

Integrated Information Technology Governance Framework: Guidebook

Introducing the USDA Incremental Governance Model



United States Department of Agriculture

*Office of the Chief Information Officer
Information Resource Management Center
Capital Planning and IT Governance Division*

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Office of the Chief Information Officer - Integrated IT Governance Framework: Guidebook

Version	Date	Description
1.0	07/05/2013	Incorporated near-final revs, grammatical items, Appendix G
2.0	12/10/2013	Added Appendices; tightened up on text and embedded Tables
3.0	02/28/2014	Major release update – removal of IPIC references throughout
3.1	03/10/2014	Text edit changes reflecting clarity
3.2	04/01/2014	Final /s/ ACIO, TPAE. Distribution to CPIC community for usage.
3.3	06/01/2018	Added USDA Incremental Governance Model and Incremental Certification and cleaned up text

Approval and Sign-off

United States Department of Agriculture Official Authorization

The signature endorses this document as being representative of the Office of the Chief Information Officer – *Integrated IT Governance Framework: Guidebook*

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Executive Summary

The United States Department of Agriculture Secretary has outlined a vision to provide economic opportunity through innovation, helping rural America to thrive; to promote agriculture production that better nourishes Americans while also helping feed others throughout the world; and to preserve our Nation's natural resources through conservation, restored forests, improved watersheds, and healthy private working lands. Information Technology is a major enabler to assisting USDA business units in achieving the Secretary's vision. The USDA manages over 230 IT investments across the Department and 29 Agencies and Staff Offices to support and enable the execution of the various business missions. Over the last five years, USDA has spent between \$2.4B and \$3.1B a year on IT projects. Because information technology services account for significant capital and operational expenses in USDA, a formal IT governance process is essential to ensure that business requirements ultimately drive planning decisions for the development and management of information technology resources. Formalizing governance processes also helps ensure that technology and business leaders agree on what is an appropriate level of risk in the information technology that powers day-to-day operations. IT governance exists to inform and align decision making for information technology planning, policy and operations to meet business objectives, ascertain that risks are managed appropriately and verify that resources are being used responsibly and strategically.

The Office of Management and Budget (OMB) and the Congress continue to establish ever higher standards for the management and performance of information technology investments within the Federal government. Those standards require a project management and accountability environment where IT projects achieve consistently successful outcomes that maximize alignment with business objectives and meet key cost, schedule, and performance objectives as well as mitigating risk.

A key to successful IT management is a solid project management and governance framework and methodology that incorporates best government and commercial practices through a consistent and repeatable process, and provides a standard structure for planning, managing and overseeing IT investments over their entire life cycle. The Integrated Information Technology Governance Framework (IITGF) provides that methodology for USDA.

The IITGF consists of these life cycle phases – *Initiation, Planning, Requirements Analysis, Design, Development and Test, Implementation, and lastly, Operations, Maintenance, and Disposition*. Within each one of these phases, specific activities, responsibilities, reviews, and deliverables are defined. Both Entry and Exit criteria are established for each phase and key Decision Gate reviews are conducted by established IT Governance Boards through the IT Governance process to ensure that the project's management quality, soundness, and technical feasibility remain adequate and the project is ready to move forward to the next phase. This Guide can be used by Project Managers, Business Owners, IT Governance Executives, Subject Matter Experts, and other key Stakeholders throughout the life of the IT investment.

The IITGF is designed to provide the flexibility needed to adequately manage risk while allowing for differences in project size, complexity, scope, duration, etc. Examples of flexibility include the ability (with IT Governance Board recommendation) to tailor the framework where particular phases, decision gates, or deliverables may not apply; or to aggregate phases and deliverables when appropriate; or to provide for conditional decision gate recommendations that allow progress to a subsequent phase in a manner that identifies and controls for risk.

Moreover, the IITGF applies to all USDA Major IT investments (projects), regardless of software development methodology used. With an increasing focus by OMB to encourage the use of incremental software development approach, and as a part of an on-going effort to enhance the USDA IT governance process, this

version of the *Guidebook* introduces the **USDA Incremental Governance Model**. This Model offers tailored decision gate reviews for Major IT investments where the life cycle phases of *Requirements Analysis, Design, Development and Test*, and *Implementation* are combined to accommodate the incremental, iterative, or agile development approach. The USDA Incremental Governance Model aims to accommodate the changing needs of the stakeholders and offer an effective way to deliver change faster and in a more flexible manner. **(Reader Note: References to the Incremental Governance Model-specific processes, decision gates, and artifacts, will be highlighted in maroon throughout this Guidebook for easy identification.)**

Since the formal implementation of the IITGF in 2014, there's been an improvement in the quality of project planning and execution, reducing overall project risk. Reducing risk, in turn, increases USDA's ability to move IT projects that best meet business needs into the production environment more quickly and with established cost constraints. The framework also provides an effective vehicle for adopting and propagating best practices in IT management. Finally, the framework provides a solid foundation for Project Manager training and certification and more effective IT Capital Planning.

Adoption of the IITGF has shifted more time and resources to the planning phases for projects and require additional resources from Project Managers, Business Owners, and IT Governance participants for review and recommendation activities. This increased investment in planning and oversight continues to return dividends in reduced program risk and less effort expended in rework or fixing foreseeable problems.

Both industry and government experience demonstrate that the quality of IT projects are directly proportional to the quality of the management processes used to acquire and operate the IT solutions those projects produce. The IITGF continues to help ensure the quality and value of USDA IT solutions through improved project management processes.

What's New in this Version...

The Integrated Information Technology Governance Framework (IITGF) is a:

- Project management and governance framework and methodology that incorporates best government and commercial practices through a consistent and repeatable process; and
- Provides a standard structure for planning, management and overseeing IT investments over their entire lifecycle.
- The IITGF consists of the following life cycle phases – *Initiation, Planning, Requirements Analysis, Design, Development and Test, Implementation, and Operations, Maintenance, and Disposition*. Within each one of these phases:
 - ✓ Specific activities, responsibilities, reviews, and deliverables are now better defined;
 - ✓ Both Entry and Exit criteria have been enhanced;
- CPITGD is taking an incremental approach to improve IT governance, resulting in minor version releases to IITGF Guidebook, to address broader improvements to the IITGF and associated IT management processes.
- As a part of an on-going effort to enhance IT governance, CPITGD has been focused on strengthening USDA's Department-level incremental development guidance (for agile, iterative, incremental, modular or spiral approach) for Major IT investments (projects).
- As of June 2018, minor version 3.3 updates incorporate:
 - ✓ Lessons learned from actual practice of the processes since version 3.2 was released in 2014;
 - ✓ Recent federal guidance on IT governance to ensure compliance;
 - ✓ Streamlined processes to promote efficiency and effectiveness; and
 - ✓ Input from CPITGD IT Governance Enhancement Survey conducted in July 2017;
 - ✓ Incremental Certification Statement.

- The IITGF is designed to provide the flexibility needed to adequately manage risk while allowing for differences in project size, complexity, scope, duration, etc.
- IITGF provides guidance to *Project Managers, Business Owners, IT Governance Executives, Subject Matter Experts, and other key Stakeholders*

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1 Introduction

1.1 Overview

The Clinger-Cohen Act (40 USC § 11315) mandates that CIOs are responsible for providing advice and other assistance to the head of the executive agency and other senior management personnel of the executive agency to ensure that information technology (IT) is acquired and information resources are properly managed. Moreover, the Clinger-Cohen Act establishes a definitive framework for IT investment management that requires federal agencies to focus more on the results they have achieved through IT initiatives and introducing more rigor and structure into how agencies select and manage IT projects, investments, and solutions. As used here, IT governance is defined as “the framework for decision rights and accountability to encourage desirable behavior in the use of IT”¹.

Information technology solutions play an integral role in assisting USDA to carry out its complex, diverse mission and objectives. For recent budget years, the USDA has invested nearly \$3 billion to ensure that the Department, Agencies, and Staff Offices have the technology solutions to address ongoing and future program needs. To that end, the USDA has a very complex and challenging task in ensuring that its diverse IT investments are properly aligned within the Department’s Enterprise Architecture (EA).

USDA approaches the management of its IT investments and projects from an enterprise perspective that facilitates smooth interfaces among IT projects, stakeholders, and IT executive governance boards. Adhering to recognized IT standards, as well as to Section 508, cyber security, and privacy requirements is essential to this outcome. By managing and governing its projects from an enterprise perspective, USDA will be in a better position to take advantage of economies of scale, as it purchases IT commodity products and solutions, which maximizes its bargaining and buying power, as well as provides needed oversight of IT investments concerning cost, schedule, risk, and performance through their life cycle phases. Furthermore, this enterprise perspective enables improved compliance with the Clinger-Cohen Act and other legislative and regulatory requirements that require USDA to manage and govern its IT projects at an enterprise level.

In addition to focusing on the planning, development, and operation and management of individual IT projects, USDA must also ensure that the overall portfolio of IT projects achieves alignment with USDA strategic goals and maximizes the return on the Department’s IT projects. The USDA IT Capital Planning and Investment Control (CPIC) Program, in conjunction with the IT Governance process, brings together the various stakeholders and governance bodies required to ensure maximum IT portfolio performance.

The Integrated Information Technology Governance Framework (IITGF) is part of an ongoing effort by the Department to further strengthen its IT management and governance processes. With the enterprise-wide approach to project management, there will also be a greater emphasis by the Department on demonstrating measurable results for each of its IT investments and projects and to better justify actions taken as IT projects move through the various life cycle phases. Additionally, there has an increasing focus by the Office of Management and Budget (OMB) to encourage use of incremental software development approaches², which is reinforced by OMB-sponsored Federal

¹ Weill, Peter. “Don’t Just Lead, Govern” Center for Information Systems Research. MIT Sloan Management. Cambridge, MA. March 2004.

² OMB’s Agile Modular Contracting Guide (2012) Contracting Guidance to Support Modular IT Development <https://obamawhitehouse.archives.gov/blog/2012/06/14/greater-accountability-and->

Information Technology Acquisition Reform Act (FITARA)³, to mitigate some of the challenges and risks associated with delivering usable IT capabilities in a timely manner with traditional software development methodologies. This version of the *Guidebook* includes guidance on Department-level agile (i.e., modular/iterative/incremental) approach for IT investments and projects as an on-going effort to accommodate to the changing needs of the stakeholders and offer an effective way to deliver change faster and in a more flexible manner.

In summary, this formalized and enhanced IT governance framework will:

- Improve alignment of USDA's IT investments to mission objectives;
- Ensure optimum value from IT investments and assets;
- Leverage cross-Mission Area and cross-agency/staff office assets;
- Share expertise and knowledge for re-use, sharing, cost savings, and innovation;
- Promote greater transparency and enable improved decision making;
- Enforce accountability, promote due diligence, and provide for a structured, repeatable, decision making process; and
- Provide leadership, organizational structures, and repeatable processes that ensure that the Department's IT sustains and extends the organization's strategies and objectives.

1.2 Purpose

The purpose of this document is to provide an overview and implementing guidance of the USDA's Integrated Information Technology Governance Framework (IITGF). Specifically, the IITGF Guidebook (Guidebook) identifies the activities associated with investment decision gates, which are aligned with an investments life cycle phase, for USDA to manage its enterprise-level IT governance process. This Guidebook further defines the alignment activities and IT executive governance board responsibilities for effective IT decision making at USDA. It includes touch points with other governance, management, and control activities and processes, such as: USDA's CPIC, Agriculture's System Development Life Cycle (AgSDLC) approach, Project Management (PM), EA, Risk Management Framework (RMF), and IT Security. Implementing an Integrated IT Governance framework further supports the USDA mission by providing the alignment for decisions with needed technology components, services, and applications.

1.3 Key Definitions

Some key definitions used throughout the IITGF include:

- **IT Portfolio** - The combination of all IT assets, resources, and investments owned or planned by an organization to achieve its strategic goals, objectives, and mission.
- **IT Investment** - An organizational investment employing or producing IT or IT-related assets. Each investment has or will incur costs for the investment, has expected or realized benefits arising from the investment, has a schedule of project activities and deadlines, and has or will incur risks associated with engaging in the investment.
- **IT Project** - A project is a temporary planned endeavor funded by an approved information technology investment; thus, achieving a specific goal and creating a unique product, service, or

[faster-delivery-through-modular-contracting](#); Digital Services Playbook, <https://playbook.cio.gov>; Transforming agency/staff office Management Practices for the Agile Age: Becoming an Agile Organization

³ Federal Information Technology Acquisition Reform Act (FITARA), December 19, 2014

result. A project has a defined start and end point with specific objectives that, when attained signify completion.

- **IT Governance** -
 - Establishes and clarifies accountability and decision rights (defines roles and authority)
 - Aligns IT investments and priorities more closely with the business
 - Ensures IT delivers on its plans, budgets, and commitments
 - Manages, evaluates, prioritizes, funds, measures and monitors request for IT Services and the resulting work and deliverables, in a more consistent and repeatable manner that optimizes returns to the business
 - Maintains responsible utilization of resources and assets
 - Manages major risks, threats, changes proactively
 - Improves IT organizational performance, compliance, maturity, staff development and outsourcing initiatives
 - Improves the voice of the customer (customer and constituent satisfaction and responsiveness)

IT governance assessment elements are defined along the following dimensions:

- **Customer-centric Strategic alignment** - Align IT strategy with business strategy and ensure advancement of business priorities.
- **Optimize the Value of IT Services** - Maximize value of IT investments.
- **Implement Risk-based Management Approaches** - Identify and mitigate IT risks in a timely manner.
- **Foster High-performing Resource Management Approaches** - Ensure availability of appropriate IT resources to meet current as well as projected business demand.
- **Continual Performance Measurement** - Monitor IT performance effectively.

1.4 Benefits

Continuing to leverage IITGF results in the following outcomes and benefits:

- Ability to leverage IITGF-type frameworks long established in the private and public sector as best practices to yield substantial benefits to USDA.
- Establish a foundation and supporting structure designed to aid in the successful planning, development, implementation, maintenance, management, and governance of USDA IT projects.
- Improved project planning and execution by project managers, and faster propagation of best practices in the project management community.
- Improved management response for individual IT projects and the broader IT investment portfolio to budgetary and other strategic changes through deliberate and approved baseline changes that fully consider Enterprise Architecture, cyber security, and other impacts.
- Movement of IT projects into the production environment more quickly and with higher quality, with the USDA Incremental Governance Model offering an effective way to deliver change faster and in a more flexible manner.
- Better operational support for production systems.
- Better measurement of IT performance (both at the individual project and at the portfolio level).
- More timely identification and resolution of project issues, reducing the risk of cost overruns, schedule delays, scope creep, and other typical project-related pitfalls.

- Improved competitiveness of IT projects in the budget process through improved performance management and linkage of IT investments to program mission.
- Enhancement of the USDA-specific CPIC Select, Control, and Evaluate processes for IT investment portfolio management.
- Adherence to Federal and Departmental Records Management policies and guidelines, and Section 508 mandates.
- Addresses tenets of the Office of Management and Budget's (OMB) Digital Government Strategy⁴ as they apply to those IT investments that builds and delivers digital services.
- Aligns with OMB's Open Data Policy⁵ for any major investment that will collect or create information that supports downstream information processing and dissemination activities including open formats and licenses, data standards, and metadata.
- Tight coupling with OMB's enterprise architecture Collaborative Planning Methodology by leveraging and monitoring the effective management of investments and projects throughout the governance process providing validation and assurances that an investment or project is addressing capability gaps and providing the intended performance improvements.
- Integration of the Risk Management Framework guidelines for properly monitoring an investments security controls.
- Alignment with the Government Accountability Office's IT Investment Management (ITIM) Framework with the IITGF.
- Greater re-use of activities and deliverables by Integrated Project Team members when moving among different projects.

1.5 Scope

The USDA IITGF applies to all new and existing USDA Major IT Investments and projects, including major enhancements to existing Major Investments and projects, projects associated with operations, maintenance and disposition, high-priority, and "fast-track" IT projects, meeting requirements as provided in Section 2.4 Thresholds and Criteria below.

