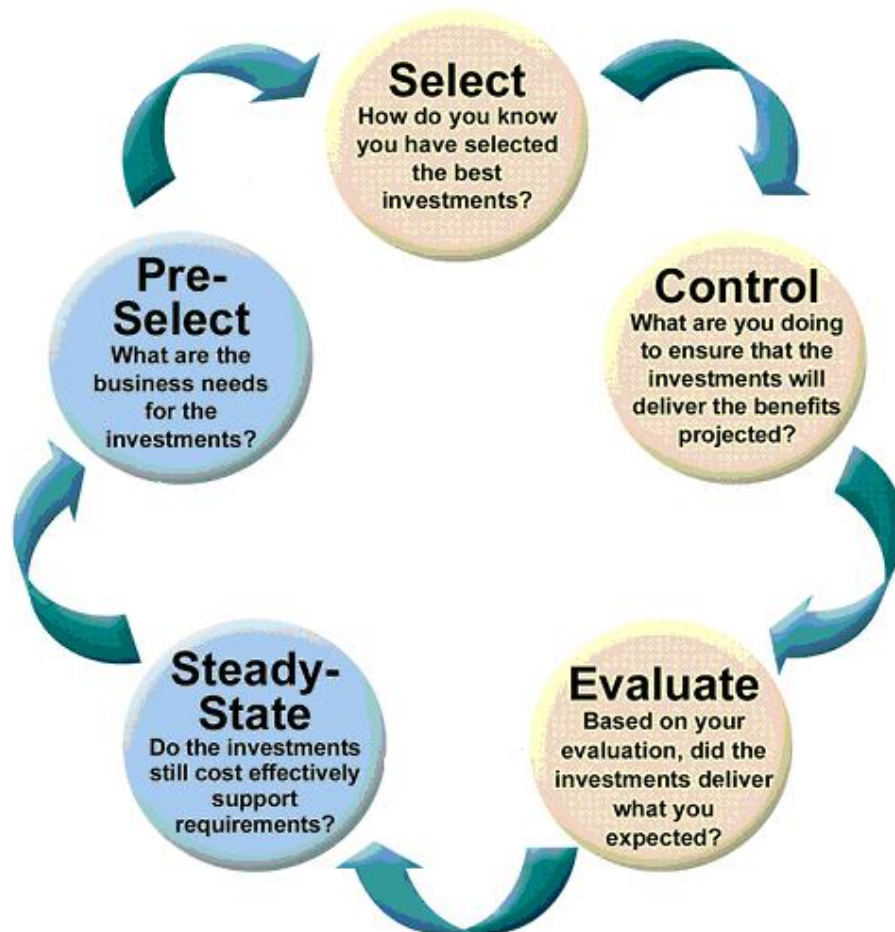


**INFORMATION TECHNOLOGY**  
**CAPITAL PLANNING AND INVESTMENT CONTROL**  
**GUIDE FOR THE**  
**FISCAL YEAR 2011 BUDGET**



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## EXECUTIVE SUMMARY

In 2011, the United States Department of Agriculture (USDA) plans to invest over \$2 billion in information technology (IT) assets and services. The success of these IT investments directly influences the ability of organizations within USDA to execute business plans and fulfill missions.

### The Key Components

Recognizing both the importance of IT investments to the organization and its role in supporting the success of these investments, the Office of the Chief Information Officer (OCIO) is engaged in an ongoing effort to establish, maintain, and support an IT investment analysis and decision-making environment. This environment consists of three key components: executive decision-making, supporting tools, and repeatable processes. Each is described below:

- **Executive Decision-Making**—consists primarily of an executive review board (E-Board) that oversees the process and is a stakeholder in the success of USDA and its agencies.
- **Supporting Tools**—USDA uses the Capital Planning Investment Repository (CIMR) for documenting and storing information on IT investments. Currently, the CIMR consists of the SharePoint and the electronic Capital Planning and Investment Control (eCPIC) applications. The eCPIC is used for documenting and storing summary cost information and for producing the Office of Management and Budget (OMB) Exhibits 53 and 300. It is also being used for storing supporting documents such as Alternatives Analysis and Acquisitions Plans. Microsoft's SharePoint application is being used for documenting Detailed Life Cycle Cost (DLCC), Earned Value Management (EVM), and Acquisition Approval Request (AAR) information.
- **Repeatable Processes**—Capital Planning and Investment Control (CPIC) is USDA's primary process for (1) making investment decisions on IT spending and (2) creating and analyzing the associated rationale for these investments. As summarized below, this guide describes the CPIC process in detail.

Currently, at USDA, the CPIC process is part of the Integrated IT Governance Process (IGP). The IGP is the integration of three disciplines, Enterprise Architecture (EA), the AAR process and CPIC. These disciplines are integrated to provide the USDA CIO with a line of sight (LOS) capability which can trace IT purchases for investments and their systems from planning through acquisition and retirement. This year the IGP process is being revised to include two more disciplines, Cyber security and Records Management. For the latest information on this process, please refer to the CPIC link on the USDA website, <http://www.ocio.usda.gov/cpic/index.html>.

### This Guide

The *USDA Information Technology Capital Planning and Investment Control Guide* identifies the processes and activities necessary to ensure that USDA's investments in IT are well-planned, cost-effective, and that they support the missions and business goals of the organization. This document is based on guidance from both OMB and the Government Accountability Office (GAO). It also incorporates "lessons learned" from USDA's iterations through the process over the past few years.

At the highest level, the CPIC process is a circular flow of USDA's IT investments through five sequential phases. As shown in Figure ES-1, these phases are:

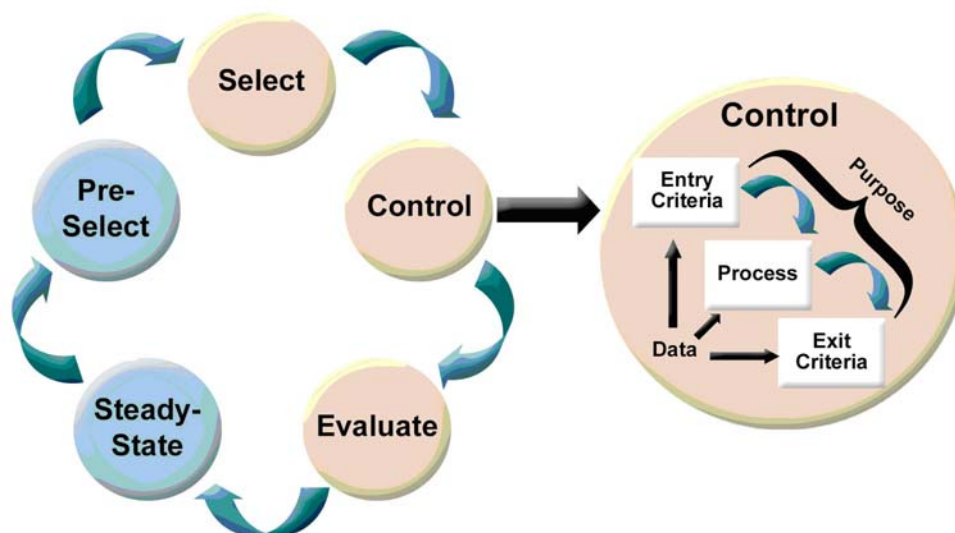
- 1) **Pre-Select Phase**—Executive decision-makers assess each proposed investment's support of USDA's strategic and mission needs. Project managers compile the information necessary for supporting a detailed investment proposal.
- 2) **Select Phase**—Investment analyses are conducted and the members of the E-Board choose the IT projects that best support USDA's mission and enterprise architecture.

- 3) **Control Phase**—USDA ensures, through timely oversight, quality control, and executive review, that IT investments are executed or developed in a disciplined, well-managed, and consistent manner.
- 4) **Evaluate Phase**—Actual results of the implemented projects are compared to planned results to assess investment performance. This is done to assess the project’s impact on mission performance and to identify any project changes or modifications that may be needed to revise the investment management process based on lessons learned.
- 5) **Steady-State Phase**—Mature investments are assessed to ascertain their continued effectiveness in supporting mission requirements, to evaluate the cost of continued maintenance support, to assess potential technology opportunities, and to consider retirement or replacement options.

(Please Note: OMB refers to investments as being in the Planning, Acquisition, Operations and Maintenance, Mixed Life Cycle, or in a Multi-Agency Collaboration status. These terms are used in the OMB Exhibits 300s. The USDA CPIC phases do not map exactly with the OMB status types. See section 1.8 for a more detailed discussion of this topic and for Figure 1.4 which demonstrates the relationships of OMB and USDA investment phases. When completing the OMB Exhibit 300s, the specific OMB guidelines should be used for indicating the status of the investment.)

Each of these five phases is structured in a similar manner using a set of common elements. These common elements provide a consistent and predictable flow and coordination of activities within each phase. See Figure ES-1. In this figure, the Control Phase is used as an example of how phases are sub-divided into the common elements. The blue spheres indicate USDA-specific phases.

**Figure ES-1. The Five CPIC Phases and the Common Elements within Each Phase**



Beyond the detailed CPIC process and activity descriptions, this Guide also includes:

- A charter for the E-Board and the associated operating procedures necessary to conduct investment reviews,
- A template for evaluating the mission need of a new IT investment proposal,
- Guidance on how to:

- Complete a Cost-Benefit Analysis (CBA)
  - Conduct a risk assessment for IT capital planning
  - Develop performance measures for IT projects
  - Manage IT projects
  - Integrate Enterprise Architecture requirements
  - Conduct earned value analysis
  - Conduct a Post-Implementation Review (PIR)
- 
- The evaluation criteria to be used by OCIO and the E-Board during investment reviews,
  - A glossary of terms and acronyms used throughout this document, and
  - A list of references used to create this document.

For further information on IT investment management or USDA's CPIC process, please see the USDA CPIC Web site at <http://www.ocio.usda.gov/cpic/index.html>.

This guide should be used with other reference documents located at the same CPIC link. For example, the IGP for IT Investment Planning and Review Guide and the System Development Lifecycle (SDLC) Guide should be used together when preparing the investment documentation for each agency's IT portfolio. See Appendix S for a complete list of references.

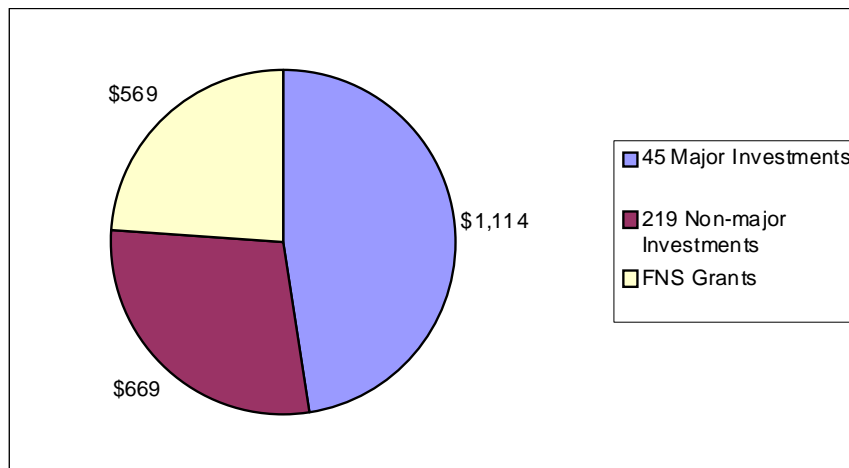
## CHAPTER 1—INTRODUCTION

### 1.1 PURPOSE

This document describes the United States Department of Agriculture (USDA) Information Technology (IT) Capital Planning and Investment Control (CPIC) process. As such, it outlines a framework for USDA to manage its IT investment portfolio better. This investment management process allows USDA to optimize the benefits of scarce IT resources, address the strategic needs of USDA, and comply with applicable laws and guidance.

Major investments, while small in number, have significant impacts on the efficient and effective operation of USDA agencies and services. Figure 1-1 shows the size of the major investments budget relative to the entire IT budget for fiscal year (FY) 2009.

