

USDA Information Technology Capital Planning and Investment Control (AgITC PIC) 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.
2.0	03/22/2019	CPITGD	Updated Guide to reflect current guidance: • External, Laws, Regulations and Guidance • Technology Business Management (TBM) Framework • External Tools and Resources • Scope • Investment Types • USDA CPIC Processes, Functions, and Activities • Funding Types • Points of Contact • Acronyms • Special Terms and Definitions This version supersedes all previous versions of a USDA Capital Planning and Investment Control Guidebook.
2.1	09/01/2019	CPITGD	Updated Guidebook with Realized Cost Saving and Cost Avoidance Guidance and link to OMB's Integrated Data Collection (IDC) instructions.

Executive Summary

The United States Department of Agriculture (USDA) touches the lives of every American, every day and Information Technology (IT) is the conduit that provides the connection to reaching the American Citizens.

In 2019, the USDA plans to invest over \$2.1 billion in IT. This will include assets and services, cloud offerings, shared services, modernization initiatives and other commodity IT. The success of these Investments directly influences the ability of organizations within USDA to execute business plans and fulfill missions.

Capital Planning and Investment Control (CPIC) strengthens the mission of the Department of Agriculture through sound and effective IT portfolio, program and project management. It provides a systematic approach to selecting, managing and evaluating our Information Technology Investments.

The guide describes key elements of USDA's CPIC Lifecycle and related processes. The descriptions of each phases of the CPIC Lifecycle – Pre-Select, Select, Control, and Evaluate – delineate the roles and responsibilities of USDA personnel in the various stages of the processes. The intent of this guide is to provide a uniform set of guidelines for the general management responsibilities required to complete each step in the overall process, recognizing that the unique mission of each USDA Agency may influence the definition and execution of these roles.

The CPIC Lifecycle is comprised of four phases: Pre-Select, Select, Control and Evaluate. This guide describes each of these phases in detail. The Lifecycle phases support the initial conception and development of the Investment, the selection of the Investment from among competing Investments, and the monitoring and evaluation of Investments for acceptable performance and progress against objectives.

The USDA strategic plan reflects that reality and reinforces our commitment to achieve results for everyone we serve. As we move forward, we will actively seek out ways to better serve our stakeholders as we work towards our shared goals of rural prosperity, preservation of forests and working lands, sustainable agricultural production, safe, nutritious food, and jobs and opportunity for every American. It is important to note that this guide is a work in progress. As USDA's CPIC processes mature, this guide will selectively incorporate best practices from sources internal and external to the Department and lessons learned from experience in executing the process.

1. Introduction

This document has been prepared by the U.S. Department of Agriculture (USDA) Office of the Chief Information Officer (OCIO) Information Resource Management Center (IRMC) Capital Planning & Information Technology Governance Division (CPITGD) to document the Department's Capital Planning and Investment Control (CPIC) processes for information technology (IT) Investments and provide enterprise-wide guidance. Consistent with the Office of Management and Budget (OMB) Circular A-130¹: Managing Information as a Strategic Resource (formerly titled "Management of Federal Information Resources") and Circular A-11²: Preparation, Submission, and Execution of the Budget, herein referred to as the A-130 and A-11, the Department's IT CPIC processes, integrated with the USDA Integrated IT Governance Framework (IITGF) processes, provide decision-makers visibility into all IT Investments and the capabilities they provide.

1.1. Purpose

The purpose of the USDA Information Technology Capital Planning and Investment Control (AgITCPIC) Guide, herein referred to as the Guide, is to identify the processes and activities necessary to ensure that USDA's IT Investments are well-planned, cost-effective, and support the missions and business goals of the organization. This document is based on guidance from both the OMB and the Government Accountability Office (GAO).

The Guide provides guidance for disciplined capital planning processes as part of a continuing effort to remain consistent with new OMB requirements and industry best practices. Specifically, the Guide:

- Documents the Department's CPIC processes;
- Establishes the policies and responsibilities for performing CPIC processes across the Department;
- Serves as the IT management guide for the execution of CPIC;
- Demonstrates how the integrated and iterative CPIC processes align and operate with other Departmental processes, components and activities; and
- Clarifies IT management nuances within the Department's other capital asset management processes.

1.2. Background

There are various legislative and regulatory drivers for implementing IT CPIC. Many legislative reforms emphasize the need for Federal agencies to significantly improve how they plan, select, fund, control, and evaluate IT initiatives. The Federal approach to IT CPIC has been the select-control-evaluate model that has been championed by the OMB, GAO, and industry experts since the early 1990's.

¹ OMB Circular A-130 (July 2016) – Management of Federal Information Resources, <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A130/a130revised.pdf>

² OMB Circular A-11 (June 2018) – Preparation, Submission, and Execution of the Budget, <https://www.whitehouse.gov/wp-content/uploads/2018/06/a11.pdf>

To provide agencies with specific guidance on implementing the Clinger-Cohen Act of 1996 (CCA), OMB regularly revises OMB A-130 specific to the sections concerning information systems and IT management. It requires agencies to follow the provisions of the Clinger-Cohen Act and the A-11, which involve the acquisition, use, and disposal of IT as a capital asset.

1.2.1. External Laws, Regulations and Guidance

- **Clinger-Cohen Act of 1996 (CCA)**³: Establishes a comprehensive approach for executive agencies to improve the acquisition and management of their information resources, by (1) implementing and using a disciplined CPIC process that links to budget formulation and execution; (2) focusing information resource planning to support the strategic missions; (3) encouraging the development and use of best practices in the acquisition of information technology; and (4) encouraging performance-based and results-based management of information technology Investments.
- **Federal Acquisition Streamlining Act of 1994 (FASA)**⁴: Requires that information technology initiatives be tied to mission and strategic goals; have cost, schedule and performance goals; and achieve, on average, 90 percent of these goals.
- **Government Performance and Results Act (GPRA) Modernization Act of 2010 (GPRAMA)**⁵: The Government Performance and Results Act of 1993 (GPRA) required agencies to engage in performance management tasks such as setting goals, measuring results, and reporting their progress. It established project planning, strategic planning, and set up a framework of reporting for agencies to show the progress they make towards achieving their goals. The GPRA Modernization Act of 2010 took the existing requirements of the 1993 act and developed a more efficient and modern system for government agencies to report their progress.
- **Federal Information Technology Acquisition Reform Act of 2014 (FITARA)**⁶: Requires the heads of the federal agencies to ensure that their respective Chief Information Officers (CIOs) have a significant role in information technology processes and decisions related to annual and multi-year planning, programming, budgeting, execution; related reporting and reporting requirements; management; governance; and oversight.
- **OMB Circular No. A-11 (June 2018) – Preparation, Submission, and Execution of the Budget**⁷:

³ Clinger-Cohen Act of 1996 (CCA). The Information Technology Management Reform Act (ITMRA) (Division E) and the Federal Acquisition Reform Act (FARA) (Division D) were signed into law as part of the National Defense Authorization Act for Fiscal Year 1996. The ITMRA and FARA were subsequently designated the Clinger Cohen Act of 1996 (CCA), encompassing both. <https://dodcio.defense.gov/Portals/0/Documents/ciodesrefvolone.pdf>

⁴ Federal Acquisition Streamlining Act of 1994, <https://www.congress.gov/103/bills/s1587/BILLS-103s1587enr.pdf>

⁵ Government Performance and Results Act (GPRA) Modernization Act of 2010 (GPRAMA), <https://www.congress.gov/111/plaws/publ352/PLAW-111publ352.pdf>

⁶ Federal Information Technology Acquisition Reform Act of 2014 (FITARA), <https://www.congress.gov/113/plaws/publ291/PLAW-113publ291.pdf#page=148%5D>

⁷ OMB Circular A-11 (June 2018) – Preparation, Submission, and Execution of the Budget, <https://www.whitehouse.gov/wp-content/uploads/2018/06/a11.pdf>

- **Section 25: Summary of Requirements:** Sub-Section 25.5 provides electronic links to the definitions and specific reporting instructions and exhibits related to budgeting for IT Investments.
- **Section 51: Basic Justification Materials:** Provides general policy and requirements for budget justification materials that must be included in Agency budget submissions to OMB.
- **Section 55: Information Technology Investments:** Provides general policy and requirements for Agency IT budget, Investment, and portfolio management.
- **Office of Management and Budget (OMB) FY2020 IT Budget -Capital Planning Guidance:** Provides technical guidance and specific requirements related to Agency IT budget reporting, Investments, and portfolio management in support of the general policy and requirements outlined in A-11 Section 55.
- **OMB Circular A-123⁸ – Management’s Responsibility for Enterprise Risk Management and Internal Control:** Ensures Federal managers are effectively managing risks an Agency faces toward achieving its strategic objectives and arising from its activities and operations.
- **OMB Circular A-130 (July 2016)⁹ – Managing Information as a Strategic Resource:** Provides general policy for the planning, budgeting, governance, acquisition, and management of Federal information, personnel, equipment, funds, IT resources and supporting infrastructure and services.
- **Section 508 of the Americans with Disability Act of 1998 (Section 508)¹⁰:** Requires Federal agencies to make their IT and electronic technology accessible to people with disabilities. The law applies to all Federal agencies when they develop, procure, maintain, or use IT and electronic technology.

1.2.2. Internal Directives and Guidance

The USDA OCIO has published numerous documents establishing Departmental requirements for IT Investment management. The following documents represent key internal CPIC program guidance.

Document	Content
USDA Information Technology Capital Planning and Investment Control (AgITCPIC) Guide	Describes the USDA IT Capital Planning and Investment Control (CPIC) process including the CPIC policies, Lifecycle phases, processes, procedures, and associated implementation activities and requirements.
USDA Strategic Plan	Describes USDA’s strategic plan for supporting the USDA mission and its business needs; USDA IT Investments must support or align with the mission and goals in this strategic plan.

