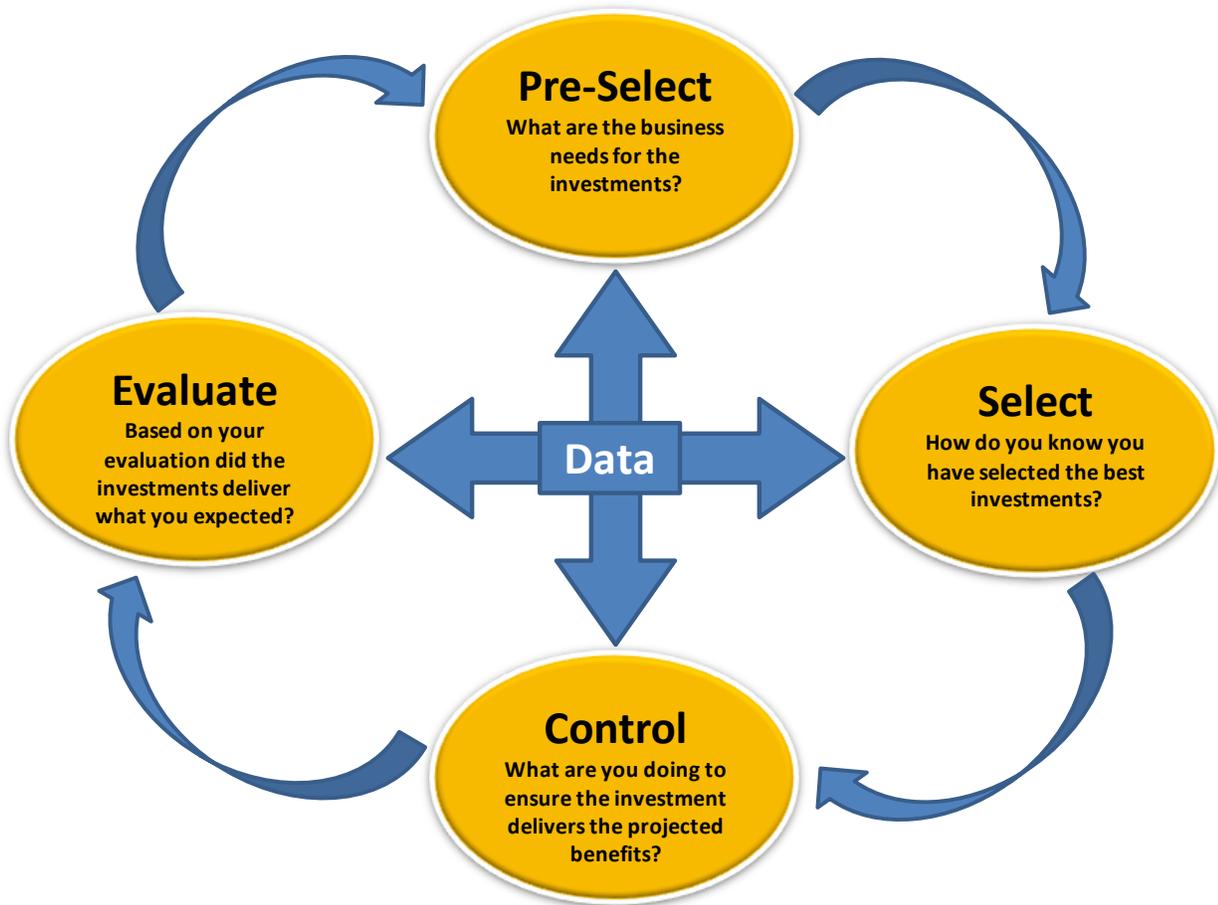


# USDA Information Technology Capital Planning and Investment Control Guide





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## Revision History

Version	Date	Author	Description
1.0	05/01/2013	CP&IGD	Updated Guide to reflect current guidance. This version supersedes all previous versions of a USDA Capital Planning and Investment Control Guidebook.



## 1 EXECUTIVE SUMMARY

In 2014, the United States Department of Agriculture (USDA) plans to invest over \$2.5 billion in information technology (IT), as it relates to assets and services, cloud computing, shared services, and other commodity IT. The success of these IT investments directly influences the ability of organizations within USDA to execute business plans and fulfill missions.

### 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).

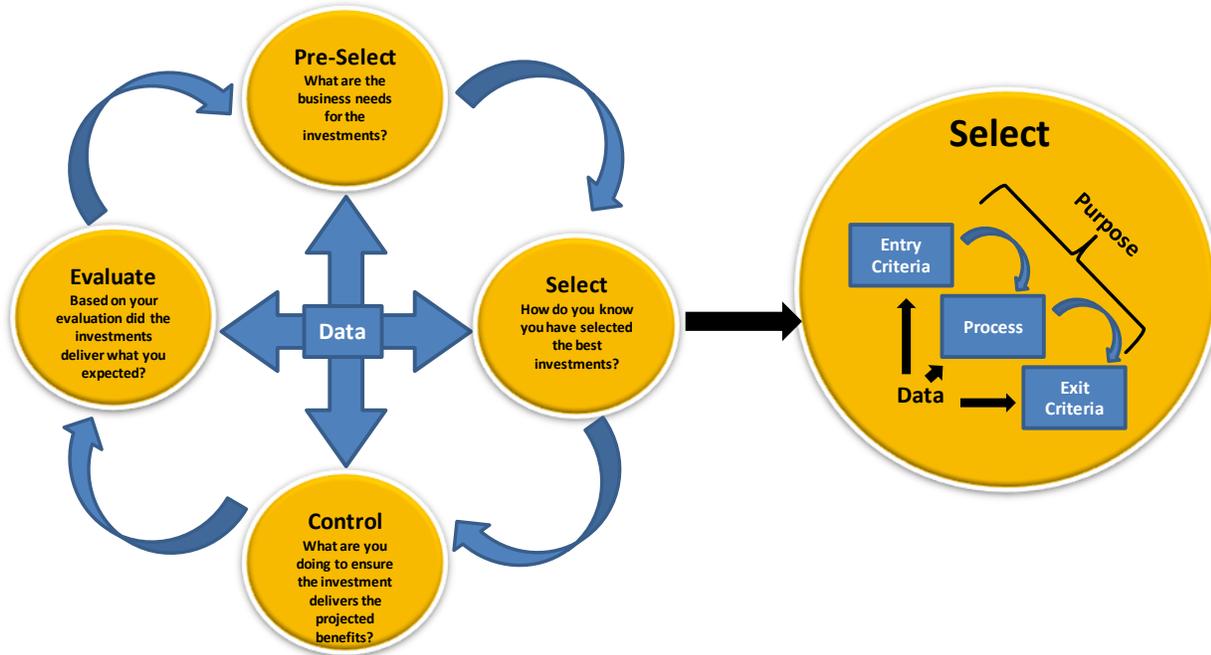
At the highest level, the CPIC process is a circular flow of USDA's IT investments through four sequential phases. As shown in Figure ES-1, these phases are:

