



**Indiana Department of Child Services
Child Support Bureau**

INvest Governance Manual

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PROJECT INITIATION

1.0 INTRODUCTION

1.1 Purpose

The Indiana Verification and Enforcement of Support (INvest) Governance Manual defines the roles, responsibilities, processes, tools, and templates used in executing the INvest Project. It is intended to guide the efforts of the Child Support Bureau (CSB), the INvest Design, Development, and Implementation (DDI) vendor, and the INvest Quality Assurance (QA) vendor. The manual describes both the INvest Project management and System Development Life Cycle (SDLC) processes.

The INvest Governance Manual supports the guiding principles that ensure the successful implementation of INvest:

- Engagement with all stakeholders
- Clear definition of project processes, roles, and responsibilities
- Clear and consistent communication of project status to all internal and external stakeholders
- Continuing operation and maintenance of INvest, post implementation

CSB has used the existing governance manual to guide the maintenance and enhancement of the Indiana Support Enforcement Tracking System (ISETS) and ancillary systems, and retains many of its core concepts. The INvest Governance Manual builds on the framework established in earlier versions, and has been updated to reflect expectations for engagement of CSB and the DDI and QA vendors. References have also been updated for consistency with the Project Management Institute's, *A Guide to the Project Management Body of Knowledge*, Fifth Edition (PMBOK® Guide).

The scope of the INvest Governance Manual includes:

- Roles and responsibilities
- Decision-making authority
- Guidance, templates, and documented processes for consistent project management plans
- SDLC processes and templates
- Processes and templates for implementation, ongoing support, and training

1.2 Updates in this Version

The INvest Project requires some changes to the roles, responsibilities, processes, and templates used by CSB. Differences between maintaining ISETS and the INvest Project include:

- Engagement of a DDI vendor to perform the bulk of the technical development, in contrast to in-house development
- Engagement of a QA vendor to lead Quality Management (QM) efforts, in contrast to an in-house QA Team
- Focus on a single large project, in contrast to the portfolio of enhancement projects and production support change requests
- Incorporation of an iterative SDLC approach

The changes required to adapt the INvest Governance Manual to the new INvest Project generally include:

- Clear expectations for decision-making authority
- Allowance for continual improvement of processes
- Focus on requirements validation as opposed to requirements identification
- Focus on structured planning of stakeholder engagement

1.3 INvest Organizational Structure

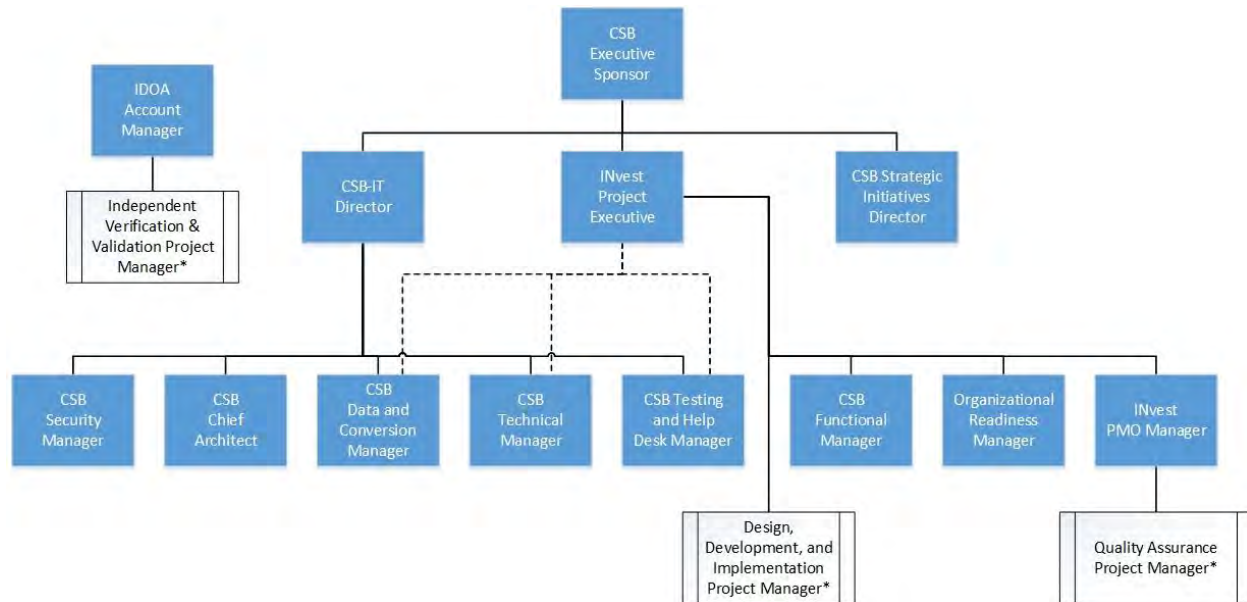
The Department of Child Services (DCS) has made substantial staff commitments to CSB for the INvest Project. CSB will have direct and daily management responsibility for the INvest Project and all vendor contracts. All CSB and vendor staff must work as one unified team for the INvest Project to be successful. CSB expects all State and vendor staff to build a collaborative environment, respect each other's roles and responsibilities, and adhere to the INvest Project schedule to accomplish project tasks and goals.

CSB has provided a management organizational structure, and definition of roles and responsibilities in this section. CSB is establishing a peer-to-peer approach for the INvest Project, meaning that CSB expects to pair the State managers with equivalent vendor lead roles. CSB will also provide embedded State staff to work in tandem with DDI vendor staff. The purpose of embedded State staff is to facilitate ongoing knowledge transfer, enabling a smooth transition at project close-out.

1.3.1 Organizational Chart

The key roles for management of the INvest Project are shown in Figure 1. The CSB Executive Sponsor is supported by a diverse team with expertise in:

- Functional areas
- Technical areas
- Security management
- Organizational Readiness (OR)
- Project Management Office (PMO) support


Figure 1: INvest Organizational Chart

* Denotes a Vendor who maintains a separate team organizational chart.

1.3.2 Individual Roles

Table 1 provides the key roles and primary responsibilities for the INvest Project.

Table 1: INvest Project Roles and Responsibilities

INvest Project Role	Responsibilities
CSB Executive Sponsor	<p>The CSB Executive Sponsor:</p> <ul style="list-style-type: none"> Provides INvest Project oversight Acts as the liaison to the DCS Executives, State agencies, and stakeholders Provides project funding authority and oversight Assists with issue resolution
INvest Project Executive	<p>The INvest Project Executive reports to the CSB Executive Sponsor and provides oversight and ultimate responsibility for day-to-day executive management of the INvest Project. The INvest Project Executive:</p> <ul style="list-style-type: none"> Provides oversight of DDI activities Manages the DDI vendor contract Ensures collaboration among INvest State and vendor management teams Provides INvest Project accountability and decision management Addresses escalated business, policy, and project issues Reports and communicates to DCS Executives and other applicable State agencies regarding project health and budget status Liaises with the DDI Project Manager Manages DDI vendor and State staff project team relations Reviews and signs-off on INvest Project deliverables and milestones Provides governance oversight

INvest Project Role	Responsibilities
	<ul style="list-style-type: none"> • Collaborates with the CSB-IT Director • Leads the INvest Core Committee • Engages with the DDI vendor to ensure knowledge transfer for all applicable areas and staff
CSB-IT Director	<p>The CSB-IT Director reports to the CSB Executive Sponsor and has the responsibility for confirming the overall system solution meets the INvest technical requirements and budget. The CSB-IT Director:</p> <ul style="list-style-type: none"> • Ensures the architecture, infrastructure, and security are sound • Reports and communicates to the Indiana Office of Technology (IOT) and other applicable State agencies regarding project health and budget status • Has responsibility for the INvest Project budget • Manages the Advanced Planning Document (APD) reporting process and Office of Child Support Enforcement (OCSE) communications • Manages staff maintaining legacy systems • Addresses escalated technical and INvest Project issues • Provides a complete and thorough review and sign-off of project deliverables and milestones • Engages with DDI vendor to ensure knowledge transfer for all applicable areas and staff • Collaborates with the INvest Project Executive • Leads the INvest Executive Steering Committee
CSB Strategic Initiatives Director	<p>The CSB Strategic Initiatives Director reports to the CSB Executive Sponsor and assists the CSB Executive Sponsor with other State agency partner activities. The CSB Strategic Initiatives Director:</p> <ul style="list-style-type: none"> • Negotiates Memoranda of Understanding (MOU) • Resolves issues that may arise from State agency partners • Coordinates meetings and discussions • Develops and manages external strategic initiative communications
INvest PMO Manager	<p>The INvest PMO Manager reports to the INvest Project Executive and is responsible for INvest Project management, QA, and adherence to project and schedule parameters. The INvest PMO Manager:</p> <ul style="list-style-type: none"> • Manages CSB's PMO and PMO staff • Escalates issues to the INvest Project Executive • Ensures all internal project communications and reporting occur • Reviews and approves INvest Project deliverables and milestones • Maintains the INvest Master Project Management Plan (PMP) and Master Project Schedule for the INvest Project • Owns the INvest Governance Manual • Ensures, in conjunction with the QA and Independent Verification & Validation (IV&V) vendors, governance is followed for project quality • Convenes the Change Control Review Board (CCRB) when appropriate • Manages the QA vendor contract • Leads the INvest Stakeholder Committee with the OR Manager

INvest Project Role	Responsibilities
	<ul style="list-style-type: none"> • Assigns resources from the team as needed • Works closely with the CSB-IT Director to report, track, and manage costs throughout the project life cycle • Engages with the DDI vendor to ensure knowledge transfer for all applicable areas and staff
CSB Security Manager	<p>The CSB Security Manager reports to the CSB-IT Director and is responsible for all application and physical security, and enforcing security controls and safeguards. The CSB Security Manager:</p> <ul style="list-style-type: none"> • Manages the Information Security Team responsible for granting and monitoring access to INvest • Serves as the technical authority for security • Provides oversight and technical expertise for application security activities, including communication network, data access, computer hardware and software, and confidentiality • Ensures security policies, safeguards, and best practices are used to protect privacy and confidentiality • Reviews and approves INvest Project deliverables and milestones related to system security • Engages with the DDI vendor to ensure knowledge transfer for all applicable areas and staff • Assigns resources from the team as needed
CSB Chief Architect	<p>The CSB Chief Architect reports to the CSB-IT Director and is responsible for providing input and oversight for the architectural plan. The CSB Chief Architect:</p> <ul style="list-style-type: none"> • Manages the application and data architecture staff • Provides oversight of the architecture to ensure it is based on business requirements, technology direction, and enterprise architecture best practices • Provides oversight and technical expertise for the creation and maintenance of data, application, and technical architecture documentation, including the Architecture Plan • Serves as authority for monitoring to ensure the overall solution is working as designed and any inconsistencies with the architecture are addressed • Reviews and approves INvest Project deliverables and milestones related to architecture, infrastructure, and implementation • Liaises between the DDI vendor and IOT to coordinate technology tasks • Engages with the DDI vendor to ensure knowledge transfer for all applicable areas and staff • Assigns resources from the team as needed
CSB Data and Conversion Manager	<p>The CSB Data and Conversion Manager reports to the CSB-IT Director and is responsible for data conversion, data governance, data management, and data warehouse and reporting functions. The CSB Data and Conversion Manager:</p> <ul style="list-style-type: none"> • Manages the Data Services Team • Provides technical expertise for the data conversion plan approach and data governance framework, including methods, best practices, and capacity planning

INvest Project Role	Responsibilities
	<ul style="list-style-type: none"> Oversees conversion activities, including data loading plans for all objects, guidance on data cleansing and preparation, and data conversion testing Ensures data mapping documentation meets the needs of multiple audiences to include technical developers, business units for sign-off, and testing team for validation Coordinates the data validation process ensuring successful data migration results Provides technical oversight for Enterprise Content Management (ECM), data warehouse, and reporting functionality Reviews and approves INvest Project deliverables and milestones related to data conversion, data governance, infrastructure, and implementation Engages with the DDI vendor to ensure knowledge transfer for all applicable areas and staff Assigns resources from the team as needed
CSB Technical Manager	<p>The CSB Technical Manager reports to the CSB-IT Director and is responsible for application development and system administration. The CSB Technical Manager:</p> <ul style="list-style-type: none"> Manages CSB's application support teams Provides oversight and technical expertise for design and development activities, software and hardware infrastructure, and technical standards Reviews and approves INvest Project deliverables and milestones related to design, development, infrastructure, and implementation Supervises the State's embedded development, system administration, and technical leads to provide input, feedback, and support to the DDI vendor Manages Rational CLM supporting the Application Life Cycle Management tool Engages with the DDI vendor to ensure knowledge transfer for all applicable areas and staff Assigns resources from the team as needed
CSB Testing and Help Desk Manager	<p>The CSB Testing and Help Desk Manager reports to the CSB-IT Director and is responsible for ensuring testing is accomplished successfully. The CSB Testing and Help Desk Manager:</p> <ul style="list-style-type: none"> Manages CSB's testing resources Provides oversight and technical expertise for testing standards, best practices, and activities Ensures the DDI vendor solution meets all functional requirements through system testing Leads the User Acceptance Testing (UAT) effort in coordination with the CSB Functional Manager Reviews and approves INvest Project deliverables and milestones related to testing Engages with the DDI vendor to ensure knowledge transfer for all applicable areas and staff Assigns resources from the team as needed
CSB Functional Manager	<p>The CSB Functional Manager reports to the INvest Project Executive and is responsible for ensuring functional requirements are implemented. The CSB Functional Manager:</p> <ul style="list-style-type: none"> Manages CSB's Business Process Owners (BPOs) and the Business Analyst Team

INvest Project Role	Responsibilities
	<ul style="list-style-type: none"> Serves as the business authority for day-to-day activities related to requirements validation, design reviews, and UAT Ensures the DDI vendor solution meets all functional requirements Provides oversight for any research related to functional requirements Represents the user and business perspective Ensures Project Change Requests (PCRs) are aligned with functional requirements and approves as appropriate Reviews and approves INvest Project deliverables and milestones related to requirements validation, design, and UAT Leads the Federal Certification process and walkthrough for OCSE Liaises with OR to coordinate and strategize communications to engage all State and County stakeholders Engages with the DDI vendor to ensure knowledge transfer for all applicable areas and staff Assigns resources from the team as needed
OR Manager	<p>The OR Manager reports to the INvest Project Executive and is responsible for preparing Primary users for the INvest implementation. The OR Manager:</p> <ul style="list-style-type: none"> Manages the OR staff Provides direction, expertise, oversight of INvest Primary user communications, and INvest stakeholder engagement Leads the effort to create resource models for business processes and staffing structures Provides oversight of the DDI vendor's training, onsite support, and help desk efforts Liaises with the INvest Project Team to coordinate and strategize communications Liaises between the INvest Project Team and Primary users Reviews and approves INvest Project deliverables and milestones related to training, onsite support, models, and implementation Leads the INvest Stakeholder Committee with the INvest PMO Manager Engages with the DDI vendor to ensure knowledge transfer for all applicable areas and staff Assigns resources from the team as needed
DDI Project Manager	<p>The DDI Project Manager reports to the INvest Project Executive. The DDI Project Manager:</p> <ul style="list-style-type: none"> Provides daily oversight of DDI vendor staff for the INvest Project Works with the INvest PMO and the INvest Project Executive to ensure project outcomes Monitors DDI vendor staff performance Develops and manages the DDI PMP
QA Project Manager	<p>The QA Project Manager reports to the INvest PMO Manager. The QA Project Manager:</p> <ul style="list-style-type: none"> Manages the INvest Project QA process Oversees the Governance Lead for the development of the INvest Governance Manual

INvest Project Role	Responsibilities
Indiana Department of Administration (IDOA) Account Manager	The IDOA Account Manager: <ul style="list-style-type: none"> Manages the IV&V vendor contract
IV&V Project Manager	The IV&V Project Manager reports to the IDOA Account Manager. The IV&V Project Manager: <ul style="list-style-type: none"> Provides periodic reviews of the INvest Project that include site visits to conduct artifact analysis and interviews with INvest Project Team members and stakeholders Provides a comprehensive snapshot of INvest Project management and technical processes

1.3.3 INvest Governing Committees

Table 2 provides the key responsibilities for the INvest Executive Steering Committee and each of the governing bodies.

Table 2: INvest Project Oversight Committees

Governance Body	Members	Key Responsibilities
INvest Executive Steering Committee	<ul style="list-style-type: none"> CSB Executive Sponsor INvest Project Executive CSB-IT Director DCS Director DCS Chief of Staff DCS Chief Information Officer DCS Chief Financial Officer DCS Legal Representative DCS Human Resources (HR) Representative DCS Legislative Representative DCS Deputy Chief of Staff IDOA Representative IOT Representative State Budget Agency Representative INvest PMO Manager 	<ul style="list-style-type: none"> Champion of the enterprise mission, providing support and guidance to INvest goals and objectives Oversee financial management of the INvest Project Monitor project resource effectiveness and adequacy Review specific project recommendations from the INvest Executive Team or INvest Core Committee Assist INvest Project in the resolution of escalated items that impact budget to the INvest Project
INvest Executive Team	<ul style="list-style-type: none"> CSB Executive Sponsor INvest Project Executive CSB-IT Director 	<ul style="list-style-type: none"> Resolve escalated items related to approval of policies, standards, guidelines, etc.

Governance Body	Members	Key Responsibilities
INvest Core Committee	<ul style="list-style-type: none"> CSB Executive Sponsor INvest Project Executive CSB-IT Director CSB Technical Manager CSB Functional Manager CSB Chief Architect INvest PMO Manager CSB Data and Conversion Manager CSB Security Manager CSB Testing and Help Desk Manager OR Manager DDI Project Manager QA Project Manager Others, as needed 	<ul style="list-style-type: none"> Steward for the enterprise vision and strategic direction as it relates to business, information, and technological architecture disciplines Provide strategic guidance to the INvest PMO and INvest Project Team Determine when and what recommendations and associated information are presented to the INvest Executive Steering Committee Review and promote enterprise guiding principles Maintain ownership for the ongoing functionality of the governance model and ensure it is functioning properly
Stakeholder Committee	<ul style="list-style-type: none"> CSB Executive Sponsor INvest Project Executive INvest PMO Manager Indiana Prosecuting Attorneys Council Representative County Prosecuting Attorney Representatives County Clerks of the Circuit Court Representatives OR Manager CSB Functional Manager CSB Strategic Initiatives Director CSB Advisors 	<ul style="list-style-type: none"> Promote understanding of current business processes and data related to these processes Promote steps for advancing INvest with designated standards, requirements, and processes Identify individuals for Super User or Change Agent roles Communicate when changes to laws impact the functionality of INvest
Business Advisory Committee (BAC)	<ul style="list-style-type: none"> INvest Project Executive CSB Functional Manager CSB BPOs OR Manager Others, as needed 	<ul style="list-style-type: none"> Evaluate accuracy and completeness of PCR information concerning functional requirements, resources, and timing impacts Provide guidance and information to the INvest PMO Manager and CCRB regarding possible business process impacts of proposed PCRs

Governance Body	Members	Key Responsibilities
Technical Advisory Committee (TAC)	<ul style="list-style-type: none"> CSB Technical Manager CSB Data and Conversion Manager CSB Chief Architect CSB Testing and Help Desk Manager CSB Security Manager Others, as needed 	<ul style="list-style-type: none"> Reviews periodic configuration management audit reports and provides consultation on issues and prioritization Evaluates accuracy and completeness of PCR information concerning technical requirements, resources, timing, and privacy and security impact Provides guidance and information to the INvest PMO Manager and CCRB regarding possible technical impact of proposed PCRs
CCRB	<p>Permanent members:</p> <ul style="list-style-type: none"> INvest Project Executive INvest PMO Manager CSB Functional Manager OR Manager CSB Technical Manager <p>Ad-hoc members:</p> <ul style="list-style-type: none"> CSB-IT Director CSB Chief Architect CSB Security Manager CSB Data and Conversion Manager CSB Testing and Help Desk Manager DDI Project Manager BAC and TAC Others, as needed 	<ul style="list-style-type: none"> Reviews submitted PCRs Ensures submitted PCRs are assessed from both business and technical viewpoints and, where appropriate, are combined with related PCRs Requests extended impact analysis where appropriate Approves, denies, defers, or escalates PCRs as defined in the PCR decision thresholds Receives any change requests identified during implementation activities

Figure 2 provides a high level overview of the relationships of the INvest Project governing bodies. Note that solid lines denote communication paths and dash / dot lines denote escalation paths.



Figure 2: INvest Governance Structure

The INvest Project Team and the committees that govern the INvest Project are strategically aligned to support a system that:

- Complies with federal and State regulations
- Meets the functional and technical requirements
- Ensures the integrity and protection of data
- Follows governance and builds a quality system for stakeholders

While the INvest Core Committee has final decision making authority for the INvest Project, the INvest PMO drives communication between the governing bodies for the ongoing management of the INvest Project. The INvest PMO is responsible for reviewing the INvest Project Team status reports on a weekly basis and providing monthly and quarterly status reports to the other governing bodies.

1.3.4 Escalation Process

The Escalation process exists to allow executive decisions when CSB and any vendor disagree and cannot resolve an issue at the project level. Escalations within the INvest Project move to the INvest Executive Team. The INvest Executive Team may engage assistance from the INvest Executive Steering Committee to resolve project items.

The Escalation process is invoked on an exception basis, and does not replace general project processes (e.g., Communications Management, Risk and Issue Management), which are expected to address the majority of project decisions.

Figure 3 provides the INvest Project Escalation process.

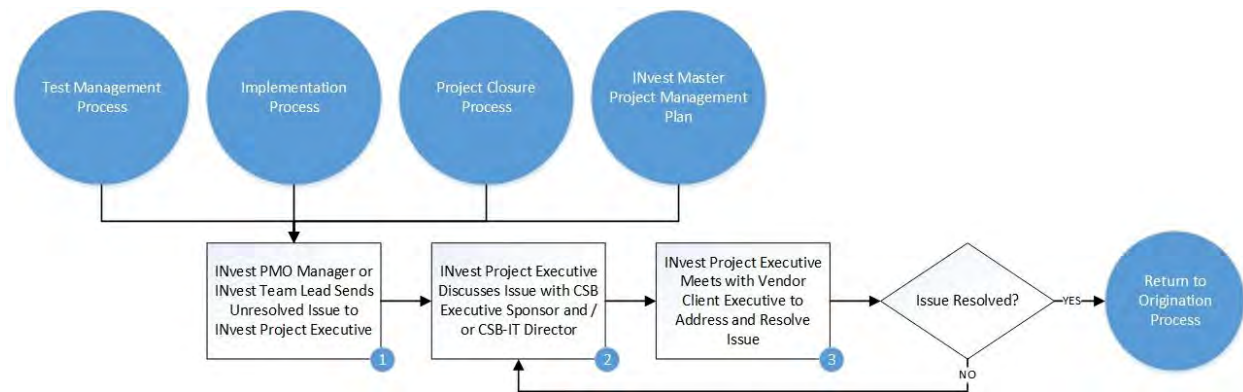


Figure 3: INvest Project Escalation Process

1. **INvest PMO Manager or INvest Team Lead Sends Unresolved Issue to INvest Project Executive** – When CSB and any vendor are unable to resolve items of disagreement at the project level, the INvest PMO Manager or the INvest Team Lead may escalate the item to the INvest Project Executive for review.
2. **INvest Project Executive Discusses Issue with CSB Executive Sponsor and / or CSB-IT Director** – Upon initial review of the escalated item, the INvest Project Executive discusses the item with the CSB Executive Sponsor and / or the CSB-IT Director, based on the nature of the disputed item, for proposed resolution.
3. **INvest Project Executive Meets with Vendor Client Executive to Address and Resolve Issue** – The INvest Project Executive meets with the vendor Client Executive to address and resolve the item. If the item is resolved during this meeting, the INvest Project Executive notifies the party originating the item. If the item is not resolved, the INvest Project Executive has further discussion with the CSB Executive Sponsor and / or CSB-IT Director to determine next steps. The INvest Executive Team may escalate the item to the INvest Executive Steering Committee for assistance in resolving the item.

1.4 INvest Project Approach

The addition of an iterative SDLC approach represents a significant change for INvest Project Team members. Expectations for the structure of the INvest Project are discussed in **Part 1.4.1**.

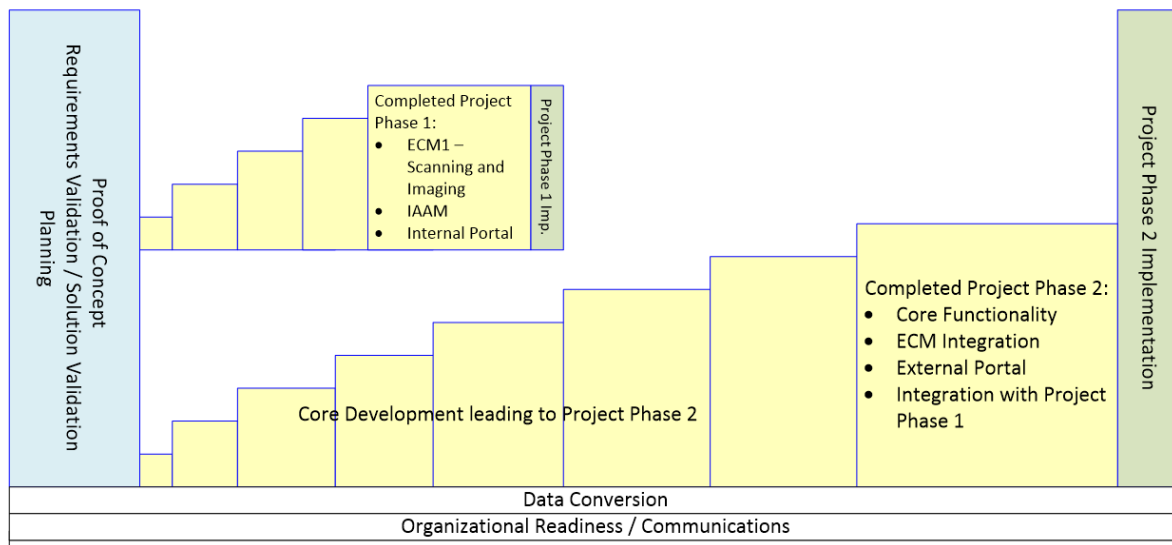
The INvest Project will be implemented in two project phases and has a planned completion date within five years. Within the two project implementation phases, INvest adopts an iterative approach. Context for INvest Project phases, iterations, and associated expectations is provided in **Part 1.4.2**.

1.4.1 INvest Project Phases

The definition of a project phase is a period to design, develop, and implement a software package Statewide. A high-level description of CSB’s vision for the two project phases is:

- Project Phase 1 – the design, development, and Statewide implementation of Identity Access and Account Management (IAAM), an Internal Portal, and ECM scanning and imaging
- Project Phase 2 – the design, development, and implementation of the INvest Core Functionality, an External Portal, ECM Integration, and integration of all Project Phase 1 features

Figure 4 depicts a possible example of the two project phases.