⁸ OMB Circular A-123 – Management’s Responsibility for Enterprise Risk Management. The previous OMB Circular A-123 - Management’s Responsibility for Internal Control was revised by OMB Memo M-16-17 (July 15, 2016), <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2016/m-16-17.pdf>

⁹ OMB Circular A-130 (July 2016) – Management of Federal Information Resources, <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A130/a130revised.pdf>

¹⁰ Section 508 of the Americans with Disability Act of 1998 (Section 508), <https://www.section508.gov/manage/laws-and-policies>

USDA Information Technology Strategic Plan	Describes the USDA IT Strategic Plan for the next five years.
USDA Enterprise Roadmap	Describes USDA's current and future enterprise architectures as well as the transition plan including the IT Investment activities to achieve the future architecture.
USDA IT Investment Management Lifecycle (IMLC) Guide	Describes USDA's universal and standards-based IT IMLC as well as the associated policies, processes, and procedures and how they apply to support PMs and IPTs in successfully managing USDA's IT Investments.
Systems Development Lifecycle Management (SDLCM) Manual.	Is a management framework designed to help agencies successfully manage its IT Investments throughout the entire IT Investment Lifecycle. The SDLCM Manual presents a seven-phase structured approach to developing, managing, and operating IT Investments throughout their entire Lifecycle, from concept to disposition.
USDA Integrated Information Technology Governance Framework: Guidebook	Provides an overview and implementing guidance of the USDA's Integrated Information Technology Governance Framework (IITGF). It identifies the activities associated with Investment decision gates, which are aligned with an Investment's Lifecycle phase, for USDA to manage its enterprise-level IT governance process. It further defines the alignment activities and IT executive governance board responsibilities for effective IT decision making at USDA.
Acquisition Approval Request (AAR) Guidance for AAR Managers	Provides an overview of the USDA's IT Acquisition Approval Request process by which the USDA OCIO monitors and reviews Agency-level IT spending.

Figure 1: Key Internal CPIC Program Guidance

1.2.3. Technology Business Management (TBM) Framework

Technology Business Management (TBM) is a value-management framework instituted by CIOs, CTOs, and other technology leaders. Founded on transparency of costs, consumption, and performance, TBM gives technology leaders and their business partners the facts they need to collaborate on business aligned decisions. Those decisions span supply and demand to enable the financial and performance tradeoffs that are necessary to optimize run-the-business spending and accelerate business change. The framework is backed by a community of CIOs, CTOs, and other business leaders on the Technology Business Management Council.

-From TBM Taxonomy Version 3.0, from the Technology Business Management Council.¹¹

TBM currently serves as the cornerstone of OMB's overarching data and Investment management strategy. OMB is leveraging this widely adopted open source taxonomy, used within private, public, and academic sectors, to generate significant value in IT data and Investment management.

OMB's intent is to strongly support CIOs in implementing the authorities within FITARA. Aligning common Investments like data centers, end user devices (e.g., laptops, desktops and mobile devices), software, and networks and linking budget and performance is critical to make informed decisions about the

¹¹ Technology Business Management Council, TBM Taxonomy Version 3.0 (November 2018), https://www.tbmcouncil.org/sites/default/files/tbmc_tbm_taxonomy_3.0.pdf

performance of these Investments. Standard IT Investments and associated Investment Reports will capture relevant information to inform decisions and management oversight.

Fully implementing FITARA requires a strong partnership among Chief Information Officers (CIO), Chief Financial Officers (CFO), budget offices, Chief Acquisition Officers (CAO), Chief Human Capital Officers (CHCO), and senior officials responsible for physical/personal security. Aligning budget and financial management with TBM creates a strategic framework that supports OMB Circular A-123, IT modernization, and alignment with Agency budgeting processes through the OMB Circular A-11.

OMB has followed an incremental process to roll out this strategy. Beginning with the FY 2018 budget cycle, elements of the TBM-based approach were phased in. The graphic below contextualizes the types of structural changes that were introduced during the multi-year approach.

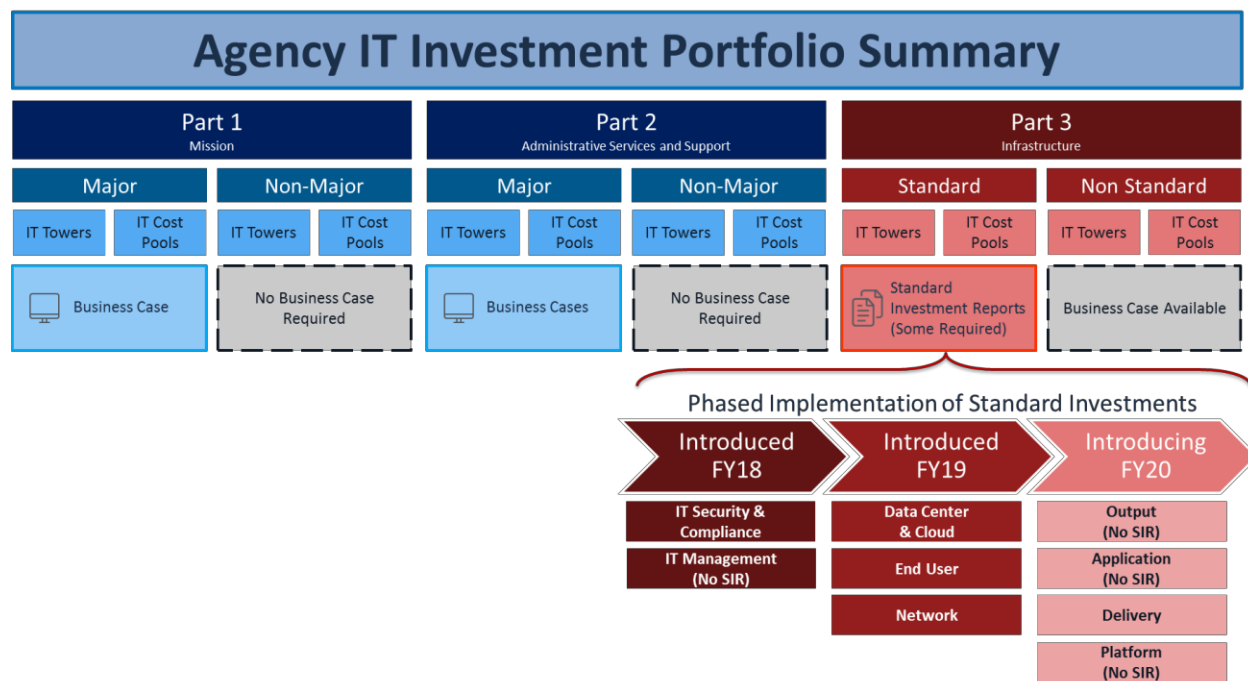


Figure 2: Phased Implementation of TBM, FY 2018 – FY 2020

Beginning with the FY 2021 submission cycle, the multi-year transition within CPIC will be completed and all TBM-related reporting will be required. Agencies will have to leverage progress made during the phased TBM implementation period to establish baselines and be prepared to share their data publicly on the Federal IT Dashboard.

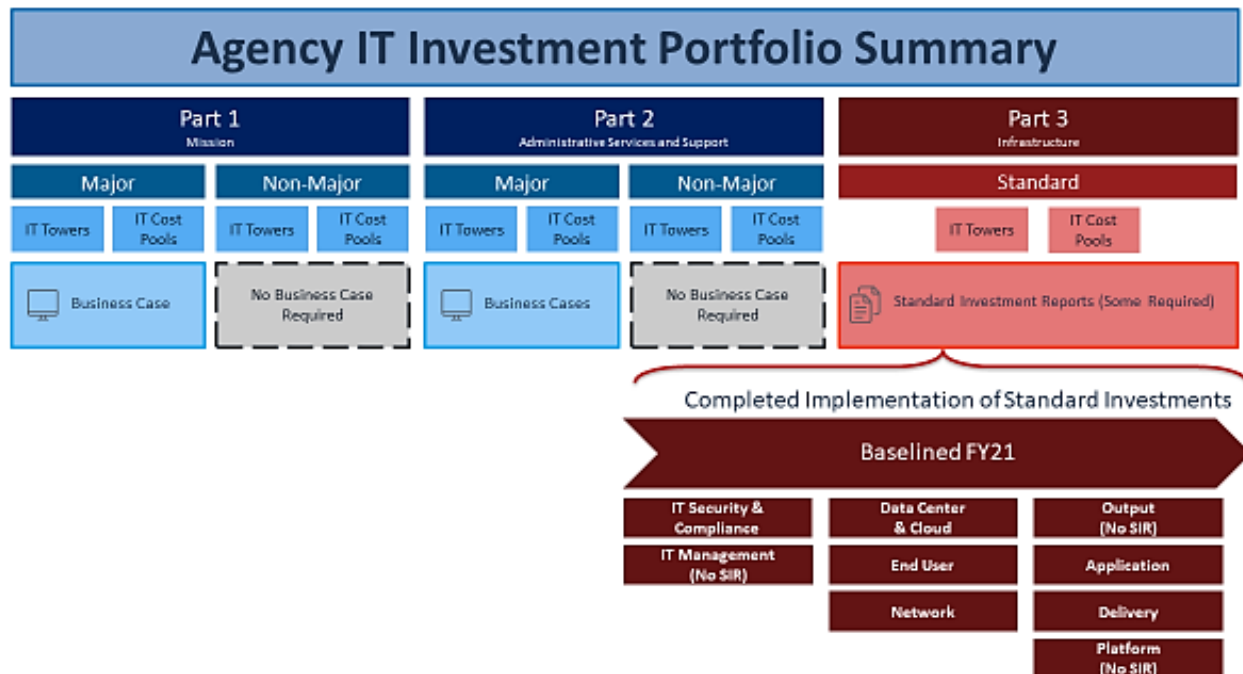


Figure 3: Completed Implementation of TBM, FY 2021

With the completion of the multi-year phased-in implementation of TBM data within CPIC reporting, OMB anticipates significant value for Agency CIOs who will be positioned to leverage existing industry benchmarking data and share identified best practices Government-wide. For details on TBM IT Towers and IT Cost Pools phased implementation and requirements, refer to OMB's FY 2021 IT Budget Capital Planning Guidance.

1.3. Scope

The Guide's scope addresses all Major and Non-Major IT Investments, as well as all Standard IT Infrastructure, IT Security, and IT Management Investments. This guide is a living document and is updated as necessary to include any new internal and/or external changes to processes and requirements. This guide supersedes the previous USDA IT CPIC (AgITCPIC) Guide, version 1.0 (May 2013).

1.4. Internal Tools and Resources

1.4.1. AgMAX

The AgMAX tool is the system record for the Department's IT budget and supports the Department's annual compilation and submission of the IT budget to OMB. It allows the USDA to collaboratively create automated workflow and approval processes that support our ability to propose, plan, and control IT Investment portfolios. USDA guidance relating to AgMAX can be found using the following link: www.mycpic.com

1.4.2. Enterprise Architecture Repository (EAR)

The Enterprise Architecture Repository (EAR) is intended to provide a single place for the storage and retrieval of solution architecture artifacts. Some of the artifacts are created using tools and some are custom developed for particular use (e.g., composite management views).

USDA's EAR is a robust knowledge repository solution for organizing, integrating and analyzing information describing the key elements of the Department's architecture. It assists with the process of understanding the Department's architecture and for planning for new systems or modifying old ones.

