental Administration
NAD	National Appeals Division
OASCR	Office of the Assistant Secretary for Civil Rights
OBPA	Office of Budget and Program Analysis
OCE	Office of Chief Economist
OCFO	Office of Chief Financial Officer
OCIO	Office of Chief Information Officer
OC	Office of Communications
OCR	Office of Congressional Relations
OES	Office of Executive Secretariat
OIG	Office of Inspector General
OGC	Office of General Counsel