- 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 initiative proposal.
- 2) **Select Phase** — Investment analyses are conducted and the members of the Executive Information Technology Investment Review Board (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, consistent and cost effective manner.
- 4) **Evaluate Phase** — Actual results of the implemented projects are compared to planned results to assess investment performance. Once investments are implemented, actual versus expected results are evaluated to: (1) assess the investment's impact on strategic performance; (2) identify any changes or modifications to the investment that may be needed; and (3) revise the investment management processes based on lessons learned, self-assessments and benchmarking.

Each of these four 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 Select Phase is used as an example of how phases are sub-divided into the common elements.



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



For further information on IT investment management or USDA's CPIC process, please see the USDA Capital Planning and IT Governance Division SharePoint site at: <https://ems-team.usda.gov/sites/OCIO/TPAE/ITM/SitePages/Home.aspx>



## 2 INTRODUCTION

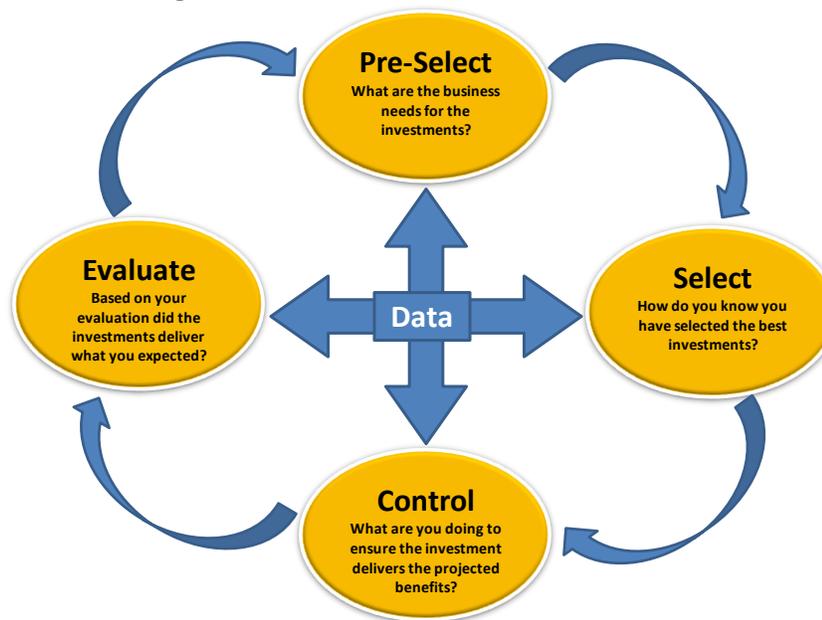
### 2.1 PURPOSE

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.

The CPIC process 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 four phases: 1) Pre-Select, 2) Select, 3) Control, and 4) Evaluate (See Figure 2-1.) This on-going evaluation process ensures that each investment’s objectives support the business and mission needs of the Department.

Through sound management of these investments, the E-Board 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 2-1. CPIC Information and Data Flow



A mature CPIC process yields numerous benefits to investment managers, key stakeholders, and program and departmental executives. Benefits include:

- Increased capability to achieve mission and business objectives
- Clear alignment of proposed investments with IT strategic goals and objectives, as specified in an Information Resources Management (IRM) Strategic Plan
- Support and integration with Enterprise Architecture (EA) efforts
- Forum for measuring performance and net benefits for dollars invested
- Framework to balance potential benefits against costs and risk
- Protocol for setting IT priorities and making appropriate IT resource shifts based on priorities



There are legislative and regulatory drivers for implementing CPIC and many legislative reforms emphasize the need for Federal Agencies to significantly improve how they plan, select, fund, control, and evaluate IT investments. The Clinger-Cohen Act requires Federal Agencies to focus on the results achieved through IT investments while concurrently streamlining their IT acquisition process. It also mandates that agency heads implement a process for maximizing the value of IT investments, as well as assess and manage the risks of IT acquisitions, and quantitatively benchmark the performance of IT activities against comparable processes and organizations in the public or private sector. To provide agencies with specific guidance on implementing the Clinger-Cohen Act, OMB regularly revises Circular A-130, Management of Federal Information Resources. The revisions apply to the sections of A-130 concerning information systems and IT management. It requires agencies to follow the provisions of the Clinger-Cohen Act and OMB Circular A-11, which involve the acquisition, use, and disposal of IT as a capital asset (Ex. 300).

## 2.2 SCOPE

All IT investments within USDA must comply with this CPIC guidance. However, not all IT investments must be reviewed by the E-Board. Only those that are considered to be major investments (see below for definition) 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 IT portfolio, and create associated thresholds.

### 2.2.1 Defining Major IT Investments

Major IT investments are considered to be strategic for the Department and will be individually reported to OMB via an Exhibit 300 and to the public on the Federal IT Dashboard. They are also included in the E-Board executive portfolio.

Per OMB's guidance on Exhibit 300, Major IT investments refers to an IT investment requiring special management attention because of its importance to the mission or function to the government; significant program or policy implications; high executive visibility; high development, operating, or maintenance costs; unusual funding mechanism; or defined as major by the Department's CPIC process.