1.5. External Tools and Resources

1.5.1. Federal Information Technology Dashboard (FITDB)

The Federal IT Dashboard (FITDB) was launched on June 1, 2009, which provided Federal agencies and the public with the ability to view details of Federal IT Investments online and to track their progress over time. The FITDB displays data received from Agency IT Portfolio and Business Case reports, including general information on over 7,000 Federal IT Investments and detailed data for over 700 of those Investments that agencies classify as "major." Federal Agency CIOs are responsible for evaluating and updating select data on a regular basis, which is accomplished through interfaces provided by the FITDB.

The FITDB shines light onto the performance and spending of IT Investments across the Federal Government. If a project is over budget or behind schedule, you can see by how much money and time, and you can see the person responsible--not just contact information but also their picture. The FITDB gives the public access to the same tools and analysis that the government uses to oversee the performance of the Federal IT Investments. The transparency and analysis features of the FITDB make it harder for underperforming projects to go unnoticed, and easier for the Government to focus action on the projects where it's needed most.

The FITDB displays a subset of data from Agency IT Portfolio and Business Case reports, and Federal Agency updated activity information, Federal Agency CIO evaluations, and other Investment information reported by agencies.

The FITDB can be accessed using the following link: <https://itdashboard.gov/>

1.5.2. OMB MAX Website

The OMB MAX website is a Government-wide suite of advanced collaboration, information sharing, data collection, publishing, business intelligence and authentication tools and services used to facilitate cross-government collaboration and knowledge management. MAX.gov tools include MAX Community, MAX Collect, MAX Survey, MAX A-11, MAX Analytics, MAX Authentication, among many others.

Secure login for the OMB MAX website can be accessed using the following link: <https://max.gov>

2. Overview of CPIC Lifecycle

The CPIC Lifecycle is a structured, integrated approach to managing IT Investments. It ensures that all IT Investments align with the Agency mission and support business needs, while minimizing risks and maximizing returns throughout the term of useful life of IT Investments.

2.1 CPIC Lifecycle Phases

At the highest level, the CPIC Lifecycle is a circular flow of IT Investments through four reciprocal phases that rely on systematic CPIC processes to facilitate IT Investment analysis, assessment, oversight, and decision-making.



Figure 4: CPIC Lifecycle

Incorporating the USDA IITGF processes as a major milestone of the CPIC phases establishes tasks, conditions and standards which provide decision-makers visibility into all IT Investments and the capabilities they provide. Without this visibility of IT Investments, the programs may possibly be delayed or terminated.

2.1.1. Pre-Select Phase

The goal of the Pre-Select Phase is to assess a proposed IT Investment's support of the Department's strategic plan and mission. During this phase the business or mission need is identified and relationships to the Department strategic planning efforts are established. This phase serves to assess the need for a proposed IT Investment.

The Pre-Select Phase allows IT project teams to begin the process of defining business requirements and conditions associated with system performance metrics/performance measures, benefits, and costs, as well as subsequent completion of a Major IT Business Case (MITBC) and initial project planning efforts in preparation for inclusion in the Department's IT portfolio.

The table below provides a summary of the Pre-Select Phase Investment Review deliverables.

IT Capital Planning and Investment Control	
Review Task	Action
Develop Concept	- Assess Mission Needs Statement. - Identify business objectives based on mission analysis and Mission Needs Statement. - Appoint project manager (PM) and Integrated Product Team (IPT Team). - IPT focus on planning, developing tasks, process and procedures.
Develop Preliminary Business Case	- MITBC provides the necessary information to build support and make funding decisions for an Investment. Develop preliminary business case. - Project Sponsor/Functional Manager begin preparing preliminary documentation identifying alternative solutions and developing an order of magnitude estimate of costs and benefits (both quantitative and qualitative) that may be realized by a given Investment (i.e. Analysis of Alternatives (AoA), Cost Benefits Analysis (CBA), feasibility study, and other artifacts required by Agency).
Review Initiative and Recommend Appropriate Action	- Once all artifacts/documentation has been completed the project manager (PM) discusses and finalize the proposal to program owner to be processed. - As part of the preliminary budget estimate, a preliminary security analysis should be performed to determine estimated baseline costs.
Budget proposal	- Assess readiness of Investment proposal for submission to budget process. At this point, the Investment's cost and benefits are adequate to support: - Project is worth doing and the Investment merits resources. - If approved, prepare all documents to proceed to the Investment Review Board (IRB).
Make Final Investment Decisions	- Timely submission to appropriate boards. - The E-Board reviews the IRB recommendation and makes the final Investment decisions. If the E-Board approves the IRB recommendation, then Agency Sponsor moves forward into the Select Phase.
IT Enterprise Architecture	
IT Enterprise Architecture Analysis	Mission analysis is conducted within the framework of both the Department's and the Agency's Enterprise Architecture and long-range strategic goals.
IT Risk Management	
This process is not applicable during this phase.	
IT Security	
This process is not applicable during this phase.	
Agriculture System Development Lifecycle (AgSDLC) Process	
This process is not applicable during this phase.	
IT Governance and Decision Gate Approval	

Figure 5: Pre-Select Phase Investment Review Deliverables

2.1.2. Select Phase

The goal of the Select Phase is to identify, screen, rank, select, and obtain funding for new and existing IT Investments to be included in USDA's annual IT portfolio and associated budget request. USDA selects IT Investments with a high probability of success and those which best support USDA's mission and approach to enterprise architecture. The Department evaluates how the individual IT Investments align with other IT Investments and projects, the IT Investment's cost, schedule, benefit, and risk performance. Ultimately, the Investments included in the IT Investment portfolio must support USDA's mission, business objectives, and stakeholder needs as efficiently and effectively as possible.

During the Select Phase, USDA agencies identify IT initiatives that meet their business needs, screen the IT Investments against Agency specified criteria, and justify the need and funding for the IT Investment via an Agency budget request. If a proposed IT Investment is approved by USDA's executive leadership and categorized as a Major IT Investment, the Agency is required to complete a MITBC. This will include reporting any planning projects and activities to be executed in the Current Year (CY) and Budget Year (BY) if known. If a proposed IT Investment is categorized as a Standard IT Infrastructure or IT Security Investment, the Agency is required to complete a Standard IT Investment Report (SIR). This may include reporting any planning projects and activities to be executed in the CY and BY if known.

The OMB reviews USDA's funding request and the MITBC/SIR. If OMB approves the funding request and the MITBC/SIR, the CY planning projects and activities are published on the FITDB website. The Select Phase planning efforts proceed and culminate in the establishment of a sound Lifecycle baseline against which cost, schedule and technical performance are measured. This phase ensures the Department has an IT portfolio whose composition changes as Investments are modified, added to, or deleted from the portfolio.

The table below provides a summary of the Select Phase Investment review deliverables.

IT Capital Planning and Investment Control	
Review Task	Action
Initial ITPS and MITBC	• Conforms to USDA IT Portfolio Summary (ITPS) and MITBC standards.
IT Investment Project Charter	• Identifies IPT members. • Specific, complete, and consistent with the business objectives identified in the Project Charter and other documents. • Signed by Agency sponsor.
Alternative of Analysis (AoA) and Cost Benefit Analysis (CBA)	• USDA template is used. • Contains three distinct, feasible, and viable alternatives. • If a secure, reliable, cost-effective cloud solution was identified in the cloud evaluation, it must be one of the alternatives evaluated in the AoA/CBA; regardless the AoA/CBA must contain the cloud evaluation. • Contains sufficient benefit and cost data for each alternative.
Acquisition Plan	• USDA template is used is to identify acquisition events activities. • Details all contracts.

Project Management Plan	• USDA template is used. • Adequately covers all sections (includes or references other management plans). • External plans must be available in AgMAX. • Signed by Agency sponsor.
Project Schedule	• High Level schedule that reflects the Investment Lifecycle that was evaluated in the AoA/CBA. • Project schedule (baseline) is compatible with the USDA Earned Value Management System (EVMS) for Investments in USDA EVM program.
Baseline Management	• PMs of Investments that are being baselined meet with the OCIO CPITGD Liaison to discuss requirements, timeframe, deliverables, and resources. • Detailed requirements are located at USDA SharePoint site.
IRB Summary Report (when applicable)	• Must use USDA template. • Completed and submitted to OCIO.
PM Involvement	• PM is actively engaged with OCIO CPITGD Liaison.
CIO Rating	• Occurs the end of each month. • All Major IT Investment will be evaluated based on OCIO rating criteria.
IT Enterprise Architecture	
IT Investment Current Architecture	• Describes the assets that comprise the Investment and their relationships and how they collectively support USDA's mission or business processes and contribute to mission and business results.
IT Investment Target Architecture	• Describes the planned assets that will comprise the Investment and their relationships and how they collectively will support USDA's mission or business processes and contribute to mission and business results, including achievement of USDA strategy.
IT Investment Transition Strategy	• Specifies the plan by which the current state of the Investment will be transitioned to the planned target state.
IT Risk Management	
Risk Management Plan	• Must use USDA Risk Management Plan template. • Complete with signature and submitted to OCIO via AgMAX.
Risk Register	• Must use the USDA Risk Register template. • Risks adequately identified, analyzed, and prioritized, using required terms detailed in the Risk Register. • Risks and mitigation strategies are specific to the Investment rather than generic. • Risks must be actively managed.
IT Security	
This process is not applicable during this phase.	
Agriculture System Development Lifecycle (AgSDLC) Process	
This process is not applicable during this phase.	

Figure 6: Select Phase Investment Review Deliverables

2.1.3. Control Phase

The goal of the Control Phase is to ensure the efficient and effective development, implementation, and performance of IT solutions. This phase requires solutions to be planned, on time and within budget per the approved baseline. IT Investment management monitoring and oversight activities are performed throughout the Control Phase by the IT Investment's funding Agency and the CPITGD. The CPITGD's monitoring and oversight activities include Control Reviews, analysis of Major IT Investments and quarterly performance data updates made to the FITDB. Analysis and approval of baseline management deliverables, such as Earned Value Management (EVM) metrics and proposed baseline changes are also reviewed. During the Control phase, decisions to continue, modify, suspend, or terminate an IT Investment are made. The phase ends when an IT Investment's funds are no longer allocated for Development/ Modernization/ Enhancement (DME) activities.

The Control Phase starts once the IT Investments have been selected, budgeted, and received funding. Control Reviews facilitate a structured process for collecting IT Investment data to support IT Investment decisions-making and to meet the goals and objectives established in Major Information Technology Business Cases and Standard IT Investment Reports submitted to OMB as part of the budget submission process. The OCIO uses AgMAX and quarterly FITDB templates for Major IT and Standard IT Investments to collect, monitor, and analyze IT Investment data. Quarterly FITDB data is then aggregated and presented to the CIO for final evaluation and scoring.