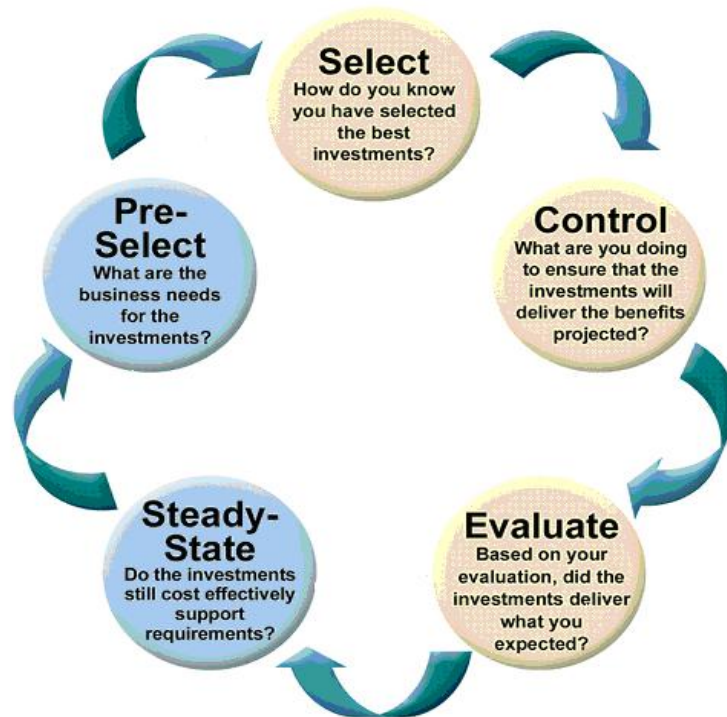
**Figure 1-1 USDA FY 2009 IT Investment Budget**  
(In Millions of Dollars as of April 2009)



The CPIC is a structured, integrated approach to managing IT investments. It ensures that all IT investments align with the USDA mission and support business needs while minimizing risks and maximizing returns throughout the investment's lifecycle. The CPIC relies on a systematic investment review process that includes five phases: 1) Pre-Select, 2) Select, 3) Control, 4) Evaluate, and 5) Steady-State. (See Figure 1-2.) This ongoing evaluation process is to ensure that each investment's objectives support the business and mission needs of the Department.

Through sound management of these investments, the executive review board (E-Board) and the Enterprise Change Control Board (ECCB) determines the IT direction for USDA, and ensures that agencies manage IT investments with the objective of maximizing return to the Department and achieving business goals.

Figure 1-2. CPIC Information and Process Flow



## 1.2 LEGISLATIVE BACKGROUND AND ASSOCIATED GUIDANCE

Recent statutes require federal agencies to revise their operational and management practices to achieve greater mission efficiency and effectiveness. These laws include:

- Chief Financial Officer (CFO) Act of 1990,
  - Government Performance and Results Act of 1993 (GPRA),
  - Federal Acquisition Streamlining Act of 1994 (FASA),
  - Paperwork Reduction Act of 1995 (PRA),
  - Clinger-Cohen Act of 1996 (CCA),
  - Information Technology Management Reform Act of 1996 (ITMRA),
  - Federal Information Security Management Act (FISMA), and
  - Federal Funding Accountability and Transparency Act of 2006.
-

This CPIC Guide is based upon the IT aspects of these laws, and focuses specifically on the CCA requirements. The CCA's objective is that senior managers use a CPIC process to systemically maximize the benefits of IT investments. The Act further describes CPIC as follows:

- “The Head of each executive agency shall design and implement in the executive agency a process for maximizing the value and assessing and managing the risk of the information technology acquisitions of the executive agency” and
- “The process shall:
  1. Provide for the selection of information technology investments to be made by the executive agency, the management of such investments, and the evaluation of the results of such investments;
  2. Be integrated with the processes for making budget, financial, and program management decisions within the executive agency;
  3. Include minimum criteria to be applied in considering whether to undertake a particular investment in information investments, criteria related to the quantitatively expressed projected net risk-adjusted return on investment and specific quantitative and qualitative criteria for comparing and prioritizing alternative information investment projects;
  4. Provide identifying information investments that would result in shared benefits or costs for other Federal agencies of State or local governments;
  5. Require identification of quantifiable measurements for determining the net benefits and risks of a proposed investment; and
  6. Provide the means for senior management to obtain timely information regarding the progress of an investment, including a system of milestones for measuring progress, on an independently verifiable basis, in terms of cost, capability of the investment to meet specified requirements, timeliness, and quality.”

Beyond the legislative background, there is extensive guidance from the Federal Chief Information Officer (CIO) Council, the Office of Management and Budget (OMB), the Government Accountability Office (GAO), and others in the area of IT investment management. A list of investment management reference guides and memos is identified in Appendix S. The policy and processes described in this Guide are consistent with this guidance.

### 1.3 POINTS OF CONTACT

The CPIC process is primarily supported and maintained by the USDA Office of the Chief Information Officer (OCIO). For further information about this Guide or the CPIC process, please see the USDA CPIC Web site at <http://www.ocio.usda.gov/cpic/index.html>. Additional USDA mission area and agency points of contact can be found in Chapter 7.

### 1.4 SCOPE

All IT projects within USDA must comply with this CPIC guidance. Exemptions to this guidance are granted only in exceptional circumstances. However, not all IT projects must be reviewed by the E-Board. Only those IT projects that are considered to be major (see section 1.5 below) investments are required to be included in the E-Board executive portfolio. It is expected that each individual USDA agency will have a similar CPIC process, manage its own portfolio, and create associated thresholds. At a minimum, each agency is expected to use the CPIC process to manage its major investments. For major thresholds, see Section 1.5. For assessments of non-majors, see Appendix T.

## 1.5 THRESHOLDS FOR MAJOR IT INVESTMENTS

Major IT investments are considered to be strategic for the Department and, thus have a greater documentation burden, including being individually reported to OMB on an Exhibit 300. They are also included in the E-Board executive portfolio. Major IT investments meet at least one of the following criteria<sup>1</sup>:

- Total lifecycle costs greater than \$50 million.
- Lifecycle costs for the investment's Development/Modernization/Enhancement (D/M/E) funding is \$20 million or more.
- The investment is a financial investment with costs greater than \$500,000 per year in FY 2006 or later.
- The investment has been identified by the USDA CIO as critical. This may include investments that have one or more of the following attributes:
  - Mandated by legislation or executive order,
  - Require a common infrastructure investment,
  - Are considered strategic or mandatory-use investments,
  - Significantly differs from or impacts on the Department infrastructure, architecture, or standards guidelines, or
  - Significant multiple-agency funding.

Each year, per OMB guidance and for reporting purposes, the USDA combines all USDA IT spending for infrastructure into a single Exhibit 300, the Infrastructure Office Automation and Telecommunication (IOAT) investment. Agencies should create their own specific infrastructure Exhibit 300s. These will be rolled up to the IOAT and they will be used for internal USDA decision-making. However, they will not be submitted individually to OMB. In addition, all agencies are encouraged also to roll up their entire infrastructure spending into a single agency-wide infrastructure investment. However, OCIO recognizes that this may not be feasible or desirable in all cases.

Three investments have been consolidated according to the USDA Enterprise Architecture criteria for segment architecture development. These consolidated segment architectures investments are the Industry Sector Income Stabilization (MIDAS), Geospatial Segment Architecture and the Enterprise Human Capital Management Segment Architecture.

All investments should be managed by the capital planning functions within each individual agency. As such, each managing agency should have:

- A process for proposing, reviewing, and monitoring its IT investments;
- An investment review board responsible for making final investment decisions and overseeing the IT investment management process;
- Relevant tools for supporting its IT investment management process; and
- Supporting documentation showing the ongoing operations of the process.

---

<sup>1</sup> The term "major information investment" means an information investment that requires special management attention because of its importance to an agency mission (mission critical); its high development, operating, or maintenance costs; or its significant role in the administration of agency programs, finances, property, or other resources. All mission critical investments are, therefore, major investments.

## 1.6 ROLES AND RESPONSIBILITIES

The following decision-making bodies and personnel have been assigned the responsibilities listed below.

- **E-Board**—Responsible for reviewing and approving strategic investments at USDA. It is staffed by the sub cabinet members and is chaired by the Deputy Secretary and vice-chaired by the CIO. (See Appendix A—Board Procedures for the E-Board Charter).
- **OCIO**—USDA Department level CIO responsible for setting IT policy, reviewing investments, assessing how potential and existing major investments meet capital planning criteria, approving movement between CPIC phases and making recommendations to the E-Board.
- **Key Agency Personnel**—The agency personnel responsible for investment management and successful completion of the CPIC.
- **Agency Head**—Responsible for signing CPIC documentation before submission to OCIO. This person is usually the Under Secretary of an agency.
- **Agency Investment Sponsor or Agency CIO**—Responsible for providing executive sponsorship of the investment; should be a senior level executive within the applicable mission area or agency.
- **Project Sponsor/functional Manager**—Responsible for the strategic business processes under development or enhancement and for ensuring their integrity; also serves as the primary user interface to the OCIO and the E-Board.
- **Project Manager**—Responsible for successful management and completion of one or more IT investments. Given the importance of this role, all major investments must be led by qualified project managers.
- **Portfolio Manager**- Responsible for managing and documenting the agency portfolio consisting of planned and approved IT investments.
- **IT Manager**—Responsible for serving as the primary point of contact for technology issues.
- **Investment Owner**- Responsible for documenting, posting and storing the investment's cost and other information into the OMB exhibits and the CPIC tools. The investment owner may be the agency CIO, the project manager, or the portfolio manager depending on the agency's internal CPIC process.
- **Contracting Specialist**—Responsible for serving as the primary acquisition support for the investment and interface between the investment and the Office of Procurement and Property Management (OPPM).
- **Capital Planning Analyst (sometimes referred to as the OCIO contact for the agency)**—Responsible for serving as the primary interface for capital planning between the OCIO and the investment owner.
- **Budget Analyst**—Responsible for serving as the primary interface between the Office of Budget and Program Analysis (OBPA) and the investment owner.
- **Architect** – Responsible for ensuring the alignment to the USDA EA Transition Plan, authorized segment architectures, and agency specific architectures in an effort to attain optimized performance from USDA investments.

## 1.7 PROCESS OVERVIEW

The CPIC is a fluid, dynamic, and ongoing process in which proposed and ongoing projects are continually monitored throughout their lifecycles. Successful investments and those that are terminated or delayed are evaluated both to assess the impact on future proposals and to benefit from any lessons learned. The CPIC contains five phases 1) Pre-Select, 2) Select, 3) Control, 4) Evaluate, and 5) Steady-State. As detailed in this document, each phase contains the following common elements:

- **Purpose**—Describes the objective of the phase;
- **Entry Criteria**—Describes the phase thresholds for entering the phase;
- **Process**—Describes the type of justification, planning, and review that will occur in the phase; and

- **Exit Criteria**—Describes the requirements and documentation necessary for proceeding to the next phase.

Completing one phase is necessary before beginning a subsequent phase. This ensures that each investment receives the appropriate level of managerial review and that coordination and accountability exist. Exceptions to CPIC requirements must be identified in the IT investment’s project plan.