To enable its functions, activities are outlined through the IITGF Guidebook to describe alignment activities and responsibilities by governance bodies to fulfill the objectives of the Integrated IT Governance process. The IITGF integrates the CPIC, AgSDLC, PM, IT Security, EA, Records Management, Section 508, Privacy, and budget formulation and execution processes, into a cohesive governance structure for decision making at various levels. Every proposed (new) Major IT Investment will be required to transition through the initial decision gate, and the decision to proceed through subsequent decision gates will be based on the investments ability to meet all established entry and exit criteria for each decision gate. As this process continues to mature, agencies and staff offices will be advised to adopt this governance framework at their own levels.

⁴ Available at <http://www.whitehouse.gov/sites/default/files/omb/egov/digital-government/digital-government-strategy.pdf>

⁵ See OMB Memorandum M-13-13, available at <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-13.pdf>

1.6 Audience

The audience for this document includes: the Secretary, Deputy Secretary, Under Secretary's, Deputy Under-Secretary's; the USDA Chief Information Officer (CIO), the USDA Chief Financial Officer (CFO); USDA agency/staff office Administrators, agency/staff office Deputy Administrators, Staff Office Directors, agency/staff office/Staff Office CIOs, Associate CIOs (ACIOs), program managers, capital planning administrators, IT governance board members, technical representatives, subject matter experts, and all others involved in the IT decision-making process.

1.7 Relationship to Other Documents

This document is a companion piece in conjunction with other Integrated IT Governance Framework documents, including: Departmental Regulation ([DR 3130-010](#), *United States Department of Agriculture Enterprise Information Technology Governance*, [DR3130-013](#), *Information Technology Capital Planning and Investment Control*, [DR3145-001](#), *Oversight and Management of the Federal Information Technology Acquisition Reform Act (FITARA)*, operating guidelines, the Capital Planning and IT Governance Division (CPITGD) program plan, IT governance communications plan, IT governance training plan, other existing USDA governance-related documents including: the *CPIC Guide*, *Security Risk Management Framework*, *Enterprise Architecture Roadmap*, and all relevant Departmental Regulations. Refer also to Federal Acquisition Regulation (FAR) 7.103(v) and 7.105(b) (5) (ii) (A), regarding capital planning. See Section 4.2, Appendix B – Key Documents Reviewed for a list of these relevant artifacts.

1.8 Vision

The IITGF establishes a project management and accountability environment where USDA IT investments can achieve consistently successful outcomes and maximize alignment with Department-wide and individual agency/staff office goals and objectives.

This *Guidebook* is supplemented with supporting materials, including, but not limited to, specific decision gate deliverable templates, checklists, overviews, and supporting reference documents, available at the [IT Governance SharePoint site](#) (or via this website once pasted in your browser):

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

The IITGF will be modified as experience dictates, and as other specific management processes that integrate with this IT governance framework that may contain additional guidance, policy, and procedures.

1.9 Goals and Objectives

USDA has established the following goals and objectives for IITGF implementation:

Goal 1: Provide a coherent and effective project management methodology to guide IT project management at USDA. The methodology is intended to consistently deliver IT capabilities that provide maximum support to USDA business needs within approved cost and schedule constraints.

Objectives:

- Expand the role of Project Managers throughout the IT project life cycle to ensure that IT projects remain targeted on highest priority business needs and meet necessary schedule and cost constraints.
- Improve project performance by applying repeatable processes and industry-leading practices for project and earned value management.

- Provide guidance to Project Managers regarding the activities and deliverables required for project planning and execution throughout all stages of project management.
- Establish a minimum set of core activities and decision gate deliverables for all IT projects undergoing this process.
- Require additional activities and deliverables based on individual project circumstances.
- Provide project deliverable templates and tools to help jump-start project activities.
- Provide examples from other projects for reference.
- Identify key processes that each project must follow to meet Federal regulations and other compliance mandates.

Goal 2: Better integrate IT project planning and execution with IT Governance, including more effective multi-disciplinary reviews of IT projects by the stakeholders and IT executive governance bodies.

Objectives:

- Facilitate alignment of IT projects with the USDA Strategic Plan.
- Provide a more streamlined and effective IT governance process for integrating multi-disciplinary executive board reviews into the IT governance process.
- Establish clear, reasonable expectations and practical standards/guidelines.
- Ensure compliance with the USDA Enterprise Architecture and prescribed design standards.

2 Approach

2.1 Overview

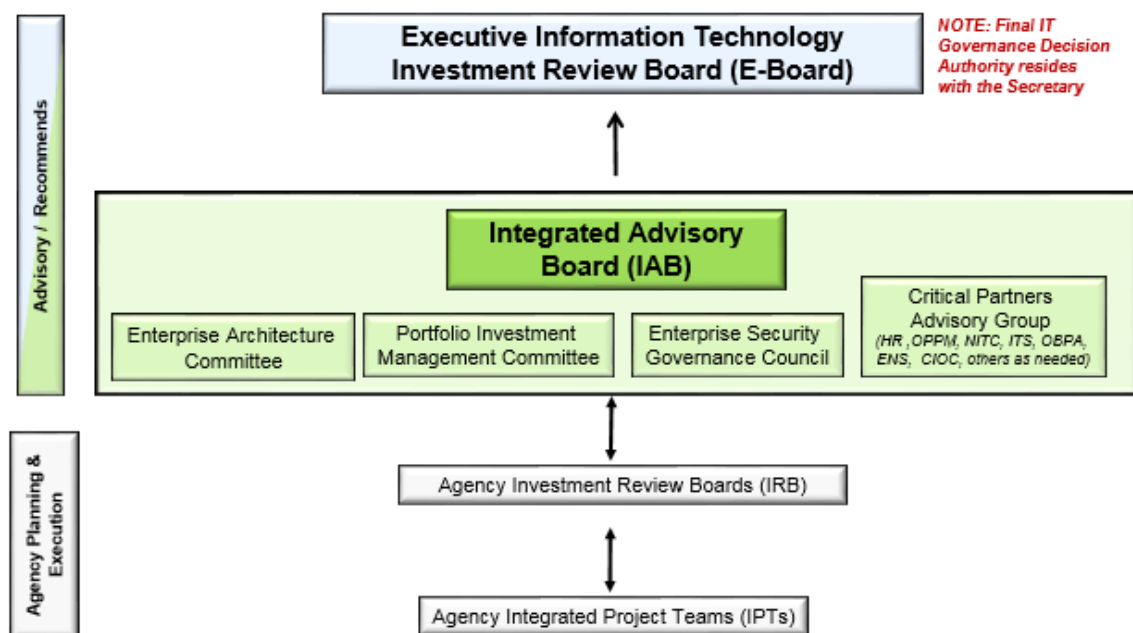
The Integrated IT Governance Framework is the comprehensive structure, policies, and processes that ensure formal, responsive, and effective oversight of IT resources, to ensure operational efficiency and value delivery in the implementation of IT. The framework spans the entire IT life cycle, from initiation through disposition. This Guidebook defines a series of governance **decision gates** and associated investment life cycle phases which promotes effective executive oversight and management of IT investments.

2.2 Executive IT Governance Board Roles and Responsibilities

The Integrated IT Governance Structure, as shown in Figure 1, presents a cohesive and streamlined governance structure that provides executive-level decision making to ensure the accountability and success of governance objectives. It additionally outlines the primary role that each governance board plays within the Integrated IT Governance Framework.

To operationalize the governance framework, governance board bodies and associated members (presented after the governance structure diagram below) represent the full complement and formal authority over the business, finance, and information technology organizations within the USDA.

Figure 1: Integrated IT Governance Structure



E-Board – The E-Board acts as a board of directors that advises the Secretary and Deputy Secretary on critical IT matters. The E-Board ensures that proposed investments contribute to the Secretary's strategic vision and mission requirements, employ sound IT investment methodologies, comply with Departmental enterprise architecture, employ sound security measures, and provide the highest return on the investment or acceptable project risk.

The primary mission of the USDA E-Board is to implement an investment decision-making management process that drives budget formulation and execution for USDA IT investments proposed for funding.

Specifically, the E-Board is charged with:

- Recommending and supporting IT investments that align with and promote the USDA mission, *USDA Strategic Plan*, *USDA IT Strategic Plan*, USDA Enterprise Architecture, and meet budget requirements.
- Providing executive management oversight, recommendation, and commitment to selected USDA IT investments.
- Recommending and presenting to the Secretary a ranked group of USDA IT investments proposed for funding.

The executive-level business (voting) members who make up the E-Board will serve to assess and evaluate submitted IT investments for funding and will make recommendations to the Secretary that will ensure USDA IT assets are managed as strategic business resources.

Title	E-Board Membership – Voting Board Members
Chair	The Chief Operating Officer (Deputy Secretary)
Vice Chair	The Assistant Secretary for Administration (ASA)
Member	The Assistant Secretary for Civil Rights
Member	The USDA Chief Information Officer
Member	The USDA Chief Financial Officer
Member	The Under Secretary for Trade and Foreign Agricultural Affairs
Member	The Under Secretary for Food, Nutrition, and Consumer Services
Member	The Under Secretary for Food Safety
Member	The Under Secretary for Marketing and Regulatory Programs
Member	The Under Secretary for Natural Resources and Environment
Member	The Under Secretary for Research, Education, and Economics
Member	The Under Secretary for Farm, Production, and Conservation
Member	The Assistant Secretary for Rural Development
Member	Director, Office of Budget and Program Analysis; and
Member	Director, Office of Communication

Note: Per USDA CIO in February 2014, the Deputy Under Secretary's are invited to the E-Board meetings but will not be a voting member unless the Deputy Under Secretary is substituting for their specific Mission Area Under Secretary.

Integrated Advisory Board (IAB) - The IAB is comprised of the Enterprise Architecture Committee, Portfolio and Investment Management Council, Enterprise Security Governance Council, and the

Critical Partners Advisory Group. The IAB is a key component of the Integrated IT Governance Framework structure that ensures the accountability and success of IT governance objectives.

The prime purpose of the IAB is to create a forum for technology leadership to ensure that all technology decisions associated with Major IT investment reviews are aligned with Department and agency/staff office/Staff Office level goals, strategies, objectives, and mission needs.

The IAB has an advisory role and has the authority to submit technical recommendations for consideration regarding IT investments to the E-Board. The IAB shall also provide advice and recommendations to the USDA CIO, as needed.

Role	Position
Chair	USDA ACIO, Information Resource Management Center (IRMC)
Vice-Chair	USDA Deputy ACIO, IRMC
Enterprise Architecture Committee	
Chair	Director, Enterprise Architecture Division (EAD)
Member	Mission Area Enterprise Architect, Natural Resources and Environment
Member	Mission Area Enterprise Architect, Trade and Foreign Agricultural Affairs
Member	Mission Area Enterprise Architect, Farm, Production and Conservation
Member	Mission Area Enterprise Architect, Rural Development
Member	Mission Area Enterprise Architect, Food, Nutrition and Consumer Services
Member	Mission Area Enterprise Architect, Food Safety
Member	Mission Area Enterprise Architect, Research, Education and Economics
Member	Mission Area Enterprise Architect, Marketing and Regulatory Programs
Member	ACIO, National Information Technology Center (NITC)
Member	ACIO, International Technology Services (ITS)
Member	Director, Enterprise Application Solutions (EAS)
Member	Director, Enterprise Network Services (ENS)
Portfolio and Investment Management Council – Interest Group	
Chair	Director, Capital Planning and IT Governance Division (CPITGD)
Vice-Chair	TBD
Member	Mission Area Capital Planning and Investment Control (CPIC) Lead or Portfolio Manager, Natural Resources and Environment
Member	Mission Area CPIC Lead or Portfolio Manager, Trade and Foreign Agricultural Affairs
Member	Mission Area CPIC Lead or Portfolio Manager, Farm, Production and Conservation
Member	Mission Area CPIC Lead or Portfolio Manager, Rural Development
Member	Mission Area CPIC Lead or Portfolio Manager, Food, Nutrition and Consumer Services
Member	Mission Area CPIC Lead or Portfolio Manager, Food Safety
Member	Mission Area CPIC Lead or Portfolio Manager, Research, Education and Economics
Member	Mission Area CPIC Lead or Portfolio Manager, Marketing and Regulatory Programs
Enterprise Security Governance Council	

Role	Position
Chair	ACIO, Agriculture Security Operations Center (ASOC)
Critical Partners Advisory Group	
Member	Human Resources (HR)
Member	Office of Budget and Program Analysis (OBPA)
Member	Office of Procurement & Property Management (OPPM)
Member	NITC
Member	ITS
Member	CTS
Member	CIOC
Member	Other Subject Matter Representatives as approved by the IAB Chair, such as from Records Management, Section 508, Privacy, ENS, EAS, and others

2.3 Management Processes and Governance Board Actions

There are five principal IT management processes integrated for each IT investment. These processes will ensure completeness, accuracy, and the quality of the information provided to the executive governance bodies shown in Figure 1 above. The management processes and their respective area of coverage are captured in Table 1 below.

Table 1: Management Processes

Management Process	Areas of Coverage
Agriculture System Development Life Cycle (AgSDLC)	- Provides a solid project management methodology process for investments - Phased investment life cycle covering Initiation through the last phase of Operations, Maintenance, and Disposition
Capital Planning and Investment Control (CPIC)	- CPIC requirements - Investment and project cost, schedule, and performance - Integrated baseline reviews - Federal IT Dashboard updates and reports - Portfolio reviews - Post-implementation reviews
Enterprise Architecture (EA)	- Architecture alignment and line of sight traceability - Segment/solution architecture - Architecture domains and standards - Required EA artifacts, standards compliance, and reference architecture as part of the Federal Enterprise Architecture Framework (FEAF) 2.0 9 (or later variant) - Decision support to IT Investments, Portfolio Management, and Operations
IT Security <i>(Note: this is not a separate process, rather IT Security is an integral part of <u>each</u> governance framework step)</i>	- Cyber security policy - Federal Information Security Management Act (FISMA) requirements - Continuous monitoring and risk management - Authorization & Accreditation (A&A) - Plan of Action & Milestones (POA&M)

Management Process	Areas of Coverage
	- Security operations requirements - Incident and response management - Endpoint protection management - Security tool standards, design, and configuration
Risk Management Framework (RMF)	6-step risk-based framework for each investment - Includes Categorize the System through proper Monitoring of Security Controls

Throughout the IITGF, the governance boards, as presented above in Section 2.2, have certain actions, which are captured in Table 2. Every effort will be made to turnaround the end-to-end governance board process in a realistic and manageable manner and will be known to the investment's Project Manager.