In addition to OMB's definition, USDA defines IT investments as major if they meet at least one of the following criteria:

- Total lifecycle costs greater than \$50 million.
- Lifecycle costs for the investment's Development/Modernization/Enhancement (DME) funding is \$20 million or more.
- The investment is a financial investment with costs greater than \$500,000 per year.
- 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 differ from or impact on the Department infrastructure, architecture, or standards guidelines
  - Have significant multiple-agency funding.

### 2.2.2 Non Major Investments

The Non-Major investments that are in the USDA portfolio are required to follow the Non-major reporting process throughout the entire CPIC process (see Appendix B for detailed guidance).



## 2.3 ROLES AND RESPONSIBILITIES

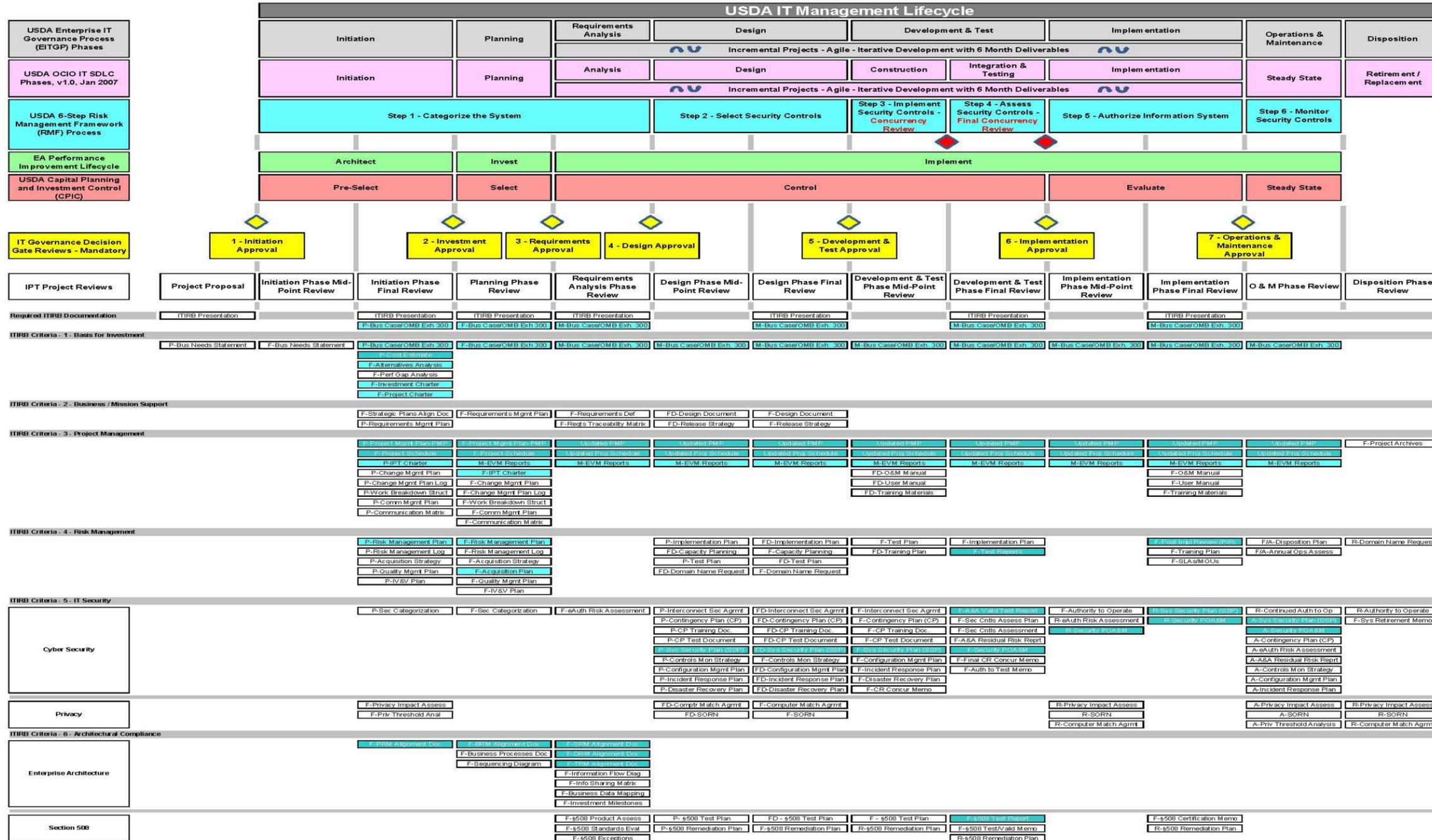
The following decision-making bodies and personnel have been assigned the responsibilities listed below:

- **E-Board** —USDA’s executive decision making authority for IT investments.
- **OCIO Capital Planning & IT Governance Division (CP&IGD)**—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. Additional detailed responsibilities include (but not limited to):
  - Receive and review investment business cases against pre-determined criteria to determine whether they meet minimum viability and investment characteristic requirements. (The division reviews investment business case summaries and assesses architectural compliance, redundancies, and opportunities for collaboration. It works with project managers when additional information and clarification is needed).
  - Meet with investment managers on a monthly basis to review status of investments and recommend corrective action as warranted
  - Actively seek to identify "at risk" investments, act to mitigate risks or correct problem areas, and present significant issues to the IT Council for consideration
  - Monitor major IT investments for progress against projected cost, schedule, and performance goals
  - Create user guides for all CPIC processes
  - Oversee the preparation of documents identified in the Department's CPIC Guide
  - Provide recommendations and support materials on IT investments
  - Develop IT management policies and directives
- **Agency Head**—Responsible for signing CPIC documentation before submission to OCIO.
- **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.
- **Program/Project Manager**—Responsible for successful management and completion of one or more IT investments/projects. Specific responsibilities include (but not limited to):
  - Ensure that IT investments align with the Department's EA
  - Initiate Pre-Select and Select documentation
  - Manage the investment throughout its life cycle
  - Participate in monthly IT Dashboard reporting quarterly control reviews as required
  - Oversee the investment's progress, including cost, schedule, and performance
  - Report on the investment's progress at each life cycle milestone
  - Prepare progress and status reports as requested
  - Document lessons learned once projects (or useful segments) are implemented
  - Participate in PIRs
  - Perform ongoing operational analysis consistent with the life cycle
- **Agency 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 program manager, or the portfolio manager depending on the agency’s internal CPIC process.
- **Agency Capital Planning and Investment Control (CPIC) Administrator**—Responsible for serving as the primary interface for capital planning between the OCIO and the investment owner.
- **Agency Architect**— Responsible for ensuring the alignment of investments to the USDA Enterprise Architecture (EA) Roadmap, and agency specific architectures in an effort to attain optimized performance from USDA investments.