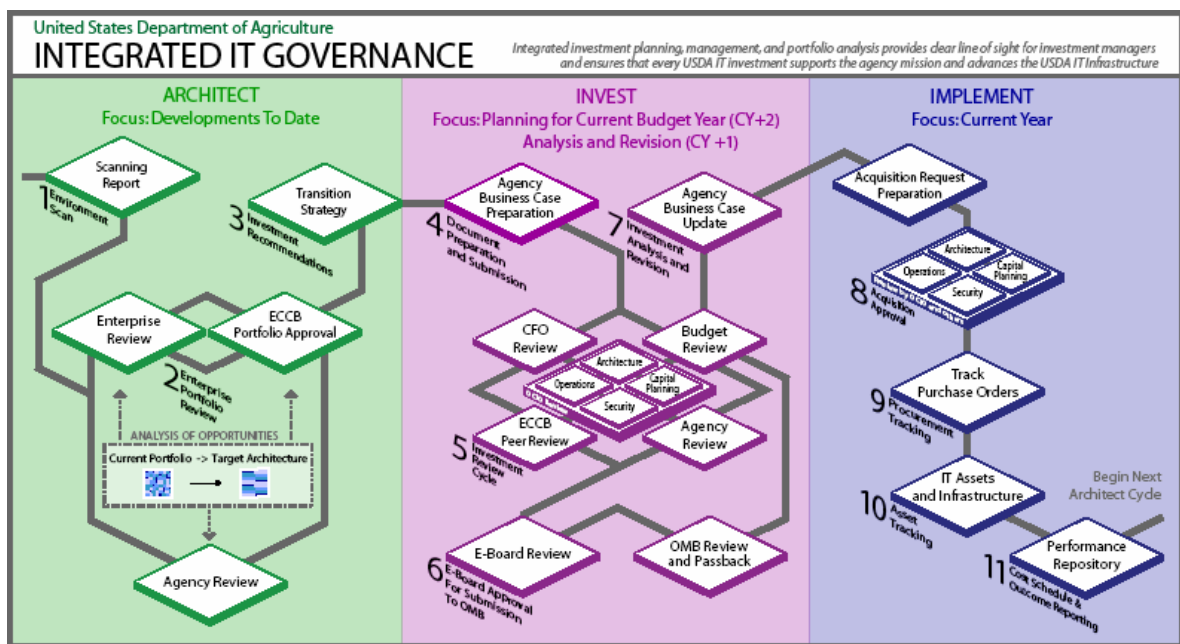
USDA agencies and staff offices that are considering investing in new IT initiatives should prepare an investment proposal according to the guidelines provided in this document. The proposal’s length and level of detail should be commensurate with the investment’s size and impact. Major investments will need more extensive documentation as well as an Exhibit 300. Non-major investments will also need documentation, but it will not need to be as extensive. The OMB Exhibit 300 is not required for non-majors. Once completed, these proposals will enter the CPIC process. They will be analyzed by OCIO for quality and conformance to policies and guidelines and reviewed against the applicable strategic investment criteria.

After the OCIO review, OCIO will prepare a brief project summary, an investment analysis and a recommendation will be sent to the E-Board for review and approval/disapproval action. Approval, if granted, is an approval of concept, indicating that the agency or staff office has done the preparatory work necessary to fully justify the investment, and has the mechanisms in place to manage the investment through acquisition, development, implementation, and operation. The investment must still compete for funding through the agency budget process.

### 1.8 PROCESS COORDINATION AND IMPROVEMENT

The CPIC process does not exist in isolation. As mentioned above, the CPIC process is part of the overall IGP governance mechanism. Specifically, it is primarily the “Invest” panel as shown below. See <http://www.ocio.usda.gov/igp/index.html> for more information on the IGP.

**Figure 1-3. USDA Integrated Governance Process**



As mentioned before, the IGP is currently being revised to include other disciplines. The CPIC process is also synchronized with other IT-related processes in USDA. The graph below shows the approximate relationship between steps in the CPIC process and other related IT management processes within USDA. More informa-

tion on the System Development Life Cycle can be found at:  
[http://www.ocio.usda.gov/e\\_arch/doc/USDA\\_SDLC\\_GUIDEv1.0\\_011507.pdf](http://www.ocio.usda.gov/e_arch/doc/USDA_SDLC_GUIDEv1.0_011507.pdf).

**Figure 1-4. Relationship Between Various USDA IT Management Processes**

OMB's Exh. 300 Funding Categories	Planning		Acquisition				Operations & Maintenance		
	Mixed Lifecycle								
USDA Capital Planning & Investment Control (CPIC)	Pre-Select								
			Select						
			Control				Evaluate		
									Steady State
Project Management	Initiation	Planning	Executing			Monitoring	Controlling	Closing	
Systems Development Life Cycle	Initiation	Planning	Analysis	Design	Construction	Integration & Testing	Implementation	Steady State	

Investments that have been approved must move through processes to obtain investment funding. The agency is responsible for preparation of budget requests for its investment submissions. The agency is also responsible for preparation and submission of IT Acquisition Approval Requests (AAR) when acquisitions for a given investment exceed the current \$25,000 threshold. More information on the AAR process can be found at: [http://www.usda.gov/procurement/policy/advisories\\_x/AGARAD53.HTM](http://www.usda.gov/procurement/policy/advisories_x/AGARAD53.HTM).

### 1.8.1 Process Improvement

In an ongoing attempt to improve its IT capital planning process, USDA has occasionally compared its process to the IT capital planning processes in other federal organizations. Formally known as benchmarking, the purpose of this comparison is to learn from others so as to improve the USDA capital planning process. In 2005, USDA conducted a study to assess the USDA CPIC tool, WorkLenz. At that time the recommendation was to continue its usage, but to re-evaluate it in three years. In 2008, USDA re-evaluated this tool and compared it to other tools used by other federal departments. The result of this study was a decision for USDA to migrate from WorkLenz to eCPIC. USDA will continue to benchmark its IT capital planning process and its corresponding tools relative to other federal organizations at least once every three years.

## 1.9 DOCUMENT STRUCTURE

This document is divided into seven chapters and 16 appendices as described below.

Chapters:

- **Chapter 1—Introduction.** Describes the CPIC purpose, scope, thresholds, roles and responsibilities, process, and document structure.
- **Chapter 2—Pre-Select Phase.** Provides a process and mechanism to assess an investment’s support of agency strategic and mission needs.
- **Chapter 3—Select Phase.** Provides tools to ensure that IT investments that are chosen best support the agency’s mission and USDA’s approach to enterprise architecture.
- **Chapter 4—Control Phase.** Provides guidance to ensure that IT investments are conducted in a disciplined, well-managed, and consistent manner, and they promote the delivery of quality products resulting in investments that are completed within scope, on time, and within budget.

- **Chapter 5—Evaluate Phase.** Provides guidance on comparing actual to expected results once a project has been fully implemented.
- **Chapter 6—Steady-State Phase.** Provides a means to assess mature investments to ascertain their continued effectiveness in supporting mission requirements and to evaluate the cost of continued support or potential retirement and replacement.
- **Chapter 7—Assessing Investment Proposals.** Describes the methods and criteria whereby the investments are assessed.

#### Appendices:

- **A. Board Procedures**—Provides the E-Board Charter that includes its roles and responsibilities.
- **B. CPIC Process Checklist**—Provides a checklist of the process steps investments must complete for each CPIC phase.
- **C. OMB Exhibit 300 Assessment**—Note: This is empty since OMB has not yet updated their scoring criteria for the new FY2010 Exhibit 300.
- **D. Operational Analysis Review**—Provides a form to use that defines the basic elements needed for an operational analysis review.
- **E. Cost-Benefit Analysis**—Provides guidance on completing a cost-benefit analysis (CBA)
- **F. Risk Assessment**—Provides guidance on conducting a risk assessment for IT capital planning.
- **G. Performance Measurement**—Provides guidance on developing performance measures for IT investments.
- **H. Project Management**—Provides guidance on managing IT investments.
- **I. Earned Value Management Analysis**—Provides guidance on conducting earned value management analysis.
- **J. Post-Implementation Reviews**—Provides guidance on conducting a post-implementation review (PIR).
- **K. Mission Needs Statement**—Provides a template for evaluating the mission need(s) for a new IT investment.
- **L. eGovernment** – Provides guidance on eGovernment information to support the investment.
- **M. Enterprise Architecture** — Provides background material on USDA's ongoing EA program and guidance on completing the EA section of the Exhibit 300.
- **N. Cyber Security Infrastructure Guide** - Provides guidance concerning cyber security information to support the investment.
- **O. Telecommunications Reference Manual** – Provides guidance on telecommunications information to support the investment.
- **P. OMB Requirements** —Provides a summary of the data required for OMB using CIMR.
- **Q. Quarterly/Milestone Control Review Checklist**—Lists the critical areas discussed by the control review team during each quarterly/milestone review.
- **R. Glossary of Terms and Acronyms**—Provides definitions for terms and acronyms used throughout this document.
- **S. References**—Provides a list of references used to develop this document.
- **T. Assessment of Non-major Investments**—Provides the basis for the USDA assessments of non-major investments.



## CHAPTER 2—PRE-SELECT PHASE

### 2.1 PURPOSE

The Pre-Select Phase is a process to assess the need for a proposed investment. (Note: in this document, proposed investments are frequently referred to as initiatives.) It is during this phase that the business/mission need is identified and relationships to the Department and/or agency strategic planning efforts are established. To prepare for the review of investments in this phase, there are significant requirements for information. The Pre-Select Phase provides an opportunity for the agency to focus efforts on developing the concept of the investment. It also allows the project's team to define the business requirements, performance measures, benefits, and costs which will be included in the investment's business case and, if approved, in the Department's investment portfolio.

### 2.2 ENTRY CRITERIA

Prior to entering the Pre-Select Phase, investment owners must:

- Have an idea as how they plan to address the mission needs;
- Think about how to include IT into the anticipated solution; and
- Identify whether or not the investment meets one or more of the threshold criteria identified in the previous section "1.5—Thresholds for Major IT Investments."

### 2.3 PROCESS

During the Pre-Select Phase, the Agency Head conducts a mission analysis which results in the identification of a mission need. This need necessitates the consideration of an IT alternative. The mission analysis and corresponding development of the Mission Needs Statement (see Appendix K—Mission Needs Statement) are closely linked to the strategic planning process of the USDA and sponsoring agency. Following mission analysis, the functional manager further develops the proposed solution's concept. Objectives are established, evaluation criteria are defined, concept alternatives are identified, and an alternative analysis approach is documented as part of the concept management plan to support concept and mission need approval. A preliminary business case with budget estimates and associated cost benefit analysis (CBA) is also completed. Table 2-1 provides a summary of the Pre-Select Phase process and responsibilities.

**Table 2-1 Pre-Select Phase Process Flow**

Process Step	Responsible Individual(s) or Group(s)
Identify project sponsor.	Agency Head
Conduct mission analysis.	Functional manager
Develop concept.	Functional manager
Prepare preliminary business case.	Functional manager
Prepare investment review submission package.	Project manager Functional manager Agency sponsor
Review/approve investment submission.	Agency Head
Review initiative and recommend appropriate action.	OCIO
Make final investment decisions.	E-Board



### 2.3.1. Identify project sponsor

The Agency Head identifies a project sponsor for each accepted proposal. The project sponsor will normally be the same person as the functional manager but if the investment is crosscutting, strategic, or of high visibility, the project sponsor may be different from the functional manager. The project sponsor should be a senior individual in the organization with the requisite management, technical, and business skills to lead the investment or to supervise a designated project manager. All USDA major investments must be led by qualified project managers. See Appendix H for criteria for project management.

The project sponsor is the business leader responsible for the investment's success and for communicating with the E-Board on its progress as it continues through the CPIC process. Commercial and government best practices show that IT investments championed by a business leader have the best chance for successful deployment. This commitment by the project sponsor to the E-Board represents accountability for the investment.

### 2.3.2. Conduct Mission Analysis

Mission analysis is a strong, forward-looking, and continuous analytical activity that evaluates the capacity of an organization's assets to satisfy existing and emerging demands for services. Mission analysis enables USDA and its agencies to determine and prioritize the most critical capability shortfalls and best technology opportunities for improving the USDA's overall security, capacity, efficiency, and effectiveness in providing services to customers.

The Integrated IT Governance Process (IGP) follows OMB's Performance Improvement Lifecycle Model to architect, invest, and implement. Throughout the year, information managers scan the internal and external environment for changing/new business drivers that could affect the priorities of the current IT Portfolio strategy. USDA conducts the EA analysis at both the enterprise and agency levels. Based on this analysis, new segment architecture decisions, transition strategies, and investment recommendations are formulated. This sets the targets and priorities for the investment year. The EA analysis emphasis is on optimization through the elimination of redundancy and encourages collaboration that results in savings.

Mission analysis is conducted within the framework of both the Department's and the sponsoring agency's enterprise architecture and long-range strategic goals. In turn, mission analysis contributes strongly to the evolution of strategic planning and USDA IT architecture development. (See Appendix K—Mission Needs Statement for a template on how to conduct mission analysis). In the mission analysis, agencies should map to the Business Reference Model and identify the business area, primary line of business and appropriate sub-function(s) (i.e. agency mission, vision, goals, objectives, and tactical plans.) to inform the business architecture and existing business processes. Performance Reference Model mappings should be used to gauge how the performance may be improved to assure optimized effectiveness and efficiency.