The table below provides a summary of the Control Phase Investment review deliverables.

IT Capital Planning and Investment Control	
Review Task	Action
Control Review Summary	• Reflects project manager responses to OCIO questions that facilitate the review process. • Provides the Investment team the opportunity to explain outside factors that could not be articulated in other project artifacts. • Use the OCIO template in AgMAX.
Baseline Management	• Project baselines must be established prior to execution and include all known scope. • If a re-baseline is warranted, USDA's re-baseline process is as follows. • PM of Investments that are being re-baselined meet with the OCIO CPITGD Liaison to discuss requirements, timeframe, deliverables, and resources.
Alternative of Analysis (AoA) and Cost Benefit Analysis (CBA)	• Should adhere to the OCIO AoA/CBA Cost Model templates • The Cost Model is used to build the AoA/CBA, this artifact is expected to be updated annually; significant Return on Investment (ROI) changes are indicated • Must provide strong support for the expenditure of DME funds. • Contain a cloud computing evaluation alternative

Cost, Schedule, and Technical Baselines	• Report to the OCIO CPITGD Liaison on the status of the IT Investment's cost, schedule, and technical baselines each month.
Earn Value Management (EVM)	• Major IT Investments participate in the EVM process for Cost & Schedule Variance reporting. • Investment are expected to meet planned cost and schedule goals for projects. • Investment project schedules must be capable of calculating cost and schedule variances. Missing or invalid data results in inaccurate variances. • Large variances in any significant area within the Investment should be documented, preferably in the Control Review summary.
MITBC/ITPS Alignment	• It is expected that actual costs will generally be equal to or below the funding levels recorded in AgMAX, within the Funding Sources table and Detail Life Cycle Costs (DLCC) table for prior years. • The baseline cost will be in alignment with the funding at the time the baseline is set. • Major IT Investments: Project Schedule must be consistent with what is reported in AgMAX within the Projects and Activities tables.
Cost Benefit Analysis	• The expenditure of funds on projects should be strongly supported.
Acquisition Plan	• Should adhere to the USDA Acquisition Plan template. • Active contracts must be identified in the plan.
Project Schedule	• Tasks related to risk mitigations are reflected in the schedule.
Project Schedule Task Specificity	• Tasks in the project schedule should represent specific work products and milestones and with a brief description.
Project Schedule Task Duration	• DME tasks do not exceed 180 days; reflecting an incremental development approach. • Operations & Maintenance (O&M) tasks do not exceed 1 year.
Project Schedule Completeness	• All scope, costs, and schedule within the Investment are included in the Investment project schedule.
Project Schedule Validity	• Task relationships are properly subordinated; costs and dates for sub-tasks ("child" tasks) roll up to their "parent" tasks. • An activity/task has an expected duration. If the event has no duration, it is considered a milestone.
Project Timeframe	• Project schedule reflects the Lifecycle of the Investment from inception through the BY or the completion of all active projects. • Timeframe should be consistent with other Investment artifacts.
Operational Analysis (OA)	• A new OA must be conducted annually (OCIO prefers it be completed prior to Mid-Year review to aid in developing Performance Budget Issue Papers). • Must use the template provided in AgMAX; export to MS Word and upload with other review artifacts.

Development Modernization & Enhancement	• Are the costs for projects leading to new IT assets/systems and projects that change or modify existing IT assets, substantively improve capability or performance, implement legislative or regulatory requirements or to meet an Agency leadership request. • Capital costs as part of DME can include hardware, software development and acquisition costs, commercial off the shelf (COTS) acquisition costs, government USDA costs, and contracted USDA costs for planning, development, acquisition, system integration, and direct project management and overhead support.
OCIO Scoring Criteria	• Define evaluation criteria and develop scoring criteria and supporting forms/templates.
IT Enterprise Architecture	
IT Investment Current Architecture (CA) (As-Is)	• Target Architecture of the IT Investment is clearly described and follow the OCIO templates and guidance. • The IT Investment business needs and operational performance are consistent with the MITBC. • The IT Investment architecture is aligned with the USDA Business Architecture, using OMB Federal Enterprise Architecture (FEA) reference model, and USDA Enterprise Roadmap. • Provide the current (As-Is) IT Investment description, including a detailed narrative addressing any current business or performance gaps and list of current subcomponents.
IT Investment Target Architecture (TA) (To-Be)	• Provide the (To-Be) IT Investment description, including a detailed narrative which addresses the enhancement that are planned or have been applied to close existing business performance gaps. • Describes the planned assets that will comprise the Investment and their relationships and how they collectively will support USDA's mission or business processes and contribute to mission and business results, including achievement of USDA strategy. • Reflects changes driven by project variances that impact project deliverables.
IT Risk Management	
Risk Management Plan	• Should adhere to the USDA Risk Management Plan template.
Risk Register	• Must use the USDA Risk Register template. • Risks adequately identified, analyzed, and prioritized, using required detailed in the Risk Register. • Risks and mitigation strategies are specific to the Investment rather than generic. • Risks must be actively managed and reported.
IT Security	

For Investments that are in Operations and Maintenance (O&M), and for the O&M parts of Mixed Investments, the following items need to appear in the Project Schedule for each year	• The review of security and privacy documents include current date, appropriate signature, verifying documented security and privacy requirements within the Investment documents and cross referencing the documents and current versions to Cyber Security Assessment and Management (CSAM). • A significant review is emphasized in the Project Plan for cybersecurity costs, Plan of Action & Milestones (POA&M), corrective actions associated with POA&Ms and funding source unique Investment identifier (UII). • Review of required Security and Privacy Deliverables: ○ Review of Federal Information Processing Standards publication (FIPS)199 and System Categorization Worksheet. ○ Review of Risk Assessment. ○ Review of Privacy Impact Assessment and other privacy requirements. ○ Review of System Security Plan (SSP). ○ Quarterly review of Plan of Action and Milestone (POA&M): ▪ Specify weakness mitigation cost ▪ Include POA&M ID and Project Unique Identifier ○ Review and update Contingency Plan (CP). ○ Annual Contingency Plan (CP) Testing. ○ Independent Security Controls Assessment. ○ Security Self-Assessment. ○ Security Assessment and Authorization annual.
Agriculture System Development Lifecycle (AgSDLC) Process	
Software Development Methodology	• Software development projects are expected to take an incremental development approach such as Agile. • Useable functionality should be produced every 180 days or earlier. • Investments are expected to justify why an incremental development method is not being used in the Control Review Summary.
Agile Development	• Agency processes support Agile methods. • Agency acquisition process support Agile methods. • Develop composition support methods. • Work is prioritized to maximize value. • Develop and ensure repeatable process is in place. • Appropriate Agile certification professional are in place. • The Agency has established and Agile supportive environment. • Programs establishes project planning controls that are compatible with Agile.
IT Governance and Decision Gate Approval	

Figure 7: Control Phase Investment Review Deliverables

2.1.4. Evaluate Phase

The goal of the Evaluate Phase is to determine whether the performance goals defined in the Select Phase and focused on in the Control Phase are being realized in the actual outcomes of implemented IT

Investments. A Post Implementation Review (PIR) assesses the deployed IT solution against its planned cost, schedule and technical performance objectives; compares the actual ROI to the planned ROI calculated as part of the CBA; identifies opportunities for improvement; and documents lessons learned. The lessons learned are then applied to the Select and Control processes to strengthen the Department's overall IT Investment management. Oversight is accomplished through biannual Evaluate Reviews. An OA is completed on an annual basis to identify gaps and ensure the IT Investment is achieving its annual performance goals. For Major IT Investments, quarterly performance data updates to the FITDB are also evaluated. The Evaluate phase ends when the IT Investment disposition (i.e., the shutdown, termination, and decommissioning of the IT Investment) has been completed.

PIRs are conducted six (6) months upon implementation of an IT solution. The PIR includes a methodical assessment of the IT Investment's costs, performance, benefits, documentation, mission, and level of stakeholder and customer satisfaction. An OA is performed after the IT solution has been in operations for a year and updated on an annual basis. The results from these activities determine the IT Investment's efficiency and effectiveness in meeting performance and financial objectives. The Agency conducts the PIR and OA, and the results are reported to the OCIO and E-Board to provide a better understanding of IT Investment's performance and to assist the project sponsor in directing any necessary Investment adjustments. Additionally, results from the Evaluate Phase should be looped back to the Pre-Select, Select, and Control Phases as lessons learned.

The table below provides a summary of the Control Phase Investment review deliverables.

IT Capital Planning and Investment Control	
Review Task	Action
Evaluate Review Summary	• Reflects project manager responses to OCIO questions that facilitate the review process. • Provides the Investment team the opportunity to explain outside factors that could not be articulated in other project artifacts. • Must use the Evaluate Review Summary template in AgMAX; export to MS Word and upload with other review artifacts.
Baseline Management	• Project baselines must be established prior to execution and include all known scope. • If a re-baseline is warranted, USDA's process is followed. • PMs of Investments that are being re-baselined meet with the OCIO CPITGD Liaison to discuss requirements, timeframe, deliverables, and resources. Detailed requirements are located on USDA SharePoint (https://usdagcc.sharepoint.com/sites/ocio/TPAE/ITM/EVM/SitePages/Home.aspx)

Operations and Maintenance (O&M)	• The phase of an asset in which the asset is in operations and produces the same product or provides a repetitive service. • Operations and Maintenance (O&M) is synonymous with “steady state.” Mixed lifecycle: an IT Investment having both DME and steady state components. • For example, a mixed Lifecycle IT Investment could include a prototype or module of a system that is operational with the remainder of the system in DME stages or, a service contract for steady state on the current system with a DME requirement for system upgrade or replacement. It is important to the IT Investment review process to make sure the funding status entered in AgMAX is current and accurate.
MS Project	• Project schedule must be submitted to OCIO CPITGD Liaison when requested. • The baseline must be properly set; task. relationships are properly subordinated;
Earn Value Management (EVM)	• Investment are expected to meet planned cost and schedule goals for projects. • Investment project schedules must be capable of calculating cost and schedule variances; no missing or invalid data results in inaccurate variances. • Large variances in any significant area within the Investment should be documented in the Control Review Summary.
MITBC/ITPS Alignment	• It is expected that actual costs will generally be equal to or below the funding levels recorded in AgMAX within the Funding Summary table and Lifecycle Costs table for prior years. The baseline cost will be in alignment with the funding at the time the baseline is set. • Major IT Investments: Project Schedule must be consistent with what is reported in AgMAX within the Projects and activities tables.
Project Schedule Timeframe	• Project schedule reflects the Lifecycle of the Investment from inception through the BY or the completion of all active projects. • Timeframe should be consistent with other Investment artifacts (i.e. updates, initial, etc.).
Project Schedule Level of Details	• Project schedule includes at least 3 levels to be useful in managing day-to-day activities, resources, costs, and schedule within the Investment given its size, scope, cost, and complexity. • The work breakdown structure (WBS) is arranged in a hierarchy and constructed to follow clear and logical groupings, either by tasks or deliverables. • Project Schedule contains more detail for the near-term and less detail being acceptable for the out-years.
Project Schedule Task Specificity	• Tasks in the project schedule should represent specific work products and milestones and generally named in a verb-noun format. • Tasks related to your risk mitigations are reflected in the schedule.
Project Schedule Task Duration	• DME tasks do not exceed 180 days; reflecting an incremental development approach. • O&M tasks do not exceed 1 year.