1/1/2017

12/31/2021

Figure 4: INvest Project Example

1.4.2 INvest Project Iterations

The iterative approach for the INvest Project is a hybrid of the best aspects of the waterfall and agile processes. The INvest Project includes smaller work efforts to realize the following goals:

- Developing a functioning component during every iteration that builds upon the others
- Enabling demonstrations of completed components
- Building support for INvest throughout the life of the project
- Detecting risks and issues as early as possible to make course corrections
- Early detection of missing, incomplete, or inaccurate requirements
- Early detection of flaws and vulnerabilities
- Moving at a faster pace to completion
- Creating an environment that lends itself to user-centered design
- Facilitating ongoing project team learning and continuous process improvement

The INvest Project Team bases this iterative approach on known requirements realized and implemented using short cycles of analysis, design, development, and testing, enabling the system to evolve. An iteration for INvest is a distinct sequence of tasks focused on a desired goal within a time box, or, simply, multiple mini-projects that are part of a project phase. Figure 5 provides a visual representation of this process.

CSB expects an architecture-driven iterative process that begins by prioritizing high-risk / high-payoff Use Cases (UCs) within each module that have well-defined objectives and produce a release of the system into a defined non-production environment. Each successive iteration builds on the work of previous iterations to evolve and refine the system until the final project phase planned iterations are ready for implementation in the production environment.

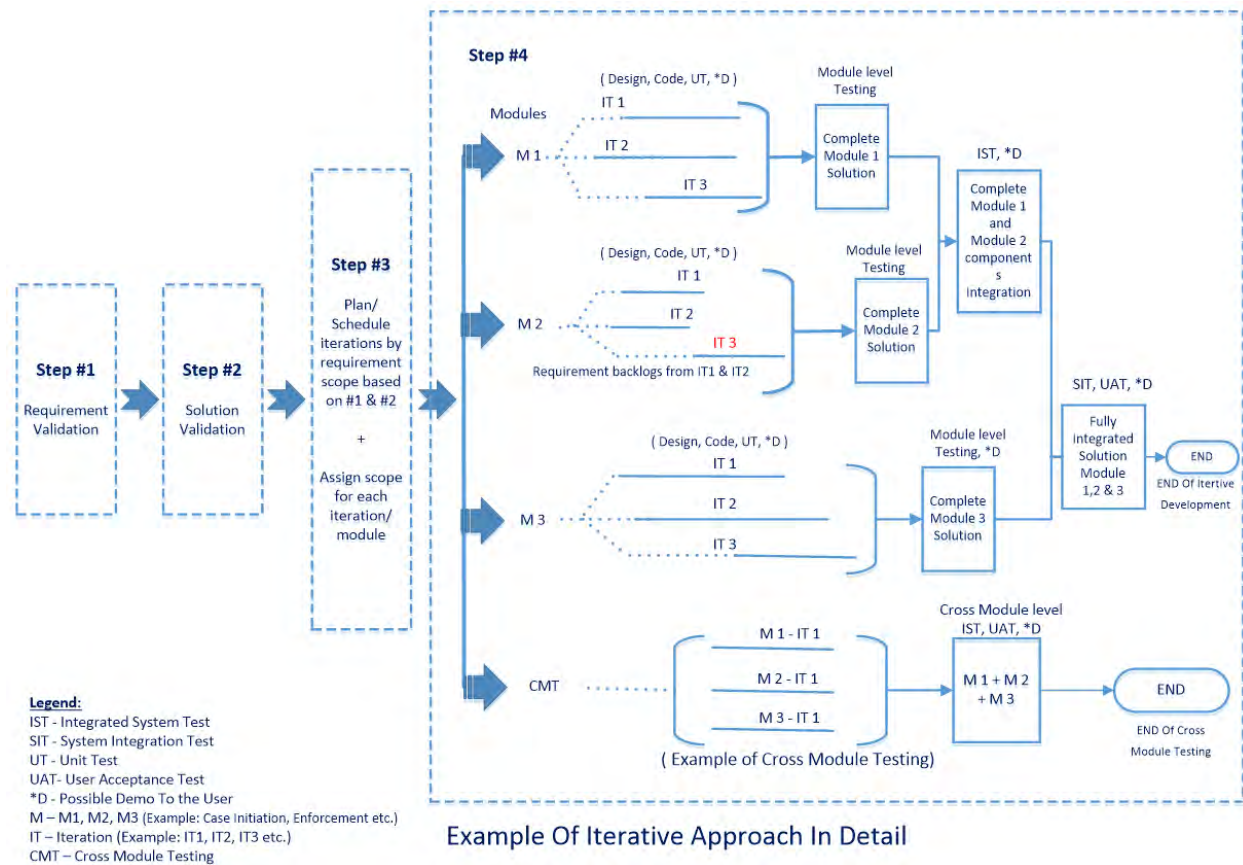


Figure 5: INvest Iteration Flow Example

1.5 INvest Quality Management

Quality Management (QM) is an important enabler for the success of INvest. While ensuring quality is every team member's responsibility, specific activities related to QM are documented in the Quality Management Plan, a component of the INvest Master Project Management Plan (PMP), which is considered to be an extension of the INvest Governance Manual.

Further information is available in the [Quality Assurance](#) chapter.

1.6 Use and Navigation

The INvest Project Team maintains all INvest Project documentation, excluding information maintained in Rational CLM, on the INvest Project Library.

1.6.1 INvest Governance Manual Organization

The INvest Governance Manual contains 22 chapters organized into 5 process groups.

The process groups and chapters are shown in Figure 6.

Process Group:	Project Initiation	Project Planning	Project Execution	Project Monitoring and Controlling	Project / Phase Closure
Chapter:	1 Introduction	2 Resource Management	9 Deliverable Review and Acceptance	18 Progress Monitoring and Reporting	20 Federal Certification
		3 Project Management Plan Development	10 Requirements Management	19 Project Change Control and Estimation	21 Post Implementation
		4 Quality Assurance	11 Design		22 Project Closure
		5 Stakeholder Management	12 Development		
		6 Communications Management	13 Test Management		
		7 Risk and Issue Management	14 Training Development and Delivery		
		8 Configuration Management	15 Implementation		
			16 Triage		
			17 Production Support		

Figure 6: INvest Governance Manual Organization

1.6.2 Process Flows

Each chapter of the INvest Governance Manual includes one or more process flow diagrams. The diagrams show inputs and outputs for the chapter's processes, as well as the high-level process steps. The intent of these diagrams is to provide context and guidance to the overall INvest governance structure, and to illustrate links and dependencies.

Figure 7 provides a legend which applies to all process flow diagrams throughout the INvest Governance Manual.

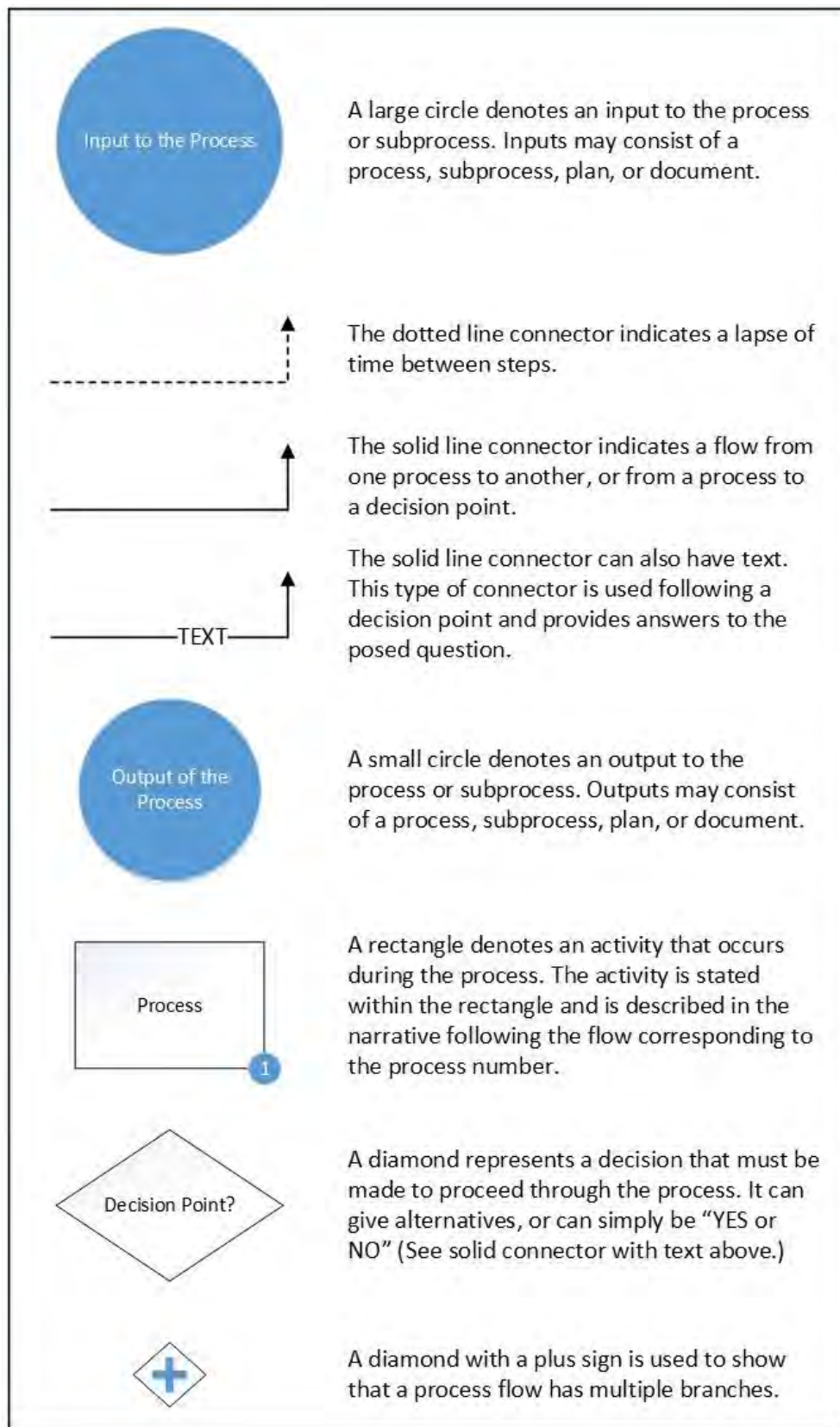


Figure 7: INvest Process Flow Diagram Legend

1.6.3 Key Roles

Each chapter of the INvest Governance Manual contains information on the roles and responsibilities of key participants relative to the processes defined in that chapter. For reference, Table 3 contains a list of all roles with a cross-reference to the chapters where those roles are involved. Detail on specific responsibilities are addressed in each chapter.

Table 3: INvest Project Key Roles

Role	Chapters with Responsibilities
BAC	<ul style="list-style-type: none"> Project Change Control and Estimation
CCRB	<ul style="list-style-type: none"> Implementation Project Change Control and Estimation
Clerical Assistant	<ul style="list-style-type: none"> Resource Management
County Partner Staff	<ul style="list-style-type: none"> Test Management
CSB Area Lead	<ul style="list-style-type: none"> Resource Management
CSB BPO	<ul style="list-style-type: none"> Requirements Management Design Test Management Implementation
CSB Certification BPO	<ul style="list-style-type: none"> Federal Certification
CSB Chief Architect	<ul style="list-style-type: none"> Risk and Issue Management Configuration Management Requirements Management Design Development Implementation Progress Monitoring and Reporting Post Implementation Project Closure
CSB Data and Conversion Manager	<ul style="list-style-type: none"> Risk and Issue Management Implementation Progress Monitoring and Reporting Post Implementation Project Closure
CSB Executive Sponsor	<ul style="list-style-type: none"> Stakeholder Management Communications Management
CSB Functional Manager	<ul style="list-style-type: none"> Risk and Issue Management Configuration Management Requirements Management Design Test Management

Role	Chapters with Responsibilities
	<ul style="list-style-type: none"> ● Implementation ● Progress Monitoring and Reporting ● Federal Certification ● Post Implementation ● Post Implementation ● Project Closure
CSB-IT Director	<ul style="list-style-type: none"> ● Risk and Issue Management ● Progress Monitoring and Reporting ● Project Change Control and Estimation ● Implementation ● Post Implementation ● Project Closure
CSB Production CCRB	<ul style="list-style-type: none"> ● Configuration Management
CSB Security Manager	<ul style="list-style-type: none"> ● Risk and Issue Management ● Configuration Management ● Test Management ● Implementation ● Progress Monitoring and Reporting ● Post Implementation ● Project Closure
CSB Site Coordinators	<ul style="list-style-type: none"> ● Implementation
CSB Strategic Initiatives Director	<ul style="list-style-type: none"> ● Stakeholder Management ● Communications Management
CSB Technical Manager	<ul style="list-style-type: none"> ● Risk and Issue Management ● Configuration Management ● Requirements Management ● Design ● Development ● Test Management ● Training Development and Delivery ● Implementation ● Progress Monitoring and Reporting ● Federal Certification ● Post Implementation ● Project Closure
CSB Test Lead	<ul style="list-style-type: none"> ● Test Management ● Implementation
CSB Tester	<ul style="list-style-type: none"> ● Test Management

Role	Chapters with Responsibilities
CSB Testing and Help Desk Manager	<ul style="list-style-type: none"> Test Management Federal Certification
CSB User	<ul style="list-style-type: none"> Test Management
DDI Application Supervisor	<ul style="list-style-type: none"> Design Development
DDI Business Analyst	<ul style="list-style-type: none"> Requirements Management
DDI Chief Architect	<ul style="list-style-type: none"> Requirements Management Design Development Implementation
DDI Data and Conversion Lead	<ul style="list-style-type: none"> Implementation
DDI Data Architect	<ul style="list-style-type: none"> Design
DDI Designer	<ul style="list-style-type: none"> Design
DDI Developer	<ul style="list-style-type: none"> Development Test Management
DDI Functional Lead	<ul style="list-style-type: none"> Requirements Management Test Management Implementation Federal Certification
DDI Functional Staff	<ul style="list-style-type: none"> Requirements Management
DDI HR Lead	<ul style="list-style-type: none"> Resource Management
DDI Implementation Lead	<ul style="list-style-type: none"> Implementation Federal Certification
DDI Infrastructure Lead	<ul style="list-style-type: none"> Configuration Management
DDI Leads	<ul style="list-style-type: none"> Post Implementation
DDI Lead Developer	<ul style="list-style-type: none"> Development Test Management
DDI Migration Lead	<ul style="list-style-type: none"> Configuration Management
DDI Onsite Support Staff	<ul style="list-style-type: none"> Training Development and Delivery
DDI Project Manager	<ul style="list-style-type: none"> Resource Management Project Management Plan Development Quality Assurance Communications Management Requirements Management Development Implementation Configuration Management

Role	Chapters with Responsibilities
	<ul style="list-style-type: none"> Progress Monitoring and Reporting Post Implementation Project Closure
DDI Security Lead	<ul style="list-style-type: none"> Configuration Management Test Management
DDI Technical Lead	<ul style="list-style-type: none"> Configuration Management Requirements Management Design Development Test Management Training Development and Delivery Implementation Federal Certification
DDI Tester	<ul style="list-style-type: none"> Test Management
DDI Testing Lead	<ul style="list-style-type: none"> Test Management Implementation Federal Certification
DDI Trainer Staff	<ul style="list-style-type: none"> Training Development and Delivery
DDI Training and Onsite Support Lead	<ul style="list-style-type: none"> Training Development and Delivery
DDI Unit Tester	<ul style="list-style-type: none"> Development
DDI vendor / DDI Team	<ul style="list-style-type: none"> Stakeholder Management Communications Management Implementation
Field Consultant	<ul style="list-style-type: none"> Implementation
Implementation Team	<ul style="list-style-type: none"> Implementation
IOT	<ul style="list-style-type: none"> Configuration Management
INvest Core Committee	<ul style="list-style-type: none"> Introduction Risk and Issue Management Implementation Progress Monitoring and Reporting Post Implementation Project Closure
INvest Executive Team	<ul style="list-style-type: none"> Project Change Control and Estimation Project Closure
INvest Help Desk Supervisor	<ul style="list-style-type: none"> Implementation
INvest Project Executive	<ul style="list-style-type: none"> Introduction Resource Management

Role	Chapters with Responsibilities
	<ul style="list-style-type: none"> Quality Assurance Stakeholder Management Communications Management Risk and Issue Management Implementation Progress Monitoring and Reporting Project Change Control and Estimation Post Implementation Project Closure
INvest Project Manager	<ul style="list-style-type: none"> Project Management Plan Development Project Change Control and Estimation
INvest PMO	<ul style="list-style-type: none"> Quality Assurance Stakeholder Management Risk and Issue Management Requirements Management Implementation Federal Certification Post Implementation
INvest PMO Manager	<ul style="list-style-type: none"> Introduction Resource Management Project Management Plan Development Quality Assurance Communications Management Risk and Issue Management Configuration Management Implementation Progress Monitoring and Reporting Project Change Control and Estimation Project Closure
INvest Project Team member	<ul style="list-style-type: none"> Project Management Plan Development Communications Management Risk and Issue Management
Master Scheduler	<ul style="list-style-type: none"> Project Change Control and Estimation
OR	<ul style="list-style-type: none"> Resource Management Stakeholder Management Communications Management Implementation Federal Certification Post Implementation

Role	Chapters with Responsibilities
OR Manager	<ul style="list-style-type: none"> Resource Management Project Management Plan Development Stakeholder Management Communications Management Training Development and Delivery Progress Monitoring and Reporting Federal Certification Post Implementation
Reporting Project Manager (any INvest Project Manager or vendor Project Manager)	<ul style="list-style-type: none"> Risk and Issue Management
Requestor Project Manager	<ul style="list-style-type: none"> Project Change Control and Estimation
QA Certification Lead	<ul style="list-style-type: none"> Federal Certification
QA Client Executive	<ul style="list-style-type: none"> Quality Assurance
QA HR Lead	<ul style="list-style-type: none"> Resource Management
QA Project Manager	<ul style="list-style-type: none"> Introduction Resource Management Project Management Plan Development Quality Assurance Communications Management Progress Monitoring and Reporting
QA Team	<ul style="list-style-type: none"> Quality Assurance Stakeholder Management Communications Management
TAC	<ul style="list-style-type: none"> Configuration Management Project Change Control and Estimation
Technical Writer	<ul style="list-style-type: none"> Introduction
Vendor Project Manager	<ul style="list-style-type: none"> Introduction

1.6.4 INvest Governance Manual Templates

Table 4 lists templates associated with each chapter of the manual.

Table 4: INvest Governance Manual Templates

Chapter	Attachment
2 Resource Management	<ul style="list-style-type: none"> RSM-01 Resource Management Template RSM-02 Vendor Staff Information Form Template
3 Project Management Plan Development	<ul style="list-style-type: none"> PMP-01 Project Management Plan Template PMP-02 Lessons Learned Register Template
4 Quality Assurance	<ul style="list-style-type: none"> N/A
5 Stakeholder Management	<ul style="list-style-type: none"> SMA-01 Stakeholder Analysis Workbook SMA-02 Stakeholder Register Template
6 Communications Management	<ul style="list-style-type: none"> COM-01 Communications Matrix Template
7 Risk and Issue Management	<ul style="list-style-type: none"> RIM-01 Risk and Issue Response Plan Template
8 Configuration Management	<ul style="list-style-type: none"> N/A
9 Deliverable Review and Acceptance	<ul style="list-style-type: none"> N/A
10 Requirements Management	<ul style="list-style-type: none"> RQM-01 Business Process Model Template RQM-02 Use Case Template RQM-03 Supplementary Specifications Summary Template RQM-04 Requirements Types and Attributes Standards and Guidelines
11 Design	<ul style="list-style-type: none"> DES-01 Solution Architecture Design Template DES-02 High Level Design Template
12 Development	<ul style="list-style-type: none"> DEV-01 Solution Detailed Design Template DEV-02 Application Development Review Checklist DEV-03 Unit Test Plan and Report Template
13 Test Management	<ul style="list-style-type: none"> TST-01 DDI Master Test Plan Template TST-02 CSB UAT Master Test Plan Template TST-03 Final Test Report Template
14 Training Development and Delivery	<ul style="list-style-type: none"> TDD-01 Training and Onsite Support Plan Template
15 Implementation	<ul style="list-style-type: none"> IMP-01 Production Readiness Review Checklist IMP-02 Technical Migration Plan Template IMP-03 Site Readiness Checklist IMP-04 Post Implementation Checklist
16 Triage	<ul style="list-style-type: none"> N/A
17 Production Support	<ul style="list-style-type: none"> N/A
18 Progress Monitoring and Reporting	<ul style="list-style-type: none"> PMR-01 INvest PMO Monthly Status Report Template PMR-02 INvest Periodic Status Report Template

Chapter	Attachment
19 Project Change Control and Estimation	<ul style="list-style-type: none"> PCC-01 Project Change Request Form PCC-02 Cost Estimation Template
20 Federal Certification	<ul style="list-style-type: none"> FED-01 Federal Certification Questionnaire FED-02 OCSE Checklist for Local Office Visits
21 Post Implementation	<ul style="list-style-type: none"> N/A
22 Project Closure	<ul style="list-style-type: none"> PCL-01 Project Close Out Report Template

1.7 Governance Amendment Process

The objective of the Governance Amendment process is to validate and document deviations from the INvest Governance Manual standards and guidelines and allow CSB flexibility in adjusting to situations that require modifications to the INvest Governance Manual.

There are two scenarios for amendment of the INvest Governance Manual:

1. **Regular updates** are conducted semi-annually to address ongoing improvements and adjustment to noncritical process changes.
2. **Ad-hoc updates** are conducted as needed to address changes to benefit the INvest Project prior to the next regular semi-annual update cycle. These exception situations are generally due to approved contract amendments, approved PCRs, QA observations, or IV&V findings.

1.7.1 Governance Amendment Process – Regular Updates

Figure 8 provides the Governance Amendment process for regular updates.

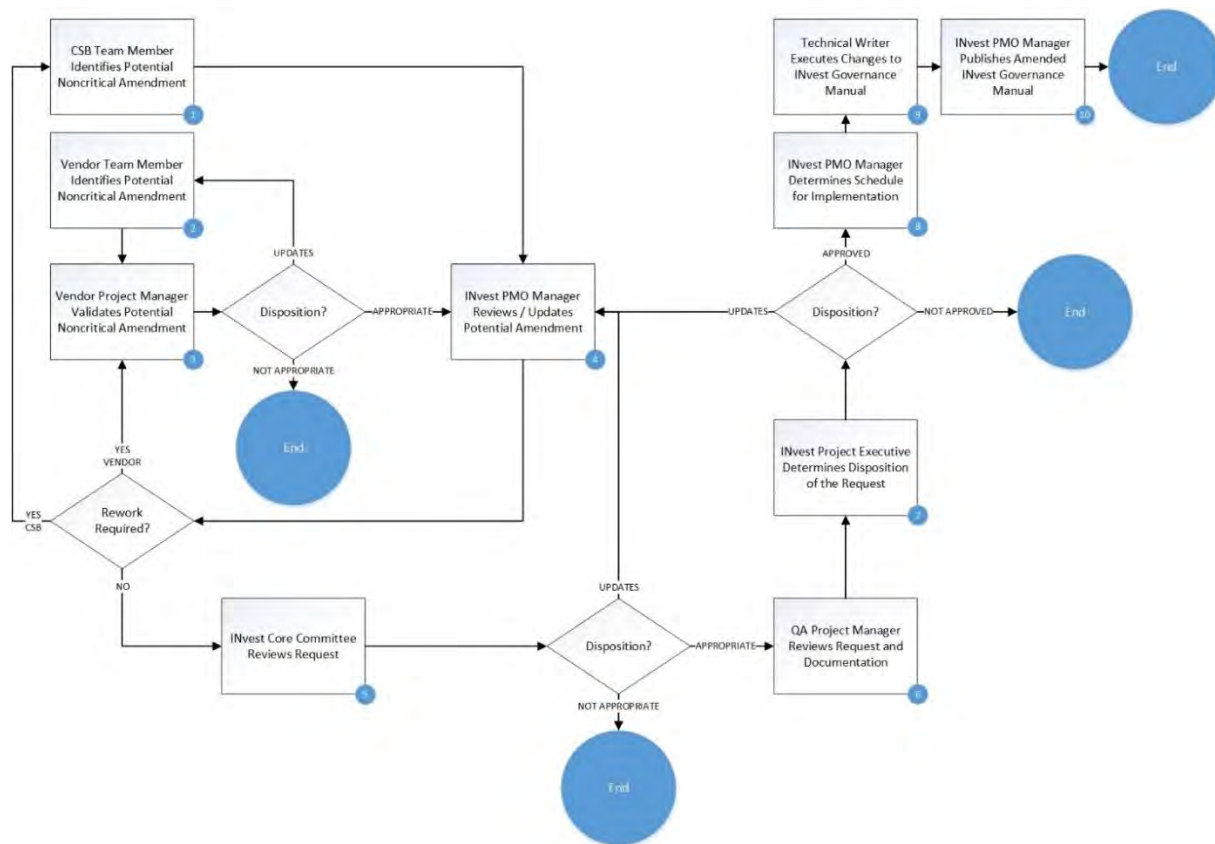


Figure 8: Governance Amendment Process – Regular Updates

1. **CSB Team Member Identifies Potential Noncritical Amendment** – Any CSB team member can identify a potential improvement to the INvest Governance Manual processes. The CSB team member completes the Governance Amendment Request form, including draft language to be included in the INvest Governance Manual, and forwards it to the INvest PMO Manager for review.
2. **Vendor Team Member Identifies Potential Noncritical Amendment** – Any vendor team member can identify a potential improvement to the INvest Governance processes. The vendor team member completes the Governance Amendment Request form, including draft language to be included in the INvest Governance Manual, and forwards it to the appropriate vendor Project Manager for review.
3. **Vendor Project Manager Validates Potential Noncritical Amendment** – The appropriate vendor Project Manager reviews the potential amendment for impact to the INvest Governance Manual processes and completeness of information. The vendor Project Manager can:
 - a. Send the request back to the team member for additional information or other updates;
 - b. Determine the request is not appropriate, inform the team member, and end the process; or
 - c. Forward the request to the INvest PMO Manager for review

4. **INvest PMO Manager Reviews / Updates Potential Amendment** – The INvest PMO Manager reviews the completed sections of the Governance Amendment Request form for completeness and appropriateness, determines whether to recommend approval of the request, and documents the recommendation, as well as notes on the INvest PMO Manager's evaluation of the need for the amendment, in the Governance Amendment Request form. If additional information is required, the INvest PMO Manager sends the request to the submitter for rework.
5. **INvest Core Committee Reviews Request** – The INvest Core Committee reviews the request and determines next steps. The disposition and associated notes are documented in the Governance Amendment Request form. The INvest Core Committee can:
 - a. Send the request back to the INvest PMO Manager for additional information or other updates;
 - b. Determine the request is not appropriate, inform the INvest PMO Manager, and end the process; or
 - c. Approve the request and forward it to the QA Project Manager for review.
6. **QA Project Manager Reviews Request and Documentation** – The QA Project Manager, working with other members of the QA Team, reviews the request and associated documentation for completeness and appropriateness using the approved checklist. The QA Project Manager documents any potential observations and related recommendations and forwards the request to the INvest Project Executive.
7. **INvest Project Executive Determines Disposition of the Request** – Based on review of the completed sections of the Governance Amendment Request form, the INvest Project Executive determines whether the request will be implemented. The INvest Project Executive can:
 - a. Send the request back to the INvest PMO Manager for additional information or other updates;
 - b. Determine the request is not appropriate, inform the INvest PMO Manager, and end the process; or
 - c. Approve the request and forward it to the INvest PMO Manager for implementation.
8. **INvest PMO Manager Determines Schedule for Implementation** – For approved Governance Amendments, the INvest PMO Manager determines the implementation schedule and any needs for coordination with other amendments, and forwards the amendment to the Technical Writer for execution.
9. **Technical Writer Executes Changes to INvest Governance Manual** – The Technical Writer implements the updates as documented in the Governance Amendment and informs the INvest PMO Manager when the changes have been completed.
10. **INvest PMO Manager Publishes Amended INvest Governance Manual** – Based on the defined schedule, the INvest PMO Manager communicates that the amended INvest Governance Manual to the INvest Project Team.