Consequently, mission analysis yields the identification of critical needs that the Department should address. It estimates the resources that the agency and/or Department will likely be able to commit to for each mission need, in competition with other needs, and within the constraint of a realistic projection of future agency budget authority. The resource estimate becomes a "placeholder" until the mission need is approved. More accurate resources quantification is conducted during the investment analysis if the investment is selected as part of the Department's portfolio. The resource estimate is a function of the benefit to the agency and the mission area, the cost of not addressing the need (e.g., poor customer responsiveness, increased maintenance cost, lost productivity, etc.), and the likely extent of required changes to the agency's infrastructure.

If the mission analysis reveals a non-IT solution (e.g., a rulemaking/policy change, operational procedural change, or transfer of investments between sites) that can satisfy a capability shortfall and can be achieved within approved budgets, it can be implemented without proceeding further in the CPIC process.



A mission analysis should identify the business drivers (i.e. agency mission, vision, goals, objectives, and tactical plans. Business drivers often involve the need to assist customers in a particular service area such as farm loans.

Once the key business drivers have been identified, a business requirements analysis should be conducted. This analysis is called the Mission Needs Statement. This analysis identifies how personnel conduct business activities in order to fulfill mission requirements, meet objectives and perform their tactical plans.

All Mission Needs Statements should emerge from a structured mission analysis. However, any individual or organization may propose a mission need based on a perceived capability shortfall or technological opportunity. Examples of potentially valid “needs” that could originate outside USDA lines of business include those related to socioeconomic and demographic trends, the environment, statutory requirements, or an industry-developed technological opportunity. These shortfalls and opportunities should be identified to the appropriate functional manager who will determine how mission analysis should be conducted to validate, quantify, and prioritize the proposed need.

USDA lines of business conduct mission analysis within their areas of responsibility. The principal activities of mission analysis are:

- Identify and quantify projected demand for services based on input from diverse sources such as the agriculture/rural community; architecture and strategic planners for services needed in the future; and integrated project teams (IPTs) in the form of performance and supportability trends of fielded investments. Identify and quantify projected technological opportunities that will enable the USDA to perform its mission more efficiently and effectively.
- Identify and quantify existing and projected services based on information from field organizations, the enterprise architecture, and IT asset inventory that defines what is in place and what is approved for implementation.
- Identify, analyze, and quantify capability shortfalls (i.e., the difference between demand and supply) and technological opportunities to increase quality of service, efficiency, and effectiveness.
- Identify the user and customer base affected.
- Prepare a mission needs statement that summarizes the mission analysis for inclusion with the Pre-Select CPIC packet submission.

When the mission analysis identifies a capability shortfall or technological opportunity, the results should be summarized in a mission needs statement. The mission needs statement must clearly describe the capability shortfall and the impact of not satisfying the shortfall, or the technological opportunity and the increase in efficiency it will achieve. The mission needs statement also must assess the criticality and timeframe of the need, and roughly estimate the resources the agency should commit to resolving it based on worth, criticality, and the scope of likely changes to the agency’s IT asset base. This information forms the basis for establishing the priority of this need in competition with all other agency and/or Department needs.

### *2.3.3. Develop Concept*

Concept development provides the opportunity for further examination of a proposed solution. It focuses on an analysis of alternatives to meet the mission need. Key components include analysis of alternatives and an examination and redesign of business practices.

The following activities are conducted during concept development:

- Assess Mission Needs Statement.
- Identify business objectives based on mission analysis and Mission Needs Statement.



- Discuss the proposed investment in relation to the following eight questions, also known as Raines Rules (<http://www.balancedscorecard.org/RainesRules/tabid/114/Default.aspx>):
  - 1) Does the investment in major capital asset support core/priority mission functions that need to be performed by the federal government?
  - 2) Does it have to be undertaken by the requesting agency because no alternative private sector or government source can more efficiently support the function?
  - 3) Does the investment support work processes that have been simplified or otherwise redesigned to reduce costs, improve effectiveness, and make maximum use of commercial-off-the-shelf (COTS) technology?
  - 4) Does this initiative demonstrate a projected return on investment that is clearly equal to or better than alternative uses of available resources?
  - 5) Is this initiative consistent with Federal, agency, and bureau information architectures which: integrate agency work processes and information flows with technology to achieve the agency's strategic goals ... and specify standards that enable information exchange and resource sharing, while retaining flexibility in the choice of suppliers and in the design of local work processes?
  - 6) Does this initiative reduce risk by: avoiding or isolating custom-designed components ...; using fully tested pilots, simulations, and prototypes ...; establishing clear measures and accountability for project progress; and securing substantial involvement and buy-in ... from program officials who will use the system?
  - 7) Will this initiative be implemented in phased, successive chunks as narrow in scope and brief in duration as practicable, each of which solves a specific part of an overall mission problem and delivers a measurable net benefit independent of future chunks?
  - 8) Will this initiative employ an acquisition strategy that appropriately allocates risk between the government and the contractor, effectively use competition, tie contract payments to accomplishments, and take maximum advantage of commercial technology?
  
- Identify high-level performance measures which support the Performance Reference Model. (Additional detailed performance measures should be developed as part of the Select Phase.)
- Determine key selection criteria to evaluate concept alternatives that support high-level performance measures and business objectives.
- Ensure that the solution aligns with agency standards for enterprise architecture planning, security & privacy, and eGovernment planning.
- Identify alternatives that will be analyzed to support mission need and business objectives.
- Conduct preliminary planning and develop a concept management plan addressing Select Phase preparation, alternative analysis approach, and business redesign/reengineering. Plans for redesign or business process reengineering (BPR) should be presented as part of the Pre-Select submission. Proposed IT investments should support work processes that 1) have been simplified or redesigned to reduce costs and improve effectiveness and 2) make maximum use of commercial-off-the-shelf (COTS) software.

#### *2.3.4. Develop Preliminary Business Case*

The business case provides the necessary information to build support and to make funding decisions for an investment. While the primary emphasis of the Pre-Select Phase is on mission and strategic needs analysis, it also requires the functional manager to begin identifying alternative solutions and developing an estimate of costs and benefits (both quantitative and qualitative). Initial business case development activities include a preliminary budget estimate and preliminary CBA, as discussed below.



- **Prepare Preliminary Cost Benefit Analysis (CBA)** — The preliminary CBA should provide anticipated costs and benefits of the proposed investment. Costs should be the same as those identified in the budget estimate and benefits should be aligned with the investment objectives and high-level performance measures.
- **Prepare preliminary budget estimate**—The preliminary budget should provide an estimate of costs necessary to support detailed planning and concept development prior to investment selection. It should provide an estimate of budget requirements to support a five-year budget plan.
  - As part of the preliminary budget estimate, a security and telecommunications infrastructure analysis should be performed to determine baseline costs for these two elements. This information should be included with the investment’s preliminary budget estimate. Detailed information concerning the preparation of a security and telecommunications infrastructure analysis can be found in Appendix N—Cyber Security Infrastructure Guide and Appendix O—Telecommunications Reference Manual. 2.3.5. Prepare Investment Review Submission Package

### *2.3.5. Prepare Investment Review Submission Package*

The project manager, functional manager, and agency sponsor prepare the Pre-Select submission package for the USDA’s annual investment review. It should include:

- Preliminary OMB Exhibit 300,
- Introduction and brief overview of the mission’s requirements,
- Mission Needs Statement,
- Concept Management Plan,
- Preliminary CBA and budget estimate, and
- A report addressing how the initiative will support USDA’s eGov, EA, and Telecommunications structures.

### *2.3.6. Review/Approve Investment Submission*

The Agency Head reviews the investment submission and requests the functional manager and/or agency sponsor to update the package or make changes as needed. The Agency Head then approves the investment submission and forwards it to the OCIO.

### *2.3.7. Review Initiative and Recommend Appropriate Action*

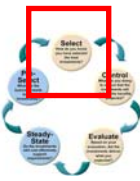
The OCIO reviews the package and provides any comments and/or questions to the agency. The agency addresses the issues and sends an updated package to the OCIO. OCIO assesses the investment with an emphasis on mission alignment and the proposed concept management plan. OCIO prepares an investment analysis and recommendation that is sent to the E-Board for the final decision.

### *2.3.8. Make Final Investment Decisions*

The E-Board reviews the OCIO analysis and recommendation and makes the final investment decisions. If the E-Board approves the proposal, the agency sponsor moves forward with alternative analysis, detailed CBA, and risk assessment, and begins to prepare for the investment’s portfolio selection.

## **2.4 EXIT CRITERIA**

Prior to exiting the Pre-Select Phase, investments must obtain OCIO approval for the mission need and concept.



## CHAPTER 3—SELECT PHASE

### 3.1 PURPOSE

In the Select Phase, USDA ensures that IT investments that best support the mission and USDA's approach to enterprise architecture, are chosen and prepared for success (i.e., have a qualified project manager, are analyzing risks, etc.). Individual investments are evaluated in terms of technical alignment with other IT investments and projected performance as measured by cost, schedule, benefit, and risk (CSBR). Milestones and review schedules are also established for each investment during the Select Phase.

In this phase, USDA prioritizes each investment and decides which investments will be included in the portfolio. Investment submissions are assessed against a uniform set of evaluation criteria and thresholds. The investment's CSBR are then systematically evaluated using objective criteria and the investment is ranked and compared to other investments. Finally, the E-Board selects which investments will be included in the Department's portfolio.

### 3.2 ENTRY CRITERIA

Prior to entering the Select Phase, investments must have an E-Board approved Pre-Select submission package and must be recommended by OCIO to move to the Select Phase.

### 3.3 PROCESS

The Select Phase begins with an investment concept (approved during the Pre-Select Phase) and moves through the development of the business case, acquisition plan, risk analysis, performance measures, and a project plan. These plans lay a foundation for success in subsequent phases. The Select Phase culminates in a decision whether to proceed with the investment.

Table 3-1 provides a summary of the Select Phase process, as well as the individual(s) and/or group(s) responsible for completing each process step. Each step is detailed following the table.

**Table 3-1 Select Phase Process Flow**

Process Step	Responsible Individual(s) or Group(s)
Review the mission needs statement and update if needed.	Functional manager
Approve integrated project team membership.	Project sponsor
Identify funding source and obtain agency approvals.	Project sponsor
Develop major investment supporting materials.	Project sponsor
Prepare IT investment review submission.	Project sponsor
Review/approve investment submission.	Agency Head
Review initiative and recommend appropriate action.	OCIO
Review and approve proposed portfolio	ECCB
Make final investment decisions.	E-Board

#### *3.3.1. Review the Mission Needs Statement and Update if Needed*

The functional manager reviews the mission needs statement and other documentation completed during the Pre-Select Phase and makes any necessary changes. Next, the functional manager develops quantifiable performance measures that focus on outcomes where possible (see Appendix G—Performance Measurement). The functional manager also describes the qualitative improvements in



measurable terms such as customer satisfaction. These performance measures will form a basis for judging investment success.

### 3.3.2. Approve Integrated Project Team (IPT) Membership

The project sponsor and project manager approve the selection of the IPT members who will assist them in the initiative’s development. The IPT members should formalize their responsibilities in a Project Charter. The IPT brings together expertise from functional areas as required by the specifics of the initiative. A capital planning analyst from the OCIO CPIC Division will work with and provide guidance to the IPT throughout the process.

The IPT should consist of functional experts in the following areas:

- Functional manager with program experience,
- IT manager with experience in proposed technology,
- Agency telecommunications specialist,
- Agency cyber security specialist,
- Agency budget Analyst,
- Contracting specialist, and
- Agency architect.

Additional staff may be added from other functional areas as needed.

### 3.3.3. Identify Funding Source and Obtain Approvals

The project sponsor identifies a potential funding source for the E-Board to continue investment support. The project sponsor then gets approval from the offices listed in Table 3-2, as needed, depending upon the investment’s characteristics. The members of the IPT should assist in coordinating these actions within their respective functional areas.

**Table 3-2 Approval Requirements**

Office	Characteristic that triggers office approval request
OCIO	Investment exceeds proposing agency’s budget threshold.
Office of Chief Financial Officer (OCFO)	Investment involves an appropriation, accounting, or financial investment.
OPPM	IT acquisitions of more than \$25 million (\$50 million if the proposing organization is OPPM/Procurement Operations Division)
Contracting Officer	Determining acquisition strategy, i.e., capability to use the Office of Small and Disadvantaged Business Utilization programs for procurement.
Office of General Counsel	Legal review of solicitation documents more than \$500,000.
OBPA	Ensure investment is included in budget submission.