Table 2: Governance Board Actions

Governance Board Actions	Description
Advise/Recommend <i>(agency/staff office- staff office-level IPTs, agency/staff office- staff office-level IRBs, Department-level IAB)</i>	- Right to advise and provide feedback, as necessary, to governing boards for an Investment Decision Gate (IDG) - agency/staff office- and staff office-level IRBs will review and approve investments before they enter the USDA IITGF process - Is not required to provide formal analysis and input for an IDG Review Form
Review/Recommend <i>(E-Board)</i>	<i>E-Board provides investment and governance recommendations to the Secretary who has final IT governance decision authority</i>

2.4 Thresholds and Criteria

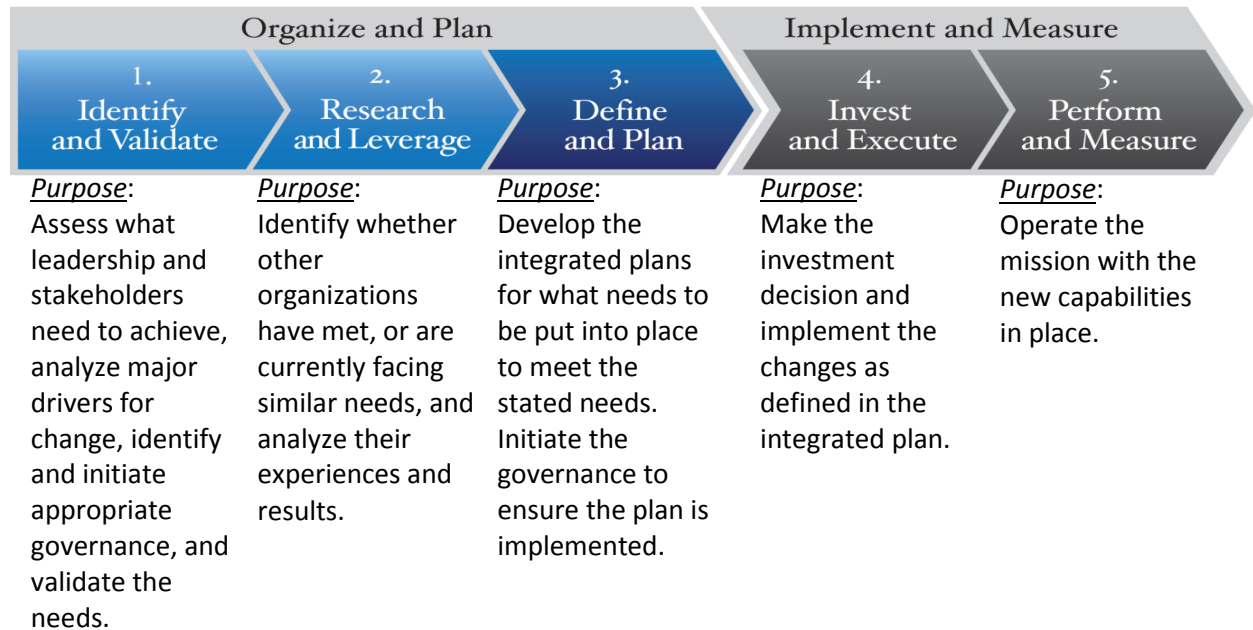
Each new proposed IT investment will proceed through the IITGF Decision Gate 1, associated with the Initiation Phase, and will be determined by the IAB to be either a Major (Standard) Investment – as defined in [Departmental Regulation \(DR\) 3130-008, Definition of Major Information Technology Investments](#), or a Non-Major Investment, as defined in [DR3130-009, Non-Major Information Technology \(IT\) Investments](#). If determined to be a Non-Major Investment, the Project Manager will be notified that governance delegation will be returned to the issuing agency/staff office and can proceed under that agency/staff office governance structure.

If the proposed investment is determined to be a Major (Standard) IT Investment, it will proceed along the governance path as presented in the IITGF Guidebook. Review, recommendation, and decision authority at each level will vary based on the criteria and decision type as presented in DR3130-008.

2.5 Enterprise Architecture Context

The OMB has prescribed a frame of reference for linking goals to results. This Collaborative Planning Methodology (CPM) is shown below. Each life cycle phase is comprised of integrated enterprise processes which combine to transform the Department's top-down strategic goals and bottom-up system needs into a logical series of work products designed to help the Department achieve its strategic results. This process integration provides the foundation for sound IT management practices, end-to-end governance of IT investments, and the alignment of IT investments with the Department's strategic goals so it can achieve its desired mission outcomes and business results.

The USDA IITGF aligns with the CPM by leveraging and monitoring the effective management of investments and projects throughout the IITGF. Furthermore, this alignment provides validation and assurances that an investment or project is addressing capability gaps and providing the intended performance improvements.



3 Decision Gates

A series of integrated IT Governance **Decision Gates** are presented below and in Table 3: Decision Gates that provide defined criteria and procedures for governance bodies. These decision gates align to USDA's management processes (i.e., AgSDLC, CPIC, EA, PM, Risk, and Security) and have dependencies from each phase of the processes that they align with. Decision Gate reviews are required during a phase or at the end of each phase to provide for independent review from the governance boards and approval of key elements of the IT investment (project) development or operation. While the governance boards (shown in Figure 1 above) are defining a meeting frequency or they will meet on an as needed basis, it is suggested that all documentation packages being submitted by a Business Owner or Project Manager for review and approval to move to the next investment (project) phase, will be provided by the 6th business day of the month to the CPITGD at [AgITGovernance](#) mailbox for review and facilitating an Integrated Advisory Board (IAB) meeting shortly thereafter.

The emphasis of Decision Gate reviews is placed on:

- The successful accomplishment of the phase objectives
- The plans for the next life cycle phase
- The risks associated with moving into the next life cycle phase
- The availability of resources to execute the subsequent life cycle phases

The number of decision gates for an IT investment to engage in may vary in the Program/Project Execution phases of the investment, but the recommendation is that all new and existing Major IT investments will proceed through each of the Integrated IT Governance Decision Gates - absent any investment tailoring requests (as explained in Appendix D) submitted and approved by the governance bodies, to ensure continuous oversight and timely delivery in meeting planned cost, schedule, and performance objectives.

USDA Integrated IT Governance Framework Phases

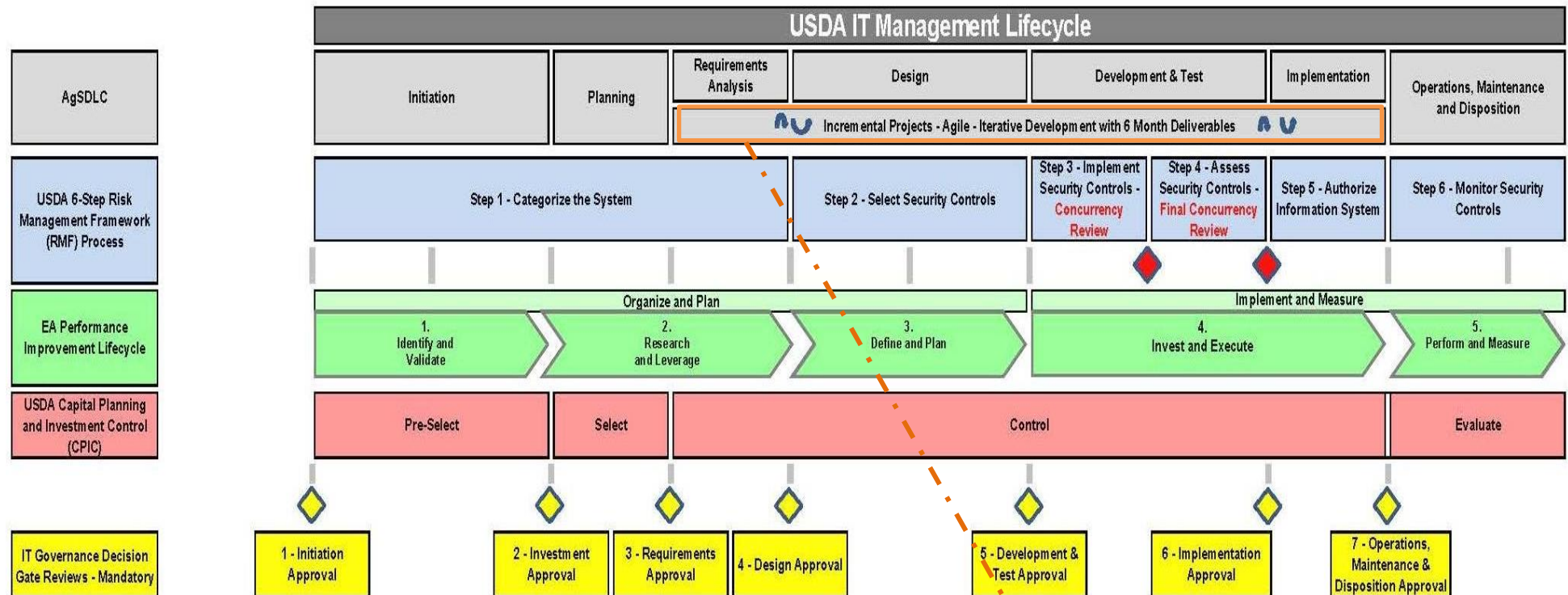


Figure 2: Alignment of Management Processes

Note: Artifacts (deliverables) presented in this Guidebook must be submitted *prior to* entering the associated decision gate. Recommendation to proceed for the gate review is provided prior to entering the decision gate.

For details, see Figure 3
USDA Incremental Governance Model

Table 3: Decision Gates

IITGF Decision Gates	Description	Governance Board Actions/Outcomes
Initiation Review 	This decision gate is conducted to assess the need for a proposed investment and evaluate the alignment with Department and/or agency/staff office strategic planning efforts. <i>(Aligned with the Initiation Life Cycle (LC) Phase)</i>	• <u>IAB</u> – Advise/Recommend • <u>E-Board</u> – Review/Recommend <i>(anticipated outcome: Recommends move to next decision gate)</i> • Memorandum confirming recommendation to proceed to next Decision Gate or not with explanation and guidance
Investment Review 	This decision gate is conducted to ensure that a proposed (or existing) investment best supports the Department’s mission and IT objectives. Investments are prioritized and evaluated for performance as measured by cost, schedule, performance, and risk; as well as technical alignment and comparison to other investments. <i>(Aligned with the Initiation LC Phase)</i>	• <u>IAB</u> – Advise/Recommend • <u>E-Board</u> – Review/Recommend <i>(anticipated outcome: Recommends move to next decision gate)</i> • Memorandum confirming recommendation to proceed to next Decision Gate or not with explanation and guidance.
Requirements Review 	The outcome of this decision gate is to get a positive recommendation to move into the requirements analysis phase to review an investment’s functional requirements, to ensure that they are sufficiently detailed (with comments) and satisfy all business and technical objectives. <i>(Aligned with the Planning LC Phase)</i>	• <u>IAB</u> – Advise/Recommend • <u>E-Board</u> – Review/Recommend <i>(anticipated outcome: Recommends move to next decision gate)</i> • Memorandum confirming recommendation to proceed to next Decision Gate or not with explanation and guidance
Design Review 	The outcome of this decision gate is to get a positive recommendation to move into the design phase to ensure that the investment’s systems under review can proceed into system fabrication, demonstration, and test; meets the stated performance requirements within cost (system project budget), schedule (system project schedule), risk, and other system constraints. <i>(Aligned with the Requirements Analysis LC Phase)</i>	• <u>IAB</u> – Advise/Recommend • <u>E-Board</u> – Review/Recommend <i>(anticipated outcome: Recommends move to next decision gate)</i> • Memorandum confirming recommendation to proceed to next Decision Gate or not with explanation and guidance

IITGF Decision Gates	Description	Governance Board Actions/Outcomes
Development & Test Review 	The outcome of this decision gate is to get a positive recommendation to move into the development and test phase to ensure that the investment's system is fabricated, tested, and satisfies the functional requirements. This is conducted to ensure that individual system components successfully complete unit and integration testing to satisfy Departmental business needs and functional requirements. <i>(Aligned with the Design LC Phase)</i>	• <u>IAB</u> – Advise/Recommend • <u>E-Board</u> – Review/Recommend <i>(anticipated outcome: Recommends move to next decision gate)</i> • Memorandum confirming recommendation to proceed to next Decision Gate or not with explanation and guidance.
Implementation Review 	The outcome of this decision gate is to get a positive recommendation to move into the implementation phase to determine whether system components have achieved expected benefits and provide an evaluation of an investment's development process. <i>(Aligned with the Development & Test LC Phase)</i>	• <u>IAB</u> - Advise/Recommend • <u>E-Board</u> – Review/Recommend <i>(anticipated outcome: Recommends move to next decision gate)</i> • Memorandum confirming recommendation to proceed to next Decision Gate or not with explanation and guidance.
Operations, Maintenance, & Disposition Review 	The outcome of this decision gate is to get a positive recommendation to move into the operations, maintenance, and disposition phase to assess the operational effectiveness of systems as they enter the operations, maintenance (O&M), or disposition state. <i>(Aligned with the Implementation LC Phase)</i>	• <u>IAB</u> - Advise/Recommend • <u>E-Board</u> – Review/Recommend <i>(anticipated outcome: Recommends entering O&M phase or approval by Associate Chief Information Officer, (ACIO) of IRMC to proceed with Disposition process)</i> • Memorandum confirming recommendation to proceed to O&M phase or not with explanation and guidance.

Activities to be performed and specific deliverables that are required to document these Decision Gate reviews are established for each phase of the life cycle. A list of deliverables can be found in Table 3 below as well as located in Appendix G – Deliverables Matrix by AgSDLC Life Cycle Phase. Deliverable templates, checklists, overviews, and any supporting references that an agency or staff office may want to use in lieu of their own documents, may be found by clicking [here](https://ems-team.usda.gov/sites/OCIO/TPAE/egp/GF/SitePages/Matrix.aspx) (or via this website pasted in your browser):

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

Processes surrounding these life cycle phases and associated decision gate governance recommendation reviews are established based on statute, regulation, policy and best practice and are designed to reduce project risk.

The IITGF also references several Security and Enterprise Architecture artifacts. Specifically, for security, these include the Privacy Impact Assessment, System Security Plan, Security Risk Assessment, System of Record Notice, and Security Authorization Letters. For a list of all security- and EA-specific artifacts, please refer to the link above. EA and Security controls must be established and integrated into the IITGF processes, phases, and reviews.

Many activities and deliverables go through multiple iterations during the life cycle, with an initial effort, updates during one or more subsequent phases, and then a final deliverable. A preliminary Project Management Plan (PMP) is required to provide sufficient cost and schedule estimates so that the IT Governance boards can make an informed decision about approving an investment or project for future life cycle phases. A Final Draft is a deliverable that is complete in the opinion of the Project Manager; the Final version will be the same unless changes are required because of testing and final coordination. Some deliverables (particularly baselines and project plans) undergo change control in which the IT Governance organization must approve initial documents and any subsequent changes. Each year the Project Manager may provide updated deliverables associated with the project's Operations, Maintenance, and Disposition phase.

Implementation of the IITGF will require training and guidance for the entire IT project stakeholder community. In addition to training programs, IITGF guidance and support will be provided via the following methods.

An [IT Governance SharePoint site](https://ems-team.usda.gov/sites/OCIO/TPAE/egp/GF/SitePages/Matrix.aspx) has been established that contains the information bulleted below as well as, in many instances, supporting or reference materials. (It is located at <https://ems-team.usda.gov/sites/OCIO/TPAE/egp/GF/SitePages/Matrix.aspx>).

Note that the Templates and Checklists are provided for your use in the absence of any agency or staff office documents that may contain the same or similar information.

Additionally, an email mailbox (AgITGovernance@ocio.usda.gov) has been created for those participating in the governance process to solicit feedback and ask questions of the CPITGD governance staff.