## 2.4 INTEGRATION WITH OTHER IT MANAGEMENT PROGRAMS

The success of the CPIC program is dependent upon its integration and interaction with other IT management programs, including EA, Security, Budget Formulation, and effective Project Management. The CPIC process does not exist in isolation and is aligned to the Integrated IT Governance Framework. The figure below shows the approximate relationship between steps in the CPIC process and other related IT management processes within USDA. A guide of the Integrated IT Governance Framework can be requested from the Capital Planning and IT Governance Division.

**USDA Integrated Governance Framework Phases - Detailed Summary**  
Draft Governance Deliverables by Lifecycle Phase



**NOTES:**  
 A = Annually Review and Revise  
 F = Final  
 FD = Final Draft  
 M = Monthly Update  
 P = Preliminary  
 R = Review and Revise  
 OMB Exh. 300 Requirement  
 OMB Technical Requirement

NOTE: Required artifacts appear to the LEFT of the corresponding Governance Decision Gate or Project Review.



### 2.4.1 Enterprise Architecture

The Enterprise Architecture (EA) is the modernization blueprint for IT investments. It captures the current “as-is” architecture and develops the anticipated target architecture for USDA. The IT department works with program areas to define business needs and problems that may warrant a technical solution, and the process engineering, technical, and data requirements needed to support the identified technical solution. In addition, the IT department assesses whether the identified technical solution aligns with the USDA Enterprise Transition Strategy, and determines whether the identified technical solution is duplicative of an existing investment or federal line of business. In addition, the EA assesses the USDA IT portfolio and identifies performance gaps, opportunities to consolidate, and opportunities to drive business management improvements across the Department.

### 2.4.2 IT Information Security & Privacy

IT Security and Privacy of information is an integral part of all phases of the CPIC process. IT investments must comply with Federal Information Security Management Act (FISMA) requirements as well as with OMB and NIST mandates. Systems that collect, use, and maintain personally identifiable information (PII) must demonstrate compliance with the Privacy Act of 1974 and Section 208 of the E-government Act, which requires a Privacy Impact Assessment (PIA) to be conducted on systems that collect, use, and maintain PII.

### 2.4.3 Project Management

Effective project management is a critical component of a successful CPIC program. Investments are often dependent upon one or more projects to close the identified performance gap. Changes to an investment impact its projects and changes to projects impact their investment. As a result, there needs to be a tight partnership between the business area and IT for any investment, regardless of size.

### 2.4.4 Budget Formulation

A fundamental part of the CPIC process is the preparation of investment justifications as part of the Department’s budget. The CPIC Administrator works with the budget office to define the IT investment portion of USDA’s budget preparation schedule and guidance. In addition, the CPIC Administrator works with each program area and the budget office to ensure that investments align with the Department’s performance-based budget.

### 2.4.5 Acquisition Approval Process

Investments that have been approved must move through the 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. Additional information on the AAR process can be found at the following SharePoint site:

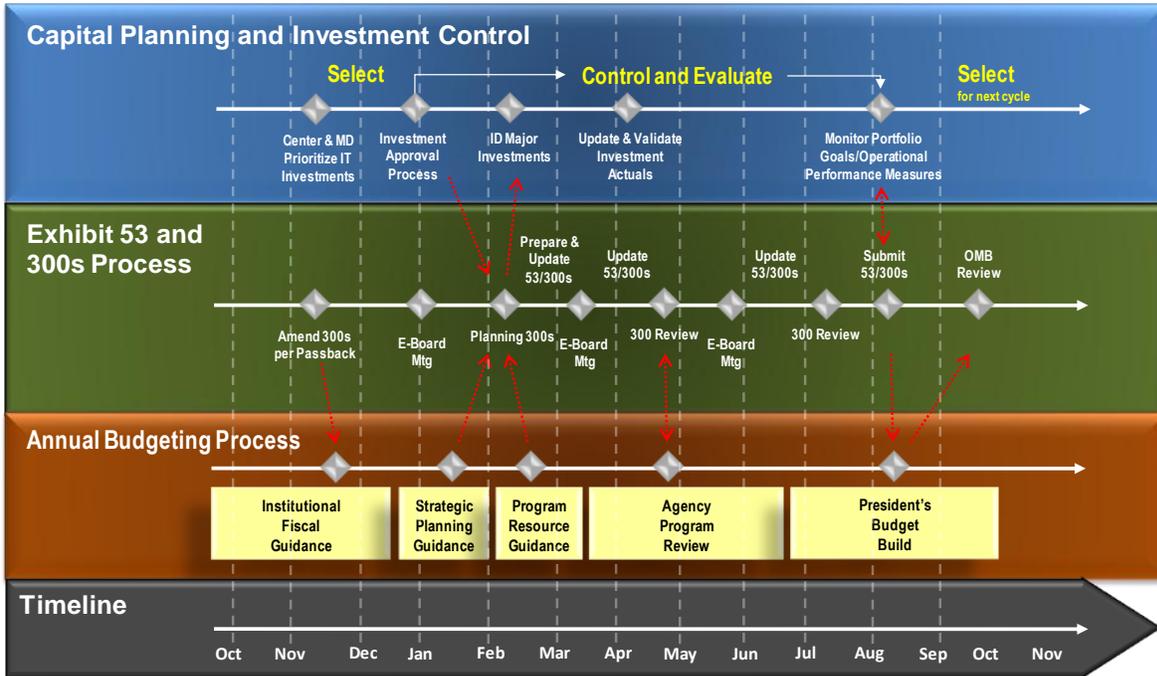
<https://ems-team.usda.gov/sites/OCIO/TPAE/ITM/newaar/SitePages/Home.aspx>.

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 E-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.