### 3.3.4. Develop Major Investment Supporting Materials

The project sponsor ensures that for each investment, the following studies are completed and the results are submitted to the OCIO:

- OMB Exhibit 300
  - Business Profile, including BRM alignment,
  - Business case with performance measures (see Appendix G—Performance Measurement) and mission needs statement,
  - Functional requirements, and
  - Feasibility study.
- Risk Profile:
  - Risk assessment and mitigation plan (see Appendix F—Risk Assessment) and
  - Initiative pilot/prototype plans.
- Financial Profile:
  - Return on investment (ROI) and CBA (see Appendix E—Cost-Benefit Analysis)
  - Update lifecycle cost projections (Currently the tools used are WorkLenz and Share-Point),
  - Alternatives analysis, and
  - Funding source identification.
- Technological Profile:
  - Technical requirements,
  - Telecommunications plan (see Appendix O—Telecommunications Reference Manual for instructions on preparing telecommunications documentation),
  - Telecommunications risk and mitigation plan,
  - Enterprise architecture plan,
  - eGovernment plan, and
  - Relationship to existing investments (dependencies).
- Security plan (see Appendix N – Cyber Security Infrastructure Guide for instructions on preparing security plan documentation).
- Management and Planning Profile:
  - Project plan, including a list of team members,
  - Integrated logistics plan (if required),
  - Acquisition plan and strategy, and
  - Independent verification and validation (IV&V) documentation (if warranted).

The project sponsor must also ensure that Earned Value Management (EVM) planning is incorporated into:

- σ The contract(s) and orders for major IT investments (see the related AGAR Advisory at <http://www.ocio.usda.gov/cpic/doc/agarad80.pdf>), and
- σ Project plans and resource requirements.

A concept of operations plan should be developed to describe how the new investment will work and satisfy business requirements. The concept of operations should also address the modularity of the investment (i.e., if the investment is stopped at any point along the way the components developed to



date would still be useful to the organization. Focus should be placed on the functional integration of Department-level IT enterprise architecture planning, telecommunications planning, and eGovernment planning.

### *3.3.5. Prepare IT Investment Review Submission*

The project sponsor also prepares the submission package in preparation for USDA's annual investment review. Other supporting investment documents which evaluate other key areas are described in the Appendix Section of this document and should be attached, as needed, to the Exhibit 300.

- Introduction and brief overview of the investment,
- Mission Needs Statement,
- Acquisition strategy,
- Initial project plan with estimated costs listed for each Work Breakdown Structure (WBS),
- CBA and budget estimate, including risk-adjusted ROI and Net Present Value (NPV) calculations,
- Risk,
- Security (see Appendix N—Cyber Security Infrastructure Guide for instructions on preparing security plan documentation),
- Performance goals compliant with the Performance Reference Model,
- Architecture, including IT accessibility for persons with disabilities (Section 508), and
- Telecommunications plan (see Appendix O—Telecommunications Reference Manual for instructions on preparing telecommunication plans).

Note that projects that provide insufficient business case documentation will not be included in the IT investment portfolio nor will they be forwarded to the Office of Management and Budget as part of USDA's IT request.

### *3.3.6. Review/Approve Investment Submission*

The Agency Head is responsible for reviewing the investment submission and for assigning the project sponsor, functional manager, and/or agency sponsor to update the package or make changes as needed. After the changes are made, the Agency Head approves the investment submission and forwards it to the OCIO.

### *3.3.7. Review Initiative and Recommend Appropriate Action*

The OCIO reviews the investment based on the established criteria. The OCIO provides any comments and/or questions to the agency. The functional manager works with the OCIO to address the issues and furnish details as requested, and sends an updated package to the OCIO. OCIO prepares a brief project summary, an investment analysis and a recommendation for action to the E-Board.

### *3.3.8. Make Final Investment Decisions*

The E-Board makes the final investment decisions. If the E-Board approves the investment, then the decision is implemented in concert with OCIO approval for the initiative to move to the Control Phase.

## **3.4 PORTFOLIO MANAGEMENT**

To support the Department's portfolio management efforts, investment assessors should document substantiating evidence for their evaluations as much as possible. An acceptable ratio of high, medium, and low risk investments should be included in the portfolio to achieve organizational objectives and future needs. The balance between the various levels of risks of the technical, operational, financial, and organizational components



should be part of the decision-making process for selecting an investment portfolio. The E-Board should consider this ratio in the different categories of investments -based on their functionality. Additionally, the E-Board should take a strategic view of their recommendations. This view should:

- Use a broad understanding of the environment and the Department’s need in identifying which investments produce the maximum results per the CCA,
- Consider public and Congressional interest in IT investment decisions,
- Determine which investments are of particular interest to the Department (through its strategic goals and policies), administration, and Congress,
- Consider enterprise architecture when analyzing Department portfolios; OMB will not approve an investment not included in the USDA EA Transition Plan or that does not support the USDA EA.
- Consider enterprise architecture, eGovernment, and telecommunications frameworks when analyzing Department portfolios,
- Consider the results of not selecting the investment,
- Evaluate mandatory investments in terms of the overall pool and whether the investment should be made now or in the future, and
- Consider whether the investment meets minimum legal requirements or goes beyond legal mandates, leading to unnecessary costs.

### 3.5 EXIT CRITERIA

Prior to exiting the Select Phase, investments must have:

- Established performance goals and quantifiable performance measures,
- Developed a project plan which details quantifiable objectives including an acquisition schedule, project deliverables, and projected and actual costs,
- Identified costs, schedule, benefits, and risks,
- Established security, telecommunications, Section 508 (IT accessibility), and architecture goals and measures (including a transition plan to achieve the target), and
- Obtained OCIO approval to enter the Control Phase.



## CHAPTER 4—CONTROL PHASE

### 4.1 PURPOSE

The goal of the Control Phase is to ensure, through timely oversight, quality control, and executive review, that IT initiatives are conducted in a disciplined, well-managed, and consistent manner. Investments should be closely tracked against the various components identified in the risk assessment and mitigation plan developed in the Select Phase. This phase also promotes the delivery of quality products and results in initiatives that are completed within scope and budget and on time. During this process, senior managers regularly monitor the progress/performance of ongoing IT investments against projected cost, schedule, performance, and delivered benefits.

The Control Phase is an ongoing activity. It requires the continuous monitoring of IT initiatives through the development or acquisition lifecycle. USDA reviews occur before, during, and after the annual budget preparation process. Periodic summary reviews should be conducted based on the review schedule established during the Select Phase.

The Control Phase is characterized by decisions to continue, modify, or terminate a program. Decisions are based on reviews at key milestones during the program's development lifecycle. The focus of these reviews changes and expands as the investments move from initial concept or design and pilot through full implementation as projected investment costs and benefits change. The reviews focus on ensuring that projected benefits are being realized; cost, schedule and performance goals are being met; risks are minimized and managed; and the investment continues to meet strategic needs. Depending on the review's outcome, decisions may be made to suspend funding or make future funding releases conditional on corrective actions.

### 4.2 ENTRY CRITERIA

Prior to entering the Control Phase, investment owners must have:

- Established performance goals and quantifiable performance measures,
- Developed a project plan which details quantifiable objectives, including an acquisition plan, project deliverables, and projected and actual costs,
- Identified costs, schedule, benefits, and risks,
- Established security, telecommunications, Section 508 (IT accessibility), and architecture goals and measures (including a transition plan to achieve the target),
- Established an E-Board investment review schedule for the Control Phase, and
- Obtained OCIO approval to enter the Control Phase.

Once the investment enters the Control Phase, the integrated project team (IPT) will monitor the investment throughout development and report investment status to the investment's sponsors and oversight groups.

### 4.3 PROCESS

During the Control Phase, an investment progresses from requirements definition to implementation. Throughout the phase, agency CIOs provide the OCIO with investment reviews to assist them in monitoring all investments in the portfolio. Investment reviews provide an opportunity for project managers to raise issues concerning the IT developmental process, including security, telecommunications, enterprise architecture alignment, eGovernment, and Section 508 concerns.

The ability to adequately monitor IT investments relies heavily on the outputs from effective investment execution and management activities. Each year, the OCIO develops a master milestone review calendar for evaluation and approval by the E-Board. The OCIO maintains a control review schedule for all investments in the Department's IT investment portfolio and monitors investments quarterly. Appendix Q provides an outline of the items agencies must

address in writing for each quarterly or milestone control review. The E-Board reviews investments at its discretion or if the cost, schedule, or performance varies more than 10 percent from expectations.

The E-Board reviews are based on factors including the strategic alignment, criticality, scope, cost, and risk associated with all investments. The project sponsor establishes milestones as part of the investment baseline against which performance will be measured throughout the Control Phase. Agencies are expected to uphold these milestones; OMB will hold agencies responsible for meeting milestones as originally indicated in the baseline. After establishing the milestones, the project sponsor revises the project plan as required to meet the approved milestones. It is recommended that the project plan include an investment pilot during the Control Phase because piloting helps reduce risk and provides a better understanding of costs and benefits. Table 4 -1 provides a summary of the Control Phase process and responsibilities.

**Table 4-1 Control Phase Process Flow**

Process Step	Responsible Individual(s) or Group(s)
Establish and maintain investment and security costs, schedule, and technical baselines.	Project sponsor
Maintain current investment and security costs, schedule, technical and general status information.	Project sponsor
Assess investment progress against performance measures using Earned Value Management Methodologies.	Project sponsor IPT Agency sponsor
Prepare annual investment review submission package.	Project sponsor
Review/approve investment submission.	Agency Head
Review investment and recommend appropriate action.	OCIO, ECCB Functional manager
Make final investment decisions.	E-Board
Work with project sponsor to develop solutions.	OCIO Project sponsor

#### ***4.3.1. Establish and Maintain Investment and Security Costs, Schedule, and Technical Baselines***

The project sponsor establishes the project management and executive plans, procedures, and practices to support investment monitoring activities. The project sponsor coordinates with the IPT to identify any new or existing internal risks based upon review of the work breakdown structure (WBS), project plan, risk checklist, and stakeholder interviews. Financial, technical, operational, schedule, legal and contractual, and organizational risks should be identified and monitored. The project sponsor provides periodic updates to the OCIO on the investment's status and security, costs, schedule, and technical baselines. The project sponsor ensures that the project has been planned realistically. Key personnel and subject matter experts (SME's) for functional areas should be identified and labor costs quantified. The project sponsor develops a project plan which should include project metrics, a WBS, and a schedule with firm milestones.

#### ***4.3.2. Maintain Current Investment Cost and Security Costs, Schedule, Technical, and General Status Information***

The project sponsor collects actual information on the resources allocated and expended throughout the Control Phase. The project sponsor ensures that the investment still aligns with the agency mission and with the strategic, enterprise architecture, telecommunications, and eGovernment planning. The project sponsor compares the actual information collected to the estimated baselines developed during the Select



Phase and identifies root causes for any differences. The project sponsor reviews the security and telecommunications infrastructure analyses for accuracy and updates cost information based on actual acquisitions or additional items included since the Select Phase (see Appendices for Telecommunications and Cyber Security Infrastructure Guide). The project sponsor also maintains a record of any changes to the investment’s technical components, including hardware, software, security, and communications equipment. Technical component changes may trigger a new architecture review.

**4.3.3. Assess Investment Progress against Performance Measures using Earned Value Management (EVM) Methodologies**

As part of the periodic milestone reviews during the Control Phase, the project sponsor and IPT should determine whether there is still a need to continue the investment. The project sponsor and IPT determine if the project team is managing investment cost and schedule variance, mitigating future variances, and providing expectation of future performance based upon work accomplished to date. The project sponsor establishes whether current cost and schedule projections align with actual costs of investment implementation. If the case continues to be valid, the project sponsor and the IPT should screen the investment to assess its progress against planned cost, schedule, and technical baselines. The primary purpose of this assessment is to ensure that the investment is on schedule and to help identify issues or deficiencies that require corrective action. In some instances, where the business case may no longer exist or be as strong, or if significant changes to the cost, schedule, and technical baselines are required, it may also be necessary to re-evaluate the investment.