- **Overviews** – Overviews are documents describing the background, requirements, best practices, and key terminology of industry-leading project management practices and their accompanying project management templates.
- **Templates** – Templates are standardized documents with a preset format. They are used as a starting point for IITGF deliverables to ensure quality and consistency. Templates are designed to be customized for the use of each project and include instructions and boiler plate text.
- **Checklists** – Checklists are brief documents listing the items to be noted, checked, remembered, and delivered when completing the accompanying template.
- **Integrated Advisory Board (IAB) Briefing Templates for each Decision Gate are available [here](#).**
- **The E-Board Briefing Template is available [here](#).**

The IITGF consists of these life cycle phases that align with the Decision Gate reviews noted above (*note: a further description for each phase is provided in Appendix H – AgSDLC, and as an embedded link on each phase name below*):

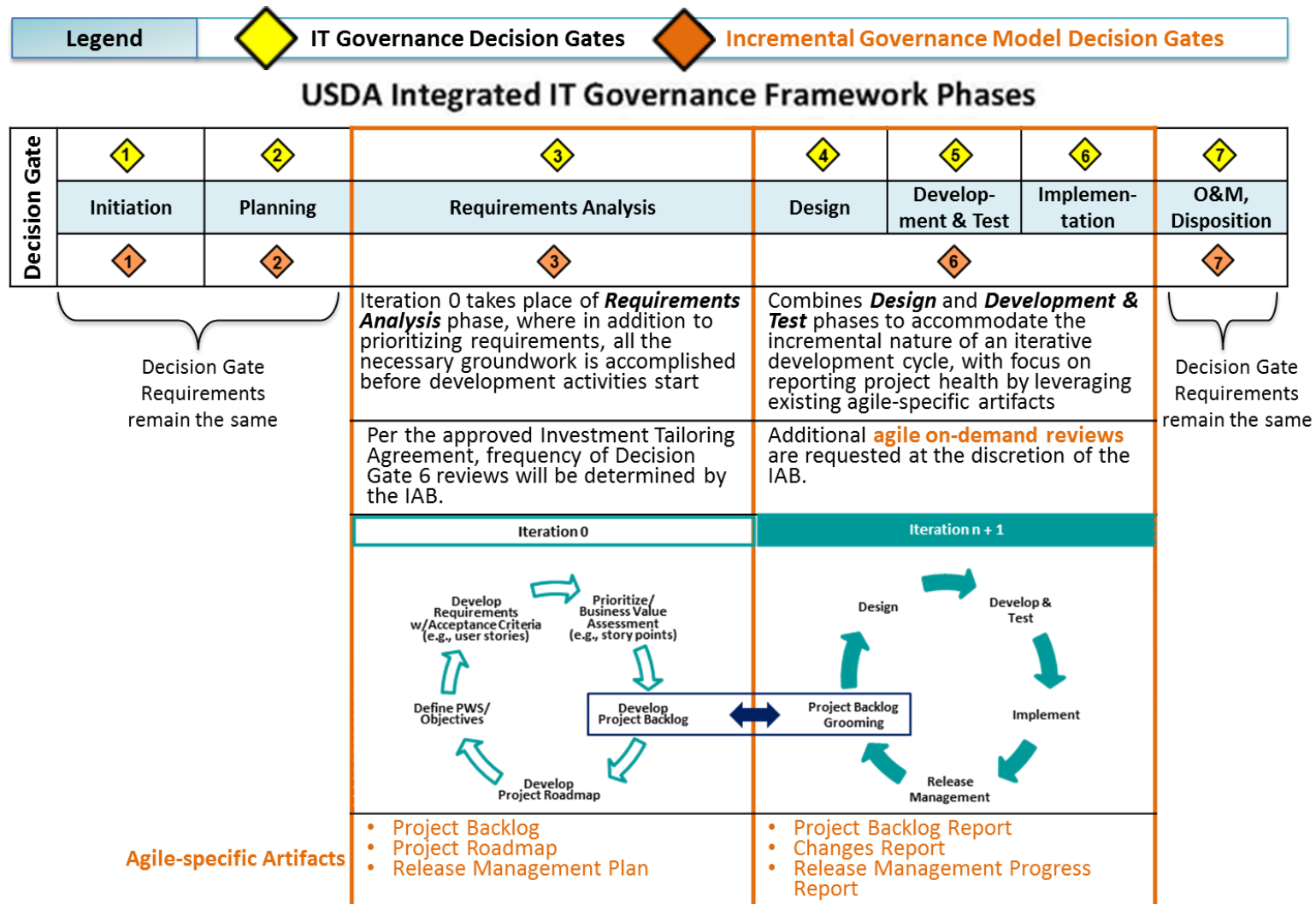
- **Initiation** – Identifies the business need, develops a Rough Order of Magnitude (ROM) cost and preliminary schedule, and basic business and technical risks. The outcome of the Initiation Phase is the decision to invest in a full business case analysis and preliminary project management plan.

- **Planning** – Completes development of a full Project Management Plan and if applicable, refinement of project cost, schedule and performance baselines. Outcomes of the Planning phase are a complete and adequate project planning with sufficient requirements development to validate the planning and project baselines.
- **Requirements Analysis** – Develop detailed functional and non-functional requirements, the Requirements Traceability Matrix (RTM) and award contracts if needed. The outcome of the Requirements Analysis Phase is award of contracts if needed and recommendation of the requirements.
- **Design** – Develops the Design Document. The outcome of the Design Phase is completion of the Investment design and successful completion of Preliminary and Detailed Design Reviews with physical Enterprise Architecture diagrams as needed.
- **Development & Test** – Develops code and other deliverables required to build the Investment and conduct an Independent Verification & Validation Assessment. The outcome of the Development Phase is completion of all coding and associated documentation; user, operator and maintenance documentation, and test planning. Thorough testing and audit of the Investment’s design, coding and documentation. The outcome of the Test Phase is completed acceptance testing and readiness for training and implementation.
- **Implementation** – Conduct user and operator training, determine readiness to implement, and execute the Implementation Plan, including any phased implementation. The outcome of the Implementation Phase is successful establishment of full production capability and completion of the Post- Implementation Review.
- **Operations, Maintenance, & Disposition** – Operate and maintain the production system and conduct annual operational analyses. The outcome of the Operations and Maintenance portion is successful operation of the asset against current cost, schedule and performance benchmarks. The Disposition portion of this Phase retires an asset when operational analysis indicates that it is no longer cost-effective to operate the asset. The outcome of Disposition is the deliberate and systematic decommissioning (or retirement) of the investment with appropriate consideration of data archiving and security, migration of data or functionality to new assets, and incorporation of lessons learned over the project life cycle.

An important objective of the IITGF life cycle is to provide flexibility that allows for tailoring of artifacts, decision gate reviews, and governance board reviews to suit to characteristics of a solution development effort. The tailoring strategy and request for the investment is described in the Investment Tailoring Agreement, which is formally approved at the investment Initiation Review (Decision Gate 1). Any subsequent change to this Agreement must be approved by the IT Governance organization. See Appendix D: Tailoring for more details.

If tailoring is approved in advance by the governance board, the alternative development approaches empower project managers to tailor tasks to meet the specific needs of the project while maintaining compliance with the AgSDLC and IITGF governance processes. Some of the most popular time and cost effective alternative development models are: Rapid Application Development (RAD), Pilot Development, Iterative, Agile, Government-off-the-Shelf (GOTS)/Commercial-off-the-Shelf (COTS), and Software as a Service (SaaS). In compliance with Federal guidance, IITGF introduces the USDA Incremental Governance Model, which provides guidance on decision gate reviews when using an agile/incremental/iterative/modular/spiral development approach for Major IT investment efforts. All life cycle phases are followed but the concept of Iteration 0 takes place of *Requirements Analysis* phase, and *Design, Development and Test, and Implementation* phases are combined into one phase to accommodate the incremental nature of an iterative development.

Figure 3: USDA Incremental Governance Model IT Governance Decision Gate Reviews for Major IT investment projects



As noted by  above, USDA Incremental Governance Model touchpoints to IITGF for Major IT investment projects are as follows:

Incremental Governance Model Decision Gates	Touchpoint to IITGF?	Incremental Governance Model Decision Gate Description
 Initiation Review	Yes	The Initiation Review follows the same steps and requires the same deliverables. Please refer to Table 3: Decision Gates for additional details. During the Initiation Reviews, the tailoring strategy and request for the investment is described in the Investment Tailoring Agreement, which is formally approved during the investment Initiation Review. At this time, IT projects can assess whether to leverage USDA Incremental Governance Model, where the Project Managers determine the appropriate level of project management and documentation rigor necessary for projective project management and project success.
 Investment Review	Yes	The Investment Review follows the same steps and requires the same deliverables. Please refer to Table 3: Decision Gates for additional details.
 Requirements Review	Yes	As illustrated above, during the Requirements Phase for an agile/incremental project, Iteration 0 is executed to accomplish all the groundwork before development activities start in the first iteration, such as architecture and design of the development and test environments and ensures both are established and ready for the first development iteration to begin. Also, during Iteration 0, a reasonable release scope is defined as a part of release planning based on the list of prioritized items contained in the Project Backlog. This gate leverages three agile/incremental-specific artifacts: Project Roadmap, Project Backlog, and Incremental Release Management Plan. These artifacts ensure that requirements are captured and monitored for an effective agile development approach (i.e., Project Backlog), and high-level system functionality as well as estimated features in each release are defined (i.e., Project Roadmap). Moreover, the mapping of requirements (i.e., user stories) to iterations are highlighted and a reasonable release scope is defined (i.e., Incremental Release Management Plan) to minimize the risk of failing to deliver usable product. Based on the Project Roadmap, number of iterations are determined for design, development and test. Decision Gate Reviews for phases Design, Development and Test, are not applicable for agile/incremental/iterative/modular/spiral projects; the next applicable Decision Gate Review in the USDA

Incremental Governance Model Decision Gates	Touchpoint to IITGF?	Incremental Governance Model Decision Gate Description
		Incremental Governance Model is Implementation Review (Gate Review 6).
 Design Review	No	The Design Review is not applicable as this decision gate review is combined into one with Development & Test Review decision gate to accommodate the incremental nature of an agile/incremental/iterative/modular/spiral development. The next applicable Decision Gate Review in the USDA Incremental Governance Model is Implementation Review (Gate Review 6).
 Development & Test Review	No	The Development & Test Review is not applicable as this decision gate review is combined into one with Design Review decision gate to accommodate the incremental nature of an agile/incremental/iterative/modular/spiral development. The next applicable Decision Gate Review in the USDA Incremental Governance Model is Implementation Review (Gate Review 6).
 Implementation Review	Yes	After Gate Review 3, this gate review is encouraged on a six-month cycle, where project teams present the health of the agile development effort by leveraging agile-specific artifacts Project Backlog Reports, Incremental Changes Report, and Incremental Release Changes Report: A key in any agile environment, project backlog reporting is recommended at the end of each iteration to highlight the features that made up the completed iteration and the features committed to delivering in a subsequent iteration. These include the user stories and, commonly, a visual representation of how the recently included stories map back to the original requirements. Complementary to Project Backlog Reports is the Incremental Changes Report, which highlights any within-iteration changes to any added, deleted, or modified features while a project is in progress. It informs the decision maker that they received the features they agreed upon, and why some features may have been added, adjusted, or removed during the project lifecycle. Lastly, Incremental Release Management Progress Report highlights the current burn-up rates (i.e., how close you are to completion) for a specific release, an update on the number of user stories both completed and remaining for the given iteration and full release, and a summary of how this release fits within the larger project timeline.

Incremental Governance Model Decision Gates	Touchpoint to IITGF?	Incremental Governance Model Decision Gate Description
 Operations, Maintenance, & Disposition Review	Yes	The Operations, Maintenance, & Disposition Review follows the same steps and requires the same deliverables. Please refer to Table 3: Decision Gates for additional details.

Legend			
P	Preliminary (Draft)	FD	Final Draft
U	Updated	F	Final

Table 3: Deliverables by Decision Gate

<i>IITGF Deliverables by Decision Gate (DG)</i>	Initiation (DG1)	Investment (DG2)	Requirements (DG3)	Design (DG4)	Development & Test (DG5)	Implementation (DG6)	O&M & Disposition (DG7)
Mission Needs Statement	F						
Major IT Business Case (MITBC) – (old OMB Exhibit 300 ⁶) – <i>This is an AgMAX form which requires AgMAX access. Contact your CPITGD Liaison for assistance if needed.</i>	P	U	F	U			
CIO Rating (AgMAX)				U	U	U	U
Alternatives Analysis	P		F				
Investment/Project and Integrated Project Team (IPT) Charters	P	F					
Project Management Plan ▪ Cost Estimate ▪ Requirements Management Plan ▪ Project Schedule and WBS ▪ Change Management Plan/Log ▪ Communication Management Plan/Log ▪ Risk Management Plan/Log ▪ Proposed Acquisition Strategy/Plan/Acquisition Management Plan (new, 12/2017) ▪ Quality Management Plan 1. Independent Verification & Validation (IV&V) Plan 2. <i>Release Strategy (DG6)</i> 3. <i>Implementation Plan (DG6)</i>	P	U each item as Needed	U each item as Needed	U each item as Needed	U	U	U
EVM Report (latest monthly) – can be loaded to the EVM site here				U	U	U	U
Integrated Baseline Review (if needed) – ANSI-748A Compliance			F				
Quality Management Plan			F				

⁶ Includes investment responses addressing the Digital Government Strategy and Open Data Policy questions.

<i>IITGF Deliverables by Decision Gate (DG)</i>	Initiation (DG1)	Investment (DG2)	Requirements (DG3)	Design (DG4)	Development & Test (DG5)	Implementation (DG6)	O&M & Disposition (DG7)
Privacy Impact Assessment		F					U
Privacy Threshold Analysis		F					
Enterprise Architecture Artifacts:							
EA-S-1: Concept Overview Diagram	P	U	U	F			
EA-B-1: Business Process Diagram			P	U	F	U	U
EA-D-1: Logical Data Model			P	U	F	U	U
EA-D-5: Physical Data Model			P	U	F	U	U
EA-A-1: Application Interface Diagram			P	U	F	U	U
EA-A-7: System/Application Evolution Diagram (if needed)			P	U	F	U	U
EA-A-8: Enterprise Service Diagram (if needed)			P	U	F	U	U
EA-SP-3: C&A					P	F	
EA-SP-5: Disaster Recovery Plan					FD	F	
EA-SP-6: Contingency of Ops Plan				P	U	F	U
EA: Any needed updates					U	U	U
Incremental/Agile Artifacts:							
Incremental Certification		F					
Project Backlog (if needed)			P	U	U	FD	
Project Roadmap (if needed)			P	U	U	FD	
Incremental Release Management Plan (if needed)			P	U	U	FD	
Project Backlog Report (if needed)			P	U	U	FD	
Incremental Changes Report (if needed)			P	U	U	FD	
Incremental Release Management Progress Report (if needed)			P	U	U	FD	
E-Authorization Risk Assessment				F			U
Section 508 Product Assessment				F			
Section 508 Standards Evaluation				F			
Section 508 Exceptions				F			
Section 508 Test Plan/Report					FD	F	

<i>IITGF Deliverables by Decision Gate (DG)</i>	Initiation (DG1)	Investment (DG2)	Requirements (DG3)	Design (DG4)	Development & Test (DG5)	Implementation (DG6)	O&M & Disposition (DG7)
Section 508 Certification Memo							F
Section 508 Remediation Plan							F
Design Document					F		
Capacity Planning (<i>NITC artifact</i>)					F	F	
Test Plan/Reports					FD	F	
Domain Name Request (<i>NITC artifact</i>)					F		
Interconnection Security Agreement					FD	F	
Contingency Plan (CP)							
CP Training Document					FD	F	
CP Test Document					FD	F	
System Security Plan					FD	F	U
Controls Management Strategy					F		
Incident Response Plan					FD	F	
Computer Match Agreement					F		U
System of Records Notice					F		U
Implementation Plan (<i>NITC artifact</i>)						F	
Test Reports						F	
Operations & Maintenance Manual							F
User Manual							F
Training Materials						FD	F
Training Plan						FD	F
Configuration Management Plan						F	
A&A Valid Test Report						F	
Security Controls Assessment Plan						F	
A&A Residual Risk Report						F	
Security POA&M						F	U
Authorization to Test Memo						F	
Authority to Operate (ATO)							F
Post Implementation Review (PIR)							F
Service Level Agreement(s) / Memorandum of Understanding(s)							F
Disposition Plan + Signed Certification							F

3.1 Decision Gate Initiation Review

This decision gate is a process to assess the need for a proposed investment and evaluate the alignment with Departmental and/or agency/staff office strategic planning efforts. It allows Agencies/Offices to develop the investment concept with preliminary business requirements, performance measures, benefits, and costs; and for the Integrated IT Governance bodies to review these proposals and assess the impact and benefit to the overall IT portfolio.

3.1.1 Alignment with Management Processes

- AgSDLC Phase – Initiation
- EA Phase - Architect
- CPIC Phase - Pre-Select
- RMF – Categorize the System

3.1.2 Authority

- Agency/Staff Office IRB – Review and approve investments before they enter the USDA IITGF process
- IAB – Advise/Recommend
- E-Board – Review/Recommend

3.1.3 Key Review Questions Needing Attention

- What are the business needs for the investment?
- Does the investment support the USDA IT and business goals?
- How does the investment impact the current IT portfolio?
- How does the investment align with defined transition plans, standards, and policies?
- Does the investment align with the USDA EA, Section 508, Privacy, and security requirements?

3.1.4 Entry Criteria and Required Inputs

Prior to entering Decision Gate 1, investments must have a concept to address the mission need that is anticipated to include an IT component and meet at least one of the threshold criteria identified in DR3130-008.

Table 4: Initiation Review Inputs

Inputs
• Mission Analysis conducted at both the Departmental and agency/staff office levels that identify the key business drivers that may impact the IT portfolio. • Integrated Project Team (IPT) that consists of: agency/staff office investment sponsor, project manager, and technical staff. • Assess a proposed IT investment to determine if the investment may be considered a Major or Non-Major IT investment. A Decision Gate 1 package containing a Mission Needs Statement, Cloud First Checklist, a Concept Overview Diagram (EA), and completion of the IAB Decision Gate 1 Briefing slide deck should be sent to the AgITGovernance email box by the 6th business day of the month in preparation for an IAB meeting later in the month.