### 2.4.6 Strategic Planning

All IT investments must support the strategic goals, objectives, and USDA Strategic Plan. The CPIC Manager and CIO work to ensure that investments align with the Department’s strategic goals and priorities. The Strategic Plan also serves as a program area evaluator for IT Business Need Case during the Select process, recommending investments based upon the Commission’s strategic needs.



An illustrative mapping of CPIC OMB submission and annual budgeting process



### 2.4.7 CPIC Process Overview

The CPIC is a dynamic and ongoing process in which proposed and ongoing projects are continually monitored throughout their lifecycles. Together agencies and the OCIO must evaluate both successful investments and those that are terminated or delayed to assess the impact on future proposals and to benefit from any lessons learned. The CPIC contains four phases 1) Pre-Select, 2) Select, 3) Control, and 4) Evaluate. As detailed in this document and captured in the following chapters, 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.

USDA agencies and staff offices that are considering investing in new IT investments should prepare an investment proposal according to the guidelines provided in this document. The level of detail of the proposals should be commensurate with the investment’s size and impact. Major investments will need more extensive documentation as well as an Exhibit 300. 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 CPIC 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.

### 2.4.8 The Key Components

Recognizing both the importance of IT investments to the organization and their role in supporting the success the USDA mission, the Office of the Chief Information Officer (OCIO) is engaged in an ongoing effort to establish, maintain, and support an effective 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**—Executive decisions are made via several Governance review boards that oversee the CPIC process and are key stakeholders in the success of USDA and its agencies.
- **Supporting Tools**—USDA uses the Capital Investment Management Repository (CIMR) for documenting and storing information on IT investments. Currently, the CIMR consists of two applications, 1) IT Capital Planning SharePoint site and 2) electronic Capital Planning and Investment Control (eCPIC). The SharePoint site contains links for Detailed Life Cycle Cost (DLCC), Earned Value Management (EVM), Acquisition Approval Requests (AAR), and documentation that support Program Management Rebaselining. The eCPIC application 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 required by OMB and the USDA OCIO CPIC office. This year the USDA is incorporating non-major investment business cases in eCPIC. More detail information on the reporting can be found in Appendix B.
- **The CPIC Process**—Capital Planning and Investment Control is USDA’s primary process for (1) providing information to assist the Executive 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.



### 2.4.9 Documentation Guidance and Templates

Additional guidance and templates referenced in this guide can be found on the USDA IT Governance SharePoint website at

<https://ems-team.usda.gov/sites/OCIO/TPAE/egp/GF/SitePages/Matrix.aspx> .

## 3 PRE-SELECT PHASE

### 3.1 PURPOSE

The Pre-Select Phase is a process to assess the need for a proposed investment. It is during this phase that the agency identifies the business/mission need and establishes relationships to the Department and/or agency strategic planning efforts. 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.

### 3.2 ENTRY CRITERIA

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

- How the investment and portfolio reflect the Department's strategic goals, objectives, and priorities;
- A description of the investment, the benefits to USDA if funding is provided, and the funding requested for development, equipment and maintenance for the entire life cycle of the investment;
- How the investment supports Secretarial priorities, Congressional mandates, and the Department's strategic goals and objectives;
- How the investment resolves GAO and Inspector General (IG) findings and material weaknesses if applicable;
- How risks will be managed; and
- How the investment conforms to the EA and other related information.

Further, a Mission Need Analysis needs to be conducted at both the Department and Agency/Office levels that identify the key internal and external business drivers and any improvement opportunities that may impact the current IT portfolio. Also, an initial integrated project team (IPT) that consists of Agency/Office investment sponsor, project sponsor/functional manager, and project manager selected by Agency/Office Head needs to be defined. A concept must also be developed that assesses a proposed solution to meet mission needs and is documented through a Pre-Select Investment Review Submission Package, approved by the Agency/Office Head that includes:

- **Mission Needs Statement (MNS)**

### 3.3 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 solution. The mission analysis and corresponding development of the Mission Needs Statement should be 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. The manager establishes objectives, defines evaluation criteria, completes project and investment charters, identifies concept alternatives and initial performance gaps, and documents an alternative analysis approach as part of the concept management plan to support concept and mission need approval. The agency should also complete a preliminary business case with budget estimates and associated Cost Benefit Analysis (CBA). Table 3-1 provides a summary of the Pre-Select Phase process steps and who is responsible for each.



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

Process Step	Responsible Individual(s) or Group(s)
Submits completed MNS for evaluation for tracking purposes through the support tool or email to the CP&IGD.	Business Owner
Receives documentation package from Business Owner and conducts investment merit evaluation of submitted materials for approval. If approved, the MNS is submitted to the CP&IGD for review. If the documentation package is found to be incorrect or incomplete, it is returned to the Business Owner for further action and re-submittal. The Business Owner is notified of any approval/rejection decision.	Agency IRB
Receives documentation package with supporting evaluation and analysis from the Agency IRB and reviews it for completion and accuracy. Notifies the governance boards (i.e., IAB, IPIC, and E-Board) of upcoming activities and routes materials and inputs to the IAB Administrator.	CP&IGD
Receives documentation package from CP&IGD and schedules IAB Review.	IAB Administrator
Conducts initial review of documentation package and provides feedback. Places emphasis on mission alignment and proposed concept management plan. Collaborates on the assessment of the investment concept against the current IT portfolio, EA and technology operation implications, and security and privacy implications. Document comments, questions and recommendations. If approval is recommended, the IAB Administrator routes the documentation package to the IPIC Administrator. If, however, the IAB does not approve, it notifies the CP&IGD and Agency IRB of its decision.	IAB
Receives documentation package from IAB Administrator and schedules IPIC Review.	IPIC Administrator
Conducts Investment Proposal Review of documentation package for recommendations. Places emphasis on IT strategic alignment and how it fits within the Enterprise Architecture Roadmap, IT Security Policies and Financial Constrains of the Department. Collaborates on the assessment of the investment concept with CIO Council. Document comments, questions and recommendations. Once recommendations are determined, the IPIC Administrator routes the documentation package to the E-Board Administrator.	IPIC
Receives documentation package from IPIC Administrator and schedules E-Board Review.	E-Board Administrator