To begin the control screening stage, the project sponsor updates the documentation set with data on planning and risk information and investment performance, as detailed in Table 4-2.

**Table 4-2 Control Screening Stage Data Requirements**

Planning and Risk Information	Investment Performance
Investment description	Requirements changes
Project organization	Risk and mitigation list
Security review	Current project organization
Risk assessment and mitigation plan	Current estimate to complete
Investment budget estimates	Planned vs. actual costs, schedule, and staffing
Investment timeframe	Current deliverable assignments
Key milestone schedule	Updated technical approach
Identified tasks	Updated architecture
Resource identification	Security risk and mitigation
Work product and deliverable requirements	Telecommunications risk and mitigation
Technical approach and architecture	Investment action-items
Telecommunications plan	Quality assurance audits
Quality and configuration management activities.	Updated project plan
	Earned value analysis.

The project sponsor and the IPT next answer two basic questions for the OCIO and E-Board:

- Is there still a need for the investment?
- Does the investment meet and will it continue to meet its planned cost, schedule, technical, telecommunications, performance, and security baselines?



In order to answer these questions, the project sponsor and agency IPT needs to apply the Department's control screening criteria. If the investment cannot be assessed affirmatively against the control screening criteria, the investment should be re-evaluated.

By using the control screening criteria to answer the questions on whether the investment has met expectations, the IPT will be able to support the decision on whether or not to continue with the investment, and to identify any deficiencies and corrective actions needed. If corrective actions are needed, then updated investment information should be submitted to the OCIO in the form of a Corrective Action Report (CAR). The OCIO expects the project sponsor to determine whether the investment is meeting expectations by addressing these questions quarterly and updating the baseline status prior to the scheduled milestone reviews. Additionally, each year the investment should undergo a comprehensive control review. The results of these more detailed reviews are used by the E-Board during preparation of the Department's IT investment portfolio.

At the conclusion of control screening, the project sponsor and IPT determine whether the investment should be re-evaluated by considering the investment status (cost, benefit, schedule, risk) and the extent to which the investment is on target or varies from the planned baselines. The level of variance determines the criticality of continuing the investment. The CARs need to be submitted for investments that vary more than 10 percent from the original baseline in cost or schedule or if the investment risks or architectural alignment has deviated from baseline assumptions. Indicators of increased risk or architectural complexity include a high number of development change requests, reduced levels of stakeholder involvement and commitment, or significant deviation of architectural components from the baseline or security architecture. In addition, OCIO recommends that investments undergo Integrated or Independent Baseline Reviews (IBRs) for investments that are considering making baselines changes. Table 4-3 presents the framework that the project sponsor and IPT employ to recommend which IT investments should be re-evaluated.

**Table 4-3 Re-Scoring Framework**

	<b>I High Variance (&gt;10%)</b>	<b>II Medium Variance (5-10%)</b>	<b>III Low Variance (&lt;5%)</b>
Benefit			
Cost			
Schedule			
Risk (describe the type, level, impact, and probability of major risk factors)			
Architecture (describe the degree of consistency with the agency and Departmental baseline and planned EA IT accessibility and security architecture)			
<b>Recommended Action</b>	<b>Re-Scoring Strongly Recommended</b>	<b>Re-Scoring May Be Recommended</b>	<b>Re-Scoring Not Likely to Be Necessary</b>

The project sponsor and agency IPT should be judicious in determining whether an investment should be re-evaluated, since it can be a time-consuming and resource intensive activity. For example, an investment may vary dramatically from the original baseline in one category, but if the project manager has a sound plan to address the variance, re-scoring may not be needed. The OCIO should also consider the effect a dramatic variance in one category may have on another category but which may not be reflected in the assessment. For example, if an investment is deviating from original technical or architectural plans, a variance in the original cost is likely and should be reflected in the variance section of the control data sheet.



Additionally, the requirement for the investment may have been overtaken by events (e.g., architectural changes or regulatory changes) and the OCIO may determine if it is appropriate to re-evaluate the investment to determine whether it is still viable.

The project sponsor, functional manager, or the agency sponsor project manager should decide whether the investment should be re-evaluated based on the investment's status and identified variances. If needed, the project sponsor, assisted by the agency IPT, re-evaluates the investment and submits a revised assessment. The revised assessment is reflected in an investment Control Status Report, prepared by the project sponsor, functional manager, or agency sponsor, and includes recommended corrective actions for the OCIO to review. Re-evaluated investments may compete against other new initiatives as part of the Select Phase. As in the Select Phase, the Control Status Report and other factors will assist the E-Board in determining the investment's future status. It is expected that most investments will not need to be re-evaluated and will move forward for status review and decision.

#### ***4.3.4. Prepare Investment Review Submission Package***

Each investment in the Control Phase should be evaluated during the annual investment review. Key elements are listed below:

- Exhibit 300,
- Introduction and brief overview of the investment,
- Cost vs. baseline,
- Schedule vs. baseline,
- Performance vs. baseline,
- Validated/updated CBA,
- Risk,
- Security plan (see Appendix N—Cyber Security Infrastructure Guide for instructions on preparing security plan documentation),
- Enterprise Architecture,
- IT accessibility for persons with disabilities (Section 508)
- Enterprise Architecture, including IT accessibility for persons with disabilities (Section 508), and
- Telecommunications Plan (see Appendix O – Telecommunications Reference Manual for instructions on preparing telecommunications plan documentation).

Note that projects that provide insufficient business case documentation will not be included in the IT investment portfolio nor forwarded to OMB as part of USDA's IT request.

#### ***4.3.5. Review/Approve Investment Submission***

The Agency Head reviews the investment submission and requests the project sponsor, functional manager, and/or agency sponsor to update the package or to make changes as needed. The Agency Head then approves the investment submission and forwards it to the OCIO.

#### ***4.3.6. Review Investment and Recommend Appropriate Action***

The OCIO assesses the investment's progress by using a methodology similar to the procedures used during the Select Phase. The OCIO provides any comments and/or questions to the agency. The functional manager works with the OCIO to address the issues and furnish details as requested, and sends an updated package to the OCIO. The OCIO reviews the investment and determines whether the investment has experienced any of the following potential risk factors:



- A particular task is significantly behind schedule or over budget,
- Requirements and work scope are constantly changing,
- A particular task on the critical path was missed, with no workaround,
- A major milestone, decision, or work product was missed or will be significantly delayed,
- The investment's functionality does not adequately support the mission, business, or security functions,
- A major technical problem with the selected technology has surfaced as part of the change control process, and the problem resolution,
- Does not allow the investment to be developed as specified, and
- The organizational environment has changed and the current IT investment is not part of the solution for meeting the business needs.

OCIO determines whether to provide continued support to the investment and forwards its recommendations to the E-Board for the final decision.

Based upon the comments of the OCIO, the functional manager and IPT may be required to conduct an Alternatives Analysis for ongoing support, which should answer the following questions: Is the investment still feasible (i.e., is it still meeting its performance requirements?), Have performance gaps been identified and tracked, and has a mitigation plan been initiated to overcome the gaps?

#### *4.3.7. Make Final Investment Decisions*

Based on the decision of the E-Board the investment continues in the Control Phase or moves to the Evaluate Phase, as required. If the E-Board does not reach a decision, the investment may be moved back to the OCIO to be reassessed.

#### *4.3.8. Work with project sponsor to Develop Solutions*

Once the E-Board has approved an OCIO recommendation that the IT investment be accelerated, modified, or cancelled, the OCIO should work closely with the project sponsor to develop a solution to any problems or issues resulting from the decision. The project sponsor, in coordination with the OCIO, should address the results or changes of the project risk assessment for the investment in its transition from Select to Control Phase. Plans should be identified to eliminate, mitigate or manage identified risks (e.g., financial, acquisition and technical). The Control Status Report should be the source for identifying the primary issues resulting from the decision. Once the OCIO and project sponsor have agreed to the corrective actions, they discuss and document the criteria that will be used to resume funding. This documentation should be maintained as part of the investment's record and the results should be evaluated during the next annual Control Phase review or during the Evaluate Phase. Prior to the next scheduled review date, the project sponsor should update the investment information and initiate another preliminary assessment. This formal monitoring of investment progress, and the determination of risks and returns, should continue throughout the Control Phase.

## 4.4 EXIT CRITERIA

Prior to exiting the Control Phase, investment owners must have:

- Completed all the investment development, modernization and enhancement stages and
- Obtained OCIO approval to enter the Evaluate Phase.



## CHAPTER 5—EVALUATE PHASE

### 5.1 PURPOSE

The purpose of the Evaluate Phase is to compare actual to expected results after an investment is fully implemented. This is done to assess the investment’s impact on mission performance, to identify any investment changes or modifications that may be needed, and to revise the investment management process based on lessons learned. As noted in GAO’s *Assessing Risks and Returns: A Guide for Evaluating Federal Agencies’ IT Investment Decision-Making*, “the evaluation phase ‘closes the loop’ of the IT investment management process by comparing actual costs and schedules against estimated cost and schedules in order to assess the investment’s performance and to identify areas where decision-making can be improved.”

The Evaluate Phase focuses on the following outcomes:

- Determining whether the IT investment met its performance, cost, and schedule objectives, and
- Determining the extent to which the IT capital investment management process improved the outcome of the IT investment.

The outcomes are measured by evaluating performance data by comparing actual to projected performance and by conducting a Post Implementation Review (PIR) See Appendix J The results from these activities will determine the investment’s efficiency and effectiveness in meeting performance and financial objectives. The PIR includes a methodical assessment of the investment’s costs, performance, benefits, documentation, mission, and level of stakeholder and customer satisfaction. The PIR is conducted by the agency, and the results are reported to the OCIO and E-Board to provide a better understanding of investment performance and to assist the project sponsor in directing any necessary investment adjustments. Additionally, results from the Evaluate Phase should be fed back to the Pre-Select, Select, and Control Phases as lessons learned.

### 5.2 ENTRY CRITERIA

The Evaluate Phase begins once an investment has been implemented and becomes operational or goes into production. Any investment cancelled prior to going into operation must also be evaluated. Prior to entering the Evaluate Phase, investments must have:

- Completed all the investment development, modernization and enhancement stages, and
- Obtained OCIO approval to enter the Evaluate Phase.

### 5.3 PROCESS

In the Evaluate Phase, investments move from implementation or termination to a PIR and the E-Board’s approval or disapproval to continue the investment (with or without modifications). From the time of implementation, the investment should be continually monitored for performance, outages, maintenance activities, costs, resource allocation, defects, problems, and changes. Investment stability should also be periodically evaluated. During the PIR, actual performance collected should be compared to performance projections made during the Select Phase. Then lessons learned for both the investment and the CPIC process should be collected and fed back to prior CPIC phases.

Table 5-1 provides a summary of the Evaluate Phase process, as well as the individual(s) and/or group(s) responsible for completing each process step. Each step is detailed in the following the table.



**Table 5-1 Evaluate Phase Process Flow**

Process Step	Responsible Individual(s) or Group(s)
Conduct PIR and present results.	Project sponsor
Prepare annual investment review submission package.	Project sponsor
Review/approve investment submission.	Agency Head
Review investment's PIR results and recommend appropriate action.	OCIO
Make final investment decisions.	E-Board
Evaluate IT capital investment management process.	Agency OCIO E-Board

### 5.3.1. Conduct PIR and Present Results

The PIR's timing is usually determined during the Control Phase. The PIR for a newly deployed investment generally should take place approximately six months after the investment is operational. In the case of a terminated investment, it should take place immediately because the review will help to define any "lessons learned" that can be factored into future IT investment decisions and activities. In either case, before starting the PIR, the project sponsor should develop a PIR plan that details the roles, responsibilities, and investment start and end dates for all PIR tasks.

At the heart of the PIR is the IT investment evaluation in which the project sponsor looks at the impact that the investment has had on customers, the mission and program, and on the technical capability. As a result of the PIR, the project sponsor provides an IT investment evaluation data sheet to the OCIO (see Figure 5-1).