1.7.2 Governance Amendment Process – Ad-hoc Updates

Figure 9 provides the Governance Amendment process for ad-hoc updates.

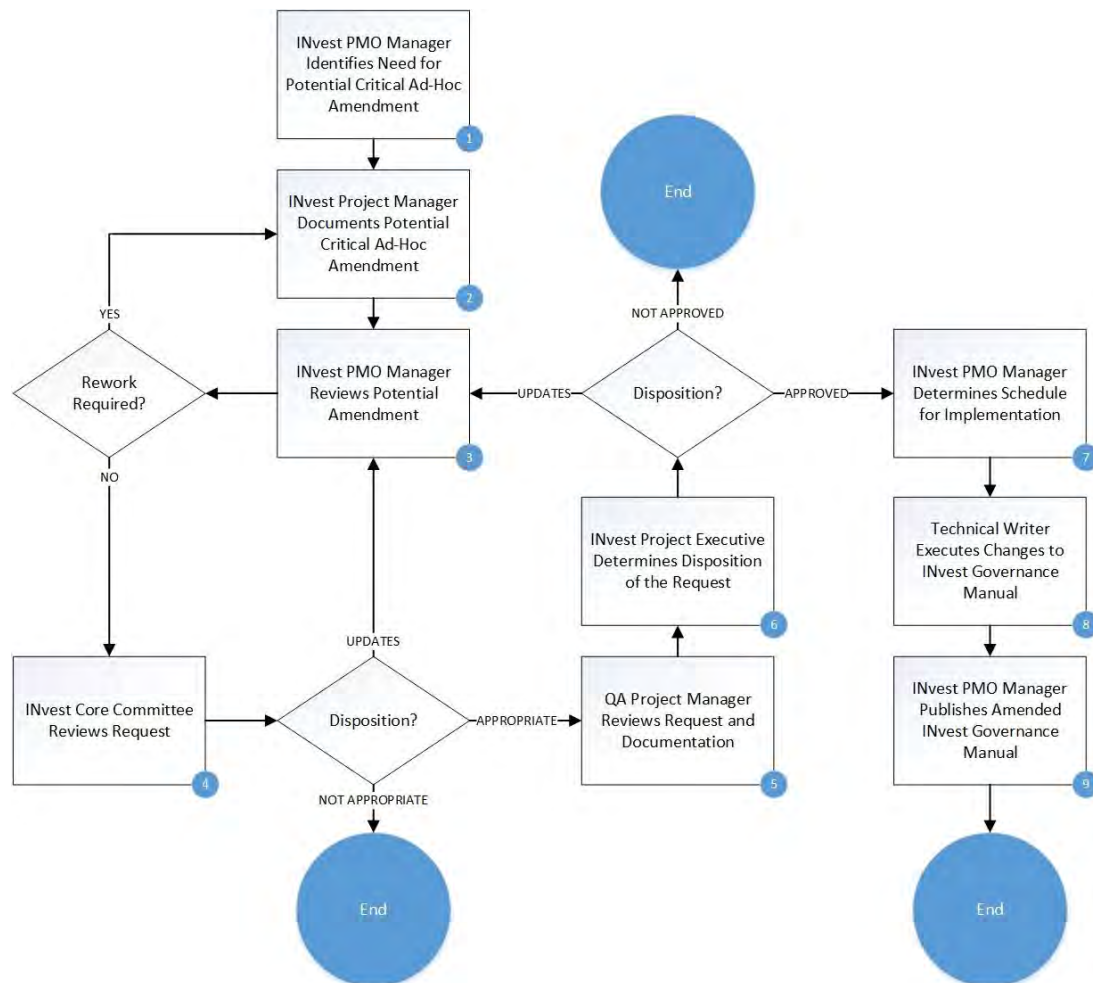


Figure 9: Governance Amendment Process – Ad-hoc Updates

- INvest PMO Manager Identifies Need for Potential Critical Ad-Hoc Amendment** – When required due to a contract amendment, approved PCR, QA observation, IV&V finding, or other exceptional situation, the INvest PMO Manager determines that an ad-hoc amendment is required, and assigns the amendment to an INvest Project Manager for development.
- INvest Project Manager Documents Potential Critical Ad-Hoc Amendment** – The INvest Project Manager completes the Governance Amendment Request form and forwards it to the INvest PMO Manager for review.
- INvest PMO Manager Reviews Potential Amendment** – The INvest PMO Manager reviews the completed sections of the Governance Amendment Request form for completeness and appropriateness, determines whether to recommend approval of the request, and documents the recommendation, as well as notes on the INvest PMO Manager’s evaluation of the need for the amendment, in the Governance Amendment Request form. If additional information is required, the INvest PMO Manager sends the request to the submitter for rework.

4. **INvest Core Committee Reviews Request** – The INvest Core Committee reviews the request and determines next steps. The disposition and associated notes are documented in the Governance Amendment Request form. The INvest Core Committee can:
 - a. Send the request back to the INvest PMO Manager for additional information or other updates;
 - b. Determine the request is not appropriate, inform the INvest PMO Manager, and end the process; or
 - c. Approve the request and forward it to the QA Project Manager for review.
5. **QA Project Manager Reviews Request and Documentation** – The QA Project Manager, working with other members of the QA Team, reviews the request and associated documentation for completeness and appropriateness using the approved checklist. The QA Project Manager documents any potential observations and related recommendations and forwards the request to the INvest Project Executive.
6. **INvest Project Executive Determines Disposition of the Request** – Based on review of the completed sections of the Governance Amendment Request form, the INvest Project Executive determines whether the request will be implemented. The INvest Project Executive can:
 - a. Send the request back to the INvest PMO Manager for additional information or other updates;
 - b. Determine the request is not appropriate, inform the INvest PMO Manager, and end the process; or
 - c. Approve the request and forward it to the INvest PMO Manager for implementation.
7. **INvest PMO Manager Determines Schedule for Implementation** – For approved Governance Amendments, the INvest PMO Manager determines the implementation schedule and any needs for coordination with other amendments, and forwards the amendment to the Technical Writer for execution.
8. **Technical Writer Executes Changes to INvest Governance Manual** – The Technical Writer implements the updates as documented in the Governance Amendment, and informs the INvest PMO Manager when the changes have been completed.
9. **INvest PMO Manager Publishes Amended INvest Governance Manual** – The INvest PMO Manager communicates that the amended INvest Governance Manual is available to the INvest Project Team.

1.7.3 Governance Amendment Request Form

The Governance Amendment Request form is used to document and communicate proposed changes to an INvest Governance Manual process in order to provide the INvest Project Team with increased flexibility.

The template is comprised of seven sections as described in Table 5.

Table 5: Governance Amendment Request Form

Section	Content
Header	<ul style="list-style-type: none"> • The name of the team member proposing the change; • The respective vendor Project Manager (if applicable); • Whether the amendment is being processed as a regular; update or an ad-hoc update; and • Whether the potential amendment is related to an approved contract amendment, approved PCR, QA observation, or IV&V finding.
Proposed Amendment Description	<ul style="list-style-type: none"> • A detailed description of the request; • Draft language for the change (where applicable); • A reference to the INvest Governance Manual chapter(s), section(s), and part(s) to be modified; and • A list of templates or other attachments that need to be modified in support of the amendment.
INvest PMO Manager Recommendation	<ul style="list-style-type: none"> • Recommendation to either approve or deny the proposed amendment; and • The rationale for the recommendation.
INvest Core Committee Review	<ul style="list-style-type: none"> • Disposition of the proposed amendment (i.e., returned for rework, determined to be not appropriate, or determined to be appropriate); and • Any notes or comments related to the INvest Core Committee’s review.
QA Review	<ul style="list-style-type: none"> • The date of the QA review; and • References to any potential observations resulting from the review.
INvest Project Executive Review	<ul style="list-style-type: none"> • The disposition of the proposed amendment (i.e., returned for rework, denied, or approved); and • Any notes or comments coming out of the review by the INvest Project Executive.
Amendment Execution Details	<ul style="list-style-type: none"> • The version number and publication date of the version of the INvest Governance Manual that reflects the approved amendment.

PROJECT PLANNING

2.0 RESOURCE MANAGEMENT

2.1 General Introduction and Overview

Resource Management is key to the overall success of INvest. The INvest Project Team is composed of resources belonging to three organizations. CSB, the DDI vendor, and the QA vendor each perform resource management tasks independently while participating in overall project processes that ensure coordination.

Resource Management Plans for each organization are developed for integration with the overall INvest Master Project Management Plan, and are tools that aid in the execution of INvest resource management activities throughout the project. The purpose of the Resource Management Plans is to achieve project success by ensuring the appropriate resources are planned for ahead of time, acquired with the necessary skills, are seamlessly transitioned on and off of the project at the appropriate times, and are managed effectively. The Resource Management Plans are components of the INvest Master PMP.

In accordance with the PMBOK® Guide, there are four key steps in Resource Management.

1. Develop the Resource Plan
2. Acquire resources
3. Develop resources
4. Manage resources

It is essential that everyone involved in the INvest Project understands the importance of having the right resources at the right time and how each organization contributes to the overall success of the INvest Project.

2.2 Key Roles and Responsibilities

Table 6 provides a summary of the key roles and primary responsibilities involved in the Resource Management process.

Table 6: Resource Management Key Roles and Responsibilities

Key Role	Responsibilities
Clerical Assistant	<ul style="list-style-type: none"> Initiates onboarding and offboarding activities including termination of system, email, and building access
CSB Area Lead	<ul style="list-style-type: none"> Reviews the Resource Management Template from the DDI vendor Approves or disapproves resource actions on the Resource Management Template
DDI HR Lead	<ul style="list-style-type: none"> Completes the Vendor Staff Information Form for each staff member on the Resource Management Template Provides Vendor Staff Information Forms to the INvest Project Executive and copies the OR Manager

Key Role	Responsibilities
DDI Project Manager	<ul style="list-style-type: none"> Identifies resources requiring onboarding or offboarding Coordinates onboarding and offboarding resource actions with the CSB Area Lead Completes the Resource Management Template Provides the Resource Management Template to the DDI HR Lead
INvest Project Executive	<ul style="list-style-type: none"> Monitors onboarding and offboarding of DDI vendor staff
INvest PMO Manager	<ul style="list-style-type: none"> Provides Vendor Staff Information Forms for all onboarding activities Receives completed Vendor Staff Information Forms for QA staff Approves or disapproves resource actions on the Resource Management Template
OR	<ul style="list-style-type: none"> Receives completed Vendor Staff Information Forms for DDI vendor staff Supports the OR Manager for all responsibilities Completes the Exchweb Login Letter and provides it to the vendor HR Lead Ensures Information Resources Use Agreement (IRUA), Federal Tax Information (FTI), and Ethics Training are completed Schedules role-based INvest Project tools training
OR Manager	<ul style="list-style-type: none"> Receives copies of Vendor Staff Information Forms Manages all aspects of onboarding and offboarding vendor staff
QA HR Lead	<ul style="list-style-type: none"> Completes the Vendor Staff Information Form for each staff member on the Resource Management Template Provides Vendor Staff Information Forms to the INvest PMO Manager and copies the OR Manager
QA Project Manager	<ul style="list-style-type: none"> Identifies resources requiring onboarding or offboarding Coordinates onboarding and offboarding resource actions with the INvest PMO Manager Completes the Resource Management Template Provides the Resource Management Template to QA HR Lead

2.3 Process Overview and Activities

The INvest Resource Management process generally follows the PMBOK® Guide approach and processes. Figure 10 provides the Resource Management process.

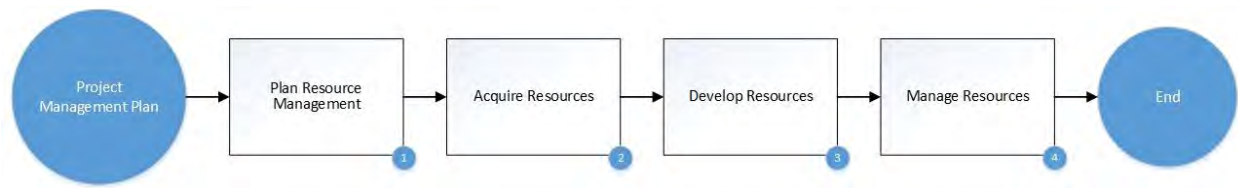


Figure 10: Resource Management Process

1. **Plan Resource Management** – During the Plan Resource Management step of developing the Resource Management Plan each organization (i.e., CSB, the DDI vendor, and the QA vendor) develops a Resource Management Plan that identifies and documents project roles and responsibilities, documents reporting relationships, and includes the staffing plan showing specific roles and assignment schedules.
2. **Acquire Resources** – This step addresses the onboarding process for new resources, training provided by OR to the DDI and QA vendors, and the offboarding process for resources.
3. **Develop Resources** – This step assures assigned staff have and maintain the necessary skills to perform their duties.
4. **Manage Resources** – The Manage Resources step provides guidance for tracking resource availability against staffing plans and tracking of resource-related impacts to INvest.

The DDI and QA vendors develop their Resource Management Plans and work with the INvest Project Manager to integrate them into the INvest Master PMP, which also contains CSB-specific detail for resource management. These individual plans provide an organizational structure identifying each INvest Project role, when the role is brought onto the project, and the duration of the role. The Resource Management Plans are used to document the activities of the DDI and QA Project Manager roles for monitoring resource requirements for the INvest Project. This includes processes for assuring that project staff are performing their duties and tasks as assigned.

The Resource Management Plan for the INvest Project addresses multiple topics including a systematic approach for onboarding and offboarding INvest Project staff and information about project team roles and responsibilities. The DDI Project Manager and the QA Project Manager complete a Resource Management Template which communicates onboarding and offboarding resource actions. The DDI Project Manager and QA Project Manager work with their HR Leads, who are the main vendor contacts for OR, to manage all onboarding and offboarding activities. OR uses the Resource Management Template to forecast onboarding and offboarding needs.

2.3.1 Plan Resource Management

All three organizations (i.e., CSB, the DDI vendor, and the QA vendor) execute resource planning for INvest during the procurement of the project, taking into consideration the specific organizational design and resource needs to support CSB’s overall approach to the INvest Project. This part focuses on planning outputs, including the roles and responsibilities of the resources, the relationships of the roles to project tasks, and how resources are expected to interact on the INvest Project.

2.3.1.1 Peer-to-Peer Interactions

All vendor and CSB staff on the INvest Project Team work together as one unified team. CSB expects all staff to function in a collaborative environment, respect each other's roles and responsibilities, and adhere to the INvest Project schedule to accomplish project tasks and goals. The INvest Project employs a peer-to-peer management approach for interaction with the DDI vendor, meaning that CSB pairs the State managers with equivalent DDI vendor lead roles to promote collaboration and knowledge transfer during the course of the project.

The DDI vendor provides resources that reflect the peer-to-peer management approach. Each of these roles is partnered with a corresponding CSB management peer. For some roles there is more than one CSB peer role. These relationships, along with information regarding expectations for their roles, are shown in Table 7.

Table 7: DDI Vendor Roles and Description with CSB Peer Role

DDI Vendor Role	High Level Role Description	CSB Peer Role(s)
Functional Lead	<ul style="list-style-type: none"> Participates in requirements validation and ensures vendor staff comprehend functional requirements Ensures traceability of all requirements for INvest throughout the life of the project through certification 	Functional Manager
Technical Lead	<ul style="list-style-type: none"> Develops and tracks the Application Design and Development Plan (ADDP) and System Configuration Management Plan, including development, Unit Test, and integration of the software build Follows a user experience approach to design Ensures timely delivery of design, development, and Unit Testing activities 	Technical Manager
Infrastructure Lead	<ul style="list-style-type: none"> Develops and tracks Hardware and Software Plan, Business Continuity / Disaster Recovery (BC/DR) Plan, and Maintenance and Operations Plan Administers and documents the life cycle of equipment including deployment, maintenance, and scheduled upgrades Enforces the established hardware and software standards 	Chief Architect
Implementation Lead	<ul style="list-style-type: none"> Develops and tracks the Implementation Plan and oversees the implementation timelines and deliverables for the system Creates a help desk team to work with the current CSB help desk to address INvest user questions or issues 	OR Manager Technical Manager Functional Manager Testing and Help Desk Manager
Training / Onsite Support Lead	<ul style="list-style-type: none"> Develops and tracks the Training and Onsite Support Plan for all Primary users Manages the training and onsite support activities throughout the project life cycle 	OR Manager

DDI Vendor Role	High Level Role Description	CSB Peer Role(s)
Data and Conversion Lead	<ul style="list-style-type: none"> Develops and tracks the Data Conversion Plan and the Data Management Plan to include Master Data Management Leads all data conversion and cleanup-related activities associated with INvest 	Data and Conversion Manager
Project Manager	<ul style="list-style-type: none"> Provides daily oversight of the project Works with the INvest Project Executive and the INvest PMO Manager to ensure project outcomes Ensures vendor project team staff performance Develops and manages the PMP 	INvest PMO Manager INvest Project Executive
Testing Lead	<ul style="list-style-type: none"> Develops and tracks the Master Test Plan, including planning for support of User Acceptance Testing Manages ongoing testing activities Collaborates with leads to implement an effective testing process including creating test infrastructure that supports continuous integration and automated testing 	Testing and Help Desk Manager
Chief Architect	<ul style="list-style-type: none"> Develops and tracks the Architecture Plan, Architecture Requirements, and Service Oriented Architecture Governance Plan Establishes Enterprise Architecture standards and processes, and ensures the delivery of the target architecture 	Chief Architect
Security Lead	<ul style="list-style-type: none"> Develops and tracks the Security Plan Contributes to the BC/DR Plan, the ADDP, and the Master Test Plan, ensuring: <ul style="list-style-type: none"> Compliance with federal requirements, policies, and procedures regarding privacy Protection of INvest confidential data and information Security testing during development and resolution of any findings Security is architected directly into the application and features 	Security Manager
Project Executive / Director	<ul style="list-style-type: none"> Directs project oversight Liaises with the CSB Executive Sponsor, INvest Project Executive, and the CSB-IT Director Addresses escalated issues 	INvest Executive Team

DDI Vendor Role	High Level Role Description	CSB Peer Role(s)
Federal Policy / Certification Specialist	<ul style="list-style-type: none"> Supports the INvest Project through the processes of planning, designing, development, and implementation with adherence to requirements defined in the Federal System Certification Guide Reviews core functionality specifics related to all aspects of an IV-D system, including the Financial Distribution Test Deck results and comments Fosters system efficiency and effectiveness Drafts certification responses 	Certification BPO

2.3.2 Acquire Resources

Each organization is generally responsible for its own activities regarding position definition, recruitment, hiring, and assignment to the INvest Project. The DDI and QA vendors maintain an INvest Project organizational structure with resources that are able to achieve all of the INvest Project requirements. The vendors provide a sufficient number of appropriately trained staff to accomplish all required tasks and manage staff and resource levels throughout the life of the project. CSB provides staff to be embedded as part of the DDI vendor’s project team; these embedded resources work under DDI vendor direction. This arrangement contributes to the transfer of knowledge to CSB resources which is critical for the ongoing support of Invest. **Part 2.3.2.1** addresses required processes for the onboarding of new resources, training provided by OR to the DDI and QA vendors, and the offboarding of resources when they leave the INvest Project. **Part 2.3.2.2** addresses tracking of resources.

2.3.2.1 Onboarding and Offboarding

OR manages onboarding and offboarding of vendor staff for the INvest Project and requires support from various entities. OR coordinates the process with the appropriate CSB staff, who then manage requests to internal entities and other State agencies for onboarding and offboarding tasks.

Onboarding is the initial process for assimilating new vendor employees into the INvest Project so they are productive as quickly as possible. Offboarding provides for terminating all access to systems, email, and the facility upon departure.

Staff forecasting is shared using the Resource Management Template. There are times when staff are needed more quickly or need to be offboarded quickly. Every effort is made to accommodate the timing of the resource action. Vacated key positions must be filled in accordance with timeframes outlined in the vendor contract with the same or higher quality resource. Additionally, the INvest Project Executive and the appropriate CSB Area Lead interview key staff; however, the INvest Project Executive may waive this participation.

Figure 11 provides the Onboarding and Offboarding process.

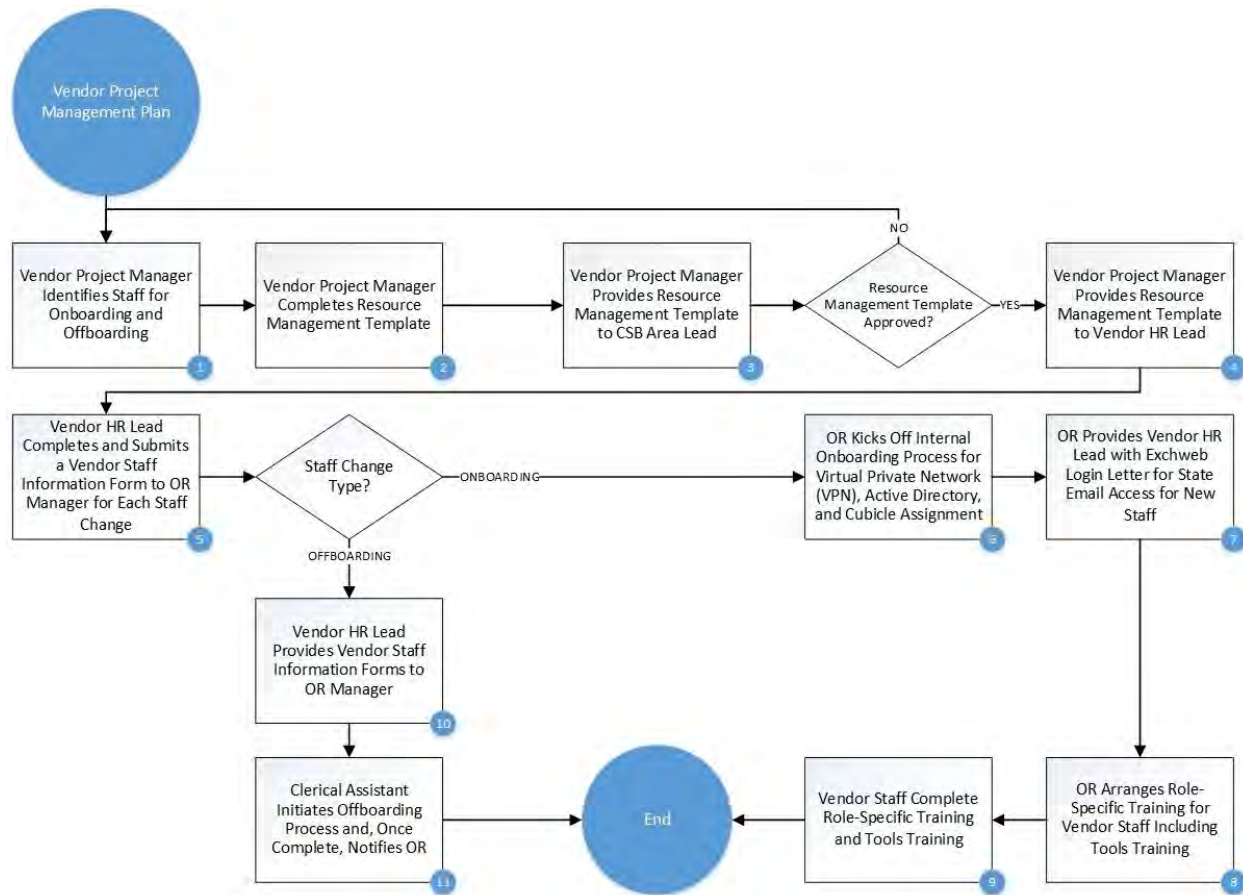


Figure 11: Onboarding and Offboarding Process

1. **Vendor Project Manager Identifies Staff for Onboarding and Offboarding** – After initial onboarding of staff at the beginning of the INvest Project, the vendor Project Manager continues to identify resources for onboarding and offboarding throughout the INvest Project life cycle.
2. **Vendor Project Manager Completes Resource Management Template** – The vendor Project Manager confers with the appropriate CSB Area Lead for all onboarding and offboarding staffing changes. The vendor Project Manager completes the Resource Management Template and the appropriate CSB Area Lead approves the resource transaction. The vendor Project Manager provides the Resource Management Template on a monthly basis for all onboarding and offboarding staffing changes for the following month.
3. **Vendor Project Manager Provides Resource Management Template to CSB Area Lead** – The appropriate CSB Area Lead approves or disapproves the resource transactions.
4. **Vendor Project Manager Provides Resource Management Template to Vendor HR Lead** – The DDI vendor and QA vendor HR Leads initiate the onboarding and offboarding process.

5. **Vendor HR Lead Completes and Submits a Vendor Staff Information Form to OR Manager for Each Staff Change** – The Vendor Staff Information Form is completed for each resource on the Resource Management Template. The DDI or QA vendor HR Lead submits the Vendor Staff Information Forms to the OR Manager. The OR Manager informs the INvest Project Executive and the INvest PMO Manager of the staffing changes.
6. **OR Kicks Off Internal Onboarding Process for Virtual Private Network (VPN), Active Directory, and Cubicle Assignment** – OR alerts the appropriate staff to execute the VPN, active directory, and cubicle assignment activities.
7. **OR Provides Vendor HR Lead with Exchweb Login Letter for State Email Access for New Staff** – The vendor staff are now able to login into State email.
8. **OR Arranges Role-Specific Training for Vendor Staff Including Tools Training** – DDI staff complete role-specific training and tools training.
9. **Vendor Staff Complete Role-Specific Training and Tools Training** – All vendor staff are required to take FTI, Ethics, and IRUA training. Other training is dependent upon their role on the INvest Project.
10. **Vendor HR Lead Provides Vendor Staff Information Forms to OR Manager** – The INvest Project Executive is informed of the staffing changes for the DDI vendor and the INvest PMO Manager is informed of the staffing changes for the QA vendor.
11. **Clerical Assistant Initiates Offboarding Process and, Once Complete, Notifies OR** – The Clerical Assistant notifies the appropriate staff to remove the vendor staff from email and the INvest Project environments, and remove their cubicle assignment.

Onboarding and Offboarding Requirements

The DDI and QA vendors are required to complete all necessary background checks according to Internal Revenue Service Publication 1075 before joining the INvest Project, in accordance with State of Indiana policy and the vendor contracts. The amount of time necessary for background checks is an important consideration for onboarding staff and must be considered for planning purposes. Additionally, vendor staff are required to be non-delinquent for any child support obligations.