Inputs

- The package container is here:



IT Governance –
Integrated Advisory

3.1.5 Process Steps

Table 5: Initiation Review Process Steps

Process Steps	Responsible Party
1. Submits completed Decision Gate 1 (DG1): Initiation Approval package from above by 6 th business day of month.	Business Owner / Project Manager
2. Receives DG1 package from the agency/staff office IRB and reviews it for completion and accuracy. Notifies the governance boards (i.e., E-Board and IAB) of upcoming activities for this Decision Gate, and routes materials and inputs to the IAB Administrator as needed.	CPITGD
3. Receives DG1 documentation package from CPITGD and schedules IAB Review.	IAB Administrator
4. Conducts initial review of DG1 documentation package and provides feedback. Places emphasis on IT mission alignment and proposed business case. Collaborates on the assessment of the investment concept against the current IT portfolio, EA, Section 508, and security requirements. Uses evaluation criteria and techniques documented in the CPIC Guide and the IT Investment Assessment Guide. Document comments, questions and recommendations (proceed, proceed with conditions, do not proceed) in a recommendation Memo within 5 business days after the IAB meeting. If investment is recommended to proceed as a Major IT Investment, the IAB Administrator routes the DG1 documentation package to the E-Board Administrator. If, however, the IAB does not recommend the investment to be a Major IT Investment, it notifies the CPITGD and agency/staff office IRB of its decision.	IAB
5. Receives DG1 documentation package from IAB Administrator and E-Board briefing template and schedules E-Board Review as needed.	E-Board Administrator
6. Conducts Investment Proposal Review of DG1 documentation package for final recommendation/approval. Places emphasis on enterprise-wide strategic alignment and how it may or may not support the Department's IT/Business mission, goals, and objectives. The IAB, CPITGD and agency/staff office IRB are notified by Memorandum within 5 business days of the E-Board meeting as well.	E-Board
7. Receives final E-Board recommendation and coordinates activities for DG2 with Business Owner.	CPITGD
8. Receives instructions from CPITGD on how to proceed to DG2, including the list of documents to be completed and associated submission timeline.	Business Owner

Process Steps	Responsible Party
Identifies Project/Program Manager to manage Agency/Staff Office IPT	

3.1.6 Exit Criteria and Required Outputs

Prior to exiting this decision gate, investments have received governance board approval of mission need and concept to proceed.

Table 6: Initiation Review Outputs

Outputs
Mission need and concept for an investment is approved or rejected by the IAB and/or E-Board via a Memorandum, stating recommendation - approval/disapproval - to proceed to next Decision Gate as an USDA Major IT Investment.

3.2 Decision Gate Investment Review

This decision gate ensures that the proposed (or existing) investment best supports the Department's mission and objectives. The investments are prioritized and evaluated for performance as measured by cost, schedule, performance, and risk, as well as technical alignment. Investments approved by the E-Board are then included as part of the Department's IT portfolio.

3.2.1 Alignment with Management Processes

- AgSDLC Phase - Initiation
- EA Phase - Architect
- CPIC Phase – Pre-Select
- RMF – Categorize the System

3.2.2 Authority

- Agency/Staff Office IRB – Review and approve investments before they enter the USDA IITGF process
- IAB – Advise/Recommend
- E-Board – Review/Recommend

3.2.3 Key Review Questions Needing Attention

- Has the investment been selected to support mission goals/objectives and any future needs?
- Is the investment mandatory to meet USDA requirements?
- Does the investment align with the USDA EA, Section 508, and security requirements?

3.2.4 Entry Criteria and Required Inputs

Prior to entering Decision Gate 2, investments must have obtained governance board approval for the mission need and concept.

Table 7: Investment Review Inputs

Inputs
• Mission need and concept for an investment approved by the E-Board • Funding source identified, and approvals obtained by the agency/staff office investment sponsor • Select Investment Review Submission Package completed and approved by the agency/staff office Head • agency/staff office security representative, records officer, architect and other members selected by agency/staff office Head for the IPT

3.2.5 Process Steps

Table 8: Investment Review Process Steps

Step	Responsible Party
1. Submits completed Decision Gate 2 (DG2): Investment Approval documentation package, for evaluation to the AgITGovernance email box for CPITGD review.	Project Manager (PM)
2. PM gathers all business requirements and conducts a baseline review. Provides input to the business owners PM for documentation package elaboration.	Agency/Staff Office IPT

3. Receives DG2 documentation package from PM and conducts evaluation of submitted materials for approval. After notification, the documentation package will be returned to PM for re-submittal.	Agency/Staff Office IRB
4. Receives DG2 documentation package with supporting evaluation and analysis from the Agency/Staff Office IRB and reviews it for completion and accuracy. Notifies the governance boards (i.e., IAB and/or E-Board) of upcoming activities for this Decision Gate and routes materials and inputs to the IAB Administrator by the 6 th business day of the month.	CPITGD (Analyst)
5. Receives DG2 documentation package from CPITGD and schedules IAB Review.	IAB Administrator
6. Conducts initial review of DG2 documentation package and provides feedback. Assess the investment documentation against the current IT portfolio, EA and technology operation implications, and security and privacy implications. Uses evaluation criteria and techniques documented in the CPIC Guide and IT Investment Assessment Guide. Documents comments, questions and recommendations. If investment is recommended to proceed, the IAB Administrator routes the DG2 documentation package to the E-Board Administrator. Else, it notifies the CPITGD and Agency/Staff Office IRB of its recommendation.	IAB
7. Receives DG2 documentation package from IAB Administrator and schedules E-Board Review.	E-Board Administrator
8. Conducts Initiation Phase Final Review of DG2 documentation package for final approval. Places emphasis on enterprise-wide strategic alignment of and how it may or may not support the Departments goals and objectives. If noted to proceed, authorization is granted to move forward to Decision Gate 3 (DG3) is granted and communicated to the IAB Administrator via Memorandum. Else, the IAB, CPITGD and Agency/Staff Office IRB are notified by Memorandum.	E-Board
9. Receives final E-Board recommendation and coordinates activities for DG3 with PM.	CPITGD
10. Receives instructions from CPITGD on how to proceed to DG3, including the list of documents to be completed and associated submission timeline.	PM

3.2.6 Exit Criteria and Required Outputs

Prior to exiting this decision gate, investments have received governance board approval of mission need and concept to proceed. Investments at this gate should have established performance goals, developed a project plan, identified costs, schedule, benefits, and risks; established security, EA, Section 508 goals and measures, established an investment review schedule for the next decision gate review.

Table 9: Investment Review Outputs

Outputs

- Investment approved by the E-Board to enter the IT portfolio and move forward (or continue to be in the IT portfolio for existing investments)
- Performance goals have been established
- Project schedule is developed that details objectives, including a proposed acquisition schedule, project deliverables, and projected costs
- Costs, schedule, performance, and risks are identified
- Security, telecommunications, Section 508, and architecture goals and measures (including a transition plan to achieve the target state) established
- System Security Plan (SSP) is completed when:
 - Majority of SSP requirements are completed
 - Risk Assessment/Mitigation completed
 - Privacy Impact Assessment completed
- System of Records Notice (SORN) (if required) completed

3.3 Decision Gate Requirements Review

This decision gate review is conducted to determine the effectiveness, completion and accuracy levels achieved throughout the investment's planning activities. It provides the Integrated IT Governance boards with the opportunity to further understand the strategy by which the proposed investment will achieve its scope, cost and schedule objectives.

3.3.1 Alignment with Management Processes

- AgSDLC Phase – Planning
- EA Phase - Invest
- CPIC Phase – Select
- RMF – Categorize the System

3.3.2 Authority

- Agency/Staff Office IRB – Review and approve investments before they enter the USDA IITGF process
- IAB – Advise/Recommend
- E-Board – Review/Recommend

3.3.3 Key Review Questions Needing Attention

- Has the planning strategy been developed to properly manage the investment's scope, cost, and schedule?
- Have risks, and associated mitigation strategies, been properly identified?
- Has the proposed acquisition strategy been properly developed and coordinated with the agency contracting office?
- **Has Agile been considered as a development strategy?**
 - **If agile/incremental project:**
 - Is there an identified agile champion within senior management?
 - Are staff trained and have access to the development tools?
 - Is an agile environment set up for executing iterative development?
 - Can requirements be decomposed into small tasks to support iterative development?
 - Are customers frequently and closely providing feedback on working software?
 - Are you tracking progressing daily and visibly?
 - Is Iteration 0 complete?

3.3.4 Entry Criteria and Required Inputs

Prior to entering this decision gate, investments should revise, as needed, performance goals, project plan, costs, schedule, benefits, and risks; security, EA, Section 508 goals and measures, and the investment review schedule for the next decision gate review.

Table 10: Requirements Review Inputs

Inputs
• Select Investment Review Submission Package and supporting analysis materials • Project schedules and cost estimates approved by the agency/staff office • Functional requirements specification approved by the agency/staff office • System requirements specification approved by the agency/staff office • Security requirements specification approved by the agency/staff office

Inputs

- Conceptual architecture models approved the agency/staff office

3.3.5 Process Steps

Table 11: Requirements Review Process Steps

Step	Responsible Party
1. Submits completed Decision Gate 3 (DG3): Investment Approval documentation package, for evaluation to the AgITGovernance email box for CPITGD review.	Project Manager (PM)
2. Finalized the gathering of all business and technical requirements and conducts a formal requirement review. Provides input to PM for documentation package elaboration.	Agency/Staff Office IPT
3. Receives DG3 documentation package and IDG Review Form from PM and conducts evaluation of submitted materials for approval. If approved, the IDG Review Form is updated with recommendation and submitted to the CPITGD for review. The PM is notified of any rejected recommendation. After notification the documentation package will be returned to PM for re-submittal.	Agency/Staff Office IRB
4. Receives DG3 documentation package and IDG Review Form with supporting evaluation and analysis from the Agency/Staff Office IRB and reviews it for completion and accuracy. Notifies the governance boards (i.e., E-Board and IAB) of upcoming activities for this Decision Gate and routes materials and inputs to the IAB Administrator.	CPITGD (Analyst)
5. Receives DG3 documentation package and IDG Review Form from CPITGD and schedules IAB Review.	IAB Administrator
6. Conducts initial review of DG3 documentation package and IDG Review Form and provides feedback. Uses evaluation criteria and techniques documented in the CPIC Guide. Documents comments, questions and recommendations on the corresponding IDG Review Form. If investment is recommended to proceed, the IAB Administrator routes the DG3 documentation package and IDG Review Form to the IAB Administrator. Else, it notifies the CPITGD and Agency/Staff Office IRB of its recommendation.	IAB
7. Receives DG3 documentation package from IAB Administrator and schedules E-Board Review. Updates the tracking status on the IDG Review Form.	E-Board Administrator
8. Conducts Investment Planning Review of DG3 documentation package and IDG Review Form for final recommendation. Places emphasis on enterprise-wide strategic alignment of IDG Review Form and how it may or may not support the Department's goals and objectives. If IDG Review Form is noted to proceed, authorization is granted to move forward (to Decision Gate 4) and communicated to the IAB Administrator via Memorandum. Else, the IAB, CPITGD and Agency/Staff Office IRB are notified via Memorandum.	E-Board

Step	Responsible Party
9. Receives updated IDG Review Form with final E-Board recommendation and coordinates activities for DG4 with PM. Updates the tracking status on the IDG Review Form and updates the governance support tool based on the recommendation and outcome.	CPITGD
10. Receives updated IDG Review Form and instructions from CPITGD on how to proceed to DG4, including the list of documents to be completed and associated submission timeline.	PM

3.3.6 Exit Criteria and Required Outputs

Prior to exiting this decision gate, the investments requirements definition, project plan, communications plan, risk management plan, acquisition strategy, and required EA artifacts must be finalized and approved by governance boards.

Table 12: Requirements Review Outputs

Outputs
- Investment and corresponding programs/projects approved by the E-Board to move forward - All functional, system, and security requirements completed and traceable - All requirements aligned to architecture, technology, and security policies and standards

3.4 Decision Gate Design Review

This decision gate is conducted to review an investment's functional requirements identified to ensure they are sufficiently detailed, satisfy all business and technical objectives. It also provides the Integrated IT Governance boards with the opportunity to ensure a complete understanding of the requirements and that the documented requirements can support a detailed design of the proposed system.

3.4.1 Alignment with Management Processes

- AgSDLC Phase – Requirements Analysis
- EA Phase - Implement
- CPIC Phase – Control
- RMF – Categorize the System

3.4.2 Authority

- Agency/Staff Office IRB – Review and approve investments before they enter the USDA IITGF process
- IAB – Advise/Recommend
- E-Board – Review/Recommend

3.4.3 Key Review Questions Needing Attention

- Are there any major variances with project schedules and cost estimates?
- Do functional requirements trace back and address planned goals and objectives?
- Is every business activity fulfilled by one or more functions?
- Are the functional requirements able to satisfy stated measures of effectiveness and performance?
- Are functional and system requirements in alignment with architecture, technology, and security policies and standards?
- Are there functions being developed that are like existing functionalities and capabilities?

3.4.4 Entry Criteria and Required Inputs

Prior to entering this decision gate, all required artifacts from prior decision gate must be finalized, reviewed and recommended by governance boards. Investments must address any major variances with cost and schedule for this decision gate.

Table 13: Design Review Inputs

Inputs
• Project schedules and cost estimates approved by the agency/staff office • System design documents approved by the agency/staff office • Logical architecture models approved by the agency/staff office • Risk assessments approved by the agency/staff office • Integration test plan approved by the agency/staff office • Maintenance plan approved by the agency/staff office

3.4.5 Process Steps

Table 14: Design Review Process Steps

Step	Responsible Party
1. Submits completed Decision Gate 4 (DG4): Investment Approval documentation package, for evaluation to the AgITGovernance email box for CPITGD review.	Project Manager (PM)
2. Gathers design parameters and conducts a formal design review. Provides input to PM for documentation package elaboration.	Agency/Staff Office IPT
3. Receives DG4 documentation package and IDG Review Form from PM and conducts evaluation of submitted materials for approval. If approved, the IDG Review Form is updated with decision and submitted to the CPITGD for review. The PM is notified of any rejected recommendation. After notification, the documentation package will be returned to PM for re-submittal.	Agency/Staff Office IRB
4. Receives DG4 documentation package and IDG Review Form with supporting evaluation and analysis from the Agency/Staff Office IRB and reviews it for completion and accuracy. Notifies the governance boards (i.e., E-Board and IAB) of upcoming activities for this Decision Gate and routes materials and inputs to the IAB Administrator.	CPITGD (Analyst)
5. Receives DG4 documentation package and IDG Review Form from CPITGD and schedules IAB Review.	IAB Administrator
6. Conducts initial review of DG4 documentation package and IDG Review Form and provides feedback. Uses evaluation criteria and techniques documented in the CPIC Guide. Documents comments, questions and recommendations on the corresponding IDG Review Form. If investment is recommended to proceed, then the IAB Administrator routes the DG4 documentation package and IDG Review Form to the E-Board Administrator. Else, it notifies the CPITGD and Agency/Staff Office IRB of its decision.	IAB
7. Receives DG4 documentation package from IAB Administrator and schedules E-Board Review. Updates the tracking status on the IDG Review Form.	E-Board Administrator
8. Conducts Requirements Analysis Review of DG4 documentation package and IDG Review Form for final concurrence. Places emphasis on enterprise-wide strategic alignment of IDG Review Form and how it may or may not support the Department's goals and objectives. If IDG Review Form is noted to proceed, authorization is granted to move forward (to Decision Gate 5) and communicated to the IAB Administrator via Memorandum. Else, the IAB, CPITGD and Agency/Staff Office IRB are notified via Memorandum.	E-Board
9. Receives updated IDG Review Form with final E-Board recommendation and coordinates activities for DG5 with PM. Updates the tracking status on the IDG Review Form and updates the governance support tool based on the recommendation and outcome.	CPITGD

Step	Responsible Party
10. Receives updated IDG Review Form and instructions from CPITGD on how to proceed to DG5, including the list of documents to be completed and associated submission timeline.	PM

3.4.6 Exit Criteria and Review Outputs

Prior to exiting this decision gate, the investment must have approval to proceed to the next gate, requirements documents must be finalized, all EA artifacts must be finalized, and Section 508 documents must be completed. Approval by governance boards to proceed to next decision gate must be obtained.