The IT investment evaluation should focus on three areas:

- **Impact to stakeholders**—The project sponsor should measure the impact the investment has on stakeholders through user surveys (formal or informal), interviews, and feedback studies. The evaluation data sheet should highlight the results.
- **Ability to deliver the IT performance measures (quantitative and qualitative)**—The investment's impact to mission and program should be carefully evaluated to determine whether the investment delivered expected results. This information should be compared to the investment's original performance goals. This evaluation and comparison should also include a review of the investment's security and telecommunications infrastructure performance measures.
- **Ability to meet baseline goals**—The following areas should be reviewed to determine whether the investment is meeting its baseline goals:
  - Cost—Identify actual lifecycle costs to date;
  - Return—Identify actual lifecycle returns to date;
  - Funding Sources—Identify actual funds received from planned funding sources;
  - Schedule—Identify original baseline and actual investment schedule;
  - Architectural Analysis—Determine whether the investment supports the Department's approach to enterprise architecture standards or determine what modifications are required to ensure investment compliance to the original architectural baseline;



- IT Accessibility Analysis—Determine whether the investment addresses accessibility for persons with disabilities, how the requirements were managed, and impact on the architecture;
- Telecommunications Analysis—Determine whether the investment adhered to the Department’s telecommunications standards and performance measures or what modifications are required to ensure investment compliance outside the original baseline (for more information see Appendix O—Telecommunications Reference Manual).
- Risk Analysis—Identify investment risks and how they were managed or mitigated, as well as their effects, if any; and
- Systems Security Analysis—Identify investment security risks and how they were managed or mitigated. Also identify security performance measures to be evaluated. (For more information see Appendix N—Cyber Security Infrastructure Guide.)

**Figure 5-1 IT Investment Evaluation Data Sheet**

SAMPLE INVESTMENT EVALUATION SHEET				
General information				
Title:				
Description:				
project sponsor:				
OMB Code:				
PIR Conducted By:				
Date of PIR:				
Performance Measures				
Item	Baseline	Actual	Variance	Comments
Quantitative				
Financial				
Non-Financial				
Baseline Status				
Item	Baseline	Actual	Variance	Comments
Lifecycle Cost				
Lifecycle Return				
Schedule				
Architectural Analysis				
Architectural Assessment				
IT Accessibility Analysis				
IT Accessibility Assessment				
Telecommunications Analysis				
Telecommunications Assessment				
Risk Analysis				
Risk Assessment				
Security Analysis				
System security risk assessment/mitigation review. Additional mitigation strategies and counter measures (if needed).				
Stakeholder Assessment				
General Comments				
Lessons Learned				
Project Management Assessment				
Technical Assessment				



After the post-implementation data has been collected and reviewed, the project sponsor should prepare and make a formal PIR presentation to the OCIO. (For investments with a variance of greater than 10 % from the original baseline, the investment may need to be re-evaluated in light of changing business, organizational, financial, or technical conditions; these new assessments are included in the PIR.) The presentation should summarize the investment evaluation and provide recommendations for presentation to the E-Board.

### *5.3.2. Prepare Annual Investment Review Submission Package*

Each investment in the Evaluate Phase should be assessed during the annual investment review. To prepare for the annual investment reviews, the project sponsor should develop a package of materials that address the PIR strategic investment criteria, the strategic investment criteria for security and infrastructure/architecture. The supporting investment documentation should include:

- OMB Exhibit 300,
- Introduction and brief overview of the investment,
- PIR,
- Validated/updated CBA,
- Security Plan (see Appendix N—Cyber Security Infrastructure Guide for instructions on preparing security plan documentation),
- Enterprise Architecture Plan, including IT accessibility for persons with disabilities (Section 508), and
- Telecommunications Plan (see Appendix O—Telecommunications Reference Manual for instructions on preparing telecommunications plan documentation).

Note that projects that provide insufficient business case documentation will not be included in the IT investment portfolio nor forwarded to the Office of Management and Budget as part of USDA's IT request.

### *5.3.3. Review/Approve Investment Submission*

The Agency Head reviews the investment submission and requests the project sponsor, functional manager, and/or agency sponsor to update the package or make changes as needed. The Agency Head then approves the investment submission and forwards it to the OCIO.

### *5.3.4. Review Investment's PIR Results and Recommend Appropriate Action*

The OCIO reviews the PIR results and provides any comments and/or questions to the agency. The functional manager works with the OCIO to address the issues and furnish details as requested, and sends an updated package to the OCIO. The OCIO reviews the investment and makes a recommendation that the investment's project sponsor take one of the following actions:

- Continue the investment as planned,
- Terminate the investment, or
- Modify the investment as recommended.

### *5.3.5. Make Final Investment Decisions*

The E-Board reviews OCIO's recommendation and makes the final investment decision. The resulting decision is then relayed by letter to the Under/Assistant Secretary, Agency Head, and project sponsor.



### 5.3.6. Evaluate IT Capital Investment Management Process

OCIO may also want to revise the CPIC process based on PIR results. A summary of the PIR activities and lessons learned should then be presented by the OCIO to the E-Board.

Following the completion of each phase, the OCIO and agencies document the strengths and weaknesses of the CPIC process. The information gathered in this evaluation should be used to improve the CPIC process, by maintaining and improving the factors associated with improved investment success rates and by revising or removing the non-value added steps. Agencies can use Table 5-2 to record observations and forward them to the OCIO as necessary. Agencies can add appropriate comments as deemed necessary. The following are examples of things agencies should consider when addressing each phase:

- Investment Development
  - Documentation set
  - General/descriptive information
  - Financial information
  - Security/ISTA models
- Screen
  - Viability criteria
  - Viability considerations
  - Investment designation
- Evaluate
  - Mission criteria
  - Risk
  - ROI
- Pre-Select
  - Agency process
  - OCIO review
  - ECCB recommendation
  - E-Board endorsement
- Select
  - Agency process
  - OCIO review
  - ECCB recommendation
  - E-Board endorsement
  - Security review
- Control
  - Milestone review format
  - OCIO/corrective actions
  - Security analysis
- Evaluate
  - PIR content
  - PIR execution
  - PIR recommendations
  - Security performance
- Steady-State (See Chapter 6 for a complete discussion of this phase)
  - Investment assessment
  - Technology assessment
  - Operations and Maintenance (O&M) review



To capture lessons learned, the project sponsor should develop a management report and submit it to the OCIO. All failures and successes should be collected and shared to ensure that managers developing future investments learn from past experiences. A high-level assessment of management techniques, including organizational approaches, budgeting, acquisition, and contracting strategies, tools and techniques, and testing methodologies, is essential to establish realistic baselines and to ensure the future success of other IT investments. The management report, including lessons learned, should follow the outline provided in Figure 5-2.

To support this process, the OCIO schedules formal and informal sessions to review the management report and collect additional information about the overall effectiveness of the process. The OCIO works with the project sponsor and Agency Portfolio Managers to conduct trend analyses of the process, validate findings, and adjust the process accordingly. The OCIO also sponsors workshops and discussion groups to improve the CPIC process and ensure lessons learned are applied throughout the Department. The OCIO then works with the agency to develop, recommend, and implement modifications to improve the process.

### 5.4 EXIT CRITERIA

Prior to exiting the Evaluate Phase, investment owners must have:

- Conducted a PIR,
- Established an Operations and Maintenance (O&M) and operational performance review schedule, and
- Obtained OCIO approval to enter the Steady-State Phase.

**Table 5-2 IT Process Evaluation Data Sheet**

	<u>Investment Development</u>	<u>Screen</u>	<u>Evaluate</u>	<u>Pre-Select</u>	<u>Select</u>	<u>Control</u>	<u>Evaluate</u>	<u>Steady-State</u>
Was each phase conducted at the appropriate time in the process?								
Was the data content sufficient to move forward to the next phase in the process?								
Were there enough resources (i.e., people) allocated for each phase in the process? Were the right types of people and expertise involved?								
Was there an acceptable level of information flow?								
List suggested corrective actions for any phase in the process.								
<u>Comments:</u>								



**Figure 5-2 Investment Management Report Data Sheet**

<b>INVESTMENT MANAGEMENT REPORT</b>
Investment Title:
project sponsor:
Date of PIR:
Background (Description of Project)
Management Approach
Organizational Structure
Resources
Acquisition Strategy
Contracting Strategy
Security Strategy
Documentation
Technical Approach
Architecture (description, adherence to USDA EA or ISTA, and IT accessibility requirements, security, telecommunications, and architecture standards)
Development (if applicable)
Testing
Lessons Learned
List of lessons learned
Recommended best practices



**CHAPTER 6—STEADY-STATE PHASE**

**6.1 PURPOSE**

The Steady-State Phase provides the means to assess mature investments, ascertain their continued effectiveness in supporting mission requirements, evaluate the cost of continued maintenance support, assess technology opportunities, and consider potential retirement or replacement of the investment. The primary review focus during this phase is on the mission support, cost, and technological assessment. Process activities during the Steady-State Phase provide the foundation to ensure mission alignment and support for investment and technology succession management.

**6.2 ENTRY CRITERIA**

Prior to entering the Steady-State Phase, investment owners must have:

- Conducted a PIR,
- Established schedules for operations and maintenance (O&M), eGovernment strategy, and operational analysis reviews. See Appendix D, and
- Obtained OCIO approval to enter the Steady-State Phase.

**6.3 PROCESS**

During the Steady-State Phase, mission analysis is used to determine whether mature investments are optimally continuing to support mission and user requirements. The sponsors should also conduct an operational analysis review every three years, or whenever there is a significant change to the investment to ensure that they are taking operational advantage of any new IT assets being acquired (see Appendix D for more the form to complete when conducting an operational analysis review).

Table 6-1 provides a summary of the Steady-State Phase process, as well as the individual(s) and/or group(s) responsible for completing each process step. Each step is detailed following the figure.

**Table 6-1 Steady-State Process Flow**

Process Step	Responsible Individual(s) or Group(s)
Analyze mission.	Project sponsor Agency sponsor
Assess user/customer satisfaction.	Project sponsor
Assess technology.	Project sponsor
Conduct O&M, eGov strategy, and operational analysis (as is necessary)	Project sponsor Agency sponsor
Prepare investment review submission package.	Project sponsor
Review/approve investment submission.	Agency Head
Review investment and recommend appropriate action.	OCIO
Make final investment decisions.	E-Board

**6.3.1. Analyze Mission**

The project sponsor and agency sponsor conduct a mission analysis to determine if the investment is continuing to meet mission requirements and needs and supports the USDA’s evolving strategic direc-



tion. The mission analysis process identified in the Pre-Select Phase and the Mission Needs Statement provide a framework to assist in the mission analysis for the Steady-State Phase. This includes an analysis of the performance measures accomplished.

### *6.3.2. Assess User/Customer Satisfaction*

The project sponsor should assess user and customer satisfaction with, and acceptance and support for, the existing investment. There are several means to conduct the user/customer assessment, including conducting a user/customer survey, assessing comments and user/customer community inputs, or analyzing usage trends. Some or all of these activities may be beneficial in determining continued support for the investment, additional user/customer need, or improvement opportunities. This information should be used to assess and update the investment's performance measures.

### *6.3.3. Assess Technology*

The project sponsor should assess the continuing ability of the investment to meet the investment's performance goals. The project sponsor should also assess the technology and determine potential opportunities to improve performance, reduce costs, support the USDA enterprise architecture, and to ensure alignment with USDA's strategic direction. The project sponsor should monitor and maintain the existing technology and determine technology refresh schedules. An assessment of security and telecommunications should also be supplied.

### *6.3.4. Review O&M*

The project sponsor and agency sponsor should conduct an O&M review to assess the cost and extent of continued maintenance and upgrades. The O&M review should include a trend analysis of O&M costs and a quantification of maintenance releases. Costs for government full-time equivalents (FTEs) should be included in all cost estimates and analysis.

If not conducted to date, the project sponsor and agency sponsor should conduct an eGovernment strategy review of the investment to assess the extent to which the investment should be modified or updated to address the eGov goals (see also Appendix L). An eGovernment strategy review should also be conducted at a minimum of every three years, or whenever there is a significant change to the investment.

### *6.3.5. Prepare Investment Review Submission Package*

In preparation for the annual investment review, the project sponsor should update actual costs and benefits for the investment and prepare the Steady-State submission package. The supporting investment documentation should be:

- OMB Exhibit 300,
- Introduction and brief overview of existing investment,
- Mission Analysis Summary,
- User/Customer Assessment Summary,
- Performance Measures Assessment,
- Technology Assessment,
- eGovernment Strategy Review or Operational Analysis Review, and
- Updated CBA.