Onboarding activities include:

- Obtaining a State badge;
- Establishing access to State email;
- Training on:
 - Federal Tax Information (FTI);
 - Vendor Ethics
 - Information Resources Use Agreement (IRUA);
 - Overview of the Indiana IV-D Program;
 - INvest Governance Manual;
- Sending an introductory email with photo;
- Establishing a VPN connection;
- Provisioning for access to tools and INvest Project environment;
- Installing the print driver on a laptop;

The Resource Management Template lists only those names that have been approved by the appropriate INvest Project CSB Area Lead. Authorized approvers are:

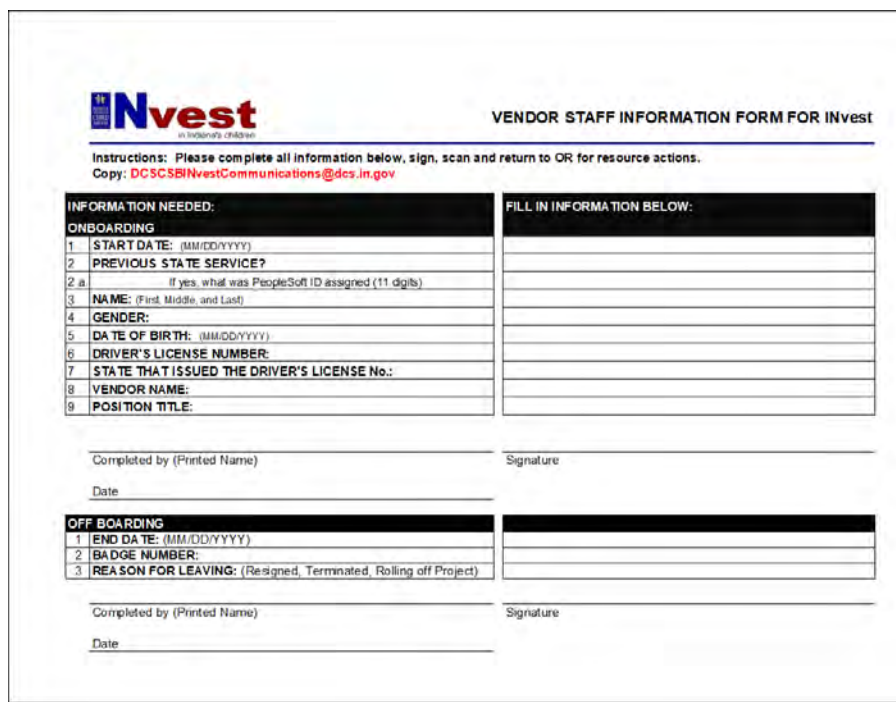
- Chief Architect
- Data and Conversion Manager
- Functional Manager
- INvest PMO Manager
- OR Manager
- Security Manager
- Technical Manager
- Testing and Help Desk Manager

The CSB Area Lead works with their peer on the vendor side to provide approvals for all additional and departing resources. The Resource Management Template is an important guide for ensuring the waves of vendor staff forecasted to be brought onboard and offboard are appropriately and efficiently managed. There may be exceptions to this schedule if an additional resource is required or a staff member leaves the INvest Project prior to their scheduled departure date. OR, DDI, and QA HR Leads collaborate to affect a seamless transition for entry and exit from the INvest Project. The INvest Executive Team participates in onboarding and offboarding of vendor staff in key management roles.

2.3.2.3 Vendor Staff Information

A Vendor Staff Information Form is filled out for each person on the Resource Management Template. The Vendor Staff Information Form initiates the onboarding and offboarding process and is provided to OR. The Vendor Staff Information Form Template is provided as **Attachment RSM-02**.

Figure 13 provides a sample of the Vendor Staff Information Form Template.



INvest
in Indiana's children

VENDOR STAFF INFORMATION FORM FOR INvest

Instructions: Please complete all information below, sign, scan and return to OR for resource actions.
Copy: DCSCSINvestCommunications@dcsc.in.gov

INFORMATION NEEDED:	FILL IN INFORMATION BELOW:
ONBOARDING	
1 START DATE: (MM/DD/YYYY)	
2 PREVIOUS STATE SERVICE?	
2.a If yes, what was PeopleSoft ID assigned (11 digits)	
3 NAME: (First, Middle, and Last)	
4 GENDER:	
5 DATE OF BIRTH: (MM/DD/YYYY)	
6 DRIVER'S LICENSE NUMBER:	
7 STATE THAT ISSUED THE DRIVER'S LICENSE No.:	
8 VENDOR NAME:	
9 POSITION TITLE:	
Completed by (Printed Name)	Signature
Date	
OFF BOARDING	
1 END DATE: (MM/DD/YYYY)	
2 BADGE NUMBER:	
3 REASON FOR LEAVING: (Resigned, Terminated, Rolling off Project)	
Completed by (Printed Name)	Signature
Date	

Figure 13: Vendor Staff Information Form Template

The Vendor Staff Information Form is also used in the offboarding process. The vendor must store the original Vendor Staff Information Form used for onboarding and update it for offboarding. Offboarding is important to ensure when staff exit the project they no longer have access to the building, email, and any environments that support the INvest Project.

2.3.2.4 Organizational Readiness Onboarding and Training

As vendor staff join the project, CSB provides initial onboarding and training to orient the vendor staff to CSB and the office building, the Indiana IV-D Program, INvest Governance Manual, and INvest Project tools as applicable. Onboarding and training assists in the development of the “one team” project culture and builds a unified INvest Project Team. Table 8 provides information about the types of training and timeframes anticipated for onboarding based on staff role. Onboarding and training vary depending on specific vendor roles. OR coordinates onboarding and training.

Table 8: Onboarding Training

Vendor Positions	CSB and Building Orientation	Indiana IV-D Program	INvest Governance	INvest Tools	QA Vendor Training for INvest Staff (State and Vendor)	DDI Vendor Training for INvest Staff (State and Vendor)
Course Description	Orientation to office, security, information security training, etc.	Introduction into Indiana IV-D Program (structure, culture, etc.), ISETS Overview	Governance for the INvest Project	Introduction to State provided tools for the INvest Project	Education and training by QA vendor on Quality Management approach for INvest Project	Including, but not limited to: <ul style="list-style-type: none"> • Tools • Processes • Procedures • Schedule creation
Key Positions	½ Day	1 Day	1 Day	1 Day	TBD	TBD
Leads / Supervisors	½ Day	1 Day	1 Day	1 Day	TBD	TBD
Technical Team Infrastructure Team Implementation Team Data Conversion Team Testing Team Architecture Team Security Team Federal Policy and Certification Specialist	½ Day	½ Day	1 Day	1 Day	N/A	TBD
Functional Team Help Desk	½ Day	1 Day	1 Day	1 Day	N/A	TBD
Training and Onsite Support Staff	½ Day	1 Day	½ Day	½ Day	N/A	TBD

2.3.3 Develop Resources

Beyond the initial onboarding training, resource development is generally a function in which each organization is responsible for conducting activities necessary to provide appropriately-trained staff to the INvest Project. This area of the Resource Management Plans addresses how to deal with any skill gaps that may be identified during the course of the project, as well as development of interpersonal skills, team building, and project ground rules needed to assure that the INvest Project is executed by a unified and collaborative team. CSB provides embedded State staff to work in tandem with DDI vendor staff. The purpose of embedding State staff is to facilitate ongoing knowledge transfer, enabling a smooth transition at project close-out.

2.3.3.1 Training

Role-specific training of resources is the responsibility of the specific organization or vendor to assure that they are staffing the INvest Project with qualified and trained staff. This includes training that must occur prior to onboarding staff to the INvest Project so they are prepared to begin work immediately upon their arrival, as well as any additional training that is required as a result of the changing needs of the INvest Project.

The DDI and QA vendors train applicable CSB and vendor staff on any relevant tools, processes, procedures, and schedule creation ensuring a seamless integration of CSB and vendor staff. The INvest PMO Manager sets up the DDI and QA vendor training sessions for the applicable CSB staff.

2.3.4 Manage Resources

Management of resources, including performance assessments, rewards and recognition, and disciplinary action, is generally the responsibility of each organization. This part includes general processes for assuring that project staff are performing their duties and tasks as assigned, for managing the processes for resource requirements for the INvest Project, and outlining the processes to be considered when resource availability or other resource-related issues impact the execution of the INvest Project.

As part of their respective Resource Management Plans, the DDI and QA vendors include details to address scenarios where resource issues impact the INvest Project. For example:

- The number of actual vendor staff on the INvest Project does not meet the planned number of resources. The Resource Management Plan addresses tracking of actual staffing against the vendor's staffing plan. Staffing shortfalls are also reported through the status reporting process; see the [Progress Monitoring and Reporting](#) chapter for additional detail on status reporting.
- While resource levels are as planned, the vendor is not meeting submission dates for deliverables or the deliverables are incomplete. A root cause analysis is performed to determine if resource issues are contributing to the late or incomplete deliverables.

Figure 14 provides the Manage Resources process.

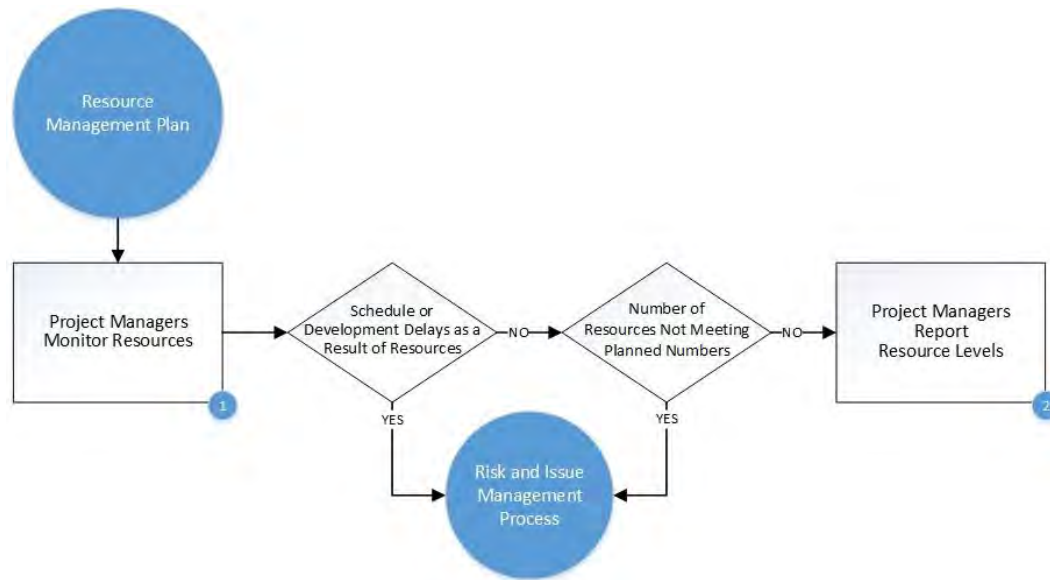


Figure 14: Manage Resources Process

1. **Project Managers Monitor Resources** – Project Managers from CSB, DDI, and QA monitor resource availability and any impacts to the INvest Project as a result of insufficient or inadequate resources, according to their respective Resource Management Plans. The Project Managers follow established processes for mitigating risks or issues in accordance with the Risk and Issue Management Plan. See the [Risk and Issue Management](#) chapter for additional detail.
2. **Project Managers Report Resource Levels** – The Project Managers from CSB, DDI, and QA report any staffing shortfalls as well as resource-related risks or issues through the status reporting process. See the [Progress Monitoring and Reporting](#) chapter for additional detail on status reporting.

2.4 Templates

Table 9 provides a summary of the templates used for the Resource Management process.

Table 9: Resource Management Templates

Template Name	Description	Attachment ID
Resource Management Template	<ul style="list-style-type: none"> Completed on a monthly basis for the onboarding and offboarding of vendor staff for the following month. 	RSM-01
Vendor Staff Information Form Template	<ul style="list-style-type: none"> Completed for every resource action on the Resource Management Template. 	RSM-02

3.0 PROJECT MANAGEMENT PLAN DEVELOPMENT

3.1 General Introduction and Overview

The purpose of the Project Management Plan Development process is to provide guidance for CSB, the DDI vendor, and the QA vendor in the development of their respective PMPs. The INvest PMP is made up of multiple integrated components:

- An INvest Master PMP, which provides overarching direction for execution of the INvest Project as well as CSB-specific detail where appropriate. This component is developed and owned by CSB, and links to the supporting components.
- A DDI PMP, which supports the INvest Master PMP and provides vendor-specific detail and overarching direction in component plans where the DDI vendor has a primary role. This component is developed and owned by the DDI vendor.
- A QA PMP, which supports the INvest Master PMP and provides vendor-specific detail. This component is developed and owned by the QA vendor.

The content of specific components of the INvest Master PMP varies for CSB, the DDI vendor, and the QA vendor, and some components may not apply to all organizations. The INvest Master PMP contains the core content of the PMP and links to content in the DDI and QA vendors' specific plans referenced in **Part 3.3.1**. The INvest Project follows an iterative approach, so some components of the plans that make up the INvest Master PMP may be finalized and approved later in the project.

The INvest Project uses best practices from the PMBOK® Guide as the basis for the INvest Project management approach.

3.2 Key Roles and Responsibilities

Table 10 provides a summary of the key roles and primary responsibilities involved in the PMP Development process.

Table 10: Project Management Plan Development Key Roles and Responsibilities

Key Role	Responsibilities
DDI Project Manager	<ul style="list-style-type: none"> • Develops and updates the DDI PMP • Submits the DDI PMP to the INvest PMO Manager • Supports integration of the DDI PMP into the INvest Master PMP
INvest Project Manager	<ul style="list-style-type: none"> • Develops and updates the INvest Master PMP • Links components of vendor PMPs to the INvest Master PMP
INvest PMO Manager	<ul style="list-style-type: none"> • Reviews and approves vendor PMPs • Reviews and approves CSB-specific content in the INvest Master PMP • Approves the INvest Master PMP • Publishes the INvest Master PMP
INvest Project Team	<ul style="list-style-type: none"> • Executes the INvest Master PMP
OR Manager	<ul style="list-style-type: none"> • Collaborates and supports the INvest PMO in the development of the INvest Master PMP, including the Communications Management Plan

Key Role	Responsibilities
QA Project Manager	<ul style="list-style-type: none"> Develops and updates the QA PMP Submits the QA PMP to the INvest PMO Manager Supports integration of the QA PMP into the INvest Master PMP

3.3 Process Overview and Activities

Direction and detail for the INvest Master PMP comes from three sources. CSB develops the overall umbrella or framework for the INvest Master PMP and contributes CSB-specific content. The DDI and QA vendors provide plans to support the INvest Master PMP in addition to defining details of vendor-specific plans. The INvest Master PMP links to the vendor-specific plans.

After consolidation, the INvest Master PMP is approved and communicated to the INvest Project Team.

Figure 15 provides the Project Management Plan Development process.

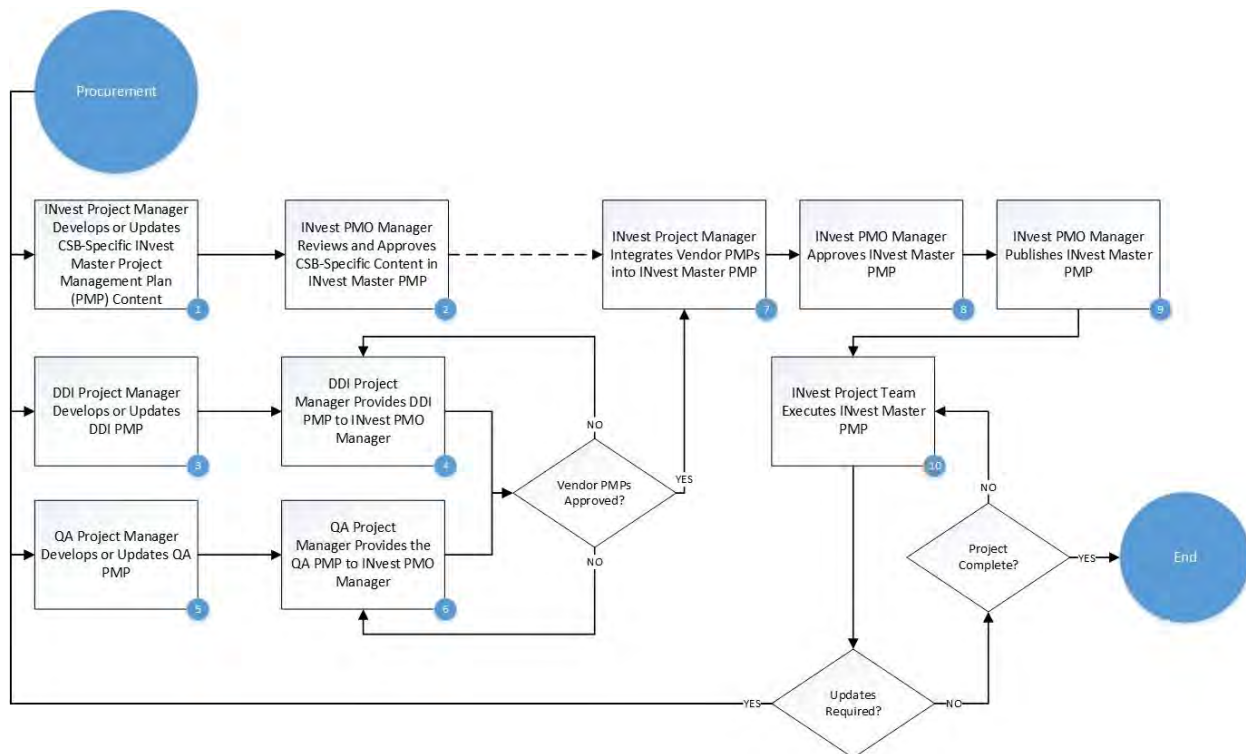


Figure 15: Project Management Plan Development Process

- INvest Project Manager Develops or Updates CSB-Specific INvest Master Project Management Plan (PMP) Content** – The INvest Project Manager writes the overarching INvest Master PMP, initially focusing on CSB content. Following initial approval, the INvest Master PMP is reviewed for CSB-specific content and updated by the INvest Project Manager semi-annually or as determined by the INvest PMO Manager.
- INvest PMO Manager Reviews and Approves CSB-Specific Content in INvest Master PMP** – The INvest PMO Manager conducts an internal review of the INvest Master PMP, and approves the CSB-specific content.

3. **DDI Project Manager Develops or Updates DDI PMP** – The DDI Project Manager develops vendor-specific PMP content for integration with the INvest Master PMP. Following initial approval, the DDI Project Manager reviews content of the DDI PMP and provides updates to the INvest PMO semi-annually or as requested by the INvest PMO Manager.
4. **DDI Project Manager Provides DDI PMP to INvest PMO Manager** – The DDI Project Manager submits the vendor-specific PMP to the INvest PMO Manager for review and approval. If the INvest PMO Manager does not approve the DDI PMP, it is returned to the DDI Project Manager for revision.
5. **QA Project Manager Develops or Updates QA PMP** – The QA Project Manager develops vendor-specific PMP content for integration with the INvest Master PMP. Following initial approval, the QA Project Manager reviews content of the QA PMP and provides updates to the INvest PMO semi-annually or as requested by the INvest PMO Manager.
6. **QA Project Manager Provides the QA PMP to INvest PMO Manager** – The QA Project Manager submits the vendor-specific PMP to the INvest PMO Manager for review and approval. If the INvest PMO Manager does not approve the QA PMP, it is returned to the QA Project Manager for updates and resubmission.
7. **INvest Project Manager Integrates Vendor PMPs into INvest Master PMP** – As the DDI and QA PMPs are completed and approved by the INvest PMO Manager (which may be later than the development of the CSB-specific INvest Master PMP content) the INvest Project Manager updates the INvest Master PMP with approved content from the DDI and QA PMPs. This integration ensures that contents are compatible (e.g., labeling of process touchpoints) as well as establishing the overall file structure and linking model.
8. **INvest PMO Manager Approves INvest Master PMP** – The INvest PMO Manager provides final approval of the INvest Master PMP (containing CSB, DDI, and QA PMP content).
9. **INvest PMO Manager Publishes INvest Master PMP** – The INvest PMO Manager publishes the INvest Master PMP, which is stored in an agreed-upon location and made available to the INvest Project Team to guide execution of the INvest Project.
10. **INvest Project Team Executes INvest Master PMP** – The INvest Project Team uses, references, and follows the INvest Master PMP as guidance for execution of the INvest Project. As the INvest Project progresses changes to the INvest Master PMP, including the DDI and QA portions are updated. These changes are communicated to the INvest Project Team following the process outlined in the INvest Communications Management Plan.

3.3.1 Project Management Plan Content

The common structure for the PMPs is defined in this **Part 3.3.1. Attachment PMP-01 Project Management Plan Template** is used by all organizations to develop their PMPs, however some sections may not apply to all PMPs.

3.3.1.1 Project Overview

The Project Overview sections of the PMP provide a high level description of the INvest Project and describe the INvest Project's benefits and the respective organization's artifacts and deliverables. Unless noted, all PMPs will contain content in all sections.

Purpose, Scope, Goals, and Objectives

This section of the PMP addresses the scope of the INvest Project, including what the project does and does not include. This helps to avoid confusion on the part of project team members and stakeholders.

Assumptions, Constraints, and Risks

This section lists all known assumptions (treating something as true for the purpose of planning), constraints (limits or restrictions), and risks (the possibility that something negative will occur) for the INvest Project. The DDI and QA vendors identify assumptions, constraints, or risks in their respective PMPs.

Glossary of Terms

This section includes a link to a file of summary explanations and definitions of terms associated with the INvest Project, which is maintained by the INvest PMO.

3.3.1.2 Project Organization

These sections of the PMP outline the management structure for the project. These sections describe, in general terms, the roles and project team members' levels of authority. They also address which organizations provide which resources for the project and any resource constraints or limitations.

Project Governance

This section contains details regarding how decisions will be made, including formal approval of vendor deliverables. If there are any decisions which must be made by specific individuals, e.g., the authorization of additional funding by the CSB Executive Sponsor, this should also be stated here. The Project Governance Plan is owned by CSB. The DDI and QA vendor plans detail how they will support the framework established by CSB in the INvest Master PMP. Areas to include in this section are:

- Methodology: Provide a descriptive explanation on the methodologies that the INvest Project will follow and how the INvest Governance Manual will be followed;
- Tools: Provide a list of any specific tools that the INvest Project Team will use; and
- Document Management: Provide the policies the INvest Project Team will follow for maintaining and updating project documentation (i.e., SharePoint).

Organizational Structure

This section includes the organizational charts and associated detail for CSB, the DDI vendor, and the QA vendor for execution of the INvest Project. The INvest Master PMP describes the overall organization across the project, as well as specific CSB detail. Detailed organization structures for the vendors are described in their respective PMPs.

Roles and Responsibilities

Key roles and associated responsibilities for the INvest Project are documented here. The PMP includes detail on CSB and vendor roles and responsibilities where the organizations interact; roles and responsibilities within the vendor organizations are documented in their respective PMPs. CSB has drafted a Master Roles and Responsibilities matrix for reference.

3.3.1.3 Project Management Processes

Project management is the discipline of initiating, planning, executing, controlling, and closing the work of a team to achieve specific goals. The following sections outline what is required through these different steps to meet project goals.

Project Deliverables

This section of the PMP discusses the Work Breakdown Structure (WBS), the WBS dictionary, key deliverables and milestones, and the schedule baseline, as well as how these items will be used in managing the project's scope. The following should be included as part of this section:

- The WBS listing the work packages to be performed for the completion of the project;
- The WBS dictionary defining the work packages;
- Key deliverables and a summary list of milestones, including dates for each milestone and actions to be taken if any changes to the milestones or delivery dates occur; and
- The schedule baseline providing a reference point for managing project progress as it pertains to the schedule and timeline.

The schedule baseline and WBS should be created using CSB's current version of Microsoft Project.

Resource Management Plan

The purpose of the Resource Management Plan is to ensure that appropriate resources are planned for ahead of time, acquired with the necessary skills, are seamlessly transitioned on and off of the project at the appropriate times during INvest, and are managed effectively. The Resource Management Plan addresses four key components:

- Plan resource management;
- Acquire resources;
- Develop resources; and
- Manage resources.

The overall structure of the Resource Management Plan section of the INvest Master PMP is led by CSB; the DDI and QA vendor Resource Management Plans are linked to the INvest Master PMP and are developed to support the Master Resource Management Plan.

The DDI and QA HR Leads complete the Resource Management Template providing dates that resources are onboarded to and offboarded from the INvest Project. This information provides projected durations for individual assignments to the INvest Project.

Further information is available in the [Resource Management](#) chapter.

Vendor Management Plan

This section addresses the management of vendor contracts, including contract administration, financial arrangements, and issue resolution. CSB develops the Vendor Management Plan in the INvest Master PMP to address management of the DDI and QA vendors. The DDI and QA vendors develop their respective Vendor Management Plans to address management of any sub-contractors that they may engage for the INvest Project.

Deliverables Management Plan

The Deliverables Management Plan establishes criteria for how deliverables are created, submitted, reviewed, and approved. CSB takes the lead in establishing the criteria that CSB, the DDI vendor, and the QA vendor will use throughout the INvest Project.

The DDI and QA vendor plans detail how they support the framework established by CSB in the INvest Master PMP.

The following items are considered in developing this section:

- Criteria for accepting project deliverables;
- Roles and responsibilities for submitting, reviewing, and accepting deliverables;
- Time considerations for review and acceptance; and
- Deliverables acceptance or comments log.

Further information is available in the [Deliverable Review and Acceptance](#) chapter.

Requirements Management Plan

The Requirements Management Plan process includes all activities required to plan and validate requirements for execution of the SDLC. The Requirements Management Plan addresses:

- Requirements validation;
- Requirements elicitation;
- Solution validation;
- Architectural proof-of-concept;
- Requirements traceability; and
- Tools and templates.

The Requirements Management Plan contained in the DDI vendor's PMP defines Requirements Management activities used by all INvest Project Team members across the INvest Project, and a link is included as part of the INvest Master PMP.

Further information is available in the [Requirements Management](#) chapter.

Schedule Management Plan

This section of the PMP provides a general framework for the approach to creation and management of the project schedule. Effective schedule management ensures tasks are completed on time, resources are allocated appropriately, and project performance is measured. This section addresses:

- Scheduling tool and format;
- Schedule milestones;
- Schedule development roles and responsibilities;
- Schedule control, including methods to establish baselines from which to measure project performance;
- Schedule changes and thresholds; and
- Schedule impacts due to scope changes.

The INvest Project Manager, the QA Project Manager, and the DDI Project Manager create and manage their respective schedules using CSB's current version of Microsoft Project. The Master Scheduler integrates the individual project schedules into one master schedule under the overall authority of the INvest PMO Manager.

The overall structure of the Schedule Management Plan is defined by CSB. The DDI and QA vendor plans detail how they will support the framework established by CSB in the INvest Master PMP.

Cost Management Plan

This section defines how the costs of the INvest Project will be managed throughout the project's life cycle. It sets the format and standards by which the project costs are measured, reported, and controlled.

Contents should include, but are not limited to:

- Who is responsible for managing costs
- Who has the authority to approve changes to the project or its budget
- How cost performance is measured and reported
- Report formats, frequency, and to whom they are presented

The Cost Management Plan is primarily developed by CSB in the INvest Master PMP. The DDI vendor's PMP and QA vendor's PMP should provide details concerning the estimation, budgeting, invoicing, and cost reporting process.

Quality Management Plan

This section of the PMP discusses how QM will be used to ensure that the deliverables for the project meet formally established standards for acceptance. This section should include quality roles and responsibilities for quality control, quality assurance, and quality monitoring.

CSB leads the development and contents of the QM section of the INvest Master PMP with support from the QA vendor. The DDI and QA vendor plans detail how they will support the framework established by CSB in the INvest Master PMP.

Further information is available in the [Quality Assurance](#) chapter.

Stakeholder Management Plan

The Stakeholder Management Plan ensures project stakeholders are effectively involved in planning and execution throughout the life cycle of the INvest Project. The plan identifies all internal and external stakeholders, documents stakeholder management strategies, and addresses monitoring and control of the stakeholder management process.