Project Schedule Completeness	• All scope, costs, and schedule within the Investment are included in the Investment project schedule.
Project Schedule Validity	• Task relationships are properly subordinated; costs and dates for sub-tasks (“child” tasks) roll up to their “parent” tasks. • An activity/task has an expected duration. If the event has no duration, it is considered a milestone.
Cost Benefit Analysis	• Should adhere to the OCIO Cost Benefit Analysis and Cost Model templates. • Only the Cost Model used to build the CBA is expected to be updated annually. significant ROI changes are noted. • Must provide strong support for the expenditure of development funds. • Contain a cloud computing evaluation alternative. • The expenditure of funds on projects should be strongly supported.
Acquisition Plan	• Should adhere to the USDA Acquisition Plan template.
Post Implementation Review (PIR)	• Completed within 3-18 months of implementation of DME activities. • Must use the template provided in AgMAX; export to MS Word and upload with other review artifacts.
Operational Analysis (OA)	• A new OA must be conducted annually (OCIO prefers it completed prior to Mid-Year review to aid in developing Performance Budget Issue Papers). • Use the template provided in AgMAX; export to MS Word and upload with other review artifacts.
Lessons Learned	• Identification of actions that will be taken because of the lesson learned, and follow-up to ensure that appropriate actions were taken. • Document the cause of issues and the reasoning behind any corrective action taken to address those issues.
IT Enterprise Architecture	
IT Investment Target Architecture (TA) (To-Be)	• Provide a detailed description of how the target (To-Be) state, as described in the Target Architecture, will be achieved. • Summarize how the IT Investment will transition from the current to target state, to include sequence of any significant milestones (i.e. gaps addressed and closed, deployment of new or improved functionality) that supports the IT Investment transition. • Identify the disposition plans for the current system.
Transition Strategy	• Include additional documentation to support the Transition Strategy.
IT Risk Management	
Risk Management Plan	• Should adhere to the USDA Risk Management Plan template.
Risk Register	• Must use the USDA Risk Register template. • Risks adequately identified, analyzed, and prioritized, using required metalanguage detailed in the Risk Register. • Risks and mitigation strategies are specific to the Investment rather than generic. • Risks must be actively managed.

IT Security	
Security and Privacy documents	The IT security deliverables should be developed as an Investment moves through the SDLCM phases. However, the activities associated with these deliverables should be included in the proposed baseline of the Project Plan.
Plan of Action & Milestones (POA&Ms)	Should include the cost associated with the corrective action, the Project Unique Identifier which allows OCIO Security to verify costs for IT Security and Privacy, and the POA&M identification.
For Investments that are in Operations and Maintenance (O&M), and for the O&M parts of mixed Investments, the following items need to appear in the Project Schedule for each year	- Review of Federal Information Processing Standards Publication (FIPS) 199 and System Categorization Worksheet. - Review of Risk Assessment. - Review of Privacy Impact Assessment and related privacy documents. - Review of System Security Plan (SSP). - Quarterly review of Plan of Action and Milestone (POA&M). - Specify weakness mitigation cost - Include POA&M ID and Project Unique Identifier - Corrective Action cost to mitigate weakness - Review and update Contingency Plan (CP). - Annual CP Testing. - Independent Security Controls Assessment. - Security Self-Assessment. - Security Assessment and Authorization (tri-annual). - Security Configuration Management and Training Plans. - Annual Security and Privacy.
Agriculture System Development Lifecycle (AgSDLC) Process	
This process is not applicable during this phase.	
IT Governance and Decision Gate Approval	

Figure 8: Evaluate Phase Investment Review Deliverables

2.2. Roles and Responsibilities

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

Role	Responsibility
Agency Head	Responsible for signing CPIC documentation before submission to OCIO.
Agency IT Investment Sponsor or Agency CIO	Responsible for providing executive sponsorship of the IT Investment; should be a senior level executive within the applicable mission area or Agency.
OCIO Capital Planning IT Governance Division (CPITGD)	On behalf of the USDA Department level CIO, the CPITGD is responsible for setting IT policy, reviewing IT Investments, assessing how potential and existing Major IT Investments meet capital planning criteria, approving movement between CPIC phases and making recommendations to the Integrated Advisory Board (IAB). Additional detailed responsibilities include (but not limited to):

	• Receive and review IT Investment business cases against pre-determined criteria to determine whether they meet minimum viability and IT Investment characteristic requirements. (The division reviews IT Investment business case summaries and assesses architectural compliance, redundancies, and opportunities for consideration. It works with project managers when additional information and clarification is needed). • Meet with IT Investment managers on a quarterly basis to review status of IT Investments and recommend corrective action as warranted. • Actively seek to identify "at risk" IT 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.
Enterprise Architect	On behalf of the USDA Department level CIO, the Enterprise Architect is 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. The Enterprise Architect is also responsible for the Department's IT Asset Management.
Agency Capital Planning and Investment Control (CPIC) Administrator	Responsible for serving as the primary interface for capital planning between the OCIO and the IT Investment owner.
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.
IT Investment Owner	Responsible for documenting, posting and storing the IT Investment's cost and other information into the OMB exhibits and the CPIC tools. The IT Investment owner may be the Agency CIO, the program manager, or the portfolio manager depending on the Agency's internal CPIC process.
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 IAB.
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 Enterprise Architecture (EA) • Initiate Pre-Select and Select documentation • Manage the IT Investment throughout its Lifecycle • Participate in quarterly IT Dashboard reporting and quarterly control reviews as required

	• Oversee the IT Investment's progress, including cost, schedule, and performance • Report on the IT Investment's progress at each Lifecycle milestone • Prepare progress and status reports as requested • Document lessons learned once projects (or useful segments) are implemented • Participate in PIRs, when required • Perform ongoing operational analysis consistent with the Lifecycle
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3. Overview of USDA CPIC Processes

3.1. Investment Types

USDA IT portfolio Investments are organized by the part of the Agency IT Portfolio Summary where their IT budget-related costs apply based on how the Investment supports the Agency:

- ***Part 1. IT Investments for Mission Delivery*** - Investments that directly support the delivery of the Agency's mission and can be mapped directly to Agency strategic objectives and/or priority goals.
- ***Part 2. IT Investments for Mission Support Systems*** - Investments for mission support systems that are specific to an Agency and are officially designated as shared or centralized services or solutions, such as E-Gov/ Line of Business (LoB). Support services are comprised of activities that are common across all Agencies and include functional areas such as financial management, human resources transactions, contracting, travel, and grants management.
- ***Part 3. IT Investments for IT Infrastructure, IT Security, and IT Management*** - Investments for IT goods and services common to all Agencies, such as IT Infrastructure, IT Security, and IT Management. Agencies are required to report nine sub-categories of Standard IT Infrastructure Investment types: IT Security and Compliance, IT Management, Network, Data Center and Cloud, End User, Output, Application, Delivery, and Platform Investments.

In alignment with OMB's IT portfolio guidance, as outlined in their IT Budget Capital Planning Guidance, USDA IT portfolio Investments are then further classified by Investment type, which must align with the part of the Agency IT Portfolio Summary assigned to each IT portfolio Investment: Major, Non-Major, Standard IT Infrastructure/Security/Management, IT Migration, and Funding Transfer.

3.1.1. Major IT Investments

Major IT Investments are Part 1. Mission Delivery and Part 2. Mission Support System Investments requiring special management attention due to (1) their importance to the mission or function to the government; (2) significant program or policy implications; (3) high executive visibility; (4) high development, operating, or maintenance costs; (5) unusual funding mechanism; and/or deemed a major by the Department's CPIC process based on other criteria. "Major automated information systems" as

defined in 10 U.S.C. § 2445¹² and all “major acquisitions” as defined in the OMB Circular A-11 Capital Programming Guide¹³ consisting of information resources.

An IT Investment may be deemed a Major IT Investment if it meets one of more of the following criteria:

- Total Lifecycle Development, Modernization, and Enhancement (DME) Investment costs are greater than \$20M;
- Total operations and maintenance costs for the seven-year period – beginning two Prior Years (PY) from the budget year (PY-1 and PY), through the Budget Year (BY) plus four additional years (BY+1, BY+2, BY+3, BY+4) – are in excess of \$200M; and/or
- The Investment has been identified by the USDA Chief Information Officer (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;
- Considered strategic or mandatory-use Investments;
- Differ from or greatly impact the Department’s infrastructure, enterprise architecture or standards guidance; and/or
- Involve multiple-Agency funding.

3.1.2. Non-Major IT Investments

Non-Major IT Investments are Part 1. Mission Delivery and Part 2. Mission Support System Investments that do not meet the definitions and criteria/attributes of Major IT Investments, Standard IT Infrastructure Investments, Funding Transfer Investments, or IT Migration Investments. All non-Major IT Investments are required to be closely managed and reviewed by the OCIO, with some exceptions. An existing IT Investment at any point of time may be changed from a non-Major to Major and vice versa

3.1.3. Standard IT Infrastructure Investments

Standard IT Infrastructure Investments are Part 3 Investments that have been disaggregated into nine discrete sub-categories based on TBM Framework’s IT Towers that are now managed and reported separately. Most sub-categories of Investments have a corresponding Standard IT Investment report (SIR) that is required to be submitted to OMB during the IT Budget Submission periods, except IT management, output, and Platform Investments. However, the need for a Standard IT Investment Report for these Investments will continue to be evaluated by OMB to determine whether additional information relating to this type of Standard IT Investment would provide useful and actionable data for OMB and agencies.