Process Step	Responsible Individual(s) or Group(s)
<p>Conducts Investment Proposal Review of documentation package for final approval. Places emphasis on enterprise-wide strategic alignment and how it may or may not support the Department goals and objectives.</p> <p>If approved, authorization to move forward and begin alternative analysis, detailed cost benefit analysis, risk assessment, and begin to prepare for the investment's portfolio selection authorization is granted and communicated to the IPIC Administrator via a Decision Memorandum.</p> <p>If not approved, the IPIC, IAB, CP&amp;IGD and Agency IRB are notified by Decision Memorandum as well.</p>	E-Board
<p>Receives Authorization to Proceed to notification from E-Board and sends documentation package to CP&amp;IGD.</p>	IPIC Administrator
<p>Receives final E-Board decision and coordinates activities with Business Owner.</p> <p>Updates status and updates the governance support tool based on the decision and outcome.</p>	CP&IGD
<p>Receives instructions from CP&amp;IGD on how to proceed, including the list of documents to be completed and associated submission timeline.</p> <p>Identifies Project/Program Manager to manage Agency IPT</p>	Business Owner

### 3.4 EXIT CRITERIA

Prior to exiting the Pre-Select Phase, investments must:

- Develop the investment concept
- Submit all required documentation listed in Section 3.3 to the OCIO
- Obtain OCIO approval to submit the investment to the E-Board
- Obtain E-Board approval for the mission need and concept to move forward to the Select Phase.



## 4 SELECT PHASE

### 4.1 PURPOSE

The processes in the Select Phase ensure that USDA selects investments with a high probability of success and that best support USDA’s mission and approach to enterprise architecture. USDA evaluates how the Individual investments align with other IT investments and projects the investment’s cost, schedule, benefit, and risk performance.

In the Select Phase agency staff review and update the mission needs statement prepared in the Pre-Select Phase, charter an Integrated Project Team (IPT), identify funding sources, and further develop the preliminary business case (OMB Exhibit 300) and its supporting documentation such as the Alternatives Analysis, Cost Benefit Analysis, and various project plans initiated in the Pre-Select Phase. This documentation comprises the submission package, which the OCIO reviews. Upon reviewing the submission package, the OCIO makes a recommendation to the E-Board. The E-Board decides which investments to include in the USDA IT Portfolio. The E-Board evaluates investments and ranks them against other proposed investments using the mission needs statement, quantifiable criteria such as projected performance as well as other criteria such as public interest, congressional mandates, and compliance with the Clinger-Cohen Act.

### 4.2 ENTRY CRITERIA

Prior to entering the Select Phase, the OCIO must recommend that the investment move to the Select Phase and the E-Board must approve the Pre-Select submission package.

### 4.3 PROCESS

The Select Phase begins with an investment concept 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 or not to proceed with the investment.

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

Process Step	Responsible Individual(s) or Group(s)
<p>Submits completed investment approval documentation package, for evaluation for tracking purposes through the governance support tool or email to the CP&amp;IGD. Documentation Package consists of the following:</p> <ul style="list-style-type: none"> <li>• PM Presentation to IPIC</li> <li>• Exhibit 300</li> <li>• Cost Estimate</li> <li>• Alternative Analysis</li> <li>• Performance Gap Analysis</li> <li>• Investment Charter</li> <li>• Project Charter</li> <li>• Strategic Plan Alignment Document</li> <li>• Requirements Management Plan</li> <li>• Project Management Plan (PMP)</li> <li>• Project Schedule</li> <li>• IPT Charter</li> <li>• Change Management Plan</li> <li>• Work Breakdown Structure</li> <li>• Communication Management Plan</li> <li>• Communication Matrix</li> <li>• Risk Management Plan</li> <li>• Acquisition Strategy</li> <li>• Quality Management Plan</li> <li>• IV&amp;V Plan</li> <li>• Security Categorization</li> <li>• Privacy Impact Assessment</li> <li>• Privacy Threshold Analysis</li> <li>• PRM Alignment Document</li> </ul>	Project Manager (PM)
<p>Led by the PM, the IPT gathers all business requirements and conducts a baseline review. Provides input to PM for documentation package elaboration.</p>	Agency IPT
<p>Receives documentation package from PM and conducts evaluation of submitted materials for approval. If approved, decision is communicated to the CP&amp;IGD for review. If the documentation package is found to be incorrect or incomplete, it is returned to the PM for further action and re-submittal. The PM is notified of any approval/rejection decision.</p>	Agency IRB
<p>Receives documentation package with supporting evaluation and analysis from the Agency IRB and reviews it for completion and accuracy. Notifies the governance boards (i.e., IAB IPIC, and E-Board) of upcoming activities and routes materials and inputs to the IAB Administrator.</p>	CP&IGD (CP&IGD Analyst)
<p>Receives documentation package from CP&amp;IGD and schedules IAB Review.</p>	IAB Administrator



Process Step	Responsible Individual(s) or Group(s)
<p>Conducts initial review of documentation package and provides feedback. Assess the investment documentation against the current IT portfolio, EA and technology operation implications, and security and privacy implications. Documents comments, questions and recommendations. If approval is recommended, the IAB Administrator routes the documentation package to the IPIC Administrator. If the IAB does not approve, it notifies the CP&amp;IGD and Agency IRB of its decision.</p>	IAB
<p>Receives documentation package from IAB Administrator and schedules IPIC Review.</p>	IPIC Administrator
<p>Conducts Select Phase Final Review of documentation package for recommendations. Places emphasis on IT strategic alignment and how it fits within the Enterprise Architecture Roadmap, IT Security Policies and Financial Constraints of the Department. Collaborates on the assessment of the investment concept with CIO Council. Documents comments, questions and recommendations. Once recommendations are determined, the IPIC Administrator routes the documentation package to the E-Board Administrator.</p>	IPIC
<p>Receives documentation package from IPIC Administrator and schedules E-Board Review.</p>	E-Board Administrator
<p>Conducts Select Phase Final Review of documentation package for final approval. Places emphasis on enterprise-wide strategic alignment and how it may or may not support the Department goals and objectives. If approved, authorization to move forward is granted and communicated to the IPIC Administrator via Decision Memorandum. If not approved, the IPIC, IAB, CP&amp;IGD and Agency IRB are notified by Decision Memorandum.</p>	E-Board
<p>Receives Authorization to Proceed notification from E-Board and sends documentation package to CP&amp;IGD.</p>	IPIC Administrator
<p>Receives final E-Board decision and coordinates activities with Business Owner. Updates status and updates the governance support tool based on the decision and outcome.</p>	CP&IGD
<p>Receives instructions from CP&amp;IGD on how to proceed, including the list of documents to be completed and associated submission timeline.</p>	Project Manager (PM)