CSB leads the development and contents of the Stakeholder Management Plan section of the INvest Master PMP. The DDI and QA PMPs detail how they will support the framework established by CSB in the INvest Master PMP.

Further information, including templates, is available in the [Stakeholder Management](#) chapter.

Communications Management Plan

The purpose of the Communications Management Plan is to define the communications requirements for the project and how information will be distributed to ensure project success. Communications management includes the steps required to identify, plan, and execute project-level communications to internal and external stakeholders. The DDI vendor, the QA vendor, and the INvest PMO prepare communications plans, including communications matrices, for integration into the INvest Master PMP.

The INvest Project has three separate communication paths that should be considered when developing communications plans by all parties:

- CSB internal INvest Project communications;
- OR external communications; and
- Strategic initiatives external communications.

CSB leads the development and contents of the Communications Management Plan with supporting input from the DDI and QA PMPs.

Further information and templates are available in the [Communications Management](#) chapter.

Progress Monitoring and Reporting

The Progress Monitoring and Reporting section addresses the processes, templates, and associated expectations for reporting progress through the INvest PMO to the INvest Core Committee and other stakeholders. The DDI vendor and QA vendor's PMPs include details on monitoring project progress, including project scope, schedule, budget, risks, issues, communications, and any certification challenges. The INvest Master PMP addresses methods to establish baselines from which to measure project performance, including the baselined project scope, the baselined project schedule, and the baselined project budget. CSB leads the development of the Progress Monitoring and Reporting section. The DDI and QA PMPs detail how they will support the framework established by CSB in the INvest Master PMP.

Further information and templates are available in the [Project Monitoring and Controlling](#) chapter.

Risk and Issue Management Plan

The Risk and Issue Management Plan addresses the identification, communications, assessment, response, and monitoring of risks and issues that impact or threaten to impact achievement of the INvest Project's objectives. This section includes a general description for the approach taken to identify and manage the risks and issues associated with the project. The risk section also includes a list of known risks when respective organization PMPs are developed.

Development of the Risk and Issue Management Plan is led by CSB. The DDI and QA vendor plans detail how they will support the framework established by CSB in the INvest Master PMP.

Further information and templates are available in the [Risk and Issue Management](#) chapter.

Project Change Control Plan

The Project Change Control Plan ensures the ongoing integrity of the project's scope and budget and documents how changes are coordinated, planned for, and approved through the proper channels.

CSB leads the development of the Project Change Control Plan in the INvest Master PMP, which includes links to the Project Change Control Plans in the vendor PMPs. The DDI and QA vendor plans detail how they will support the framework established by CSB in the INvest Master PMP.

The following content is included in the Project Change Control sections of the INvest Master PMP:

- Guidelines and method for requesting changes;
- Process for submitting changes to artifacts;
- Roles and responsibilities for submitting, analyzing, and approving project change requests;
- Criteria for determining impact to the baselines for scope, schedule, or budget;
- Thresholds for approval by INvest PMO Manager, the CCRB, or the INvest Executive Team; and
- Communications of changes (approved or denied) to INvest Project Team.

Further information and templates are available in the [Project Change Control and Estimation](#) chapter.

Lessons Learned Plan

The Lessons Learned Plan documents expectations for ongoing capture and review of lessons learned throughout the course of the INvest Project, leading to final documentation in the Project Closure Report. A Lessons Learned Register will be used throughout the INvest Project to capture organizational experience gained through the INvest Project. The template used for capturing lessons learned is provided as **Attachment PMP-02 Lessons Learned Register Template**.

CSB leads the development of the Lessons Learned Plan. The DDI and QA vendor plans detail how they will support the framework established by CSB in the INvest Master PMP.

Project Closure Plan

The Project Closure Plan addresses the steps needed to ensure that INvest has been completed and transitioned to ongoing operations, confirms the satisfaction of project stakeholders, and captures key lessons learned from the project for use in planning and managing future projects. CSB leads the development of the Project Closure Plan in the INvest Master PMP, which includes links to the Project Closure Plans in the vendor PMPs. The DDI and QA vendor plans detail how they will support the framework established by CSB in the INvest Master PMP.

Further information and templates are available in the [Project Closure](#) chapter.

3.3.1.4 Project Supporting Processes

The following are additional PMP sections addressing project approaches used in the execution of the INvest Project, generally containing specific detail in technical areas.

System Configuration Management Plan

The System Configuration Management Plan addresses the steps required to establish, approve, and execute configuration control for the various system components of INvest. Contents of the System Configuration Management Plan include, but are not limited to:

- Roles and responsibilities
- Configuration change control
- Configuration management database
- Configuration status accounting
- Configuration audits

The System Configuration Management Plan contained in the DDI vendor's PMP defines Configuration Management activities used by all INvest Project Team members across the INvest Project; a link is included in the INvest Master PMP.

Further information is available in the [Configuration Management](#) chapter.

Test Management Plan

The Test Management Plan includes the activities to plan and execute testing to validate INvest requirements and resolve any identified test defects. The DDI vendor and CSB develop the Test Management Plan collaboratively.

The objective of test planning is to develop an overall test strategy describing what to test, how to test, when to test, and who performs the test. The Test Management Plan has two major components:

- The DDI Master Test Plan that includes the test strategy for Integration Testing, System Testing, Performance Testing, and Federal Certification Testing, and outlines all test activities. The DDI Master Test Plan provides a mechanism to control the scope of the DDI vendor testing efforts.
- The CSB User Acceptance Testing (UAT) Master Test Plan includes the test strategy for User Testing at the module level and UAT at the project phase level. The CSB UAT Master Test Plan provides a mechanism to control the scope of CSB testing activities.

Further information and templates are available in the [Test Management](#) chapter.

Security Management Plan

The Security Management Plan describes the implementation of controls related to the confidentiality, integrity, and availability of information. The Security Management Plan addresses processes for capturing, maintaining, and disposing of data in accordance with all State and federal data security standards and policies. The plan also addresses interactions with State security resources to ensure compliance throughout the entire SDLC. The Security Management Plan contained in the DDI vendor's PMP defines Security Management activities used by all INvest Project Team members across the INvest Project; a link is included in the INvest Master PMP.

Data Conversion Plan

The Data Conversion Plan describes the process of transferring data from one location, storage medium, or hardware / software system to another. The Data Conversion Plan addresses processes for cleansing, transferring, validating, and synchronizing the data throughout the entire process.

The DDI vendor takes the lead on development of the Data Conversion Plan; a link to the plan is included in the INvest Master PMP.

Data Governance Plan

The Data Governance Plan describes the policies for the management of data assets and the performance of data functions. The Data Governance Plan includes the framework that encompasses the availability, usability, integrity, and security of data. Sections of the plan include:

- Policy, Standards, and Strategy
- Data Quality
- Privacy, Compliance, and Security
- Data Architecture and Data Integrity
- Business Intelligence / Reporting

The DDI vendor takes the lead on development of the Data Governance plan; a link to the plan is included in the INvest Master PMP.

Implementation Plan

The Implementation Plan documents activities required to coordinate the deployment of software into production, user training for the new software, and the development of a support mechanism to address any challenges that may occur during the transition.

The DDI vendor develops the Implementation Plan; a link to the DDI vendor's Implementation Plan is included in the INvest Master PMP.

Further information is available in the [Implementation](#) chapter.

Knowledge Transfer Plan

The Knowledge Transfer Plan addresses the multiple components required to transition support of INvest to the CSB Application Development, System Services, and INvest Help Desk teams for ongoing maintenance. Components of the knowledge transfer approach include, but are not limited to:

- Implementation of a peer-to-peer approach with management staff
- Embedding CSB staff, as appropriate, within various vendor teams
- Formal knowledge transfer activities, including training and shadowing of DDI vendor staff

The Knowledge Transfer Plan provides the most detail for the formal knowledge transfer activities, including technical training, documentation, checklists, and other materials.

The DDI vendor develops the Knowledge Transfer Plan; a link to the plan is included in the INvest Master PMP.

Further information is available in the [Post Implementation](#) chapter.

Training and Onsite Support Plan

The Training and Onsite Support Plan documents the objectives and the scope of Primary and Secondary user training and onsite implementation support, as well as the resources, schedule, and constraints related to the execution of those activities.

The DDI vendor leads the development of this plan; a link to the plan is included in the INvest Master PMP.

Further information is available in the [Triage](#) chapter.

Application Design and Development Plan

The ADDP includes all activities required to translate validated requirements into efficient, repeatable patterns for development of final application code for INvest. The Development process includes the steps required to code the components as determined in the Design process. The ADDP includes, but is not limited to:

- Design
 - Iterative software design process and standards
 - User considerations
 - Design tradeoffs
 - Handling of critical requirements
 - Safety and security assurance
 - Reusable software products
 - Risk management
- Development
 - Iterative software development process
 - Establishing software development environments
 - Application development coding standards
 - Unit Testing approach
- Application integration

The DDI vendor leads the development of ADDP; a link to the plan is included in the INvest Master PMP.

Architecture Plan

The Architecture Plan addresses the business and technology strategies and standards for INvest development, as well as the overall components of the solution.

The Architecture Plan includes:

- Architecture approach for business, data, application, and technology
- Architecture views and view descriptions
- Resource management
- Requirements
- Replication architecture
- Batch architecture
- Interface architecture
- Architecture diagnostics and metrics
- Architectural change management
- Architecture repository

The DDI vendor takes the lead in the development of the Architecture Plan; a link to this plan is included in the INvest Master PMP.

Service Oriented Architecture Governance Plan

The Service Oriented Architecture (SOA) Governance Plan documents how the practices to manage services through policies, processes, metrics, and resources will be structured and executed.

The SOA Governance Plan includes, but is not limited to:

- Service Portfolio Management
- Services Technical Architecture
- Services Design and Development
- Configuration and Release Management
- Service Monitoring and Control
- Incident Management
- Change Management

The DDI vendor takes the lead on development of the SOA Governance Plan; a link to this plan is included in the INvest Master PMP.

Business Continuity / Disaster Recovery Plan

The Business Continuity / Disaster Recovery (BC/DR) Plan addresses actions required to maintain operations from both technology and overall business perspectives in the event of a disaster or other disruption to normal operations.

The Business Continuity / Disaster Recovery Plan addresses the following:

- Business Continuity
 - Defines how organizations will recover and restore partially or completely interrupted critical (urgent) functions within a predetermined time after a disaster or extended disruption
 - Defines maintenance review cycles for the BC/DR Plans to identify potential sources of change such as new compliance requirements, changes to critical Recovery Time Objectives (RTO), and Recovery Point Objectives (RPO) levels
 - Includes risk assessment methodology, threat identification and analysis, potential damage that events could cause, and impact scenarios
- Disaster Recovery
 - Defines maintenance and contingency plan testing schedules
 - Provides guidance for business continuity and disaster recovery drills
 - Documents the communications plan to be used during a system disaster and recovery
 - Identifies measures and controls, establishing business and technical recovery requirements
 - Documents backup and failover processes for all IT assets based on RTO and RPO as determined and mutually agreed upon by the DDI vendor and State during disaster recovery planning

The DDI vendor leads the development of the BC/DR Plan; a link to this plan is included in the INvest Master PMP.

Further information is available in the **Implementation** chapter.

Maintenance and Operations Plan

The Maintenance and Operations Plan defines activities needed to support ongoing operation of INvest, as well as the identification, prioritization, and execution of changes to the INvest production environment. The Maintenance and Operations Plan is initially used by the DDI vendor and is transitioned to CSB as defined in the DDI vendor contract.

The Maintenance and Operations Plan addresses, but is not limited to the following:

- Maintenance and operations
 - Approach
 - Objectives
 - Resources
 - Security
- Maintenance policy, procedures, and checklists
- Third party software upgrade schedules
- Maintenance and operations transition plan to CSB including third party software and hardware procured by the DDI vendor

The DDI vendor develops the Maintenance and Operations Plan; a link to this plan is included in the INvest Master PMP.

Further information is available in the [Post Implementation](#) chapter.

Hardware and Software Plan

The Hardware and Software Plan documents all of the hardware and software anticipated to make up the multiple technical environments for INvest.

The Hardware and Software Plan addresses the following activities and processes:

- Hardware, Network, and Software requirements;
- Capacity planning and analysis;
- Environments to support the development life cycle;
- Tools used; and
- Hardware and software set up for complete solution including, but not limited to:
 - Installation
 - Configuration
 - Troubleshooting
 - Database installation, configuring, and monitoring.

The DDI vendor is responsible for the development of this plan; a link is included as part of the INvest Master PMP.

3.3.2 Updates to the INvest Master Project Management Plan

The INvest Master PMP is progressively elaborated as new sections are developed or existing sections are updated based on project needs. The INvest Master PMP, the DDI PMP, and the QA PMP are reviewed by the INvest PMO, the DDI vendor, and the QA vendor, respectively, semi-annually or as requested by the INvest PMO Manager. Changes to all PMP content must be reviewed and approved by the INvest PMO Manager.

Any changes to sections of the INvest Master PMP that result in changes to established baselines must follow the Project Change Control and Estimation process.

3.4 Templates

Table 11 provides a summary of the templates used for the PMP Development process.

Table 11: Project Management Plan Development Templates

Template Name	Description	Attachment ID
Project Management Plan Template	<ul style="list-style-type: none"> Provides direction and a framework in developing project management plans. 	PMP-01
Lessons Learned Register Template	<ul style="list-style-type: none"> Captures organizational experience gained through the INvest Project. 	PMP-02

4.0 QUALITY ASSURANCE

4.1 General Introduction and Overview

The **Quality Assurance** chapter provides a description of QA, including quality management (QM) and quality control (QC) activities, as well as roles and responsibilities related to the Quality Management Plan (QMP) review and update process.

- **Quality Management:** The PMBOK® Guide's QM principles serve as the basis for the INvest QA approach, with emphasis on prevention over inspection, continuous improvement, managerial responsibility, and customer satisfaction. The QMP identifies the quality standards, processes, and tools used by the INvest Project Team to assess, control, and report on INvest quality.
- **Quality Assurance:** Quality assurance ensures the processes used to create the system and project artifacts are functioning to produce high quality deliverables. This includes validating adherence to approved project processes, observing project execution and team member interactions, and verifying execution of the project in accordance with plans and procedures as identified in the INvest Governance Manual. QA involves evaluating, identifying, and recommending adjustments to activities, tasks, and associated resources to provide assurance the project is meeting its stated goals and standards.
- **Quality Control:** Quality control is the activities performed to inspect, review, and correct deficiencies in INvest Project deliverables. QC monitors to assure that acceptance criteria are defined and used during deliverable and work product development. Deliverables are developed to meet requirements and acceptance criteria. A primary method of performing QC on the INvest Project is using customized quality checklists to review deliverables to verify compliance with the acceptance criteria and quality standards. The QA Team works collaboratively with CSB to customize existing checklists or to develop new checklists appropriate to the specific deliverable or process being assessed. The DDI vendor works cooperatively with CSB and the QA Team to ensure understanding and implementation of the quality standards and checklist criteria. The results of QC reviews are then fed back into the QA process to re-evaluate and analyze the quality standards and acceptance criteria.

The QMP developed by the QA Team serves as the central guide for all INvest quality-related activities for CSB, the QA vendor, and the DDI vendor. The QMP is stored in the INvest Project Library.

INvest quality is also supported by the efforts of the Independent Verification and Validation (IV&V) vendor. While, as an independent agent, the IV&V vendor's activities are not described in the INvest Governance Manual, IV&V provides important input to the QM processes and activities defined in the QMP.

4.2 Key Roles and Responsibilities

Table 12 provides a summary of the key roles and primary responsibilities involved in the Quality Assurance process.

Table 12: Quality Assurance Key Roles and Responsibilities

Key Role	Responsibilities
DDI Project Manager	<ul style="list-style-type: none"> Updates the DDI QA approach per the INvest QMP as needed, following QMP updates
INvest Project Executive	<ul style="list-style-type: none"> Serves as the escalation point for unresolved quality approach or content Reviews and signs off on the revised QMP
INvest PMO	<ul style="list-style-type: none"> Schedules clarification meetings if necessary Confirms the QA Team has addressed the comments Reviews the QMP Provides comments to the INvest PMO Manager
INvest PMO Manager	<ul style="list-style-type: none"> Notifies the team to begin the review Submits comments to the QA Team Escalates questions and concerns raised during the review to the INvest Project Executive as needed Reviews and signs off on the revised QMP
QA Client Executive	<ul style="list-style-type: none"> Serves as the escalation point for unresolved issues related to the quality approach or content
QA Project Manager	<ul style="list-style-type: none"> Oversees QA Team activities Submits the QMP for review one month prior to the six month required review of the QMP Resubmits the revised QMP based on CSB comments Signs off on the revised QMP after the INvest Project Executive signs off
QA Team	<ul style="list-style-type: none"> Revises the QMP based on any lessons learned or comments received since the last QMP approval Documents updates in the Document History before submitting the revised QMP to CSB Addresses comments received from CSB Attends clarification meetings as necessary

4.3 Process Overview and Activities

The QMP includes descriptions of QA and QC processes for CSB, the QA vendor, and the DDI vendor as well as a list of related templates. The QMP is reviewed and updated every six months following initial approval. The last review and update occurs no later than one month prior to the INvest anticipated closure date.

Figure 16 provides the Quality Management Plan Review and Update process.

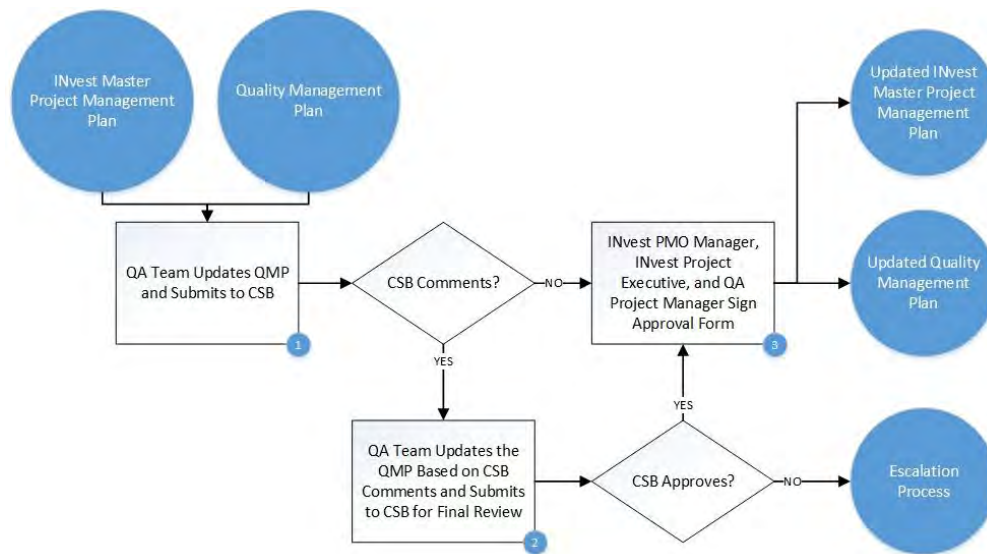


Figure 16: Quality Management Plan Review and Update Process

1. **QA Team Updates QMP and Submits to CSB** – The QA Team updates the QMP with any lessons learned from the QA processes used to date and submits the revised plan to the INvest PMO Manager with a comment log for an initial review. The INvest PMO Manager solicits comments from INvest Project Team members and submits comments to the QA Team using the comment log. INvest Project Team members may conduct clarification meetings with the QA Team to ensure understanding of the QMP contents and the intent of any proposed revisions before completing their review.
2. **QA Team Updates the QMP Based on CSB Comments and Submits to CSB for Final Review** – The QA Team responds to all comments, revises the QMP based on accepted comments and provides explanations for rejected comments, and resubmits the QMP to the INvest PMO Manager for approval.
3. **INvest PMO Manager, INvest Project Executive, and QA Project Manager Sign Approval Form** – The INvest PMO Manager and INvest Project Executive sign the approval form. The escalation process is used to resolve any disagreements related to QMP revisions that cannot be resolved between the INvest PMO Manager and the QA Project Manager.

4.4 Templates

(Note: There are no templates defined for the Quality Assurance process. Templates will be defined as part of the Quality Management Plan once the DDI vendor is engaged.)

5.0 STAKEHOLDER MANAGEMENT

5.1 General Introduction and Overview

The Stakeholder Management process ensures project stakeholders are effectively involved in planning and execution throughout the life cycle of the INvest Project. Keeping stakeholders engaged reinforces support for the project, and helps gauge resistance, conflict, or competing objectives that may impact the project.

Stakeholder management includes the processes required to:

- Identify people, groups, and organizations that affect or are affected by the INvest Project;
- Analyze stakeholder expectations and their impact on the project; and
- Develop appropriate strategies for effectively engaging stakeholders in a manner appropriate to the stakeholders' interest and involvement in the project.

A stakeholder is a person or group of people, either internal or external, who is involved in or affected by the INvest Project and whose understanding and support are desired. For purposes of the INvest Project, internal stakeholders are team members, groups, or vendors directly involved in the implementation of INvest. External stakeholders are divided into three distinct categories as listed in Table 13. Refer to the INvest Glossary for the definitions for Internal and External Stakeholders.

The Stakeholder Management Plan is a component of the INvest Master PMP.

Table 13: Internal and External Stakeholders

Stakeholder Type	Stakeholder Groups	Members
Internal	INvest Executive Team	<ul style="list-style-type: none"> • CSB Executive Sponsor • INvest Project Executive • CSB-IT Director
	DDI	<ul style="list-style-type: none"> • DDI Project Manager • DDI Deputy Project Manager
	QA	<ul style="list-style-type: none"> • QA Project Manager • QM Lead
	INvest Core Committee	<ul style="list-style-type: none"> • CSB Executive Sponsor • INvest Project Executive • CSB-IT Director • CSB Technical Manager • CSB Functional Manager • CSB Chief Architect • INvest PMO Manager • CSB Data and Conversion Manager • CSB Security Manager • CSB Testing and Help Desk Manager • OR Manager • Others, as needed

Stakeholder Type	Stakeholder Groups	Members
	Stakeholder Committee	<ul style="list-style-type: none"> • CSB Executive Sponsor • INvest Project Executive • INvest PMO Manager • Indiana Prosecuting Attorneys Council Representatives • County Prosecuting Attorneys Representatives • County Clerks of the Circuit Court Representatives • OR Manager • CSB Functional Manager • CSB Strategic Initiatives Manager • CSB Advisors
	Executive Steering Committee	<ul style="list-style-type: none"> • CSB Executive Sponsor • INvest Project Executive • CSB-IT Director • DCS Director • DCS Chief of Staff • DCS Chief Information Officer • DCS Chief Financial Officer • DCS Legal Representative • DCS HR Representative • DCS Legislative Representative • DCS Deputy Chief of Staff • IDOA Representative • IOT Representative • State Budget Agency Representative • INvest PMO Manager
	CCRB	<p>Permanent members:</p> <ul style="list-style-type: none"> • INvest Project Executive • INvest PMO Manager • CSB Functional Manager • OR Manager • CSB Technical Manager <p>Ad-hoc members:</p> <ul style="list-style-type: none"> • CSB-IT Director • CSB Chief Architect • CSB Security Manager • CSB Data and Conversion Manager • CSB Testing and Help Desk Manager • DDI Project Manager • BAC and TAC • Other staff, as needed

Stakeholder Type	Stakeholder Groups	Members
External	IV&V	<ul style="list-style-type: none"> IV&V Project Manager
	Primary users	<ul style="list-style-type: none"> County Prosecutors County Clerks CSB Staff Indiana State Central Collection Unit (INSCCU) Staff OCSE
	Secondary users	<ul style="list-style-type: none"> Employers Custodial Parties Non-Custodial Parties
	Others	<ul style="list-style-type: none"> State and Federal Agency Interface Partners Vendor Interface Partners

The **Communications Management** chapter contains additional detail related to interactions with stakeholders in support of the Stakeholder Management process.

5.2 Key Roles and Responsibilities

Table 14 provides a summary of the key roles and primary responsibilities involved in the Stakeholder Management process.

Table 14: Stakeholder Management Key Roles and Responsibilities

Key Role	Responsibilities
CSB Executive Sponsor	<ul style="list-style-type: none"> Provides vision and input for managing stakeholders Approves stakeholder management strategies and control mechanisms
DDI / QA vendors	<ul style="list-style-type: none"> Supports the process Provides input
INvest Project Executive	<ul style="list-style-type: none"> Gives direction to the INvest PMO and OR for managing stakeholders Approves the Stakeholder Management Plan Approves stakeholder management strategies and control mechanisms
INvest PMO	<ul style="list-style-type: none"> Manages Stakeholder Management processes Completes the Stakeholder Influence Grid
OR	<ul style="list-style-type: none"> Supports completion of the Stakeholder Influence Grid using the Stakeholder Analysis Workbook Supports the INvest PMO with the Stakeholder Management process as a conduit to external stakeholders
CSB Strategic Initiatives Director	<ul style="list-style-type: none"> Manages interactions with State and federal agencies and vendor interface partners

5.3 Process Overview and Activities

The objective of the stakeholder management process is to identify all internal and external stakeholders, plan stakeholder management, and manage and control the stakeholder management process.

Figure 17 provides the Stakeholder Management process.

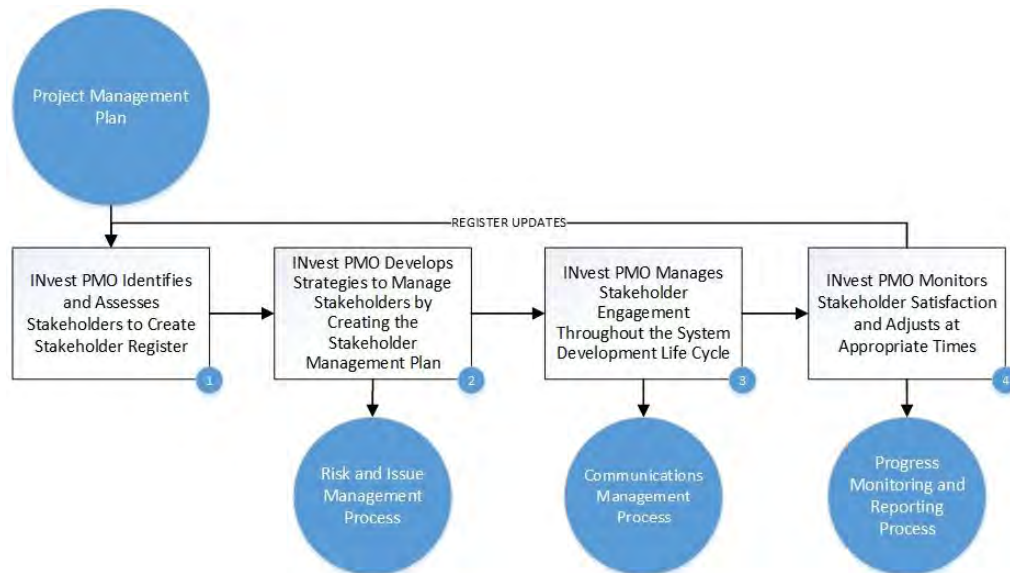


Figure 17: Stakeholder Management Process

The Stakeholder Management process includes the following four tasks:

1. **INvest PMO Identifies and Assesses Stakeholders to Create Stakeholder Register** – This task identifies the people, groups, and organizations that could influence project direction or be impacted by a decision, activity or outcome of the project. Completing the analysis of new and existing stakeholders ensures the INvest Project identifies each stakeholder’s influence and involvement in the project, and ensures success by identifying their interests and impact to the project.
2. **INvest PMO Develops Strategies to Manage Stakeholders by Creating the Stakeholder Management Plan** – This task identifies strategies and mechanisms used to effectively engage stakeholders throughout the project life cycle, based on their needs and potential impact on project success. These strategies are created to involve stakeholders at appropriate times in the project life cycle.
3. **INvest PMO Manages Stakeholder Engagement Throughout the System Development Life Cycle** – This task outlines processes and steps taken to carry out planned strategies by communicating and working with stakeholders, and meeting their needs and expectations. Fostering stakeholder involvement is a critical component to ensure that issues are addressed throughout the INvest Project.
4. **INvest PMO Monitors Stakeholder Satisfaction and Adjusts at Appropriate Times** – This task describes methods to monitor stakeholder involvement and alert the INvest Project Team to potential issues. This process is ongoing throughout the INvest Project; plans and strategies are updated as appropriate to keep stakeholders involved.