¹² 10 U.S.C. § 2445: Title 10 – Armed Forces, Subtitle A – General Military Law, Part IV – Service, Supply, and Procurement, Chapter 144A – Major Automated Information System Programs, Sec. 2445a – Definitions, <https://www.govinfo.gov/content/pkg/USCODE-2010-title10/html/USCODE-2010-title10-subtitleA-partIV-chap144A.htm>

¹³ Capital Programming Guide – Supplement to OMB Circular A-11: Planning, Budgeting, and Acquisition of Capital Assets (2018), https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/assets/a11_current_year/capital_programming_guide.pdf

Refer to OMB's latest IT Budget Capital Planning Guidance for specific reporting requirements for each sub-category of Investments.

3.1.3.1. IT Security & Compliance Investments

IT Security and Compliance Investments are for the provisioning of Security Operations Centers (SOCs) and associated costs in alignment with the TBM IT Security and Compliance tower. Every organization managing a security program is required to report an IT Security and Compliance Standard IT Investment to provide visibility into costs and outcomes of its cybersecurity activities. These Investments should include bureau or Agency-wide IT Security and Compliance spending, such as Agency or component SOCs, not contained within specific program budgets.

3.1.3.2. IT Management Investments

IT Management Investments are for the provisioning of an enterprise-wide IT management capability as defined by the TBM IT Management tower.

These Investments must be created for each independently managed enterprise-wide IT Management capability within an Agency.

Note: IT Management Investments are not required to complete a Standard IT Investment report. However, the need for a Standard IT Investment Report will continue to be evaluated by OMB.

3.1.3.3. Network Investments

IT Network Investments are for the provisioning of an enterprise-wide wide-area network (WAN), local-area network (LAN), and metropolitan-area network (MAN) capabilities as defined by the TBM Network tower. These Investments are required to be reported at the WAN level. One Network Standard IT Investment should be reported for each WAN or MAN and LANs may be reported together in one Investment if they are managed at the same level.

3.1.3.4. End User Investments

End User Investments are for the provisioning of an enterprise-wide end user capability as defined by the TBM End User tower. These Investments are required to be reported at the point of management.

3.1.3.5. Data Center & Cloud Investments

Data Center and Cloud Investments are for the provisioning of an enterprise-wide data center and/or cloud capability as defined by the TBM Data Center, Compute, Storage, and Cloud IT Towers. These Investments are required to be reported at the most granular level available, such as by data center or cloud procurement. Otherwise, they should be reported at the bureau or Agency level and include all relevant data centers and/or cloud procurements at this level of management. Non-tiered data centers should be reported as part of other Investments by including costs within the Data Center IT Tower within the Agency IT Portfolio Summary.

3.1.3.6. Application Investments

Application Investments are for the provisioning of an enterprise-wide shared application capability based on the definition of the TBM Application tower to include sub-towers: Application Development, Application Support & Operations, and Business Software. Application resources shared across the enterprise (e.g., testing personnel, integrated development environments, testing software) are included. Application resources specific to program IT Investments (e.g., dedicated analysts and programmers) are not included. Application resources, tools, and services associated with development projects for the enterprise application capability itself are included.

These Investments are required to be created for each independently managed enterprise-wide application capability within an Agency; however, they are not created for an application capability that is provisioned as part of a program-specific IT Investment. The expenditure of IT resources for such an application capability is included with the program-specific IT Investment.

3.1.3.7. Output Investments

Output Standard IT Investments are for the provisioning of an enterprise-wide independently-managed output capability as defined by the TBM Output tower.

These Investments are required to be created for each independently managed enterprise-wide output capability within an Agency.

Note: Output Investments are not required to complete a Standard IT Investment report. However, the need for a Standard IT Investment Report will continue to be evaluated by OMB.

3.1.3.8. Delivery Investments

Delivery Investments are for the provisioning of an enterprise-wide shared delivery capability based on the definition of the TBM Delivery tower that includes enabling capabilities (e.g., Business Software). Delivery resources, products, and services shared across the enterprise (e.g., PMO personnel, account managers) are included. Delivery resources, products, and services specific to a program IT Investment (e.g., dedicated project managers and business analysts) or other Standard IT Investments are not included, as the focus of this Standard IT Investment is on multi-program and multi-operation centers.

These Investments are required to be created for each independently managed enterprise-wide delivery capability within an Agency (e.g., PMOs, Customer Relationship Management (CRM) operation centers).

3.1.3.9. Platform Investments

Platform Investments are for the provisioning of an enterprise-wide platform capability as defined by the Platform tower to include sub-towers: database, middleware, mainframe database, and mainframe middleware, which were all previously under the Application Tower. These Investments are required to be reported at the point of management.

Note: Platform Investments are not required to complete a Standard IT Investment report. However, the need for a Standard IT Investment Report will continue to be evaluated by OMB.

3.1.4. IT Migration Investments

IT Migration Investments are a portion of a larger asset and for which there is an existing MITBC for the overall asset. The description of the IT Investment should indicate the UII of the major asset Investment of the managing partner.

3.1.5. Funding Transfer Investments

Funding Transfer Investments are primarily used to indicate a partner contribution to a Lead Agency Investment through inter- or intra-Agency transfers. The description of the IT Investment should indicate the UII of the Lead Agency's Investment.

3.2. USDA CPIC Processes, Functions, and Activities

USDA CPIC processes and activities are used to monitor, manage and deliver improved IT project management performance. An improved focus on effective IT project management and enhanced oversight enables the delivery of more on-time, in-scope, and within budget IT projects. OCIO ensures the Department has the policies, practices, and processes in place to drive performance through successful planning and implementation. OCIO also ensures the ongoing analysis of each IT Investment through a deliberate and structured approach to managing USDA's IT Investments. USDA Agencies are encouraged to follow the Department's established and highly structured CPIC processes and other functional attributes to ensure a uniform approach to IT Investment management. The Department's CPIC processes throughout the four CPIC phases: Pre-Select, Select, Control, and Evaluate.

3.2.1. IT Budget & Management Reporting Submissions

The Department's IT budget and management submissions are executed in three distinct components.

1. **Agency IT Portfolio Summary (ITPS) (formerly Exhibit 53)** – Collects information for all Investments aligned to
 - a. Part 1: Mission Delivery;
 - b. Part 2: Mission Support Systems; and
 - c. Part 3: IT Infrastructure, IT Security, and IT Management.
2. **Major IT Business Case (MITBC) (formerly Exhibit 300)** – Used to track the planning, budgeting, acquisition, and management of all Major IT Investments aligned to Part 1 and Part 2 of the Agency IT Portfolio Summary.
3. **Standard IT Investment Reports** - Used for Investments corresponding to Part 3 of the Agency IT Portfolio Summary and that require or make available such reports.

3.2.1.1 Agency IT Portfolio Summary

Agencies are required to submit all IT budget-related costs in the Agency ITPS to OMB annually. The Agency's complete IT Portfolio must be reported for all Investments and must include all IT resources for the IT Investments from all funding sources. This means that for each Investment, the Agency must identify the funding source and budgetary resources, including the OMB Budget Account codes, used for the Investment. The following table displays how the Agency IT Portfolio Summary is organized:

Agency IT Portfolio Summary	
Agency IT Investment Portfolio Summary	Part 1: IT Investments for Mission Delivery
	Part 2: IT Investments for Mission Support
	Part 3: IT Investments for IT Infrastructure, IT Security, and IT Management
Agency Budget Accounts Summary	

Figure 9: Agency IT Portfolio Summary Composition

In the Investment's Detailed Life Cycle Cost (DLCC) table in AgMAX, IT budget-related costs are categorized into two categories, which identifies the use or intended use for the costs: development, modernization, and enhancement (DME) costs and operations and maintenance (O&M) costs.

- **Development, Modernization and Enhancement (DME)** – DME refers to projects and activities leading to new IT assets/systems, as well as projects and activities that change or modify existing IT assets to improve capability or performance. Expanding the capacity of an asset or otherwise upgrading it to serve needs different from or significantly greater than those originally intended.
- **Operations & Maintenance (O&M) / Steady State (SS)** – Operations & Maintenance Costs refers to the expenses required to operate and maintain an IT asset that is operating in a production environment. O&M costs include costs associated with operations, maintenance activities, and maintenance projects needed to sustain the IT asset at the current capability and performance levels. It includes Federal and contracted labor costs, corrective hardware and software maintenance, voice and data communications maintenance and service, replacement of broken or obsolete IT equipment, overhead costs, and costs for the disposal of an asset.
- **Mixed Lifecycle** - An Investment having both DME and O&M/SS components is referred to as being in a Mixed Lifecycle state. For example, a mixed Lifecycle Investment could include a prototype or module of a system that is operational with the remainder of the system in DME stages; or, a service contract for O&M (steady state) on the current system with a DME requirement for system upgrade or replacement. It is important to the Investment review process to make sure the funding entered in AgMAX is current and accurate.

IT budget-related costs are also reported in alignment with TBM. The IT Cost Pool tab in AgMAX provides a table for costs to be broken out across the nine IT Cost Pools: Internal Labor, External Labor, Outside Services, Hardware, Software, Facilities, Telecom, Other, and Internal Services. The IT Tower tab in AgMAX provides a table for costs to also be broken out across the eleven IT Towers: Data Center, Compute, Storage, Network, Output, End User, Application, Delivery, IT Security and Compliance, IT Management, and Platform.

3.2.1.2. Major IT Business Case

Business Cases are only required for Part 1 and Part 2 major IT Investments and are required to be submitted to OMB annually. Together, the Major IT Business Case and Major IT Business Case Details provide the budgetary and management information necessary for sound planning, management, and governance of major IT Investments. These documents help Agencies explicitly align IT Investments with strategic and performance goals, and ultimately provide value to the public by making Investment and management information more transparent. As architecture-driven IT Investments are funded in the "Select" CPIC phase, the Investments move forward into the implementation phase. The system

development Lifecycle processes are then followed while actual outputs, schedule, and operational performance expenditures are tracked against planned numbers using performance-based management processes as part of the CPIC “Control” Phase.

All information necessary to complete the Major IT Business Case and Major IT Business Case Detail should already exist as part of the Agency's overall capital planning activities and within project- and program-specific documentation. The materials used to populate Major IT Business Case and Major IT Business Case Detail should be readily available to OMB upon request. Major IT Business Case Details establish cost, schedule, and performance targets for PY and CY. As required by OMB’s IT Budget Capital Planning Guidance:

- All software development projects must produce usable functionality at intervals of no more than six months. Projects that do not involve software development are not required to leverage iterative/agile methodologies;
- All projects within Investments are required to use modular development principles; and
- All major software development projects within Investments are required to incorporate contract terms that require the use of modular/iterative (e.g., agile) development principles.