Note: Refer to the USDA Integrated Governance Framework SharePoint site for artifact templates, checklists, and instructions:

<https://ems-team.usda.gov/sites/OCIO/TPAE/ITM/SitePages/Home.aspx>



## 4.4 EXIT CRITERIA

Prior to exiting the Select Phase, investments must have:

- Investment approved by the E-Board to enter the IT portfolio and move forward (or continue to be in the IT portfolio for existing investments)
- Supporting criteria documented and completed based on recommendations and final decision
- Performance goals and quantifiable performance measures established
- Project plan developed that details quantifiable objectives, including an acquisition schedule, project deliverables, and projected and actual costs
- Costs, schedule, benefits, and risks identified
- Security, telecommunications, Section 508, and architecture goals and measures (including a transition plan to achieve the target state) established
- Security Plan completed, that includes:
  - Majority of System Security Plans (SSP) completed
  - Risk Assessment/Mitigation completed
  - Privacy Impact Assessment completed
  - System of Record Notice (if required) completed
- Obtained E-Board approval to go to the Control Phase



## 5 CONTROL PHASE

### 5.1 PURPOSE

The Control Phase begins once investments have been selected, budgeted, and received funding. The Control Phase of the Department's IT CPIC process requires monitoring of on-going IT investments during the planning, acquisition, deployment and maintenance/operational phases of the IT investment life cycle. The primary objective of the Control Phase is to assess the performance of investments and enable the effective management of all major IT investments. The Control Review sets in place a structured process to provide senior management with decision making information and to meet the goals and objectives that were established in the business cases submitted to OMB as part of the budget submission process.

The ability to adequately monitor IT investments relies heavily on outputs from effective investment execution and management activities. The Department has made significant strides in controlling its IT investments. The OCIO requires all major USDA IT investments report cost, schedule and performance data to the OMB IT Dashboard on a monthly basis and be reviewed by the CIO.

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 will be made to suspend funding or make future funding releases conditional on corrective actions.

A qualified project manager is responsible for each major IT investment project. All major IT investment project managers have a minimum project management qualification of level one, according to CIO Council requirements. In addition, the Department will work to certify all major investment project managers at the Senior/Expert level according to the Federal Acquisition Certification Program and Project Manager (FAC P/PM) requirements.

The OCIO employs eCPIC and monthly IT Dashboard templates to collect, monitor, and analyze investment data. Agencies with major investments are currently required to report monthly performance data in eCPIC for the OMB IT Dashboard. The monthly IT Dashboard data is then aggregated and presented to the CIO for final evaluation and scoring.

### 5.2 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 E-Board schedule for the Control Phase, and
- Obtained E-Board approval to enter the Control Phase.

Once the investment enters the Control Phase, the Integrated Project Team (IPT) will monitor the investment throughout development or acquisition and will report investment status to the investment's sponsors and oversight groups.



### 5.3 PROCESS

The CPIC Control Phase consists of three major steps as detailed below.

**Step 1:** Define evaluation criteria and develop scoring criteria and supporting forms/templates for Investment Control Reviews

The OCIO Capital Planning and IT Governance Division has established control review and IT Dashboard scoring criteria to assess the performance and health of IT investments. All major IT investments are reviewed against the criteria. The current Investment Monthly Scoring Criteria can be found in Appendix C.

"Passing" scores have been defined for each performance area. In addition to evaluation and scoring criteria, the Capital Planning and IT Governance Division has created IT investment review summary reports for individual investments which are presented to the CIO.

**Step 2:** Establish and Maintain Investment Cost, Schedule, and Technical Baselines

The project manager has the responsibility for establishing project management and execution plans, procedures, and practices to support investment monitoring activities. The project manager is also required to report to the OCIO on the status of the investment's cost, schedule, and technical baselines each month.

The OMB requirements for appropriate project control include the implementation of an EVMS that meets ANSI/EIA-748 Standard. Earned value management provides an indication of how well an investment is meeting the cost and schedule goals defined prior to the outset of the investment. The determination of earned value begins with an estimate of the costs and schedule dates associated with completing investment work packages. The three major objectives of employing earned value are to provide:

- An effective internal cost and schedule management tool for use by project managers;
- Review bodies with a mechanism for evaluating investment progress; and
- A means to identify potential problems throughout the life cycle in time to implement changes or corrective actions to ensure project objectives are met.

All Major IT investments must be planned, budgeted, and scheduled in measurable and phased "value-added" increments. Major IT investments DME funding are required to use an ANSI/EIA-748 Standard compliant EVMS and are to report EVMS data on a monthly basis.

Non-major IT investments are reviewed and managed within the Agencies, but are subject to Department-level review and reporting at the discretion of the OCIO.

USDA requires that major steady state investments and major investments with operational components (Mixed-Lifecycle) report monthly on operational performance metrics in eCPIC.

**Step 3:** Review of Ongoing IT Investments

During the implementation of an investment, the project managers conduct frequent reviews of their investments to assess progress against planned cost, schedule, and technical baselines. The primary purpose of these assessments is to ensure that the investment is on track, and to identify issues or deficiencies that require corrective action. As part of this process, the project manager is responsible for reporting cost and schedule performance for the investment to the OCIO in SharePoint on a monthly basis.



After the OCIO receives the information, monthly scoring reviews are conducted on all major IT Investments using the standard criteria. This information will also be leveraged in the Integrated IT Governance Framework at several decision gates. At the decision gates, the E-Board will use the assessments to:

- Determine whether investments under review continue to support mission and business functions;
- Assess the extent to which investments continue to meet planned cost, schedule, and technical baselines;
- Identify deficiencies and track the completion of corrective actions;
- Reach and document the decision for each investment to "continue-as-is" or be "modified" in order to improve its overall performance; and
- Score investments based on their status for the following six criteria: project management qualification, cost variance, schedule variance, performance goal variance, security, and earned value management.