5.3.1 Identify Stakeholders

To develop an effective plan for managing stakeholders, they must be clearly identified with an accompanying assessment of each stakeholder group's position, the impact it has on the project, and how it may affect the project.

The INvest PMO, supported by OR, identifies all internal and external stakeholders that affect or are affected by the INvest Project, completing a Stakeholder Analysis Workbook to identify communication needs and other expectations related to INvest Project stakeholders. See **Attachment SMA-01 Stakeholder Analysis Workbook**.

5.3.1.1 Stakeholder Influence Grid

The INvest PMO, supported by OR, uses the Stakeholder Analysis Workbook to develop a Stakeholder Influence Grid that analyzes stakeholders and stakeholder groups. Once the analysis is complete, the INvest PMO and OR plot each stakeholder entity into the Stakeholder Influence Grid (see Table 15) based on the results of the analysis. This provides a visual depiction of each stakeholders' level of influence over the project and their involvement or interest with the project outcomes.

The Stakeholder Influence Grid is an internal tool used by the INvest PMO to identify the most influential and most impacted stakeholders and stakeholder groups, and supports the development of focused stakeholder management strategies and plans. The outputs of this internal tool inform the stakeholder-specific details captured in the public Stakeholder Register.

Table 15: Stakeholder Influence Grid

		INVOLVEMENT		
		1 (Low)	3 (Medium)	5 (High)
INFLUENCE	5 (High)	Keep Satisfied <ul style="list-style-type: none"> Monitor perceptions Communicate regularly Seek feedback Resolve any concerns quickly 	Keep Satisfied <ul style="list-style-type: none"> Monitor perceptions often Communicate often Seek feedback Resolve problems immediately 	Critical <ul style="list-style-type: none"> Monitor perceptions often Communicate often Seek feedback often Resolve problems immediately
	3 (Medium)	Keep Informed <ul style="list-style-type: none"> Monitor perceptions Communicate regularly Resolve problems timely 	Keep Informed <ul style="list-style-type: none"> Monitor perceptions often Communicate often Resolve problems timely 	Keep Satisfied <ul style="list-style-type: none"> Monitor perceptions often Communicate often Seek feedback Resolve problems immediately
	1 (Low)	Minimal Effort	Keep Informed <ul style="list-style-type: none"> Monitor perceptions Communicate regularly Resolve problems promptly 	Keep Informed <ul style="list-style-type: none"> Monitor perceptions Communicate often Resolve problems promptly

5.3.1.2 Stakeholder Confirmation

To confirm the stakeholder identification and analysis process is accurate and complete, the INvest PMO, supported by OR, facilitates a series of reviews with the CSB Executive Sponsor, INvest Project Executive, and others.

5.3.1.3 Stakeholder Register

INvest Project stakeholders are primarily identified at the group level, with some exceptions who are identified individually. The output of stakeholder identification is the creation of the INvest Project Stakeholder Register. Typically, the stakeholder register provides each stakeholder's name, title, role, requirements (i.e., Required Action Level and Required Documentation), and expectations (i.e., Preferred Method of Communication and Required Participation). See **Attachment SMA-02 Stakeholder Register Template**.

Creating the INvest Project Stakeholder Register early in the project helps enable project success. After creation of the stakeholder register, the INvest PMO and OR can plan for and manage project stakeholders.

The stakeholder register identifies all stakeholders, internal and external (see Table 13), impacted by the INvest Project. The INvest PMO, supported by OR, updates the register throughout the project as the project team identifies new information, and any stakeholders not identified in the initial assessment.

The stakeholder register is an input to other processes associated with the INvest Project, ensuring stakeholders get involved with the INvest Project at the right time, receive reports and other documentation at the appropriate point in the project, and communicate using the preferred methods.

5.3.2 Plan Stakeholder Management

Plan Stakeholder Management is the process of developing appropriate management strategies to involve stakeholders effectively throughout the life cycle of the INvest Project. The INvest PMO and OR understand how to manage stakeholders to support the project's interests based on the analysis of stakeholders' needs, interests, and potential impact on project success. The INvest Stakeholder Management Plan includes background information concerning previous stakeholder identification activities; the continued identification and assessment is focused on external stakeholders.

The result of planning stakeholder management is the development of the Stakeholder Management Plan. Descriptions of the elements of the Stakeholder Management Plan are included in **Part 5.3.2.1**.

5.3.2.1 Stakeholder Management Plan

Table 16 provides the Stakeholder Management Plan contents.

Table 16: Stakeholder Management Plan Contents

Section	Contents
Purpose and Scope	<ul style="list-style-type: none"> This section defines the strategies needed to meet the needs of the stakeholders and the goals of the INvest Project, as well as any assumptions and constraints that are identified
Relationship to Other Plans	<ul style="list-style-type: none"> The Stakeholder Management Plan provides the guiding principles for engagement of INvest Project stakeholders throughout the INvest Project life cycle. Understanding how the Stakeholder Management Plan relates to other INvest Project plans ensures consistency of communications and that the overall messaging for the INvest Project stays on point. The INvest PMO Manager considers relationships with other plans developed by the INvest PMO, DDI vendor, and others throughout the course of the INvest Project. Expected relationships include: <ul style="list-style-type: none"> The INvest Master PMP. The Stakeholder Management Plan is a key component of the PMP. The Communications Management Plan. The stakeholder-specific communication needs captured in the stakeholder register are important inputs to communication planning, especially regarding external stakeholders. The Risk and Issue Management Plan. Analysis of stakeholder perspectives can uncover important project risks, and ongoing monitoring may discover issues related to stakeholder engagement
Stakeholder Management Objectives	<ul style="list-style-type: none"> Stakeholder management objectives capture the intended impact of the stakeholder management process. Objectives documented in this part address: <ul style="list-style-type: none"> The desired level of engagement for key stakeholders; and Expectations for the level of effort required to monitor and sustain stakeholder engagement.
Stakeholder Management Risks	<ul style="list-style-type: none"> Stakeholder management risks identify potential events that could negatively affect INvest Project stakeholder engagement. This part documents risks identified during the stakeholder management planning process; additional risks may be identified in later stages of INvest Project execution. Once identified, risks are managed through the INvest Project Risk and Issue Management process.
Stakeholder Management Approach	<ul style="list-style-type: none"> The INvest Project has a broad range of stakeholders, all of whom have differing interests and influence. To aid in choosing effective and efficient stakeholder management techniques, the INvest PMO assesses all identified stakeholders based on their: <ul style="list-style-type: none"> Influence on the INvest Project; Interest in the INvest Project; and Role and responsibilities. The Stakeholder Management Approach identifies general techniques used across the set of stakeholders; following analysis using the Stakeholder Analysis Workbook, specific communication needs are documented in the Stakeholder Register

5.3.3 Manage Stakeholder Engagement

The practice of communicating and working with stakeholders to meet their needs and expectations is part of managing stakeholder engagement. The Communications Matrix in the **Communications Management** chapter provides information on how communication helps manage stakeholders and stakeholder groups. This process also fosters appropriate stakeholder engagement in project activities throughout the life of the INvest Project and addresses issues as they occur.

Managing stakeholder engagement includes:

- Engaging INvest Project stakeholders at different stages of the project to obtain or confirm their continued commitment to the INvest Project's ongoing success
- Managing INvest Project stakeholder's expectations ensuring achievement of INvest Project goals
- Addressing potential risks prior to them becoming issues, and anticipating future stakeholders' concerns
- Clarifying and resolving issues that arise

To manage stakeholder engagement effectively, the INvest PMO and OR use the Stakeholder Management Plan, the Communications Management Plan, and the strategies identified to communicate project-related information to key stakeholders in a proactive and timely manner. The Stakeholder Management Plan provides guidance for how to involve various stakeholders in the INvest Project.

Leveraging the information provided in the Communications Management Plan (e.g., stakeholder groups, communication items, purpose, method of communication, and frequency), the INvest PMO and OR have the ability to increase support and minimize stakeholder resistance throughout the life of the project. Managing stakeholder involvement helps to increase the probability of project success by ensuring stakeholders clearly understand the project goals, objectives, benefits, and risks.

5.3.4 Monitor Stakeholder Engagement

Monitoring stakeholder engagement and project stakeholder relationships allows for adjustment of strategies and plans to involve stakeholders where required. Specific activities include collecting data, assessing the level of involvement, and using insights from the data collection to adjust strategies for engaging with stakeholders. This data collection allows reporting on how effectively the INvest Project is meeting its goals in managing stakeholders.

There are a variety of tools and techniques available to receive ongoing direct feedback from stakeholders, including interviews, surveys, questionnaires, and meetings. The process encourages individual stakeholders to participate and to voice questions and concerns.

As part of the ongoing process of stakeholder management, the information gathered through these tools and techniques may result in updates to the stakeholder register, communications matrix, or the risk and issue registers maintained in the risk and issue tool. For the stakeholder register, the INvest PMO and OR may identify stakeholders who are no longer involved, no longer impacted, etc., as well as identifying any new stakeholders. Additionally, these tools and techniques may identify new issues or risks and allow closure of existing issues or risks when they no longer have existing or potential impact to the INvest Project.

5.4 Templates

Table 17 provides a summary of the templates used for the Stakeholder Management process.

Table 17: Stakeholder Management Templates

Template Name	Description	Attachment ID
Stakeholder Analysis Workbook	<ul style="list-style-type: none"> Identifies each stakeholder’s influence and involvement with the INvest Project and produces the Stakeholder Influence Grid 	SMA-01
Stakeholder Register Template	<ul style="list-style-type: none"> Identifies each stakeholder, how to effectively communicate with and manage stakeholders, and how to keep stakeholders engaged in the INvest Project 	SMA-02

6.0 COMMUNICATIONS MANAGEMENT

6.1 General Introduction and Overview

Communications Management includes the steps required to identify, plan, and execute project-level communications to stakeholders. The DDI vendor, QA vendor, and the INvest PMO prepare Communications Management Plans, including communications matrices, for insertion into the INvest Master PMP. OR and the CSB Strategic Initiatives Director develop communications matrices for insertion into the INvest Master PMP. The INvest PMO is responsible for consolidating and monitoring all communications matrices. The communications matrices guide all internal and external communications and are updated as appropriate.

Various forms of project communications are necessary to ensure the INvest Project Team and all external stakeholders understand the goals of the project, as well as project progress. Timely and appropriate communication is critical to accommodate all levels of stakeholder involvement. The Communications Management Plans provide:

- Awareness of the INvest Project goals
- Understanding of the benefits of the INvest Project
- Support and buy-in for the INvest Project goals and vision
- Commitment to provide time and resources to the INvest Project
- Acceptance and the ultimate success of the INvest Project

INvest Project communications provide timely and consistent updates to all INvest stakeholders. The objectives of the Communications Management Plans are to:

- Establish standards and norms for INvest Project Team communications
- Describe the communications management process for all stakeholders
- Develop strategic and consistent messaging tailored for specific stakeholders appropriate to the INvest Project phase
- Develop a standardized process with clear pathways for feedback from all stakeholders

The successful implementation of the INvest Project is dependent upon how well the affected stakeholders are equipped to adopt and adapt to the new environment. Successful communication provides timely access to information in the manner best suited for the audience and the project phase.

The Communications Management Plans are components of the INvest Master PMP.

6.2 Key Roles and Responsibilities

Table 18 provides a summary of the key roles and primary responsibilities involved in the Communications Management process.

Table 18: Communications Management Key Roles and Responsibilities

Key Role	Responsibilities
CSB Executive Sponsor	<ul style="list-style-type: none"> Provides approval for the OR External Communications Matrix Provides approval for the Strategic Initiatives External Communications Matrix
CSB Strategic Initiatives Director	<ul style="list-style-type: none"> Develops the External Strategic Initiatives Communications Matrix Provides the External Communications Matrix to the CSB Executive Sponsor or INvest Project Executive or both for approval Publishes the approved External Communications Matrix Identifies upcoming external communications on the Strategic Initiatives Communications Matrix Monitors progress of external communications development, review, and approval Develops external communications Provides communications to OR for review and updates for style, grammar, and consistency Ensures external communications are published according to Strategic Initiatives External Communications Matrix
DDI Project Manager	<ul style="list-style-type: none"> Develops the DDI Communications Section of the PMP Develops the DDI Internal Communications Matrix Works with DDI vendor staff to prepare, develop, and approve the DDI Internal Communications Matrix Provides the DDI Internal Communications Matrix to the INvest PMO Manager for approval Revises the DDI Internal Communications Matrix if it is not approved Assists with external communications
DDI Team	<ul style="list-style-type: none"> Identifies upcoming communications on the DDI Internal Communications Matrix Submits communications to the INvest PMO Manager for approval Publishes communications once approved, or revises it if not approved Assists with external communications
INvest Project Executive	<ul style="list-style-type: none"> Provides approval for the OR External Communications Matrix Provides approval for the Strategic Initiatives External Communications Matrix

Key Role	Responsibilities
INvest PMO Manager	<ul style="list-style-type: none"> • Develops the PMO Internal Communications Matrix • Approves or rejects the DDI and QA Internal Communications Matrices • Consolidates all approved internal communications matrices into the Master Internal Communications Matrix • Publishes and maintains the Master Internal Communications Matrix • Monitors progress of communications development, review, and approval • Ensures communications are published according to schedule • Monitors effectiveness of internal communications • Reports status via status report
INvest Project Team	<ul style="list-style-type: none"> • Identifies upcoming internal communications on the PMO Internal Communications Matrix • Develops the internal communications and submits them to the INvest PMO Manager for approval • Publishes internal communications once approved
OR	<ul style="list-style-type: none"> • Reviews and updates Strategic Initiatives communications for style, grammar, and consistency • Identifies upcoming external communications on the OR External Communications Matrix • Supports development of communications
OR Manager	<ul style="list-style-type: none"> • Develops the OR External Communications Matrix for Primary and Secondary users • Submits the External Communications Matrix to the INvest Project Executive or CSB Executive Sponsor or both for approval • Publishes the approved OR External Communications Matrix • Monitors progress of external communications development, review, and approval • Ensures external communications are published according to the OR External Communications Matrix schedule • Monitors effectiveness of communications to Primary and Secondary users
QA Project Manager	<ul style="list-style-type: none"> • Develops the QA Internal Communications Matrix • Works with QA staff to prepare, develop, and approve the QA Internal Communications Matrix • Provides the QA Internal Communications Matrix to the INvest PMO Manager for approval • Revises the QA Internal Communications Matrix if it is not approved • Assists with external communications
QA Team	<ul style="list-style-type: none"> • Identifies upcoming internal communications on the QA Internal Communications Matrix • Submits communications to the INvest PMO Manager for approval • Publishes communications once approved, or revises it if not approved • Assists with external communications

6.3 Process Overview and Activities

The objective of the Communications Management Plans and Communications Matrices contained in the CSB, DDI vendor, and QA vendor's PMP(s) is to manage execution of INvest Project communications to keep stakeholders informed of project progress and developments, and to communicate general messaging that amplifies or clarifies project information. This process includes the use of the Stakeholder Register, communication topics, and communication channels, as well as assignment of responsibility for developing, delivering, and assessing the effectiveness of communications. As the INvest Project progresses, CSB, the DDI vendor, and the QA vendors update their respective communications matrices as needed.

Figure 18 provides the Communications Management Plans and Communications Matrices Overview process, which depicts a high-level view of the development of the Communications Management Plans and Communications Matrices.

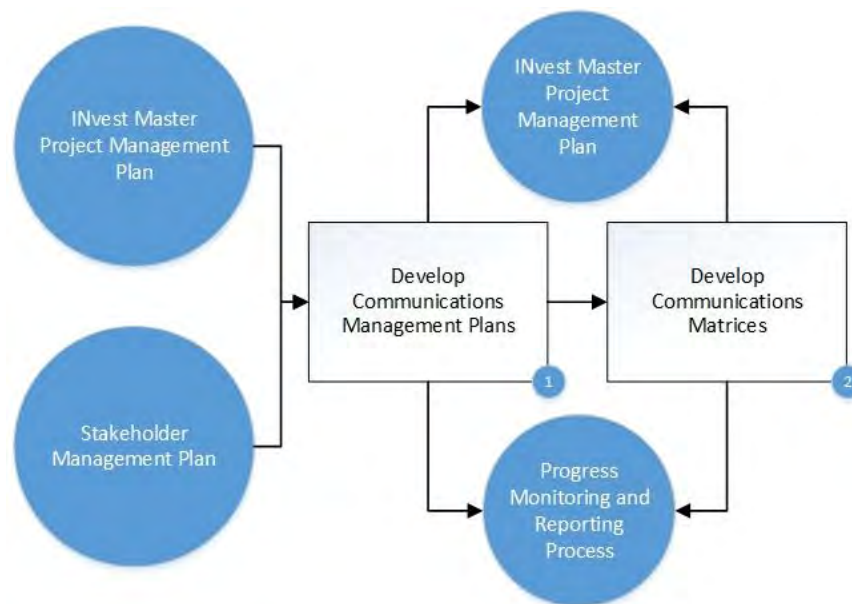


Figure 18: Communications Management Plans and Communications Matrices Overview Process

1. **Develop Communications Management Plans** – The INvest PMO, the DDI vendor, OR, the CSB Strategic Initiatives Director, and the QA vendor develop strategies for internal communications which are consolidated into the INvest Master PMP and reported using status reports.
2. **Develop Communications Matrices** – The Communications Matrices provide the details for how communications are developed, delivered, and consolidated into the INvest Master PMP and reported using status reports.

6.3.1 Communications Management Plan

The Communications Management Plan ensures project stakeholders are effectively informed of the status of the INvest Project. Identification of stakeholders and a planned communication strategy helps to ensure that stakeholders remain engaged and reinforces support for the project. Table 19 provides the minimum content of each owner's Communications Management Plan.

Table 19: Communications Management Plan Contents

Section	Contents
Purpose and Scope	<ul style="list-style-type: none"> ● Purpose and scope sets the foundation for the communication goals and strategies of the INvest Project, and is intended to provide guidance in planning and measuring results of current and future communication efforts. The purpose and scope of the Communications Management Plans document expectations for what is included in formal communication planning, as well as other expectations for involvement in the process and the level of detail to be documented.
Relationship to Other Plans	<ul style="list-style-type: none"> ● The Communications Management Plans provides guidelines for how communications are executed throughout the INvest Project life cycle. Understanding how INvest Project communications relate to other INvest Project plans ensures consistency of communication and that the overall messaging for the INvest Project stays on point. ● The INvest PMO Manager considers relationships with other plans developed by the INvest PMO, the DDI vendor, and others throughout the course of the INvest Project. Expected relationships include: <ul style="list-style-type: none"> ○ The INvest Master PMP: The Communications Management Plans and the consolidated Communications Matrix are key components of the INvest Master PMP. ○ The Stakeholder Management Plan: The Stakeholder Register, which is created following the guidance provided by the Stakeholder Management Plan, is an important input to communication planning, especially regarding external stakeholders. ○ The Risk and Issue Management Plan: Communication is critical to effective execution of risk and issue management, so it is especially important to align these efforts.
Communication Objectives	<ul style="list-style-type: none"> ● The objective of the Communications Management Plans is to define the communications requirements for the INvest Project and how information is distributed. This guidance will influence the development and documentation of specific communication items in the communications matrix.
Communication Risks	<ul style="list-style-type: none"> ● As the INvest PMO Manager leads the effort to document the internal and external communication requirements of the INvest Project, areas of risk will likely be identified. Examples of potential risks might include: <ul style="list-style-type: none"> ○ The reliability of a communication channel (e.g., technical issues with an electronic medium) ○ The engagement of an individual stakeholder or group of stakeholders (e.g., will they look at a website or read an email?) ○ Potential for miscommunication if messages targeted for one audience are shared with others (who may not have all related contextual information)

Section	Contents
Project Team Communications Approach	<ul style="list-style-type: none"> The Communications Matrix is used as the guide for what is communicated to INvest Project Team members. The INvest PMO manages all internal communications. OR manages external communications with Primary and Secondary users. The CSB Strategic Initiatives Director manages communications with both State and federal agency interface partners and vendor interface partners. The approach outlines expectations and identifies any specific methods or tools that are preferred for different types of communication needs. This guidance drives the development and documentation of specific communication items in the communications matrix. Guidance may involve expectations for: <ul style="list-style-type: none"> What must be communicated with the stakeholder The appropriate delivery method The appropriate audience When the communication should occur Who delivers the communication The level of effectiveness expected for the communication
Stakeholder Communications Approach	<ul style="list-style-type: none"> The INvest Project has a broad range of stakeholders, each of whom have differing interests in and influence on the project. As such, a range of approaches is required to meet the varying needs of the stakeholders. The stakeholder communication approach builds on information developed in the Stakeholder Management Plan to identify a set of approaches that can be used as needed across the set of stakeholders. For more information on the approach to identifying stakeholders and their level of influence and involvement, refer to the Stakeholder Management chapter. The Communications Matrix is used as the guide for which information is communicated to INvest Project stakeholders. The approach outlines expectations and identifies any specific methods or tools that are preferred for different types of communication needs.
Communications Matrix	<ul style="list-style-type: none"> The Communications Matrix is a tactical artifact used to manage communications for the INvest Project. Each column of the Communications Matrix is completed for a given INvest Project phase. See Attachment COM-01 Communications Matrix. The Communications Matrix Template includes an additional tab providing guidance for recommended messages based on the stage of the development cycle.

6.3.2 Introduction to Matrices

The subprocesses presented in this section describe the development and management of communications matrices for INvest Project internal, OR external, and strategic initiatives external communications. In each section, separate subprocesses depict “Development” and “Management” of the matrices.

- Development captures the process for the establishment and approval of the matrices.
- Management captures the process for identifying, developing, publishing, and monitoring communications.

The INvest Project internal communications subprocesses capture the processes for the development, approval, and delivery of communications for the INvest PMO, DDI vendor, and QA vendor.

The INvest Project external communications subprocesses represent the processes for the development, approval and delivery of communications for OR and the CSB Strategic Initiatives Director.

6.3.2.1 Internal Communications Matrix Development

Figure 19 provides the Internal Communications Matrix Development subprocess.

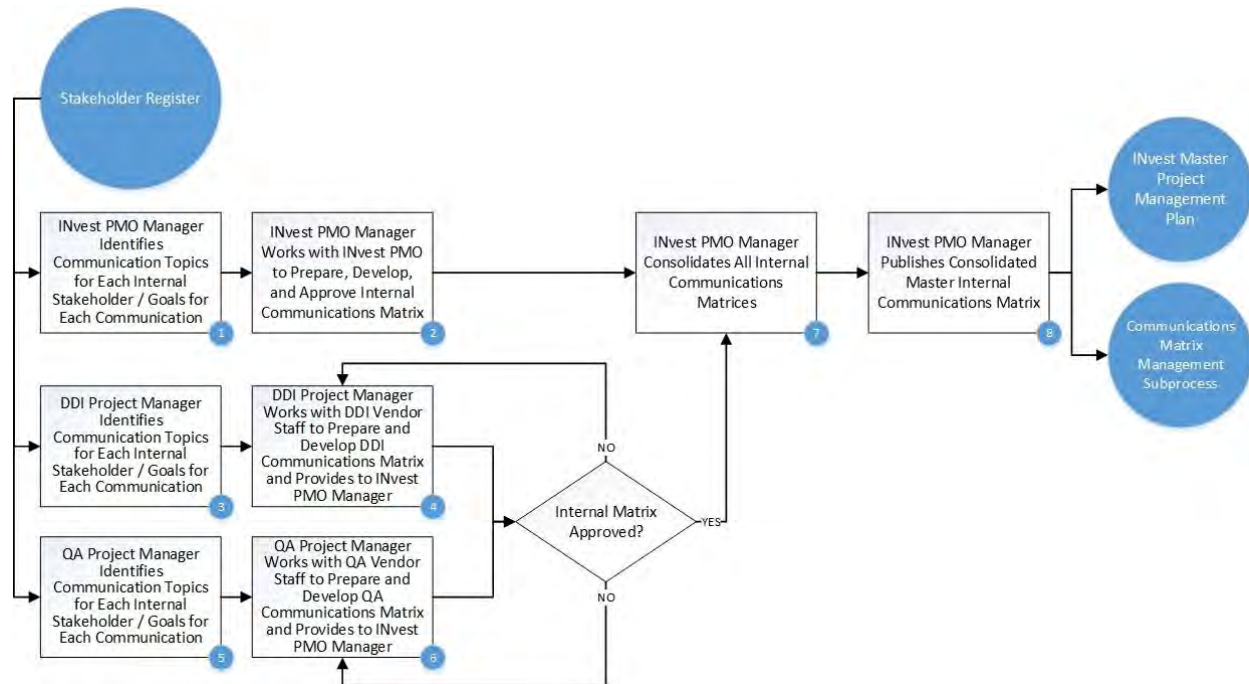


Figure 19: Internal Communications Matrix Development Subprocess

1. **INvest PMO Manager Identifies Communication Topics for Each Internal Stakeholder / Goals for Each Communication** – The INvest PMO Manager uses the stakeholder register to identify internal stakeholders, communication topics, and goals for each communication to internal stakeholders.
2. **INvest PMO Manager Works with INvest PMO to Prepare, Develop, and Approve Internal Communications Matrix** – The INvest PMO Manager, along with the INvest PMO, prepares and develops the internal stakeholder Communications Matrix, including the Identification of appropriate communication channels for each internal stakeholder.
3. **DDI Project Manager Identifies Communication Topics for Each Internal Stakeholder / Goals for Each Communication** –The DDI Project Manager uses the stakeholder register to identify internal stakeholders, communication topics for each internal stakeholder, and goals for each communication to internal stakeholders.

4. **DDI Project Manager Works with DDI Vendor Staff to Prepare and Develop DDI Communications Matrix and Provides to INvest PMO Manager** – The DDI Project Manager, along with the DDI team, prepares and develops the internal stakeholder Communications Matrix. The DDI Project Manager provides the DDI Internal Communications Matrix to the INvest PMO Manager for approval. If the INvest PMO Manager does not approve the DDI Internal Communications Matrix, the INvest PMO Manager returns it to the DDI Project Manager for revision.
5. **QA Project Manager Identifies Communication Topics for Each Internal Stakeholder / Goals for Each Communications** – The QA Project Manager uses the Stakeholder Register to identify internal stakeholders, communication topics for each internal stakeholder, and goals for each communication to internal stakeholders
6. **QA Project Manager Works with QA Vendor Staff to Prepare and Develop QA Communications Matrix and Provides to INvest PMO Manager** – The QA Project Manager, along with the QA Team, prepares and develops the internal stakeholder Communications Matrix. The QA Project Manager provides the Communications Matrix to the INvest PMO Manager for approval. If the INvest PMO Manager does not approve the QA Internal Communications Matrix, the INvest PMO Manager returns it to the QA Project Manager for revision.
7. **INvest PMO Manager Consolidates All Internal Communications Matrices** – After the INvest PMO Manager approves the DDI and QA Internal Communications Matrices, the INvest PMO Manager consolidates the three communications matrices into a master matrix. The consolidated Communications Matrix guides all communication activity internally for the INvest Project.
8. **INvest PMO Manager Publishes Consolidated Master Internal Communications Matrix** – The INvest PMO Manager then publishes the master matrix. OR, the DDI vendor, and the QA vendor use the consolidated Master Internal Communications Matrix as a guide for INvest Project communications.