3.2.1.3. Standard IT Investment Reports

Standard IT Investment Reports (SIR) are only required for Part 3 Standard IT Infrastructure Investments and are required to be submitted to OMB annually. Most Standard IT Investments have a corresponding SIR, which is tailored to the commodity IT data that it reports. Each SIR has its own reporting requirements and frequency, which are detailed in OMB’s IT Budget Capital Planning Guidance. Of the nine Standard IT Investment types, three do not have SIRs required at this time: IT management, output, and Platform Investments. However, the need for a Standard IT Investment Report for these Investments will continue to be evaluated by OMB to determine whether additional information relating to this type of Standard IT Investment would provide useful and actionable data for OMB and agencies. Refer to OMB’s latest IT Budget Capital Planning Guidance for specific reporting requirements for each sub-category of Investments.

3.2.2. IT Acquisition Approval Request (AAR) Process

The IT AAR process is the mechanism by which the USDA OCIO monitors and reviews Agency-level IT spending.

The AAR process was established as a requirement in the USDA Appropriations Act, Title VII, General Provisions, Section 711. This is reiterated in the Consolidated and Further Continuing Appropriations Act for Fiscal Year 2015, P. L. 113-235, Division A, Title VII, Section 706, and the Consolidated Appropriations Act for Fiscal Year 2016, P.L. 114–113.

In addition, Title 40 USC §11319, “Federal Information Technology Acquisition Reform Act,” (National Defense Authorization Act for Fiscal Year 2015, Title VIII, Subtitle D, P.L. 113-291) stipulates that agencies “may not enter into a contract or other agreement for information technical or information technology services, unless the contract or other agreement has been reviewed and approved by the Chief Information Officer of the Agency.” In this context, “Agency” refers to USDA.

The IT AAR process establishes USDA procedures for complying with the statutory requirement for approval of the use of funds prior to awarding orders or contracts for IT equipment, supplies, software, or services. This review process applies to all types of IT acquisitions, contracts, and agreements over \$25,000. The IT AAR process includes:

- All contracts or orders under any contract type;
- Open market blanket purchase agreements (BPAs) – both the initial agreement and any BPA orders or calls;
- BPAs placed under General Services Administration (GSA) Multiple Award Schedules – both the initial agreement and any orders or calls;
- Indefinite delivery contracts – both the initial contract and each order;
- Commercial item or service, contract, or order;
- Orders under Federal Acquisition Regulation (FAR) part 8 including Federal Prison industries, nonprofit agencies employing people who are blind or severely disabled;
- Modifications to contracts and orders;
- Significant changes to the acquisition approach;
- Option renewals; and
- Inter-Agency agreements.

Additional guidance relating to the IT AAR process can be found using the following link:

https://usdagcc.sharepoint.com/:b:/s/ocio/TPAE/ITM/EXu-BtCS1FNDnAT6h1GRODkBEqnrvk49IFk3y39BG9_mFg?e=w0OpZF

3.2.3. Earned Value Management (EVM)

Major IT Investments participating in the USDA EVM program are to submit updated project schedules to the OCIO on the 10th business day of every month. Additional guidance relating to EVM can be found using the following link:

<https://usdagcc.sharepoint.com/sites/ocio/TPAE/ITM/EVM/SitePages/Home.aspx>

3.2.4. Realized Cost Savings and Avoidance

In order to meet FITARA reporting requirements (see sec. 834 subsection (b)(1)(III) and Sec. 833 subsection (c)(1)(C) of Title VIII, Subtitle D of the National Defense Authorization Act (NDAA) for Fiscal Year 2015, Pub. L. No. 113-291, <https://www.congress.gov/bill/113th-congress/house-bill/3979/titles>). Agencies / Staff Offices will submit Cost Savings and Cost Avoidance data to the Department on a quarterly basis. In turn, OMB will harvest the data from USDA along with other Federal Government Agencies in according to the deadlines for the IDC and will centrally report government-wide cost savings and/or avoidances publicly on the IT Dashboard.

For further details please see OMB's [Integrated Data Collection \(IDC\)](#) website (Note: to access the link you must have OMB MAX Access), and the latest Quarterly IDC Instructions.

USDA Agencies and Staff Offices, specifically, should report all cost savings and avoidance associated with the reported decision, not just those strictly confined to IT cost savings and avoidance. Additionally, Agencies/Staff Offices should explain what the resultant savings will be used for, or how it will be reinvested. Note: Although this field is optional for OMB, it is required for USDA which enables USDA to

accurately track reinvestment. Agencies should provide a description of the activities that were funded using those savings.

3.2.5. IT Baseline Management of IT Investments

A baseline is a standard against which actual work of an Investment is measured. In this policy, actual work is measured in terms of cost and schedule and business-related performance metrics against performance standards. A baseline change requiring CIO approval for any modification to any of the following:

- Major IT Investment that is going through a re-baseline, after internal approval within your Agency's IRB (or similar governance body); request must then be routed through USDA IAB for approval and final approval of the E-Board.
- Non-major/Standard IT Investment that is going through a re-baseline, the approval will be conducted within your Agency's IRB (or similar governance body) and documented within AgMAX

Additional guidance relating to IT Baseline Management can be found using the following link:

<https://usdagcc.sharepoint.com/sites/ocio/TPAE/ITM/EVM/SitePages/Home.aspx>

3.2.6. IT TechStat

The objective of the TechStat sessions is to hold officials accountable for program success. The TechStat review goals provides a realistic assessment of the IT Investment's performance and health, and identification of corrective actions as necessary. To achieve these goals, the TechStat and program teams must work collaboratively. Transparency is essential to ensure that the root causes can be explored and resolved. This dialogue sets the foundation for continued open conversations between the project team and Agency leadership to facilitate support, engagement, and quick issue resolution. The illustration below is a brief view of this process. Additional guidance relating to TechStat can be found using the following link:

<https://usdagcc.sharepoint.com/sites/ocio/TPAE/ITM/TechStat/SitePages/Home.aspx>

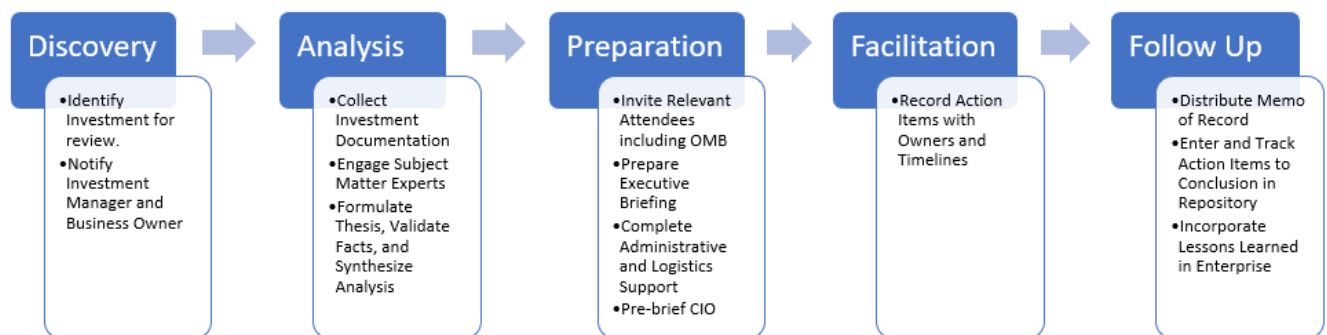


Figure 5 – TechStat High Level Process Overview

3.2.7. CIO Evaluation

On a regularly scheduled basis, the OCIO Capital Planning Team meets with the OCIO CPITG Director to evaluate and rate Major, Non-Major, and Standard IT Investments. Major and Standard IT Investments are evaluated on a quarterly basis, while Non-Major IT Investments are evaluated on a semi-annual basis. The IT Investments are evaluated and rated using a set of pre-established criteria. On the last day of the evaluation period, the OCIO Capital Planning Team updates the rating and explanation for each IT Investment in AgMAX and submits the final evaluations and ratings to the FITDB. Below is a view of the rating scale below.

The rating system employs different sets of rating criteria corresponding to different parts of the business case and its supporting documentation. They are:

- Investment Overview
- Contract /Acquisition Strategy
- Performance Metrics
- Risk Management
- Project Cost and Schedule Variances
- Project/Program Management Certification
- IT Governance (Major IT Investments only)

For each set of rating criteria, the range of possible scores in AgMax is 1 to 5. After assigning a score to each area, the individual criteria scores are then weighted to determine an overall numeric score, which then is categorized as green, yellow or red.

Calculated Weighted Score in AgMax	Color Assigned	Score Reported to OMB (Majors only)
1.00 – 2.49	Red	1 - 2
2.50 – 3.50	Yellow	3
3.51 – 5.00	Green	4-5

Figure 3 – USDA CIO Scoring Criteria

Additional guidance relating to CIO evaluation scoring and criteria can be found using the following link: <https://usdagcc.sharepoint.com/:f:/s/ocio/TPAE/ITM/CAMSite/Ehahc5A46cxCgb4WjJ85alkBXwsrt0Ohm9PGoiqDdW3YSg?e=zklgUT>

4. Integration of IT Governance with Other IT Management Processes

A strong IT Governance Framework is the backbone for managing IT enabled Investments. It allows the Department to carefully select and manage IT Investments which will provide the most value (financial, non-financial, or a combination of the two) to the business and enterprise governance. The OCIO leverages the existing USDA IITGF practices, processes and procedures establishing a repeatable process, which affords decision makers visibility into IT Investments and the capabilities they provide. The IITGF is a holistic set of processes, procedures, and guidelines that assist the OCIO's customers and stakeholders

to improve mission delivery. IT Governance consist of the policy, structure, and processes exercised by the Department to govern its IT Investments. It is used to establish and communicate the strategic direction, ensure goal realization, mitigate risk, and validate the effective and efficient execution of IT resources. The IITGF includes touch points with other USDA's governance, management, control activities and processes:

- Agriculture System Development Lifecycle (AgSDLC) Process;
- Risk Management Framework (RMF) Process (IT Security);
- Enterprise Architecture (EA) Performance Improvement Lifecycle Process;
- Capital Planning & Investment Control (CPIC) Process;
- Integrated IT Governance Structure; and
- IT Governance Decision Gate Reviews Process

The CPIC process focuses on optimizing the IITGF across the IT portfolio to provide the OCIO the most effective support possible. The IITGF establishes the IT business practices and determines the strategic priorities and assumptions for IT Investments. This defines the strategic, organizational practices, processes and technology discipline for enhancing and managing the IT portfolio. This is in line with the overarching governance from the IT management processes. Collectively, integrating the IITGF processes into the CPIC process:

- Allows enterprise-wide participation in the management of IT Investments based upon objective and measurable criteria;
- Encourages the use of enterprise architecture products to support Investment decisions and facilitates the implementation of the governance within the CPIC process;
- Facilitates the management and oversight of potential and currently funded IT Investments; and
- Supports and facilitates governance for IT Investment portfolios as a management tool for the engagement of the integrated IITGF processes.