Note that projects that provide insufficient business case documentation will not be included in the IT investment portfolio nor forwarded to the Office of Management and Budget as part of USDA's IT request.



### *6.3.6. Review/Approve Investment Submission*

In this phase, the Agency Head reviews the investment submission and requests the project sponsor, functional manager, and/or agency sponsor to update the package or make changes as needed. The Agency Head then approves the investment submission and forwards it to the OCIO.

### *6.3.7. Review Investment and Recommend Appropriate Action*

The OCIO reviews the investment submission with an emphasis on strategic mission alignment, cost, technology succession, and performance measures. The OCIO provides any comments and/or questions to the agency. The functional manager works with the OCIO to address the issues and furnish details as requested, and sends an updated package to the OCIO. The OCIO reviews the investment to determine whether it can optimally continue to support mission/user requirements and the Department's strategic direction. The OCIO determines whether the investment should continue in the Steady-State Phase, return to a previous phase due to the extent of investment modifications, be replaced, or be retired and then sends its assessment and recommendations to the E-Board.

### *6.8.8. Make Final Investment Decisions*

The E-Board's responsibility is to approve or disapprove the OCIO's recommendation and to direct the project sponsor on how to proceed.

## 6.4 EXIT CRITERIA

Prior to exiting the Steady-State Phase, investment owners must have obtained OCIO direction on whether to dispose, retire, or replace the investment.

## 6.5 SPECIAL CASES: DEVELOPMENT ACTIVITY IN STEADY-STATE INVESTMENTS

Some agencies in the past have spent significant amounts of development money (i.e., Development/modernization/enhancement or DME funding) for enhancements and improvements to large Steady-State investments. While this may be required to ensure that evolving business needs are met, all significant new investment activity is subject to the investment review process per this Guide. Indicators of significant new investment activity include Steady-State investments that have one or more of the following criteria:

- 25% or more of their budget year (BY) funding request is DME,
- 25% or more of their BY funding request is for new functionality,
- Significant changes in their performance goals that would appear to require new IT support,
- Had DME funding rising as a percent of their budget in the last few years, or
- New legislative requirements imposed upon them that will require significant development activity.

OCIO analysts will review Steady-State investments on an ongoing basis. Based on these reviews, the analysts may contact the agency portfolio and project managers about these investments. Based on the discussion with the agency officials and the analysts' review, OCIO may request that:

- The DME portion of the investment be spun off into a separate stand-alone major investment; or
- The DME portion of the investment be spun off into a separate stand-alone non-major investment; or
- The whole investment be sent back through the CPIC cycle; or
- There should be no change.

**CHAPTER 7—ASSESSING INVESTMENT PROPOSALS**

The following pages provide a summary of the criteria to be used by OCIO and the E-Board during the annual investment review cycle. Per Figure 7.1, each IT investment will be evaluated based on two sets of criteria:

- 1) The OMB Exhibit 300 rating factors (see Appendix C), and
- 2) An analyst review of the submitted documentation per this guide. The USDA CPIC documents required for a given investment depend upon the CPIC phase of that investment. The chapters above describe the documentation requirements for each of the five USDA CPIC phases.

**Figure 7-1 – CPIC Documentation Requirements**

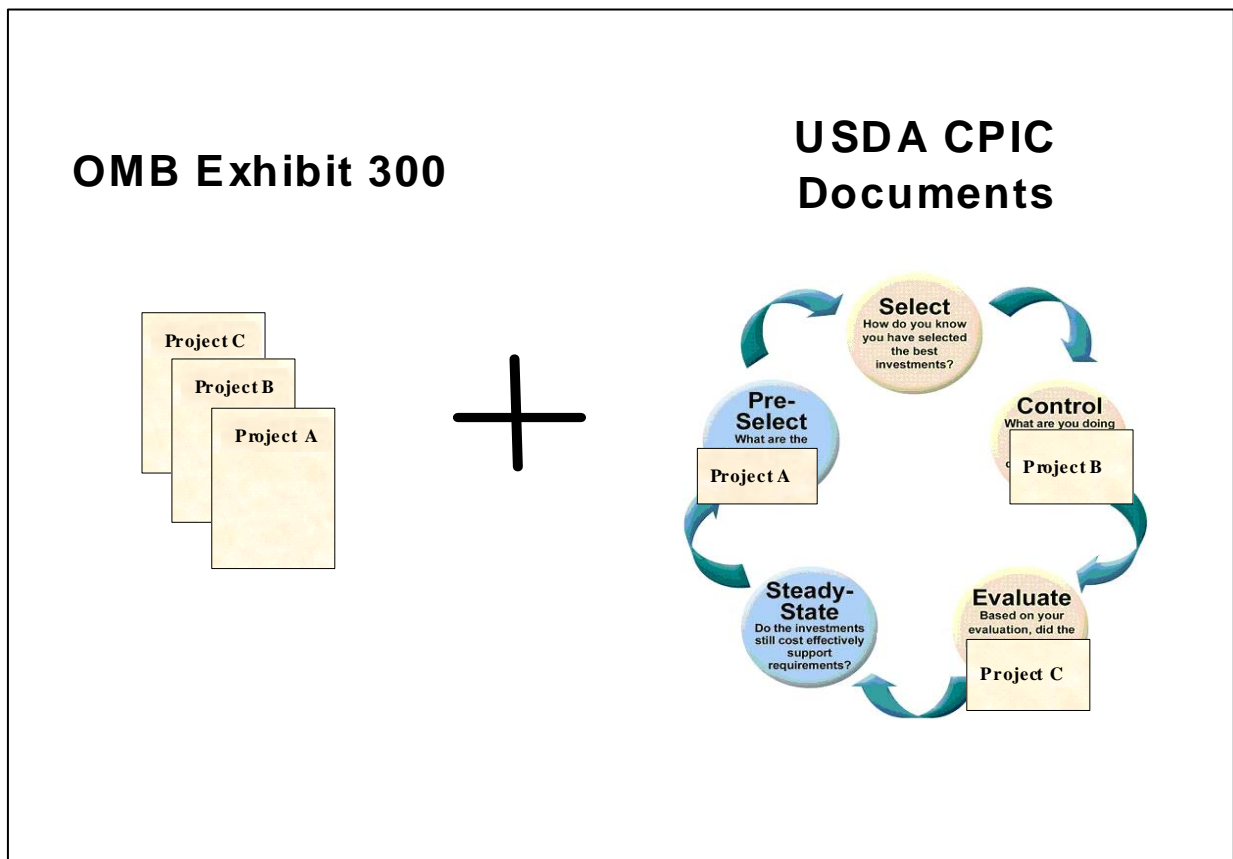


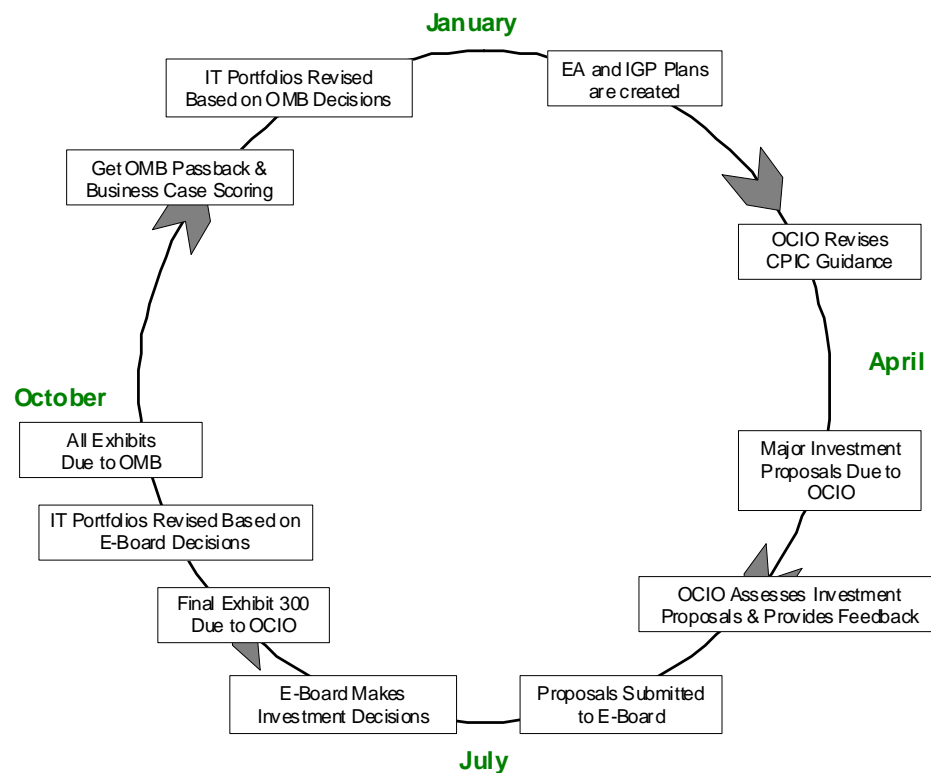
Table 7-2 identifies the OCIO analyst associated with each USDA mission area.

Figure 7-3 illustrates the typical annual USDA capital planning cycle.

**Table 7-2 – OCIO CPIC Analysts<sup>2</sup>**

USDA Mission Area or Agency	OCIO Analyst (phone number)
Farm Service Agency, Risk Mgmt Agency	Alesia Webster (202-720-6898)
Food, Nutrition, and Consumer Service	Naomi Gumbs (202-720-3745)
Food Safety	Alesia Webster (202-720-6898)
Forest Service	Naomi Gumbs (202-720-3745)
Natural Resources Conservation Service	Naomi Gumbs (202-720-3745)
Research, Education and Economics	Hien-Hoa Nguyen (202-720-5786)
Rural Development	Naomi Gumbs (202-720-3745)
Marketing and Regulatory Programs	Eva Desiderio (202-720-8918)
Foreign Ag Service	Lee Farquharson (202-720-9080)
Office of Civil Rights	Hien-Hoa Nguyen (202-720-5786)
Office of Chief Economist	Hien-Hoa Nguyen (202-720-5786)
DA and remaining staff offices	Eva Desiderio (202-720-8918)

**Figure 7-3 – Typical Annual CPIC Cycle**



<sup>2</sup> This table is subject to change according to available staff resources in the OCIO Capital Planning Division.

## APPENDICES

- A. **Board Procedures**—Provides the E-Board charter that includes its roles and responsibilities.
- B. **CPIC Process Checklist**—Provides a checklist of the process steps investments must complete for each CPIC phase.
- C. **OMB Exhibit 300 Assessment**—Note: This is empty since OMB has not yet updated their scoring criteria for the new FY2010 Exhibit 300.
- D. **Operational Analysis Review**—Provides a form to use that defines the basic elements needed for an operational analysis review.
- E. **Cost-Benefit Analysis**—Provides guidance on completing a cost-benefit analysis (CBA).
- F. **Risk Assessment**—Provides guidance on conducting a risk assessment for IT capital planning.
- G. **Performance Measurement**—Provides guidance on developing performance measures for IT investments.
- H. **Project Management**—Provides guidance on managing IT investments.
- I. **Earned Value Management**—Provides guidance on conducting earned value analysis.
- J. **Post-Implementation Reviews**—Provides guidance on conducting a post-implementation review (PIR).
- K. **Mission Needs Statement**—Provides a template for evaluating the mission need(s) for a new IT investment.
- L. **eGovernment**—Provides guidance on eGovernment information to support the investment.
- M. **Enterprise Architecture**—Provides guidance on matter related to the USDA enterprise architecture.
- N. **Cyber Security Infrastructure Guide**—Provides guidance concerning cyber security information to support the investment.
- O. **Telecommunications Reference Manual**—Provides guidance on telecommunications information to support the investment.
- P. **OMB Requirements**—Provides a summary of the data required for OMB using CIMR.
- Q. **Quarterly/Milestone Control Review Checklist**—Lists the critical areas discussed by the control review team during each quarterly/milestone review.
- R. **Glossary of Terms and Acronyms**—Provides definitions for terms and acronyms used throughout this document.
- S. **References**—Provides a list of references used to develop this document.
- T. **Assessment of Non-major Investments**—Provides the basis for the USDA assessments of non-major investments.