6.3.2.2 Internal Communications Matrix Management

Figure 20 provides the Internal Communications Matrix Management subprocess.

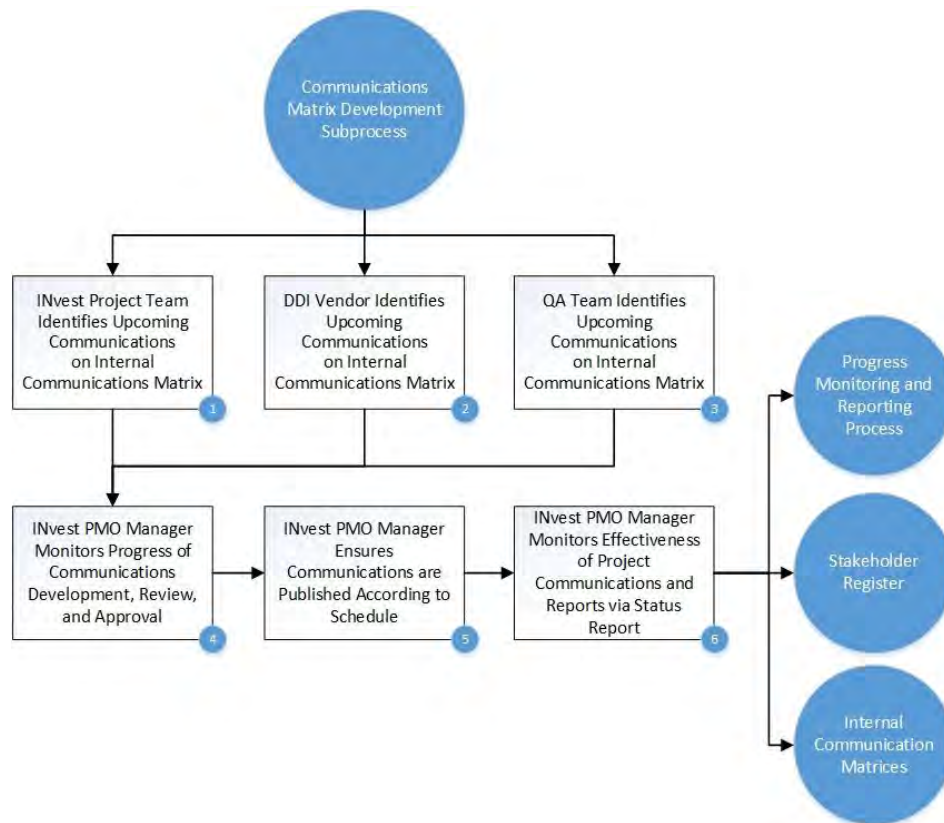


Figure 20: Internal Communications Matrix Management Subprocess

1. **INvest Project Team Identifies Upcoming Communications on Internal Communications Matrix** – The INvest PMO identifies an upcoming communication need from the Internal Communications Matrix and prepares for the communication activity.
2. **DDI Vendor Identifies Upcoming Communications on Internal Communications Matrix** – The DDI vendor team identifies an upcoming communication need from the Internal Communications Matrix and prepares for the communication activity.
3. **QA Team Identifies Upcoming Internal Communications on Internal Communications Matrix** – The QA Team identifies an upcoming communication need from the Internal Communications Matrix and prepares for the communication activity.
4. **INvest PMO Manager Monitors Progress of Communications Development, Review, and Approval** – The INvest PMO Manager monitors progress of the communication development, review and approval from the appropriate entity. The INvest PMO oversees adherence to the Master Internal Communications Matrix.
5. **INvest PMO Manager Ensures Communications are Published According to Schedule** – The INvest PMO Manager ensures the approved communication is published according to the INvest Project Schedule following the Master Internal Communications Matrix.

6. **INvest PMO Manager Monitors Effectiveness of Project Communications and Reports via Status Report** – The INvest PMO Manager ensures each communication has a specific feedback mechanism to gauge its effectiveness.

6.3.2.3 Organizational Readiness External Communications Matrix Development

Figure 21 provides the Organizational Readiness External Communications Matrix Development subprocess.

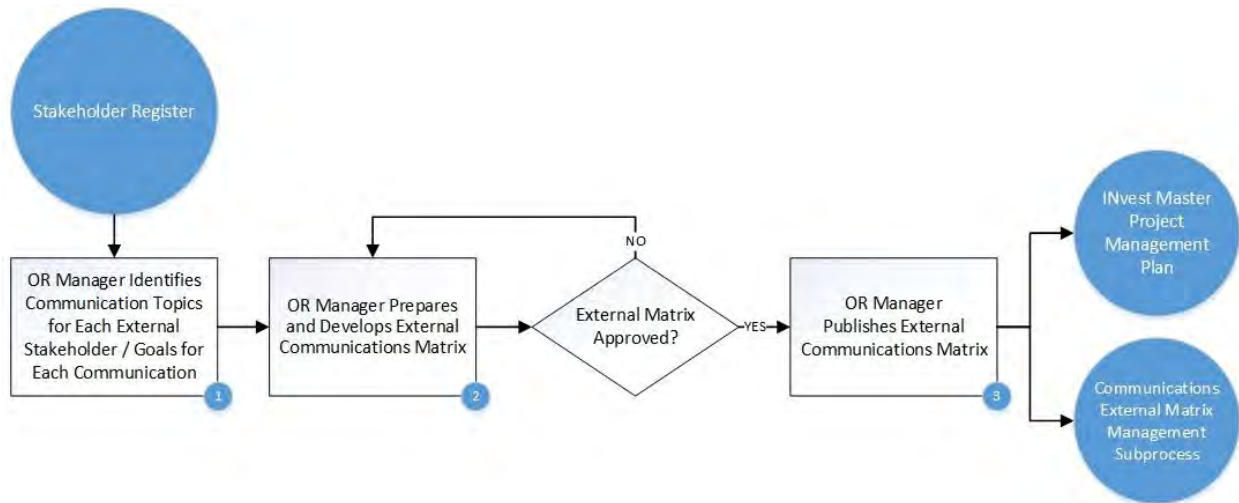


Figure 21: Organizational Readiness External Communications Matrix Development Subprocess

1. **OR Manager Identifies Communication Topics for Each External Stakeholder / Goals for Each Communication** – The OR Manager uses the Stakeholder Register to identify external stakeholders, communication topics, and goals for each communication to external stakeholders.
2. **OR Manager Prepares and Develops External Communications Matrix** – OR, under the leadership of the OR Manager, identifies the communications for which they are responsible in order to communicate with the appropriate external stakeholders. The CSB Executive Sponsor and INvest Project Executive review and approve the External Communications Matrix as appropriate. If the External Communications Matrix is not approved, it is returned to the OR Manager for revision.
3. **OR Manager Publishes External Communications Matrix** – After approval of the External Communications Matrix, the OR Manager publishes it.

6.3.2.4 Organizational Readiness External Communications Matrix Management

Figure 22 provides the Organizational Readiness External Communications Matrix Management subprocess.

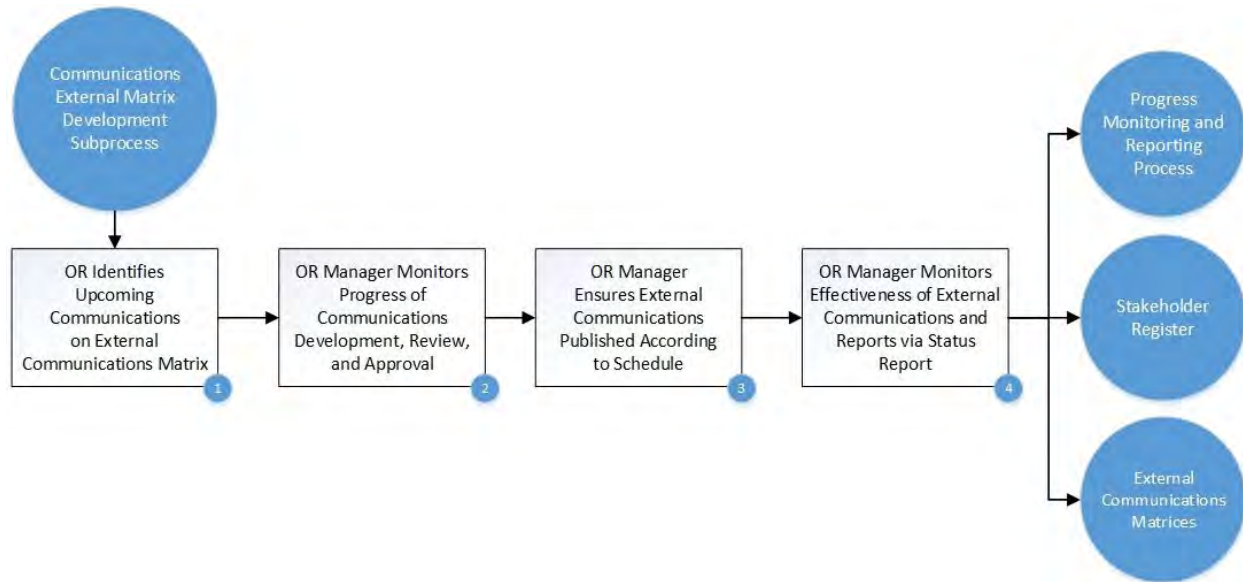


Figure 22: Organizational Readiness External Communications Matrix Management Subprocess

1. **OR Identifies Upcoming Communications on External Communications Matrix** – OR uses the External Communications Matrix to ensure communications stay on schedule based on the expected publish date.
2. **OR Manager Monitors Progress of Communications Development, Review, and Approval** – The OR Manager oversees adherence to the OR External Communications Matrix.
3. **OR Manager Ensures External Communications Published According to Schedule** – All communications are published as provided in the OR External Communications Matrix.
4. **OR Manager Monitors Effectiveness of Project External Communications and Reports via Status Report** – The OR Manager ensures each communication has a specific feedback mechanism to gauge its effectiveness.

6.3.2.5 Strategic Initiatives External Communications Matrix Development

Figure 23 provides the Strategic Initiatives External Communications Matrix Development subprocess.

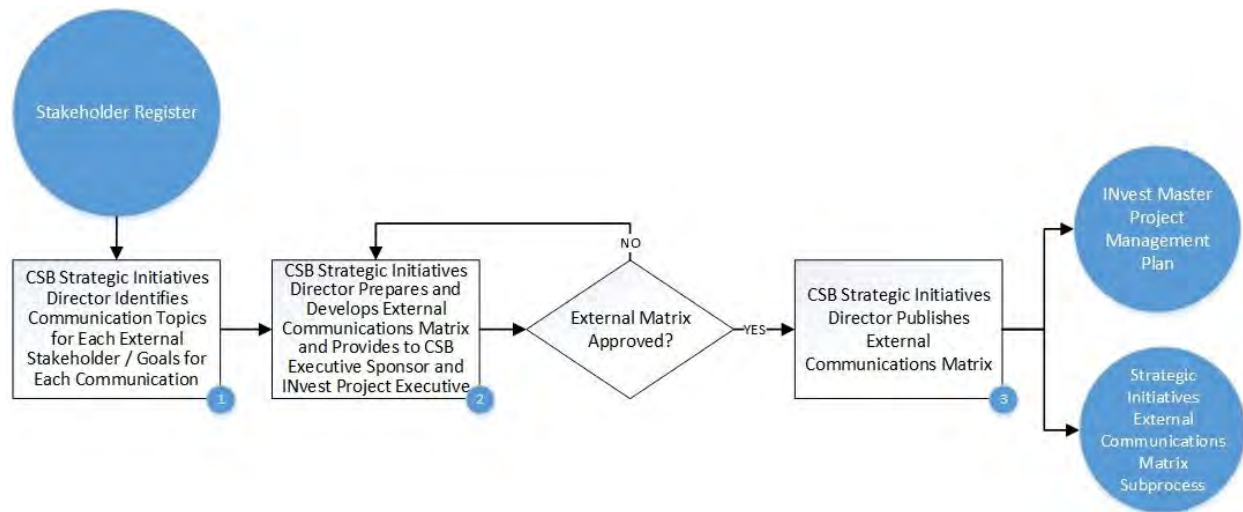


Figure 23: Strategic Initiatives External Communications Matrix Development Subprocess

1. **CSB Strategic Initiatives Director Identifies Communication Topics for Each External Stakeholder / Goals for Each Communication** – The Stakeholder Register identifies all stakeholders, internal and external, that affect or are affected by the INvest Project. The Strategic Initiatives Director focuses on the State, federal, and vendor interface partners.
2. **CSB Strategic Initiatives Director Prepares and Develops External Communications Matrix and Provides to CSB Executive Sponsor and INvest Project Executive** – The CSB Strategic Initiatives Director identifies the communications for which they are responsible, in order to communicate with the appropriate external stakeholders. The CSB Executive Sponsor and INvest Project Executive review and approve the External Communications Matrix as appropriate.
3. **CSB Strategic Initiatives Director Publishes External Communications Matrix** – The CSB Strategic Initiatives Director publishes the approved Strategic Initiatives External Communications Matrix.

6.3.2.6 Strategic Initiatives External Communications Matrix Management

Figure 24 provides the Strategic Initiatives External Communications Matrix Management subprocess.

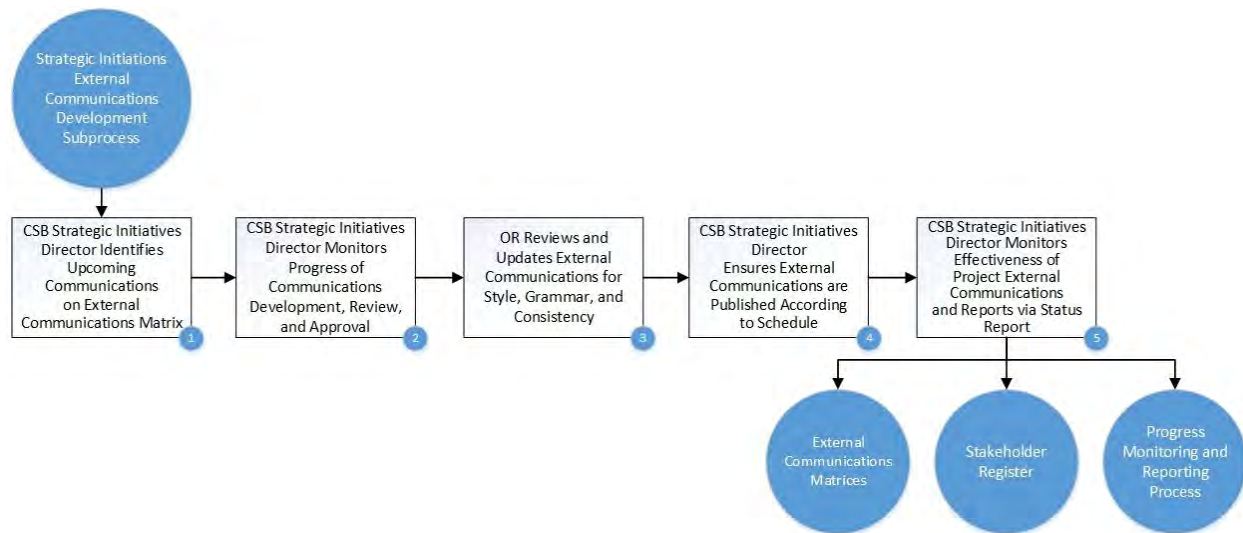


Figure 24: Strategic Initiatives External Communications Matrix Management Subprocess

1. **CSB Strategic Initiatives Director Identifies Upcoming Communications on External Communications Matrix** – The CSB Strategic Initiatives Director uses the Strategic Initiatives External Communications Matrix to ensure communications stay on schedule based on the expected publish date.
2. **CSB Strategic Initiatives Director Monitors Progress of Communications Development, Review, and Approval** – The CSB Strategic Initiatives Director oversees adherence to the Strategic Initiatives External Communications Matrix.
3. **OR Reviews and Updates External Communications for Style, Grammar, and Consistency** – OR is responsible for ensuring the communications are written with one voice.
4. **CSB Strategic Initiatives Director Ensures External Communications are Published According to Schedule** – All communications are published as provided in the Strategic Initiatives External Communications Matrix.
5. **CSB Strategic Initiatives Director Monitors Effectiveness of Project External Communications and Reports via Status Report** – The CSB Strategic Initiatives Director ensures each communication has a specific feedback mechanism to gauge its effectiveness.

Figure 19, Figure 20, Figure 21, Figure 22, Figure 23, and Figure 24 illustrate development of the communications matrices and the subsequent publishing of the communications. At times, a communication owner may invoke a process to fast track a communication which has not been previously identified. In these instances, the identified communication owner works with the appropriate manager to determine the best way to proceed to execute the communication.

6.3.3 Communication Channels

After identifying project stakeholders and communication needs, an appropriate communication channel is selected based on the intended stakeholder audience, message, INvest Project needs, and priority. Some communication channels are more effective than others for a particular message and stakeholder. The ultimate decision about which communication channel to use for any given message and stakeholder audience combination is guided by level of influence and involvement.

A set of communication types and a list of considerations for use is provided in Table 20.

Table 20: Communication Channel Types and Considerations

Communication Type	Considerations for Use
Print Mailings, project newsletters, posters, brochures	<ul style="list-style-type: none"> General messages Limited interaction INvest Project background and progress Time insensitive messages
Dialogue INvest Project Team meetings, brown bag lunches, employee socials, scheduled office visits, person-to-person interaction	<ul style="list-style-type: none"> Highly time-sensitive messages Moderate to maximum interaction Specific, targeted messages Event-based communication High priority issues Intervention-focused messages
Multimedia Standard package for INvest Project presentations (logos, PowerPoint templates, etc.), training presentations, webinars, etc.	<ul style="list-style-type: none"> Specific, targeted messages Intervention-focused messages Event-based information High and medium priority issues
Electronic Webmail, email, INvest SharePoint site, Indiana Child Support Resources, web-based video, frequently asked questions (FAQs)	<ul style="list-style-type: none"> Broad content Non-controversial messages Group-focused information Limited interaction needed Message reinforcement Event-based communication

The INvest PMO coordinates with all Communications Matrix owners to identify any existing or newly identified communication channels as part of effective planning.

6.3.4 Feedback Mechanisms

To determine if the objectives of the INvest Project communications matrices are being met, it is important to measure communication effectiveness. Successful communication has a positive effect on the INvest Project's performance and its ability to meet intended objectives. The metrics and feedback mechanisms facilitate assessment of the effectiveness of the messages. The feedback process is owned by the INvest PMO, and the appropriate methods are determined by the INvest PMO. The feedback process includes the Internal, OR External, and Strategic Initiatives External communications processes.

After analysis, the INvest PMO captures both positive and negative lessons learned to facilitate ongoing communication quality improvement.

Feedback mechanisms to measure effectiveness can be either formal or informal. Formal mechanisms include, but are not limited to, surveys, assessments, polling (via webmail, email, INvest SharePoint site, etc.), and an email suggestion box. Informal mechanisms consist of in-person discussion or written communications with stakeholders. Whenever possible, the INvest Project builds natural feedback loops into communications. For example, a webinar may include questions to assess the level of staff understanding and update messages may include a signature line or a footer with a link to a “suggestion box” or other location for stakeholders to provide feedback.

Formal and informal feedback mechanisms provide an understanding of stakeholder awareness, acceptance, level of engagement, and ownership during the INvest Project. While there is no specific formula that prescribes a mechanism for a specific phase or communication type, the relative benefits for each feedback mechanism or tool are considered. Table 21 provides feedback mechanisms to be considered for assessing communication effectiveness.

Table 21: Feedback Mechanisms

Mechanism	Description
Surveys	<ul style="list-style-type: none"> Formal surveys are distributed at one or more points during the INvest Project life cycle to gauge the level of awareness, understanding, acceptance, engagement, and ownership among stakeholders.
Assessments	<ul style="list-style-type: none"> Formal documents are distributed to measure the level of knowledge or understanding of participants. The timing of an assessment can be pre-communication, post-communication, or both, depending on the level of knowledge the participant is known to have on the topic.
Focus Groups	<ul style="list-style-type: none"> Focus groups are a subset or subsets of stakeholder groups assembled to provide direct and ongoing feedback about the effectiveness of the communication activities, and to offer guidance and support for any recommended adjustments. Focus groups are also used to develop informal project champions who provide positive interactions between the INvest Project Team and other stakeholders.
Polling	<ul style="list-style-type: none"> Polling involves posing specific, often singular questions to an already captive audience. Key examples of polling opportunities include INvest Project newsletters and INvest Project websites. These mechanisms can pose a question of the day, week, or month with an email address to receive replies. Polling can also be used to assess audience understanding of materials used for webinars.
INvest Email (Suggestion or Question) Box	<ul style="list-style-type: none"> A dedicated email address, maintained by OR, is offered for the exclusive use of communicating feedback about the INvest Project, communication content, and quality. This may be provided as a consistent header or footer on INvest Project communication collateral (e.g., newsletters, emails from project leaders, on the INvest Project website), and can be mentioned at the end of conference calls to encourage feedback from the audience.

Mechanism	Description
Help Desk Inquiry and Analysis	<ul style="list-style-type: none"> Scheduled reviews of questions and concerns that come through the INvest Project help desk.
Communications and Training Unit Mailbox Inquiry and Analysis	<ul style="list-style-type: none"> Scheduled review of questions and concerns that come through the CTU mailbox that help determine the most common questions posed by end users.
Meeting or Conference Call Question and Answer (Q&A)	<ul style="list-style-type: none"> Q&A is a dedicated time during conference calls or meetings for question and answer from the audience so the INvest Project Team can use the questions to assess awareness, understanding, acceptance, engagement, or ownership of the audience.
Face-to-Face Feedback Sessions (One-on-One Feedback Sessions)	<ul style="list-style-type: none"> These sessions are ad-hoc opportunities to gather feedback about the INvest Project and effectiveness of the communications during casual conversations or meetings with stakeholders.
Observations from Team Leads (Managers, Champions)	<ul style="list-style-type: none"> Obtains information by requesting and assessing the observations, suggestions, or concerns reported by team leads or others who work with INvest Project stakeholder groups.

Effective performance measurement provides information for the planning and control of the communications matrix. It is a means to gauge whether the direction, efforts, and result of the Communications Matrix are in alignment. INvest Project communications are measured based on each stakeholder group's:

- Satisfaction with quality, usefulness, and timeliness of information;
- Awareness of the INvest Project;
- Understanding of INvest Project goals;
- Level of support for the INvest Project;
- Knowledge of key milestones and success factors for the INvest Project; and
- Understanding of where to find information about the INvest Project.

Specific measures of effectiveness for communication items are documented in each communications matrix.

6.4 Templates

Table 22 provides a summary of the template used for the Communications Management process.

Table 22: Communications Management Template

Template Name	Description	Attachment ID
Communications Matrix Template	<ul style="list-style-type: none"> Guides all project communications 	COM-01

7.0 RISK AND ISSUE MANAGEMENT

7.1 General Introduction and Overview

Risk and Issue Management addresses the identification, communication, assessment, response, and monitoring of risks and issues that impact or threaten to impact achievement of INvest Project objectives. While the process addresses both risks and issues in a similar fashion, they differ in detail.

- **Risks** – A risk has a cause and, if it eventually occurs, a consequence. As such, a risk is an anticipated event or action that has a chance of occurring, which may result in a negative impact on the INvest Project. Risks are managed by developing mechanisms to mitigate and avoid the risk. If the risk cannot be avoided or mitigated, such factors will be taken into consideration and contingency plans will be developed.
- **Issues** – An issue is something that has occurred which may have a negative impact on the INvest Project, in contrast to a risk, which is something that may occur. Issues are managed by defining specific actions, due dates for resolution, and resources assigned to resolve the issue.

The identification of risks or issues occurs during the creation of the PMP or at any point during the INvest Project. Risks and issues are managed through a discrete process that has multiple touchpoints with status reporting. See the [Progress Monitoring and Reporting](#) chapter for more information on the status reporting process.

7.2 Key Roles and Responsibilities

Table 23 provides a summary of the key roles and primary responsibilities involved in the Risk and Issue Management process.

Table 23: Risk and Issue Management Key Roles and Responsibilities

Key Role	Responsibilities
INvest Core Committee	<ul style="list-style-type: none"> ● Reviews new and updated risks and issues ranked as high and provides guidance or approvals as needed
INvest PMO	<ul style="list-style-type: none"> ● Supports the INvest PMO Manager in evaluating and responding to potential emergency issues ● Leads ad-hoc ranking and response planning meetings for new risks or issues ● Facilitates the monthly risk and issue review meeting ● Monitors the risk and issue tool to confirm that Project Managers and owners of risks and issues make appropriate and timely updates to Risk and Issue Response Plans
INvest PMO Manager	<ul style="list-style-type: none"> ● Evaluates potential emergency issues and leads action plan development with appropriate team members ● Reviews new and updated risks and issues at the Weekly Project Status Meeting and provides guidance ● Provides guidance at the monthly risk and issue review meeting ● Communicates risk and issue information to the INvest Core Committee

Key Role	Responsibilities
INvest Project Team member	<ul style="list-style-type: none"> Identifies a potential risk or issue and notifies the Reporting Project Manager Provides ongoing monitoring and reporting related to assigned risks and issues
Reporting Project Manager (any INvest Project Manager or vendor Project Manager)	<ul style="list-style-type: none"> Conducts preliminary assessments of potential risks and issues Notifies INvest Project Team members if potential risks or issues are assessed as invalid Notifies the INvest PMO Manager and INvest PMO immediately when emergency issues are identified Logs valid risks and issues in the risk and issue tool Participates in ad-hoc sessions to address risk and issue ranking and response or action planning Reports new and updated risks and issues at the Weekly Project Status Meeting Participates in the monthly risk and issue review meeting

7.3 Process Overview and Activities

Management of risks and issues follows the same general process, from identification through assessment, response planning, and monitoring. An INvest Project Manager serves as the focal point for ensuring that risks and issues are addressed by the appropriate team members. Figure 25 provides the Risk and Issue Management process.