Table 15: Design Review Outputs

Outputs
• Investment and corresponding programs/projects approved by the E-Board to move forward • Estimated system product baseline established • Risk assessment updated • Integration test plan completed • Cost analysis updated based on the system design • System project development schedule updated • Maintenance plan updated

3.5 Decision Gate Development & Test Review

This decision gate is conducted to ensure that the investment's systems under review can proceed into system fabrication, development, and test; and can meet the stated performance requirements within cost (system project budget), schedule (system project schedule), risk, and other constraints. Generally, this review assesses the system final design, as captured in product specifications for each configuration item in the system (product baseline) and ensures that each product in the product baseline has been captured in the detailed design documentation and ready for test.

3.5.1 Alignment with Management Processes

- AgSDLC Phase – Design
- EA Phase - Implement
- CPIC Phase – Control
- RMF – Select Security Controls

3.5.2 Authority

- Agency/Staff Office IRB – Review and approve investments before they enter the USDA IITGF process
- IAB – Advise/Recommend
- E-Board – Review/Recommend

3.5.3 Key Review Questions Needing Attention

- Are there any major variances with project schedules and cost estimates?
- Can every functional requirement trace back to the design?
- Is the designed system capable of operating within established constraints?
- Does the designed system satisfy the stated measures of effectiveness and performance?
- Is the system design complete?
- Does the design satisfy the business needs of the system as originally planned?
- Are the designs described at a sufficient level of detail for the implementation process?
- Is the design in alignment with architecture, technology, and security policies and standards?

3.5.4 Entry Criteria and Required Inputs

Prior to entering this decision gate, all required artifacts from prior decision gates must be finalized, reviewed and approved by governance boards.

Table 16: Development & Test Review Inputs

Inputs
• Project schedules and cost estimates approved by the agency/staff office • System design documents approved by the agency/staff office • Logical architecture models approved by the agency/staff office • Conversion strategy approved by the agency/staff office • Risk assessments approved by the agency/staff office • Integration test plan approved by the agency/staff office • Maintenance plan approved by the agency/staff office

Inputs

- Baseline, planned, and actual investment documentation, including cost, schedule, architecture, telecommunications, security, and other corresponding information will be updated
- User procedures and documentation approved by the agency/staff office

3.5.5 Process Steps

Table 17: Development & Test Review Process Steps

Step	Responsible Party
1. Submits completed Decision Gate 5 (DG5): Investment Approval documentation package, for evaluation to the AgITGovernance email box for CPITGD review.	Project Manager (PM)
2. Receives DG5 documentation package and IDG Review Form from PM and conducts evaluation of submitted materials for approval. If approved, the IDG Review Form is updated with decision and submitted to the CPITGD for review. The PM is notified of any rejected recommendation. After notification the documentation package will be returned to PM for re-submittal.	Agency/Staff Office IRB
3. Receives DG5 documentation package and IDG Review Form with supporting evaluation and analysis from the Agency/Staff Office IRB and reviews it for completion and accuracy. Notifies the governance boards (i.e., E-Board and IAB) of upcoming activities for this Decision Gate, and routes materials and inputs to the IAB Administrator.	CPITGD (Analyst)
4. Receives DG5 documentation package and IDG Review Form from CPITGD and schedules IAB Review.	IAB Administrator
5. Conducts initial review of DG5 documentation package and IDG Review Form and provides feedback. Uses evaluation criteria and techniques documented in the CPIC Guide. Documents comments, questions and recommendations on the corresponding IDG Review Form. If investment is recommended to proceed, the IAB Administrator routes the DG5 documentation package and IDG Review Form to the E-Board Administrator. Else, it notifies the CPITGD and Agency/Staff Office IRB of its decision.	IAB
6. Receives DG5 documentation package from the IAB Administrator and schedules E-Board Review. Updates the tracking status on the IDG Review Form.	E-Board Administrator
7. Conducts Requirements Analysis Review of DG5 documentation package and IDG Review Form for final recommendation. Places emphasis on enterprise-wide strategic alignment of IDG Review Form and how it may or may not support the Department's goals and objectives. If IDG Review Form is noted to proceed, authorization is granted to move forward (to Decision Gate 6) and communicated to the IAB Administrator. Else, the IAB, CPITGD and Agency/Staff Office IRB are notified.	E-Board
8. Receives updated IDG Review Form with final E-Board recommendation and coordinates activities for DG6 with PM. Updates the tracking status on the IDG Review Form and updates the governance support tool based on the recommendation and outcome.	CPITGD

Step	Responsible Party
9. Receives updated IDG Review Form and instructions from CPITGD on how to proceed to DG6, including the list of documents to be completed and associated submission timeline.	PM

3.5.6 Exit Criteria and Required Outputs

Prior to exiting this decision gate, the investment must have approval to proceed to the next gate, implementation requirements documents must be finalized, all EA artifacts must be finalized, and Section 508 documents must be completed. Approval by governance boards to proceed to next decision gate must be obtained.

Table 18: Development & Test Review Outputs

Outputs
• Investment and corresponding programs/projects approved by the E-Board to move forward • Design of all hardware and software configurations completed • Test plans / iterative testing for all system functions completed with satisfactory results • User procedures and documentation finalized • Conversion strategy finalized

3.6 Decision Gate Implementation Review

This decision gate is conducted to ensure that the investment's systems have been developed and tested to satisfy the desired functional requirements. It ensures user procedures and documentation are adequate and meet the needs of stakeholders; that individual system components successfully completed unit and integration testing to satisfy business needs, functional requirements, and service level agreements. In addition, this review will ensure components adhere to any physical constraints and operate as described in user documentation.

3.6.1 Alignment with Management Processes

- AgSDLC Phase – Development & Test
- EA Phase - Implement
- CPIC Phase – Control
- RMF – Implement & Assess Security Controls

3.6.2 Authority

- Agency/Staff Office IRB – Review and approve investments before they enter the USDA IITGF process
- IAB – Advise/Recommend
- E-Board – Review/Recommend

3.6.3 Key Review Questions Needing Attention

- Are there any major variances with project schedules and cost estimates?
- Have any process changes been documented?
- Is the system staying consistent with the design?
- Is the design in alignment with architecture, technology, and security policies and standards?
- What are the variances between the delivered (or in-progress) system and the proposed system
- Is the testing clearly indicating realization of benefits?
- Have the affected business processes been tested end-to-end?
- Have any non-planned, cross-domain impacts been found?
- Have end users been involved with the testing?
- Are there any roadblocks that enterprise architecture can assist in removing?
- Have all the business capabilities been enabled? Which ones have not? What is the plan for enabling them?
- **If agile/incremental, QUESTION RE IMPLEMENTATION**
 - Are planned iteration(s)/release(s) completed for deployment?
 - Are acceptance tests complete for deployment, including Section 508 Accessibility Test?
 - Are deliverables and work products complete and under configuration control?

3.6.4 Entry Criteria and Required Inputs

Prior to entering this decision gate, all required artifacts from prior decision gate must be finalized, reviewed and approved by governance boards.

Table 19: Implementation Review Inputs

Inputs
- Baseline, planned, and actual investment documentation; including cost, schedule, architecture, telecommunications, security, and other corresponding information will be updated. - Post-Implementation Review (PIR) Plan prepared by the agency/staff office - IDG Review Form completed for tracking purposes for this decision gate

3.6.5 Process Steps

Table 20: Implementation Review Process Steps

Step	Responsible Party
1. Submits completed Decision Gate 6 (DG6): Investment Approval documentation package, for evaluation to the AgITGovernance email box for CPITGD review.	Project Manager (PM)
2. Prepares Post Implementation Review (PIR) Plan. Provides input to PM for documentation package elaboration.	Agency/Staff Office IPT
3. Receives DG6 documentation package and IDG Review Form from PM and conducts evaluation of submitted materials for approval. If approved, the IDG Review Form is updated with decision and submitted to the CPITGD for review. The PM is notified of any rejected recommendation. After notification, the documentation package will be returned to PM for re-submittal.	Agency/Staff Office IRB
4. Receives DG6 documentation package and IDG Review Form with supporting evaluation and analysis from the Agency/Staff Office IRB and reviews it for completion and accuracy. Notifies the governance boards (i.e., E-Board and IAB) of upcoming activities for this Decision Gate and routes materials and inputs to the IAB Administrator.	CPITGD (Analyst)
5. Receives DG6 documentation package and IDG Review Form from CPITGD and schedules IAB Review.	IAB Administrator
6. Conducts initial review of DG6 documentation package and IDG Review Form and provides feedback. Uses evaluation criteria and techniques documented in the CPIC Guide. Documents comments, questions and recommendations on the corresponding IDG Review Form. If investment is recommended to proceed, the IAB Administrator routes the DG4 documentation package and IDG Review Form to the E-Board Administrator. Else, it notifies the CPITGD and Agency/Staff Office IRB of its decision.	IAB
7. Receives DG6 documentation package from IAB Administrator and schedules E-Board Review. Updates the tracking status on the IDG Review Form.	E-Board Administrator
8. Conducts Dev & Test Final Phase Review of DG6 documentation package and IDG Review Form for final recommendation. Places emphasis on enterprise-wide strategic alignment of IDG Review Form, and how it may or may not support the Department's goals and objectives.	E-Board

Step	Responsible Party
If IDG Review Form is noted to proceed, then authorization is granted to move forward (to Decision Gate 7) and communicated to the IAB Administrator via Memorandum. Else, the IAB, CPITGD and Agency/Staff Office IRB are notified via Memorandum.	
9. Receives updated IDG Review Form with final E-Board recommendation and coordinates activities for DG7 with PM. Updates the tracking status on the IDG Review Form and updates the governance support tool based on the recommendation and outcome.	CPITGD
10. Receives updated IDG Review Form and instructions from CPITGD on how to proceed to DG7, including the list of documents to be completed and associated submission timeline.	PM

3.6.6 Exit Criteria and Required Outputs

Prior to exiting this decision gate, the investment must have approval to proceed to next gate, requirements documents must be finalized, all EA artifacts must be finalized, and Section 508 documents must be completed. Investments must have conducted a PIR, established an operations and maintenance review schedule and obtained approval by governance boards to proceed to next decision gate.

Table 21: Implementation Review Outputs

Outputs
- Decision formulated by the E-Board to continue, modify, or terminate an investment - Corrective actions (where applicable) established

3.7 Decision Gate Operations, Maintenance, and Disposition Review

This decision gate is conducted to determine whether system components have achieved expected benefits, provide an evaluation of the investment's development process and the investment is ready to go into operations and maintenance mode or will be disposed (decommissioned). From the evaluation, a recommendation is made for continuing, modifying, terminating, or disposing (retiring) an investment.

3.7.1 Alignment with Management Processes

11. AgSDLC Phase – Implementation
12. EA Phase - Implement
13. CPIC Phase – Evaluate
14. RMF – Authorize Information System

3.7.2 Authority (only for Operations and Maintenance portion of this Phase)

- Agency/Staff Office IRB – Review and approve investments before they enter the USDA IITGF process
- IAB – Advise/Recommend
- E-Board – Review/Recommend
- ***ACIO of IRMC – Approves candidate investments entering Disposition ONLY (no separate decision gate occurs) with the concurrence of the CIO.***

3.7.3 Key Review Questions Addressed

- Did the investments deliver expected benefits?
- How well did the development process of the investments execute?
- To what extent are the decisions making processes sustaining or improving the success rate of the investments?
- What are the lessons learned?

3.7.4 Entry Criteria and Required Inputs

Prior to entering this decision gate, all required artifacts from prior decision gate's must be finalized, reviewed and approved by governance boards.

Table 22: Operations, Maintenance, & Disposition Review Inputs

Inputs
• Operations and Maintenance (O&M) and e-Government strategy schedules established • Steady State Investment Review Submission Package completed and approved by the agency/staff office Head

3.7.5 Process Steps

Table 23: Operations, Maintenance, & Disposition Review Process Steps

Step	Responsible Party
1. Submits completed Decision Gate 7 (DG7): Investment Approval documentation package, for evaluation to the AgITGovernance email box for CPITGD review. <i>NOTE: Disposition Plan (Final) – Deliverable will be approved by ACIO/IRMC with concurrence of the CIO.</i>	Project Manager (PM)

Step	Responsible Party
2. Provides input to PM for documentation package elaboration.	Agency/Staff Office IPT
3. Receives DG7 documentation package and IDG Review Form from PM and conducts evaluation of submitted materials for approval. If approved, the IDG Review Form is updated with decision and submitted to the CPITGD for review. The PM is notified of any rejected recommendation. After notification, the documentation package will be returned to PM for re-submittal.	Agency/Staff Office IRB
4. Receives DG7 documentation package and IDG Review Form with supporting evaluation and analysis from the Agency/Staff Office IRB and reviews it for completion and accuracy. Notifies the governance boards (i.e., E-Board and IAB) of upcoming activities for this Decision Gate and routes materials and inputs to the IAB Administrator.	CPITGD (Analyst)
5. Receives DG7 documentation package and IDG Review Form from CPITGD and schedules IAB Review.	IAB Administrator
6. Conducts initial review of DG7 documentation package and IDG Review Form and provides feedback. Uses evaluation criteria and techniques documented in the CPIC Guide. Documents comments, questions and recommendations on the corresponding IDG Review Form. If investment is recommended to proceed, the IAB Administrator routes the DG4 documentation package and IDG Review Form to the E-Board Administrator. Else, it notifies the CPITGD and Agency/Staff Office IRB of its decision.	IAB
7. Receives DG7 documentation package from IAB Administrator and schedules E-Board Review. Updates the tracking status on the IDG Review Form.	E-Board Administrator
8. Conducts Implementation Final Phase Review of DG7 documentation package and IDG Review Form for final recommendation. Places emphasis on enterprise-wide strategic alignment of IDG Review Form and how it may or may not support the Department's goals and objectives. If IDG Review Form is noted to proceed, then authorization is granted for investment to go into Operations and Maintenance status. This recommendation is communicated through the E-Board Administrator to the CPITGD via Memorandum. Else, the IAB, CPITGD and Agency/Staff Office IRB are notified via Memorandum.	E-Board
9. Receives updated IDG Review Form with final E-Board recommendation and coordinates activities with PM and Business Owner. Updates the tracking status on the IDG Review Form and updates the governance support tool based on the recommendation and outcome.	CPITGD
10. Receives updated IDG Review Form and any instructions from CPITGD. Coordinates with Business Owner for deployment of investment.	PM

3.7.6 Exit Criteria and Required Outputs

Prior to exiting this decision gate, all requirements documents must be finalized, all EA artifacts must be finalized, and Section 508 documents must be completed. The investment remains in the operations and maintenance phase until a decision is made by the governance boards to modify, replace, or terminate (retire) the system.

Table 24: Operations, Maintenance, & Disposition Review Outputs

Outputs
• Decision formulated by the E-Board to continue, modify, terminate, or dispose (decommission or retire) an investment (system) • Corrective actions (where applicable) established • DME portions of Operations and Maintenance investments spun-off (where applicable) • <i>For Disposition ONLY: The ACIO of IRMC will receive and approve the systems Disposition Plan. The ACIO of IRMC will also receive and approve the Post Disposition Review Plan no later than six months after final activity identified in the Disposition Plan</i>

4 Appendix

4.1 Appendix A – Acronyms

Table 25: Acronyms used throughout this document.