The six robust governance, management, and control processes add an additional layer of safeguards for IT Governance to effectively oversee the Department's IT Investment portfolio. The framework blends with other IT authoritative components allowing transparency into the many business cohorts that are leveraged to monitor and maintain the CPIC disposition. The figure below shows the USDA Integrated IT Governance Framework structure. It depicts how these entities achieve important objectives and sustain improve performance for the Department's IT Investments.

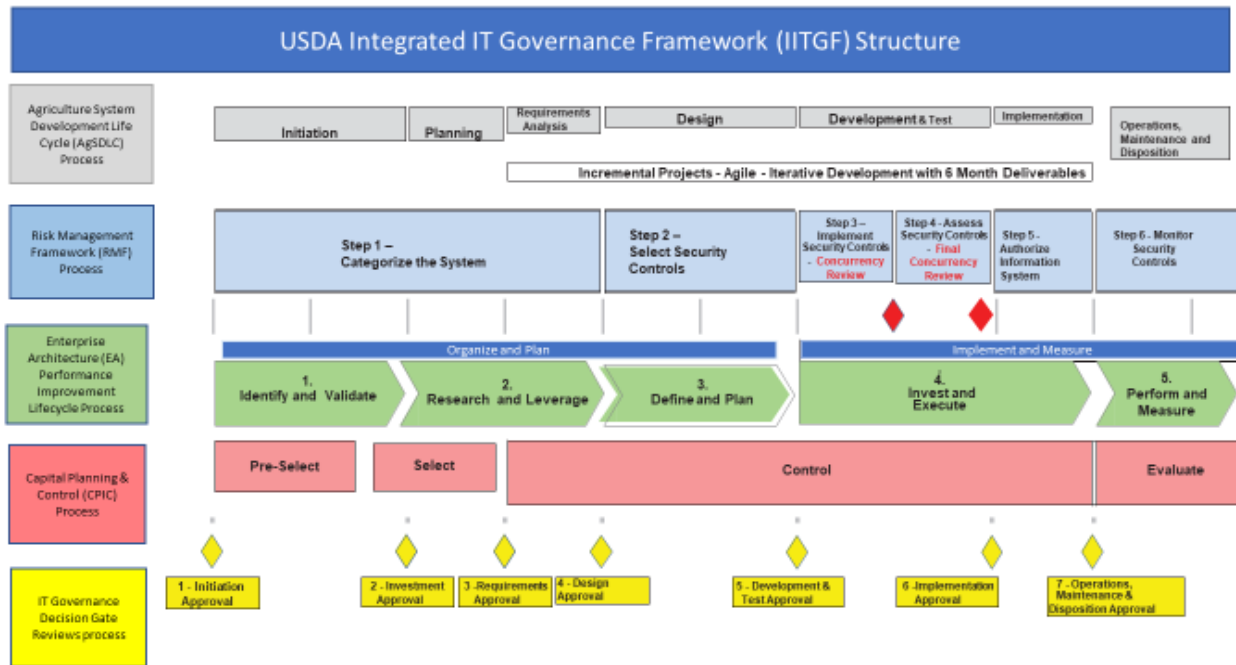


Figure 10: USDA Integrated IT Governance Framework (IITGF) Structure

5. Points of Contact

Contact information for the Department CPITGD Director, CPITGD Liaisons, and Mission Area CPIC Administrators can be found using the following link:

<https://usdagcc.sharepoint.com/sites/ocio/TPAE/ITM/SitePages/Home.aspx>

Appendix A: Acronyms

Acronym	Description
AAR	Acquisition Approval Request
AgITCPIC	US Department of Agriculture Information Technology Capital Planning and Investment Control
AgSDLC	US Department of Agriculture Systems Development Lifecycle
AoA	Analysis of Alternatives
BPA	Blanket Purchase Agreement
BY	Budget Year
CA	Current Architecture
CAO	Chief Acquisition Officer
CBA	Cost Benefit Analysis
CCA	Clinger-Cohen Act of 1996
CFO	Chief Financial Officer
CHCO	Chief Human Capital Officer
CIO	Chief Information Officer
COTS	Commercial Off The Shelf
CP	Contingency Plan
CPIC	Capital Planning and Investment Control
CPITGD	Capital Planning and Information Technology Governance Division
CRM	Customer Relationship Management
CSAM	Cyber Security Assessment and Management
CTO	Chief Technology Officer
CY	Current Year
DLCC	Detailed Lifecycle Costs
DME	Development, Modernization and Enhancement
EA	Enterprise Architecture
EAR	Enterprise Architecture Repository
ER	Enterprise Roadmap
EVM	Earned Value Management
EVMS	Earned Value Management System
FAR	Federal Acquisition Regulation
FARA	Federal Acquisition Reform Act
FASA	Federal Acquisition Streamlining Act of 1994
FEA	Federal Enterprise Architecture
FIPS	Federal Information Processing Standards
FITARA	Federal Information Technology Acquisition Reform Act of 2014
FITDB	Federal IT Dashboard
FY	Fiscal Year
GAO	Government Accountability Office

Acronym	Description
GPRA	Governance Performance and Results Act
GPRAMA	Governance Performance and Results Act (GPRA) Modernization Act of 2010
GSA	General Services Administration
IAB	Integrated Advisory Board
IITGF	Integrated Information Technology Governance Framework
IMLC	Investment Management Lifecycle
IPT	Integrated Product Team
IRB	Investment Review Board
IRM	Investment Resource Management
IRMC	Information Resource Management Center
IT	Information Technology
ITMRA	Information Technology Management Reform Act
ITPS	IT Portfolio Summary
LAN	Local Area Network
LoB	Line of Business
MAN	Metropolitan Area Network
MITBC	Major IT Business Case
MS	Microsoft
O&M	Operations & Maintenance
OA	Operational Analysis
OCIO	Office of the Chief Information Officer
OMB	Office of Management and Budget
OPPM	Oracle Primavera Portfolio Management
PIR	Post Implementation Review
PM	Project Manager
PMO	Program Management Office or Performance Management Office
POA&M	Plan of Action & Milestones
RMF	Risk Management Framework
ROI	Return on Investment
SDLCM	Systems Development Lifecycle Management
SIR	Standard IT Investment Report
SOC	Security Operations Center
SSP	System Security Plan
TA	Target Architecture
TBM	Technology Business Management
UII	Unique Investment Identifier
USC	United States Code
USDA	United States Department of Agriculture
WAN	Wide Area Network
WBS	Work Breakdown Structure

Appendix B: Special Terms and Definitions

Term	Definition
Applications	Application is a piece of software which a customer uses to perform at least one business capability within USDA. An application is a collection of code and components which provide an interface to the business user in which a 2-way exchange of information occurs. Examples include AgLearn, WebTA, Employee Personal Page, ConnectHR, etc. Excludes: Informational websites and desktop software (locally installed 3rd-party software).
Application Components	Application Components are the lower level decomposition of capabilities within an application that work together to deliver a function such as, but not limited to a software package, a web service, or a web resource that encapsulates a set of related functions.
Desktop and Laptop Systems	Desktop and Laptop systems are defined as “End User Systems” that can consist of any of the following: desktops and laptops, printers (both individual and shared), print servers; and scanners. This category includes the local hardware and software (PC operating systems, office automation suites) cost associated with the device as well as any related support costs (excluding help desk). • Desktops and laptops • Peripherals (scanners, fingerprint scanners, etc.) • Software/Desktop Applications (PC operating systems, office automation suites) • Local printers, shared printers, fax machines or the cost of supplies (e.g., toner and paper).
Information Systems	Information System refers a discrete set of information resources organized for the collection, processing, maintenance, use, sharing, transmission, or dissemination of information, in accordance with defined procedures, whether automated or manual.
Information Technology (IT)	This term refers to any equipment or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by an executive Agency. IT is related to the terms capital asset, IT Investment, program, project, sub-project, service, and system. It also includes computers, ancillary equipment (including imaging peripherals, input, output, and storage devices necessary for security and surveillance), peripheral equipment designed to be controlled by the central processing unit of a computer, software, firmware and similar procedures, services (including support services), and related resources; but does not include any equipment acquired by a federal contractor incidental to a federal contract (40 USC 11101); however OMB policy includes in this "supercomputers, software for mission systems, telecommunications, and satellite signal processing.
IT Asset	This term refers to anything (tangible or intangible) that has value to an organization, including, but not limited to: a computing device, IT system, IT network, IT circuit, software (both an installed instance and a physical instance), virtual computing platform (common in cloud and virtualized computing), and related hardware (e.g., locks, cabinets, keyboards) as well as people and intellectual property (including software). Assets are the lowest level at which IT is planned, acquired, implemented, and operated.

Mainframes and Servers	This term refers to a subset of the Mainframes and Servers Systems & Support apportionment category. The definition for this data center commodity IT area applies equally to any data processing environment (such as production, backup, Disaster Recovery/COOP, test, development, etc.) and typically includes: • Hardware (processing devices, supporting client devices): Includes all hardware in server platform configurations, including internal disk storage (but NOT external disk arrays), processors, memory, etc., and equipment used by operations staff to support the environment (e.g., desktops, laptops, tablets). • Software: Includes all software related to host and virtual OS licenses, virtualization and partitioning software, non-storage utilities, databases, middleware, content/document management, search engines, messaging, and server security. • Disaster recovery: Includes hardware, software, facilities, and contracts specifically dedicated to disaster recovery for mainframes/servers. • Outsourcing: includes fees for third party and outsource contracts, such as collocation, managed hosting services, and cloud computing. • Personnel: Includes in-house costs for government personnel (salaries and benefits) and costs for contract personnel supporting operations & maintenance, engineering/technical services, planning and process management, services administration, management and administration allocated to mainframe and server services and support.
Portfolio	A collection of IT Investments, which consist of related programs and/or projects that are grouped together to facilitate effective management of that work to meet strategic business objectives.
Program	A program is a group of related projects managed in a coordinated manner to obtain benefits not available from managing them individually. Program management is the application of knowledge, skills, tools and techniques to meet program requirements.
Project	A project can be defined as a temporary endeavor undertaken to create a unique product or service. Projects are different from other ongoing operations in an organization, because unlike operations, projects have a definite beginning and an end -they have a limited duration.
Platform	Platform is an integrated software development and/or hosting environment that systems, applications, websites, components, data, etc. are built upon. Examples include commercial platforms such as Salesforce or ServiceNow and open source platforms such as JBOSS, or Drupal.
System	System groups together similar and related applications, and their underlying hardware, that work together to deliver enhanced business capabilities.