IT investments that are consistently scored as 'green' and are continuing to achieve their planned performance goals, are not likely to be subject to a high level of scrutiny. Greater scrutiny will be given to investments that are scored either "red" or "yellow" for 2 or more consecutive months, submit several rebaseline requests within a given fiscal year or fail to achieve their performance goals. The E-Board reviews the status of each of these IT investments and the Agency's representative has the opportunity to present on the current status of the investment.

The E-Board will then make one of the following recommendations:

- Accelerate: External factors require the investment to be completed sooner than expected or investment resources are available that can enable an acceleration of investment schedule.
- Decelerate: The investment timetable or funding needs to be reduced in order to allow the investment an opportunity to regain acceptable cost, schedule, and/or performance levels. Or, external factors, such as dependence on another investment, require extending the investment life cycle.
- Suspend: It is not cost-effective to proceed with further development or ongoing activity until problems stemming from resource shortfalls, investment performance, system dependencies, or other external issues are resolved. In addition, a realignment of Department priorities among existing IT investments may result in the suspension of an investment.
- Cancel: The investment is no longer required or there is a low probability that it will ever meet acceptable cost, schedule or performance levels.

If the E-Board determined that 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 and to update the baseline prior to the scheduled decision gate reviews. Additionally, each year the investment should undergo a comprehensive control review. The E-Board uses the results of these more detailed reviews during preparation of the Department's IT investment portfolio.

### 5.3.1 TechStat

As part of the Control Phase, USDA has implemented TechStat reviews that focus on ensuring investments are implemented according to a pre-established baseline. These reviews focus on cost and schedule variances from the baseline, performance targets, frequency of re-baselines, and lack of executive sponsorship. The purpose of TechStats is to ensure investments will complete implementation successfully, within scope, schedule and budget. In order to comply with OMB's IT Reform, it is required that USDA Agencies and Staff Offices implement TechStats within their governance process.



## 5.4 EXIT CRITERIA

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

- Established investment cost, schedule, and technical baselines.
- Assessed investments using EVM methodologies.
- Prepared all Investment Review Submission Package documentation
- Completed all the investment development, modernization and enhancement stages and
- Obtained E-Board approval to enter the Evaluate Phase.



## 6 EVALUATE PHASE

### 6.1 PURPOSE

The purpose of the Evaluate Phase is to compare actual to expected results after an investment has completed useful segments or 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) 6 months upon implementation. An Operational Analysis (OA) is performed after the investment has been in operations for a year, and updated on an annual basis. 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 agency conducts the PIR and OA, and the results are reported to the OCIO and E-Board to provide a better understanding of investment's 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.

### 6.2 ENTRY CRITERIA

The Evaluate Phase begins once an investment has been implemented and becomes operational or goes into production. Prior to entering the Evaluate Phase, investments must have:

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

### 6.3 PROCESS

In the Evaluate Phase, investments move from implementation to being operational based on the approval from the E-Board. From the time an investment reaches the steady state phase, it 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 and OA, 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 6-1 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 table.



**Table 6-1 Evaluate Phase Process Flow**

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

### 6.3.1 Conduct PIR/OA and Present Results

The PIR for a newly deployed investment generally should take place approximately six months after the investment or useful segment is operational. Before starting the PIR, the program/project manager should develop a PIR plan that details the roles, responsibilities, and the start and end dates for all PIR tasks. After an investment is in operations for a year an OA is performed and updated each year thereafter.

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.

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 on investment (ROI) 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.
  - 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.

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.

### 6.3.2 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 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,
- Enterprise Architecture Plan, including IT accessibility for persons with disabilities (Section 508),
- Telecommunications Plan, and
- Operational Analysis Plan.

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.

### 6.3.3 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.

### 6.3.4 Review Investment’s Review Submission Package and Recommendation for Appropriate Action

The OCIO reviews the PIR and OA 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,
- Perform a detailed Program Review to either:
- Terminate the investment, or
- Modify the investment as recommended.

### 6.3.5 Make Final Investment Decisions

The E-Board reviews OCIO’s recommendation, makes the final investment decision, and relays the decision by letter to the Under/Assistant Secretary, Agency Head, and project sponsor.

### 6.3.6 Evaluate IT Capital Investment Management Process

Following the completion of each phase, the OCIO and agencies should document the strengths and weaknesses of the CPIC process. The Evaluate Phase may provide particularly useful information that should be used to improve, and streamline the CPIC process. This will help the OCIO to maintain factors that improve the investment’s success rate; and remove any non-value steps associated with the CPIC process. Agencies can record observations and forward them to the OCIO as necessary. Agencies can add appropriate com-



ments 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
- **Pre-Select**
  - Agency process
  - OCIO review
  - ECCB recommendation
  - E-Board endorsement
- **Select**
  - Agency process
  - Mission Criteria
  - OCIO review
  - E-Board
  - Security review
  - Risk
  - ROI
- **Control**
  - Milestone review format
  - OCIO/corrective actions
  - Security analysis
- **Evaluate**
  - PIR content
  - PIR execution
  - PIR recommendations
  - Security performance
  - Investment assessment
  - Technology assessment
  - Operational Analysis (OA)

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 templates at the USDA IT Governance site.

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.

### 6.3.7 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.

## 6.4 EXIT CRITERIA

Prior to exiting the Evaluate Phase to close out the investment (disposition), investment owners must have completed:

- Complete the PIR/OA and present results to the E-Board
- Present an investment close-out briefing to the E-Board



## 7 APPENDICES

- A. **Capital Planning and IT Governance Division CPIC Analysts** – Contact information for the Capital Planning and IT Governance Division CPIC Analysts and the agencies assigned.
- B. **Non-major Investment Business Case** - Instructions for documenting non-major investments.
- C. **Investment Monthly Scoring Criteria** – Current scoring criteria used by the OCIO to score major investments on a monthly basis.
- D. **Glossary of Terms** – Provides definitions for terms and acronyms used throughout this document.
- E. **Legislative Background and Associated Guidance** - Provides a list of references used to develop this document.