Table 25: Acronyms

Acronym	Definition
A&A	Assessment & Authorization
AoA	Analysis of Alternatives
ACIO	Associate Chief Information Officer
AgMAX	Agriculture Maximus (IT Portfolio Repository)
AgSDLC	Agriculture’s System Development Life Cycle
ANSI	American National Standards Institute
ASA	Assistant Secretary for Administration
ASOC	Agriculture Security Operations Center
ATO	Authority to Operate
CFO	Chief Financial Officer
CIO	Chief Information Officer
CIOC	Chief Information Officers Council (USDA)
COTS	Commercial Off-The-Shelf (software)
CP	Contingency Planning
CPITGD	Capital Planning and IT Governance Division
CPIC	Capital Planning and Investment Control
CPM	Collaborative Planning Methodology
CR	Concurrency Review
DME	Development, Modernization, Enhancement
DG	Decision Gate
DGS	Digital Government Strategy
DR	Departmental Regulation
E-Board	Executive Information Technology Investment Review Board
EA	Enterprise Architecture
EAD	Enterprise Architecture Division
EAS	Enterprise Application Solutions
ENS	Enterprise Network Services
EVM	Earned Value Management

Acronym	Definition
FAR	Federal Acquisition Regulation
FEAF	Federal Enterprise Architecture Framework
FISMA	Federal Information Security Management Act
FITARA	Federal Information Technology Acquisition Reform Act
GAO	Government Accountability Office
GOTS	Government Off-The-Shelf (software)
HR	Human Resources
IAB	Integrated Advisory Board
IITGF	Integrated Information Technology Governance Framework
IPT	Integrated Project Team
IRB	Integrated Baseline Review
IRB	Investment Review Board (agency/staff office level)
IRMC	Information Resource Management Center
ITS	International Technology Services
IV&V	Independent Verification and Validation
LC	Life Cycle
MIT	Massachusetts Institute of Technology
MNS	Mission Needs Statement
MOU	Memorandum of Understanding
NITC	National Information Technology Center
O&M	Operations and Maintenance
OCFO	Office of the Chief Financial Officer
OCIO	Office of the Chief Information Officer
OMB	Office of Management and Budget
PIA	Privacy Impact Assessment
PIR	Post Implementation Review
PM	Project Manager (Management)
PMP	Project Management Plan
POA&M	Plan of Action and Milestones
RMF	Risk Management Framework
SLA	Service Level Agreement
SORN	System of Records Notice
SSP	System Security Plan

Acronym	Definition
USC	United States Code
USDA	United States Department of Agriculture
WBS	Work Breakdown Structure

4.2 Appendix B – Key Documents Reviewed

Table 26: Key Documents Reviewed below to develop this document.

Table 26: Key Documents Reviewed

Document Name	Version	Date Published
Clinger-Cohen Act (formerly the IT Management Reform Act, 40 USC 1402(3))	N/A	1996
Federal Information Security Management Act (FISMA)	N/A	2002
USDA EA Development Framework	1.0	April 2010
USDA 2013 EA Requirements Guidance	1.0	January 2013
OMB's "Collaborative Planning Methodology"	1.0	October 2012
OMB's "A Common Approach to Federal EA"	1.0	May 2012
USDA Enterprise Roadmap	N/A	May 2013
USDA Integrated IT Governance Framework: Metrics Definition	1.0	January 2011
USDA Information Technology Capital Planning and Investment Control (CPIC) Guide	N/A	May 2013
USDA IT Strategic Plan 2014-2018	N/A	February 2014
OMB's Agile Modular Contracting Guide	N/A	2012
OMB's TechFAR Handbook for Procuring Digital Services Using Agile Processes	N/A	2014
GAO-12-681 Software Development: Effective Practices and Federal Challenges in Applying Agile Methods	N/A	July 2012
American Council for Technology-Industry Advisory Council (ACT-IAC): Planning for Success: Agile Software Development in Federal Agencies	N/A	August 2013

4.3 Appendix C – Tailoring

An essential element of the IITGF is the ability to tailor framework requirements to the specific circumstances of each USDA investment or project. By doing so, USDA will be able to preserve a consistent and repeatable project management methodology while recognizing in a deliberate manner when certain elements of the framework are not applicable or not cost-effective for a particular project. The IITGF does not preclude Agencies or Staff Offices from requiring more rigor than proposed here.

Concept

The IITGF provides a complete list of activities, deliverables and reviews that are necessary to properly manage and control a large-scale, mission-critical, high-risk system. However, not all USDA projects fall into this category. While all projects require adequate documentation and deliverables to ensure that they are progressing appropriately and to provide management with enough information to make informed decisions concerning the future of the system, lower risk projects do not need as much documentation to maintain appropriate oversight and control. The Project Manager is responsible for determining the appropriate level of project management and documentation rigor necessary for effective project management and project success.

Tailoring consists of waiving particular life cycle phases, activities, deliverables or reviews. The requested tailoring strategy will provide the justification for the tailoring as well as identify the specific elements of the IITGF to be tailored. To develop the tailoring strategy, analyze the impact of tailoring on the IT project, determine the appropriate amount of rigor required, and conduct a risk assessment for the project.

The tailoring strategy and request for the investment is described in the Investment Tailoring Agreement, which is formally approved at the investment Initiation Review (Decision Gate 1). Any subsequent change to this Agreement must be approved by the IT Governance organization.

Evaluation Factors for IITGF Tailoring

To meet the needs of USDA projects, evaluation factors may be used by Project Managers, Business Owners, and IT Governance bodies to determine appropriate tailoring of the IITGF for a given project.

There are some fundamental elements that can never be removed from IITGF through tailoring. These include:

- Identifying the business need.
- Documenting correct, clear and adequate functional and non-functional requirements.
- Following processes that ensure the system will be able to operate within the as-is and/or target enterprise architecture.
- Adequate testing.
- Appropriate operations and maintenance documentation.

Project risk, complexity, visibility, interdependencies, impact, and budget may be used as inputs to determine the appropriate levels of project management and documentation required. The greater role these factors play in a project, the greater degree of project management and documentation may be necessary. In addition, Project Managers, Business Owners, and the IT Governance organization may include consideration of the following factors in determining the tailoring strategy for a project:

- **Cost:** As cost decreases, IITGF elements that mitigate cost risk or that are relatively expensive are candidates for tailoring.
- **Risk:** Framework elements that mitigate low-level risks are candidates for tailoring.

- **Schedule:** Framework elements that provide a corporate knowledge base or continuity over time or during team turnover are candidates for tailoring if the schedule is short enough to lower those risks.
- **Interdependencies:** Stand-alone systems that do not have bi-directional dependencies with other projects or systems have less risk and complexity and therefore are candidates for tailoring the framework elements that mitigate risks.
- **Acquisition Strategy:** Contracts awarded for contractor developed or operated projects should require project management methodologies equivalent to the IITGF framework for tasks and deliverables. Tasks and deliverables provided under performance-based contracts are candidates for tailoring if they mitigate risk.
- **COTS and other specific project types:** While projects such as COTS may be candidates for tailoring of some IITGF Development Phase activities, activities in other Phases will be needed to ensure proper project selection, Enterprise Architecture compliance, security, implementation, Operations and Maintenance support, etc.
- **Development Methodology:** Choice of development methodology is likely to affect the iterative nature of the framework elements and may offer significant tailoring opportunities.

“Fast Track” Investments and Projects

Mission-critical, urgent projects demand rigorous planning and monitoring. The IITGF is intended to enable USDA to successfully manage risk, thus it is especially important that the IITGF be applied to any so-called “fast track” projects. The Agreement deliverable for each project defines how the IITGF is to be tailored. Options for tailoring include:

- **Acceleration:** For example, the initiation phase of the IITGF is designed in part to answer the question “are we doing the right thing?” In the case of some projects, such as a legislatively-mandated program, the answer to this question is largely pre-determined. Acceleration does not relieve the project manager to demonstrate that the proposed project will meet the requirements stated in the mandate and do so in the optimal manner.
- **Consolidation:** It is possible to tailor the IITGF framework so that phases are consolidated.
- **Deferral:** At Decision Gate Reviews, the IT governance organization has the option to approve with conditions. If all exit criteria are not met, the IT governance organization may accept the risk of moving forward with the condition that those criteria will be met at a later date.

Development Methodologies

The IITGF applies to all projects, regardless of the development methodology used, and can be applied appropriately to meet the particular needs of the methodology applied. Specifically, the Framework can accommodate the iterative nature of many development methodologies (including the “waterfall”, Spiral, Rapid Application Development, Incremental, Rapid Prototyping, and Agile) primarily through the use of iterative cycles within the overall life cycle phases.

There are numerous frameworks available that incorporate characteristics of the agile philosophy, such as Scrum, Extreme Programming (XP), Kanban, and Test-Driven Development, and this section introduces an overview of some of the more popular agile methodologies in the industry today which are highlighted in this section. Many of these agile methods have their own unique processes, terms, techniques, and timelines. Because Scrum is the most widely used agile methodology, this companion document uses

many Scrum terms and processes, but Agencies/Staff Offices could employ practices from all these agile methodologies.

Common Agile Frameworks	
Scrum	Scrum is the most widely recognized agile framework and is often used in conjunction with other methodologies ⁷ . It emphasizes the use of self-organizing, cross-functional teams, with a product owner responsible for managing user stories that add value to the product or organization. Scrum iterations are called Sprints , a time-boxed period for delivery of functionality with defined deadlines and deliverables. Requirements are collectively sorted into project-level and sprint-level backlogs, and overall project activity is monitored, communicated, and managed using frequent team processes including daily stand-ups, sprint planning, sprint reviews, and retrospectives.
Extreme Programming (XP)	XP is an approach based on using dedicated teams of high-performing individuals working intensively on software development. Key XP values are communication, simplicity, feedback, and courage (i.e., risk-taking). It emphasizes constant end-user involvement and technical best practices, including test-driven development, pair programming (jointly executed coding on a single task between two developers), and constant refactoring (restructuring of code). It is often used together with Scrum to specify code-level development and team processes.
Kanban	Kanban is also rooted in the same principles as Lean and is often combined with other approaches. Kanban is a management practice that relies on a visual display of process information and workflows, translating activities into a collection of queues. Kanban manages work-in-progress by tracking the number of tasks in each work stream at any given time. The visual display of progress within and across these queues helps to identify issues rapidly and optimizes overall project processing. Many Agile teams use these displays (“Kanban boards”) as management and communication tools in conjunction with other Agile techniques.
Lean Software Development	Lean is based on manufacturing principles that emphasize the delivery of value while eliminating waste. As with other Agile techniques, there is an emphasis on learning throughout the development process, updating project decisions to incorporate new information, rapid delivery, and a holistic view of product development. As with other approaches, Lean processes are often combined with Scrum and other techniques.

⁷ “8th Annual State of Agile Survey,” VersionOne.com (2014), <http://www.versionone.com/pdf/2013-state-of-Agile-survey.pdf>.

4.4 Appendix D – Deliverable Descriptions (core deliverables listing)

Deliverable	Description
Mission Needs Statement (Final)	A Mission Needs Statement identifies the business need for a proposed investment or project. It includes a brief description of the proposed project's purpose, goals, and scope. The Mission Needs Statement provides sufficient information to justify a decision whether or not the organization should move forward with the development of a full business case.
Business Case (old OMB Exhibit 300) with components (Final) • Business Process Models (BPMs) • Conceptual Architecture • Organizational Impact Assessment • Investment/Project (e.g., FIPS-199 categorization needed for information security) • High-Level Requirements • Proposed Acquisition Strategy	The Business Case is a documented, structured proposal for business improvement that is prepared to facilitate a selection decision for a proposed investment or project by organizational decision makers. The Business Case describes the reasons and justification for the investment or project in terms of business process performance, needs and/or problems, and expected benefits. It identifies the high-level requirements that are to be satisfied, an analysis of proposed alternative solutions (with reasons for rejecting or carrying forward each option), assumptions, constraints, a risk-adjusted cost-benefit analysis, and proposed acquisition strategy. Also presents how the investment will align and address tenets of the OMB's Digital Government Strategy and Open Data Plan.
Project Charter (Final)	The Project Charter formally authorizes a project, describes the business need for the project and the product to be created by the project. It provides the project manager with the authority to apply up to a certain level of organizational resources to project activities.
Project Management Plan (PMP) with components (Preliminary/Final) • Risk Management Plan/Log • Proposed Acquisition Strategy • Change Management Plan/Log • Configuration Management Plan/Log • System Categorization • Requirements Management Plan/Log • Communications Management Plan • Work Breakdown Structure (WBS) /Project Schedule • IV&V Planning • Quality Assurance	The Project Management Plan is a dynamic formal approved document that defines how the project is executed, monitored and controlled. It may be summary or detailed and may be composed of one or more subsidiary management plans and other planning documents. The main objective of the PMP is to document assumptions and decisions for how the project is to be managed, to help in communication between all of the concerned parties and to document the scope, costs and time sequencing of the project.
Privacy Impact Assessment (PIA) (Preliminary)	Based on the initial FIPS 199 categorization and the identification of the need or potential to collect Privacy Act data/information,

Deliverable	Description
	the assessment required by the Privacy Act and/or E-Government Act of 2002 to conduct assessments on projects before developing or procuring information technology that collects, maintains, or disseminates personal information in identifiable form. A PIA is an agency review of how collected information is handled by and protected in a manner consistent with Federal standards for privacy and information security. The PIA determines what kind of information in identifiable form is contained within a system, what is done with that information, and how that information is protected. Though the PIA specifically refers to "privacy", a PIA also typically covers confidentiality, access to data, and use of data.
Requirements Document with components (Final) • Functional & Non-Functional Requirements • Requirements Traceability Matrix (RTM) • Logical Data Model	The Requirements Document describes both the project and product requirements. It outlines the technical, functional, performance and other requirements necessary to deliver the end investment.
Design Document with components (Architectural & detailed elements) (Final) • Physical Data Model (database design) • Release Strategy • Data Conversion • Interface Control • Section 508 Compliance • Capacity /Implementation Planning • Updated RTM	The Design Document describes the technical solution that satisfies the requirements for the Investment (e.g., system). Either directly or by reference to other documents, the Design Document provides a high-level overview of the entire solution architecture or data design, including external interfaces, as well as lower-level detailed design specifications for internal components that are to be developed.
Computer Match Agreement (CMA) (Final)	A Computer Match Agreement CMA is a written accord that establishes the conditions, safeguards, and procedures under which a Federal organization agrees to disclose data where there is a computerized comparison of two or more automated System of Records (SORs). In conjunction with a CMA, an Inter/Intra-agency Agreement (IA) is also prepared when the SOR(s) involved in the comparison are the responsibility of another Federal agency. An Interconnection Security Agreement (ISA) may also be prepared. ISAs are intended to establish procedures for mutual cooperation and coordination between two distinct authorizing entities regarding the development, management, operation and security of a connection between two different systems. An ISA does not typically involve the data matching so cannot take the

Deliverable	Description
	place of a Computer Match Agreement, however, a comprehensive Computer Match Agreement may alleviate the need for a separate ISA.
Test Plan (Final) • Test Case Specification	The Test Plan defines the types of tests (e.g. unit, function, integration, system, information security, performance (load and stress), regression, user acceptance, and/or independent verification and validation) to be carried out. The document describes the acceptance criteria for those tests, roles and responsibilities of individuals involved in the testing process, traceability matrix, resources required (hardware and software environments), and other elements relevant to test planning and execution. This plan details the manner of testing (test cases, simulation, etc.) of the integrated Investment system. It must include as part of the main document or as a separate document detailed Test Case Specifications that describe the purpose and manner of each specific test, the required inputs and expected results for the test, step-by-step procedures for executing the test, and the pass/fail criteria for determining acceptance.
Contingency/Disaster Recovery Plan (Final)	The Contingency/Disaster Recovery Plan describes the strategy and organized course of action that is to be taken if things don't go as planned or if there is a loss of use of the established investment (e.g., system) due to a disaster such as a flood, fire, computer virus, or major failure. The plan describes the strategy for ensuring recovery of the investment in accordance with stated recovery time and recovery point objectives.
Operations, Maintenance, and Disposition Manual (Final) • Help Desk Support	The Operations, Maintenance, and Disposition Manual clearly describes the investment that will be operating in the production environment and provides the operations and support staff with the information necessary to effectively handle routine production processing, ongoing maintenance, and identified problems, issues, and/or change requests.
Systems Security Plan (SSP) (Final)	The SSP describes managerial, technical and operational security controls (defined by the National Institute of Standards and Technology) that are designed and implemented within the system.
Training Plan (Final)	The Training Plan describes the overall goals, learning objectives, and activities that are to be performed to develop, conduct, control, and evaluate instructions that are to be provided to end users, operators, administrators, and support staff who will use, operate, and/or otherwise support the solution.
Training Materials (Final)	Training Materials include the documentation associated with the deployment of the Investment. This includes instructor and student guides, audio-visual aids, and computer-based or other media used to disseminate information about the final product to the target audience that is in need of the instruction.

Deliverable	Description
Security Risk Assessment (SRA) (Final)	A Security Risk Assessment will document the analysis of the information security functional requirements and will identify the protection requirements for the system using a formal risk assessment process. The risk assessment includes the identification of threats to and vulnerabilities in the information system; the potential impact or magnitude of harm that a loss of confidentiality, integrity, or availability would have on agency assets or operations and the identification and analysis of information security controls for the information system.
User Manual (Final)	The User Manual clearly explains how a business user is to use the established investment from a business function perspective.
Authority to Operate (ATO) with components (Final) • Security Authorization Letters • Section 508 Product Certifications/Exceptions	An Authority to Operate (ATO) is a formal declaration by an Authorizing Official (AO) that authorizes operation of an investment and explicitly accepts the risk to agency operations (including mission, functions, image, or reputation), agency assets, or individuals, based on the implementation of an agreed-upon set of information security controls. Though not security-specific, formal documentation of Section 508 Certification or Exception is also required before an investment can be released into operation.
Service Level Agreement(s) (SLAs) and/or Memorandum(s) of Understanding (MOU)	A Service Level Agreement(s) (SLAs) is a contractual agreement between a service provider and their customer specifying performance guarantees with associated penalties should the service not be performed as contracted. A Memorandum(s) of Understanding (MOU) is a legal document that outlines the terms and details of an agreement between parties, including each party's requirements, responsibilities and period of performance.
Plan of Action and Milestones (POA&M)	A management process that outlines weaknesses and delineates the tasks necessary to mitigate them. The POA&M process will be used to facilitate the remediation of information security program- and system-level weaknesses, and will provide a means for: Planning and monitoring corrective actions; Defining roles and responsibilities for weakness resolution; Assisting in identifying the information security funding requirements necessary to mitigate weaknesses; Tracking and prioritizing resources; and Informing decision makers.
Privacy Impact Assessment (Final)	A PIA is an agency review of how collected information is handled by and protected in a manner consistent with Federal standards for privacy and information security. The PIA determines what kind of information in identifiable form is contained within a system, what is done with that information, and how that information is protected. Though the PIA specifically refers to

Deliverable	Description
	"privacy", a PIA also typically covers confidentiality, access to data, and use of data.
Project Roadmap	Provides an outline for the high to mid-level system functionality that will be delivered, and includes the estimated features in each release, which is a delivery of software into production environment for use by actual users.
Project Backlog	The Project Backlog serves as the initial requirements document, which communicates the project scope and provides a high-level description of the required system characteristics and features, and it is necessary for the successful delivery of a working software system. The features are prioritized by business value and are further defined into top-level requirements that the project is designed to satisfy (e.g., epics), features, and user stories throughout the life cycle. These items are recorded and tracked in the Project Backlog as a prioritized list of requirements in the form of user stories and associated relative estimates for completion. Iteration Backlog is a complete list of the selected and prioritized user stories, which describe how the product features will ultimately meet the users' requirements and are described at levels just low enough for the development team to design solutions. During an iteration, the backlog is updated to reflect work completed and work remaining, ideally resulting in all task being completed by the end of the iteration.
Incremental Certification	Agency or Staff Office (Mission Area CIOs) CIO Certification email or memo (statement) that affirms that active software development project(s) are implementing incremental (iterative/agile) development methodologies as appropriate.
Incremental Release Management Plan	The release plan can also tie into the original project plan by highlighting progress on the mapping of user stories to iterations (completed and remaining) as well as delivered features. A good release plan identifies a minimal viable product (MVP). They are the simplest version of a product that can still be released. A MVP should have enough value that it is still usable, it demonstrates future benefit early on to retain user buy in and provides a feedback loop to help guide future development. This approach helps software keep pace with ever-changing technology and customer needs with the ability to quickly demonstrating its capability to stakeholders for immediate feedback and modification.
Project Backlog Report	Project Backlog Report highlights the number of features completed at the end of each iteration, and features number of committed to delivering in subsequent iterations. The report includes number of user stories and, commonly, a visual

Deliverable	Description
	representation of how the recently included stories map back to the original requirements.
Incremental Changes Report	Incremental Changes Report highlights number of any within-iteration changes to any added, deleted, or modified features while a project is in progress. It informs the decision maker that they received the features they agreed upon, and why some features may have been added, adjusted, or removed during the project lifecycle.
Incremental Release Management Progress Report	A release report highlights the current burn-up rates for a specific release, an update on the number of user stories both completed and remaining for the given iteration and full release, and a summary of how completed release(s) fit within the larger project timeline.

4.5 Appendix E – AgSDLC Phases

AgSDLC Phase	Description
Initiation	During the Initiation Phase, a Business Owner identifies a business need for which a technological solution is required, and a preliminary enterprise architecture review is conducted to determine if there is sufficient justification to proceed into the Planning Phase. The Initiation Phase may be triggered because of business process improvement activities, changes in business functions, advances in information technology, or may arise from external sources, such as public law or the public. When an opportunity to improve business/mission accomplishments or to address a deficiency is identified, the Business Owner and the Project Manager document these opportunities in the Mission Needs Statement. Sufficient high-level functional requirements are required to understand what the project is intended to do and how it supports the business needs. An Enterprise Architecture review examines whether the proposed project potentially duplicates, interferes, contradicts or can leverage another project that already exists, or is proposed, under development, or planned for near-term disposition. This Phase ends with a decision by the IT Governance organization of whether to approve commitment of the necessary resources to solve the identified business need. If recommended, the investment or project proceeds to the Planning Phase.
Investment (Planning)	The Planning Phase requires study and analysis culminating in the full Project Management Plan (PMP) that may lead to system development activities. If obtaining contractor support is necessary, coordinate acquisition activities with agency contracting office. The project work is broken down into specific tasks and sub-tasks, including the identification of project deliverables and assignment of allocated resources to each task. Control documents relating to that effort are produced. The degree of project management rigor that is to be applied to the project is determined and milestones are established. Specific plans for management and governance of the project are established and documented to guide ongoing project execution and control. The Planning Phase ends with a formal review during which the adequacy of the PMP is determined. In this Phase, sufficient requirements detail is required to support the development of the project's PMP and permit outside validation of this deliverable. This Phase ends with a review and recommendation from the IT Governance Board to determine readiness to proceed to the Requirements Analysis Phase.
Requirements Analysis	During the Requirements Analysis Phase, the business (project in-scope) requirements that were documented during earlier phases are validated and further analyzed and decomposed into functional and non-functional requirements that define the anticipated technology solution in more detail with regard to inputs, processes, outputs, and interfaces. If appropriate, a logical depiction of the data entities, relationships and attributes of the system/application is also created. During the Requirements Analysis Phase, the initial strategy for testing and implementation should be considered. In addition, the work planned for future phases is redefined, if necessary, based on information acquired during this Phase. Detailed application requirements (both functional and non-functional) are required to permit detailed project management planning, execution and control. If detailed requirements and subsequent planning identify a breach of the project-level cost,

AgSDLC Phase	Description
	schedule or performance baselines established at the end of the planning phase, a formal change to the Project Baselines should be requested. The Requirements Analysis Phase ends with a review and recommendation from the IT Governance Board to determine readiness to proceed to the Design Phase.
Design	The Design Phase seeks to develop detailed specifications that emphasize the physical solution to the customer's information technology needs. The system requirements and logical description of the entities, relationships, and attributes of the data that were documented during the Requirements Analysis Phase are further refined and allocated into system and database design specifications that are organized in a way suitable for implementation within the constraints of a physical environment (e.g., computer, database, facilities). A formal review of the high-level enterprise architectural design is conducted prior to detailed design of the technology solution to achieve confidence that the design satisfies the system requirements, is in conformance with the enterprise architecture and prescribed design standards, to raise and resolve any critical technical and/or project-related issues, and to identify and mitigate project, technical, security, and/or business risks affecting continued detailed design and subsequent life cycle activities. During the Design Phase, the initial strategy for any necessary training is also begun. Estimates of project expenses are updated to reflect actual costs and estimates for future phases. In addition, the work planned for future phases is redefined, if necessary, based on information acquired during the Design Phase. For Commercial Off-The-Shelf (COTS) software products, some tasks and activities may have been performed by the vendor and vendor documentation may be appropriate to meet some documentation requirements. This is acceptable as long as each required activity is performed, and each required deliverable is available. The Design Phase ends with a review and recommendation from the IT Governance Board to determine readiness to proceed to the Development & Test Phase.
Development & Test	During the Development portion of this Phase, the system developer takes the detailed design information documented in the previous phase and transforms it into machine-executable form and ensures that all of the individual components of the technology solution function correctly and interface properly with other components within the system/application. As necessary and appropriate, system hardware, networking and telecommunications equipment, and COTS/Government Off-The-Shelf (GOTS) software is acquired and configured. New custom-software programs are developed, database(s) are built, and software components (COTS, GOTS, and custom-developed software and databases) are integrated. Test data and test case specifications are finalized. Unit and integration testing is performed by the developer with test results appropriately documented. Data conversion and training plans are finalized, and user procedures are baselined, while operations, office, and maintenance procedures are also initially developed. The Development portion ends with a recommendation to proceed to the Test cycle. The primary purpose of the Test portion of this Phase is to determine whether the technology solution developed or acquired and preliminarily tested during the Development Phase is ready for implementation. During the Test cycle, formally controlled and focused testing is performed to uncover errors and bugs in the proposed technology solution that need to be resolved. There are a number of specific

AgSDLC Phase	Description
	validation tests that are performed during the Test cycle (e.g., requirements validation, system integration, interface, regression, information security, performance, stress, usability, and user acceptance). Additional tests or reviews may be conducted to validate product-specific, non-technical requirements (e.g. contingency plans, disaster recovery procedures, training, and documentation). This entire Phase ends with a review and recommendation from the IT Governance Board to proceed to the Implementation Phase.
Implementation	During the Implementation Phase, the technology solution is moved from development and test status to production status. The process of implementation is dependent on the characteristics of the project and the proposed solution, and thus may be synonymous with installation, deployment, rollout, or go-live. If necessary, data conversion, phased implementation, and training for using, operating, and maintaining the system are accomplished during the Implementation Phase. The final system must be formally authorized before use in the production environment during the Implementation Phase. All affected customers and organizations affected are notified of the implementation. Additionally, it is good policy to make internal organizations not directly affected by the implementation aware of the schedule so that allowances can be made for a disruption in the normal activities of that section. The notification should include: - The schedule of the implementation - A brief synopsis of the benefits of the new system - The difference between the old and new system - Guidelines for the customers affected by the implementation during this phase - The process to obtain system support, including contact names and phone numbers This Phase ends with a review and recommendation from the IT Governance Board to determine readiness to proceed to the Operations, Maintenance, & Disposition Phase. The Implementation Phase ends with a formal decision to release the final technology solution into the Operations, Maintenance, & Disposition Phase.
Operations, Maintenance, & Disposition	During the Operations, Maintenance (O&M), & Disposition Phase, the authorized technology solution operates in full-scale production environment for sustained use and operations/maintenance support. Changes and problems with the solution may continually be identified and resolved to ensure that the solution meets ongoing functional and non-functional needs. During this portion of the Phase, residual system weaknesses are tracked and resolved according to a documented POA&M schedule and new POA&M items are developed as necessary. Periodically the technology solution will also need to be re-authorized for continued operation in the production environment. When the time comes that the technology solution will no longer be needed or will be replaced, then a plan for final disposition (or decommissioning) must be prepared and approved prior to moving into the Disposition portion of this Phase. As part of the Operations and Maintenance portion of this Phase, periodic project reviews are conducted. One review is the scheduled Security Authorization. Security Authorization is the comprehensive re-evaluation of the management, operational, and technical information security controls implemented for an information system that is performed during the Operations & Maintenance portion to ensure that the system is continuing to operate at an acceptable risk level. Over the life of the system,

AgSDLC Phase	Description
	many changes occur that may reduce the effectiveness of internal information security controls. Information Security controls typically become outdated and less effective as threats and vulnerabilities evolve. The objective of the Security Authorization is to ensure that system authorization is an on-going process, and that information security is managed throughout the life of the system. Another review is the annual Operational Assessment. The Operational Assessment is performed to evaluate system performance, user satisfaction with the system, adaptability to changing business needs, and new technologies that might improve the system. This review is diagnostic in nature and can lead to development or maintenance activities. Any major system modifications needed after the system has been implemented follow the IITGF life cycle process from planning through implementation. The Operational Assessment ultimately determines whether the IT Project should continue, be modified, or terminated. During the Disposition portion of this Phase, the operation of a technology solution (system) is formally ended in accordance with organization needs, guidance, pertinent laws, and regulations. Particular emphasis is given to proper preservation of the data processed by the system, so that the data is effectively migrated to another system or archived in accordance with applicable records management regulations and policies for potential future access. A Disposition Plan should be developed and reviewed by the project team should the Operational Assessment conclude that the project should be terminated. The Disposition Plan should include a detailed plan with checklist, dependencies, roles and responsibilities, and timing of activities for both contract closeout and administrative closeout. A Project Archives include the system data, software, and documentation designated for archiving in the Disposition Plan. Software components will need to be transferred to the new system, or if that is not feasible, disposed of appropriately. If hardware can be used elsewhere in the organization, it should be recycled. If obsolete, follow property management procedures to excess all hardware.

4.6 Appendix F – Frequently Asked Questions (FAQs)

Integrated IT Governance Framework (IITGF) Frequently Asked Questions (FAQs)

What is IITGF?

A key to successful IT management is a solid project management methodology that incorporates best government and commercial practices through a consistent and repeatable process, and provides a standard structure for planning, managing, and overseeing IT investments or projects over their entire life cycle. The USDA IITGF provides that framework for the USDA.

Why does USDA need an IITGF?

The IITGF framework will help establish a project management and accountability environment where USDA IT investments and projects achieve consistently successful outcomes that maximize alignment with Department-wide and individual agency/staff office and Staff Office goals, strategies, and objectives.

How was IITGF developed?

The IITGF was developed by the USDA IRMC organization with input from a structured peer review process.

Will IITGF “cost” more to use?

The IITGF framework implementation may shift more time and resources to the planning phases for investments or projects, and may require additional resources from Project Managers, Subject Matter Experts, and IT governance organization participants for review and approval activities. This increased investment in planning and oversight is expected to return dividends in reduced program risk and less effort expended in rework or fixing foreseeable problems.

What artifacts are available for me to use?

All IITGF artifacts, Guidebook, Communication Management Plan, Training Plan, etc., have been developed and posted to the IT Governance SharePoint site at:

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

Can I tailor the IITGF to meet my specific IT investment or project needs?

Yes. Tailoring consists of customizing or waiving particular IITGF investment or project phases, activities, deliverables, or decision gate reviews based on your specific project requirements or specific business needs. Tailoring is completed during the Planning Phase of the investment and is documented in the Investment Tailoring Agreement (available on the IITGF website noted above) deliverable. Project Managers document the reason why specific phases, activities, deliverables, or decision gate reviews were adjusted. For more information on Tailoring, please refer to Appendix D: Tailoring in the IITGF: Guidebook.

Is the IITGF required?

The USDA IITGF process applies to all USDA IT investments and projects. A Departmental Regulation is forthcoming.

Can I adapt IITGF to meet the specific business needs of my agency/staff office or Staff Office?

Possibly. It is expected that agency/staff office's and Staff Offices within USDA will develop implementation plans to ensure the framework is successfully incorporated into their IT development and operations business practices.

How do I request a change to an IITGF artifact or have an IITGF question?

Please send an email with your comment or request to the AgITGovernance@ocio.usda.gov mailbox and staff will review and respond to you as soon as possible.