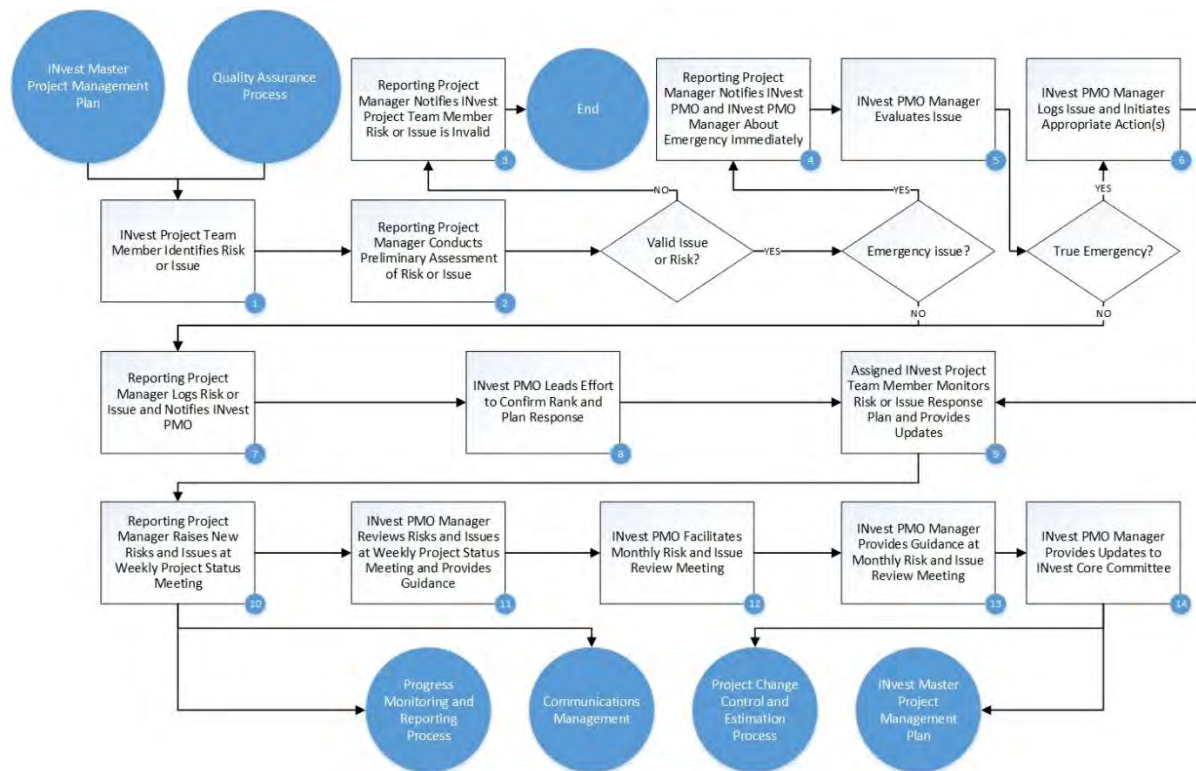


Figure 25: Risk and Issue Management Process

1. **INvest Project Team Member Identifies Risk or Issue** – Any INvest Project Team member can identify a risk or issue. The INvest Project Team member gathers initial information and discusses the situation with an INvest Project Manager or vendor Project Manager (the Reporting Project Manager).
2. **Reporting Project Manager Conducts Preliminary Assessment of Risk or Issue** – The Reporting Project Manager validates the potential risk or issue. If the risk or issue is determined not to be valid the Reporting Project Manager notifies the appropriate INvest Project Team member. The Reporting Project Manager assesses valid risks or issues to determine its urgency. There are two possible results of this assessment:
 - a. An emergency issue exists and needs immediate escalation; or
 - b. The risk or issue is not an emergency and can follow the regular review and response process.
3. **Reporting Project Manager Notifies INvest Project Team Member Risk or Issue is Invalid** – If the Reporting Project Manager assesses a potential risk or issue as invalid, the Reporting Project Manager notifies the INvest Project Team member who raised the potential risk or issue.
4. **Reporting Project Manager Notifies INvest PMO and INvest PMO Manager About Emergency Immediately** – If the Reporting Project Manager assesses that the item is an emergency issue requiring immediate attention, the Reporting Project Manager notifies the INvest PMO and the INvest PMO Manager. See **Part 7.3.1** for information on what is considered to be an emergency issue.
5. **INvest PMO Manager Evaluates Issue** – Working with the Reporting Project Manager, the INvest PMO, and any other resources required to provide needed information, the INvest PMO Manager further evaluates the issue to determine if it is a true emergency. There are two possible results:
 - a. The issue is a true emergency; or
 - b. The issue is not a true emergency and can follow the regular review and response process.
6. **INvest PMO Manager Logs Issue and Initiates Appropriate Action(s)** – If the issue is a true emergency, the INvest PMO Manager calls an ad-hoc meeting with appropriate team members to determine an action plan and associated action plan owner; the action plan may contain both immediate and long-term activities. The INvest PMO Manager ensures that the action plan is documented in the Risk and Issue Response Plan, with an understanding that the emergency issue is logged in the risk and issue tool, and any immediate actions are documented, after the fact. The owner becomes responsible for ongoing monitoring and communication regarding the issue.
7. **Reporting Project Manager Logs Risk or Issue and Notifies INvest PMO** – Valid risks and issues, that were not assessed as emergency issues, are logged in the risk and issue tool by the Reporting Project Manager as completely as possible, including initial assessment of the risk or issue ranking and potential action plan(s). Risks are captured in the form of a concise risk statement – “if <something happens> then <describe impact>.”

8. **INvest PMO Leads Effort to Confirm Rank and Plan Response** – The INvest Project Manager calls an ad-hoc meeting with the Reporting Project Manager and appropriate INvest Project Team members to review and update the initial ranking and develop a response or action plan, which is documented in the risk and issue tool. Each item is assigned to an INvest Project Team member as the owner. See **Part 7.3.3** for information on ranking and the different types of response plans and action plans. Risk or issue response plans may involve initiation of activities in the Communications or Project Change Control processes, or updates to the INvest Master PMP.
9. **Assigned INvest Project Team Member Monitors Risk or Issue Response Plan and Provides Updates** – Risks and issues require ongoing monitoring as response plans or action plans are executed. An INvest Project Team member is assigned to monitor the item and make updates to the record in the risk and issue tool when required.
10. **Reporting Project Manager Raises New Risks and Issues at Weekly Project Status Meeting** – As part of the Progress Monitoring and Reporting process, new and updated risks and issues ranked high or medium are included on the Weekly or Periodic Status Report for the assigned area. The Reporting Project Manager provides information and answers any questions at the Weekly Project Status Meeting.
11. **INvest PMO Manager Reviews Risks and Issues at Weekly Project Status Meeting and Provides Guidance** – The INvest PMO Manager ensures understanding of the reported risks or issues and may provide immediate guidance at the Weekly Project Status Meeting.
12. **INvest PMO Facilitates Monthly Risk and Issue Review Meeting** – The INvest PMO leads a monthly risk and issue review and working session with the INvest and vendor Project Managers and the owners of response plans and action plans. Risks and issues are reviewed for any updates, cross-functional impacts, and potential closure. The review is prioritized based on risk or issue rank and urgency. Items ranked as low may not be reviewed at each meeting; the date of the last review will be tracked to ensure that all risks and issues are reviewed at least quarterly.
13. **INvest PMO Manager Provides Guidance at Monthly Risk and Issue Review Meeting** – The INvest PMO Manager may provide guidance on the management of risks and issues, including recommendations to close items when appropriate.
14. **INvest PMO Manager Provides Updates to INvest Core Committee** – As part of the Progress Monitoring and Reporting process, new and updated risks and issues ranked high are included on the INvest PMO Monthly Status Report to the INvest Core Committee. The INvest PMO Manager discusses the details of the relevant items with the INvest Core Committee and may ask for guidance or approval of specific actions, where appropriate.

7.3.1 Emergency Issues

Emergency issues require immediate action, and intentionally bypass the normal process steps. The Reporting Project Manager has broad discretion to assess an issue as an emergency in the interest of erring on the side of caution. Emergency situations are confirmed by the INvest PMO Manager, again using broad discretion.

While it is impossible to list all of the potential situations that may be classified as emergencies, examples are provided to inform expectations:

- Situations that impact the INvest Project Team’s ability to do their work, such as system outages or facilities being unavailable for any reason
- Situations involving communication with external stakeholders, where an immediate action may be required to avoid miscommunication or misinterpretation and potential for damage to stakeholder relationships
- Situations involving security or privacy concerns with high potential impact
- Any issue where a one-week delay in initiating a response reduces the effectiveness of that response

7.3.2 Risk and Issue Tool

Risk and Issue Management is enabled by the use of a shared repository. The repository is structured to allow incremental entry of information about each risk and issue from initial identification through assessment, response planning and monitoring, as well as supporting communication regarding risks and issues.

Each record in the risk and issue tool contains data elements to accurately identify, evaluate, and monitor the risk or issue. Table 24 lists the mandatory data elements for creating a risk or issue.

Table 24: Risk and Issue Tool Data Elements

Risk and Issue Tool Data Elements	
Risks	Issues
<ul style="list-style-type: none"> • Risk ID • Date identified • Reporting Project Manager • Status (which defaults to “new”) • Risk title • Risk description • Probability • Impact • Risk exposure • Risk response strategy • Risk response plan • Functional area • Risk or issue owner • Date of last update • Comments 	<ul style="list-style-type: none"> • Issue ID • Date identified • Reporting Project Manager • Status (which defaults to “new”) • Emergency issue flag (which defaults to “no”) • Issue title • Issue description • Level of impact • Scope • Issue priority • Issue action plan • Functional area • Issue owner • Date of last update • Comments

7.3.3 Rankings

The Reporting Project Manager uses the information listed in **Part 7.3.3.1** and **Part 7.3.3.2** to determine the impact of an identified risk or issue on the INvest Project. Having a better understanding of the impact of a risk or issue allows for more targeted planning to address the risk or issue properly. These

rankings are calculated by the risk and issue tool based on the probability and impact (for risks) or level of impact and scope (for issues).

7.3.3.1 Risk Exposure

Upon identification of a valid risk, the Reporting Project Manager determines an initial risk probability and risk impact, such that the risk exposure can be initially determined. These values are reviewed and refined by the INvest Project Manager with support from the Reporting Project Manager and any other appropriate resources.

In assessing risk probability, the first step is to determine the probability of that risk occurring during the life of the INvest Project. The probability ratings are as follows:

- **High (3)** – Risk has a high probability of occurring (>70%)
- **Medium (2)** – Risk has a reasonable probability of occurring (30 – 70%)
- **Low (1)** – Risk is not likely to occur (<30%)

The next step is to identify the possible impact on the INvest Project. The risk impact ratings are as follows:

- **High (3)** – This rating denotes a major or significant impact to the INvest Project. The consequences threaten INvest Project completion and require management intervention at the highest level.
- **Medium (2)** – This rating denotes an average impact on the INvest Project. The consequences do not threaten INvest Project completion, but may cause the scope, cost, or schedule to be subject for review and possible amendment. Management intervention is likely to be required.
- **Low (1)** – This rating denotes a minor impact to the INvest Project. The consequences could threaten the efficiency or effectiveness of an aspect of the INvest Project. Management intervention may be needed at some stage.

Risk probability and risk impact ratings determine the risk exposure, which is based on the Risk Exposure Matrix embedded in the risk and issue tool. The calculated exposure levels are shown in Figure 26.

For the risk exposure value, probability is multiplied by impact to provide an idea of the priority of the risk.

- **Significant (6,9)** – Significant impact on INvest Project cost, schedule, and performance
- **Moderate (3,4)** – Impact on INvest Project cost, schedule, and performance
- **Controllable (2)** – Controllable impact on INvest Project cost, schedule, and performance
- **Low (1)** – Minor impact on INvest Project cost, schedule, and performance

Probability	High 3	Moderate (3)	Significant (6)	Significant (9)
	Med 2	Controllable (2)	Moderate (4)	Significant (6)
	Low 1	Low (1)	Controllable (2)	Moderate (3)
		Low 1	Med 2	High 3
Impact				

Figure 26: Risk Exposure Matrix

7.3.3.2 Issue Priority

Upon identification of an issue, the Reporting Project Manager makes a preliminary assessment of the levels of impact and scope to determine the issue priority. These values are reviewed and refined by the INvest Project Manager with support from the Reporting Project Manager and any other appropriate resources.

The level of impact definitions are:

- **High (3)** – Will cause critical path delay and will likely add significant cost; may cause INvest Project failure
- **Medium (2)** – Can cause delay to a dependent milestone, work product, or deliverable; can add cost
- **Low (1)** – May delay a task, but not a milestone

The next step is to assess the scope of the issue. The possible scope categories are:

- **Severe (3)** – Issue has a possible significant negative impact to a major work product, deliverable, or overall INvest Project success
- **Moderate (2)** – Issue has a possible medium negative impact to one or more work products or deliverables
- **Low (1)** – Issue has minimal impact, but still needs to be tracked and resolved

The impact and scope ratings determine the issue priority based on the issue priority matrix embedded in the risk and issue tool. The calculated exposure levels are shown in Figure 27.

For the issue priority value, impact multiplied by scope provides an idea of the priority of the issue.

- **High (6,9)** – Action plan required with action plan monitored daily
- **Medium (2,3,4)** – Action plan likely with action plan monitored weekly
- **Low (1)** – Action plan may be needed, no imminent action necessary

Level of Impact	High 3	Medium (3)	High (6)	High (9)
	Med 2	Medium (2)	Medium (4)	High (6)
	Low 1	Low (1)	Medium (2)	Medium (3)
		Low 1	Moderate 2	Severe 3
		Scope		

Figure 27: Issue Priority Matrix

7.3.4 Response Plans and Action Plans

When risks or issues that impact the INvest Project are identified, response plans (for risks) and action plans (for issues) are developed. **Part 7.3.4.1** and **Part 7.3.4.2** define the content of each of these plans.

7.3.4.1 Risk Response Plans

Response plans are required for all risks. If the risk exposure is Significant (6, 9), the response plan reflects a higher level of detail than for lower levels of risk exposure. Response planning is the process of developing options to address the risk, determining actions needed to decrease the probability or the impact of a specific risk and, finally, how to respond if the risk event occurs and becomes an issue.

Response planning must be appropriate to the severity of the risk, cost effective in meeting the challenge, and timely to be successful. During this process, strategies for preventing the identified risk from occurring are identified. The Risk and Issue Response Plan Template is provided as Attachment RIM-01. A summary of the response plan, including the selected risk response strategy, is entered in the risk and issue tool.

7.3.4.2 Issue Action Plans

Action plans are required for all issues, with an expectation that if the issue priority is high or medium the action plan reflects a higher level of detail than for lower levels of issue priority. Action planning is the process of developing options and determining actions to resolve a specific issue. Action planning must be appropriate to the priority of the issue, cost effective in meeting the challenge, and timely to be successful. During this process, specific actions to address the issue are identified and resources are assigned to those actions. The Risk and Issue Response Plan Template, provided as **Attachment RIM-01**, is also used for action planning. A summary of the action plan is entered in the risk and issue tool.

7.4 Templates

Table 25 provides a summary of the template used for the Risk and Issue Management process.

Table 25: Risk and Issue Management Template

Template Name	Description	Attachment ID
Risk and Issue Response Plan Template	<ul style="list-style-type: none"> Captures risk response plans and issue action plans 	RIM-01

8.0 CONFIGURATION MANAGEMENT

8.1 General Introduction and Overview

The Configuration Management process includes the steps required to establish, approve, and execute configuration control for the various system components of INvest. The Configuration Management process initially establishes what configurable items to track and determines baselines for future comparisons.

The scope of configuration management includes:

- Software configuration management activities;
- Hardware, operating system, middleware, and network environments; and
- Associated security-related infrastructure.

Configuration and versioning information for these items are maintained in the Rational CLM repository, with links to associated documentation maintained in the INvest SharePoint document repository.

Effective control of configuration is an important enabler of the INvest Project’s iterative software development process, where changes to interdependent components of the software and hardware environments are expected to occur rapidly.

The Configuration Management process has two primary subprocesses:

- System Configuration Management Plan subprocess, which establishes the procedures and responsibilities for executing configuration management
- System Configuration Management Change Control subprocess, which establishes the various change processes of the INvest environment

Details regarding these two primary processes are documented in **Section 8.3**. The System Configuration Management Plan is a component of the DDI portion of the INvest Master PMP.

8.2 Key Roles and Responsibilities

Table 26 provides a summary of the key roles and primary responsibilities involved in the Configuration Management process.

Table 26: Configuration Management Key Roles and Responsibilities

Key Role	Responsibilities
CSB Chief Architect	<ul style="list-style-type: none"> • Consults on application of system patches • Consults on supporting environment configuration changes • Reviews periodic configuration management audit reports
CSB Production CCRB	<ul style="list-style-type: none"> • Approves production environment system configuration changes
CSB Security Manager	<ul style="list-style-type: none"> • Consults on application of system patches • Reviews documentation related to security changes

Key Role	Responsibilities
CSB Technical Manager	<ul style="list-style-type: none"> • Approves the System Configuration Management Plan • Consults on application of non-production system patches • Identifies or updates project risks and issues as needed • Reviews periodic configuration management audit reports
DDI Infrastructure Lead	<ul style="list-style-type: none"> • Tracks and monitors hardware, middleware, and network changes
DDI Migration Lead	<ul style="list-style-type: none"> • Coordinates system configuration change control activities • Maintains migration schedule • Manages automation tools and scripts used to build, integrate, and migrate software to various platforms • Performs periodic reporting on migration activities • Creates / releases baselines
DDI Project Manager	<ul style="list-style-type: none"> • Provides periodic configuration management audit reports • Submits the System Configuration Management Plan to the INvest PMO Manager
DDI Security Lead	<ul style="list-style-type: none"> • Conducts ongoing system security activities • Creates system hardening report
DDI Technical Lead	<ul style="list-style-type: none"> • Creates and updates the System Configuration Management Plan • Creates configuration change tickets • Establishes configuration management baselines for INvest • Performs periodic configuration audits • Reviews system security hardening materials
IOT	<ul style="list-style-type: none"> • Supports system, network, and infrastructure configuration changes where applicable • Consults on strategic technological infrastructure changes and provides recommendations where applicable
INvest PMO Manager	<ul style="list-style-type: none"> • Coordinates review and approval of the System Configuration Management Plan • Ensures related QA activities are completed
TAC	<ul style="list-style-type: none"> • Reviews periodic audit reports and provides consultation on issues and prioritization

8.3 Process Overview and Activities

This section explains the System Configuration Management processes in detail. Figure 28 provides the System Configuration Management process, which illustrates a conceptual overview of the progression of processes and subprocesses and the interactions between them. The Configuration Management process includes the development of a System Configuration Management Plan and a change control process that manages changes to system configuration items.

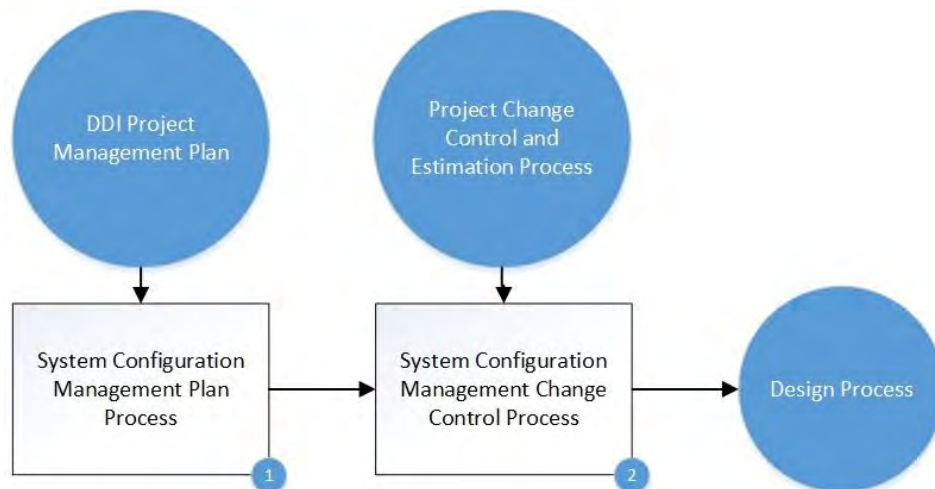


Figure 28: System Configuration Management Process

1. **System Configuration Management Plan Process** – After CSB approves the DDI PMP, the DDI vendor develops the System Configuration Management Plan. The elements of the System Configuration Management Plan are listed in **Part 8.3.1.1**. The DDI Technical Lead reviews and updates the System Configuration Management Plan every six months.
2. **System Configuration Management Change Control Process** – The System Configuration Management Change Control process follows the standards established in the System Configuration Management Plan. This includes gathering information regarding configuration changes, as well as prioritizing potential system changes, to align the software development processes to the application rollout schedule. Additional detail regarding the System Configuration Management Change Control process is shown in **Part 8.3.2**. The System Configuration Management Change Control process is supported by two subprocesses:
 - a. System Security Configuration Hardening, which outlines prioritization and communication of changes related to security controls and project risks and issues. See **Part 8.3.2.1**.
 - b. Periodic System Configuration Audit, which compares the current system configuration to previously defined baselines and correlates the configuration with documented changes. See **Part 8.3.2.2**.

The System Configuration Management Change Control process and associated subprocesses are continuous throughout the INvest Project.

8.3.1 System Configuration Management Plan Subprocess

The System Configuration Management Plan subprocess creates a reference plan that defines the configuration management procedures and configuration items for both software development and infrastructure environments. This subprocess is critical to ensuring security and performance needs are maintained, monitored, and modified in an organized manner.

Figure 29 provides the System Configuration Management Plan subprocess.



Figure 29: System Configuration Management Plan Subprocess

1. **DDI Technical Lead Develops and Submits System Configuration Management Plan to CSB –**
After CSB approves the DDI PMP, the DDI Technical Lead creates the System Configuration Management Plan that documents how the INvest configurations are monitored, adjusted, and controlled. The scope of the System Configuration Management Plan includes the various system environments (e.g., development, test, production) and related hardware and software (e.g., networking, security). The plan covers the following configuration management areas:
 - a. Database – Organizing structural configuration and metadata settings;
 - b. Hardware – Ensuring performance and functionality settings;
 - c. Network – Coordinating multi-vendor device compliance;
 - d. Security – Enforcing the hardening and compliance standards; and
 - e. Software – Managing and maintaining source code, version release promotion, and auditing.

The DDI Technical Lead uses the INvest Master Project Management Plan and its components to understand requirements for procedures and practices associated with change to identified system configuration items. The software configuration management events are the primary thread for release management and labeling; other system components (e.g., hardware, network, and security) are addressed in the process to cover all configuration information. Where execution of INvest configuration changes involves entities external to the primary INvest Project Team (e.g., County Partners or IOT), the DDI Technical Lead and DDI Infrastructure Lead collaborate and facilitate communication to reach an understanding of Configuration Management process dependencies.

The DDI Technical Lead submits the System Configuration Management Plan to the INvest PMO Manager for coordination of review and approval by the CSB Technical Manager. If CSB does not approve the System Configuration Management Plan, the INvest PMO Manager returns it to the DDI Technical Lead with needed corrections. After making the requested updates, the DDI Technical Lead submits the System Configuration Management Plan to the INvest PMO Manager for approval.

2. **DDI Migration Lead Manages Configuration Management Activities Following System Configuration Management Plan** – Once the System Configuration Management Plan is approved, the DDI Migration Lead uses the procedures provided to manage the changes to the identified configuration items. The DDI Technical Lead reviews and updates the System Configuration Management Plan, as required, at least every six months.

8.3.1.1 System Configuration Management Plan

The System Configuration Management Plan includes, but is not limited to, the following:

- Definition of Terms
- Configuration Item Identification
- Configuration Change Control
- Configuration Auditing and Verification
- Security Risks
- Schedule for Configuration Management Activities
- Project Repositories
- Release Administration
- Status Accounting and Reporting
- Relationship to Other Plans
 - Application Design and Development Plan
 - Data Governance Plan
 - Hardware and Software Plan
 - Master Test Plan
 - Security Plan
 - SOA Governance Plan

8.3.2 System Configuration Management Change Control Process

The System Configuration Management Change Control process enables management of system configuration changes. Potential system changes include updates to the INvest software solution, foundational hardware and middleware environment, and supporting documentation. System configuration changes are managed to support the software release schedule, enable auditing, and support disaster recovery efforts to assure a rapid reconstruction of any solution that may have been built using various versions of core assets.

The System Configuration Management Change Control process is a framework to process all configuration modifications and ensures coordination of the activities required to keep INvest configuration settings and documentation updated. The System Configuration Management Change Control process references guidance and procedures provided in the System Configuration Management Plan. This process prioritizes system configuration changes in coordination with the INvest software development build and release process. The process also addresses the role of the CSB Production CCRB in oversight of changes to the INvest production environment. This process is ongoing, and includes periodic review, prioritization and execution cycles.

Figure 30 provides the System Configuration Management Change Control process.

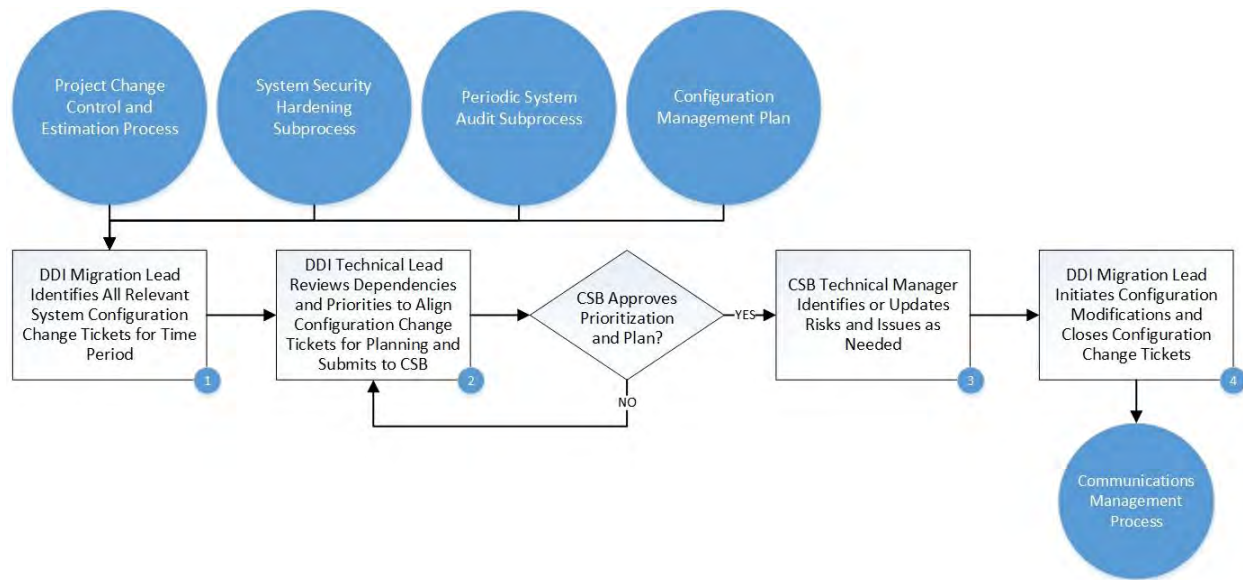


Figure 30: System Configuration Management Change Control Process

1. **DDI Migration Lead Identifies All Relevant System Configuration Change Tickets for Time Period** – System configuration management change control activities arise from multiple sources, including the Project Change Control and Estimation process, the System Security Configuration Hardening subprocess, and the Periodic System Audit subprocess. Potential system configuration change tickets are created and configured to include dependency and initial prioritization information. The DDI Migration Lead identifies the set of configuration change tickets to be addressed for the next review cycle.
2. **DDI Technical Lead Reviews Dependencies and Priorities to Align Configuration Change Tickets for Planning and Submits to CSB** – The DDI Technical Lead determines the dependency and priority of all potential changes to the configuration environment and assesses alignment with the schedule for related software configuration management updates. The DDI Technical Lead approves all changes related to non-production environments. The CSB Technical Manager, CSB Chief Architect, and CSB Security Manager review the security vulnerabilities and proposed plan to implement security controls, as well as confirming or revising priorities for other changes. The CSB Production CCRB reviews and approves changes to the production environments. If CSB does not approve the prioritization and plan, the CSB Technical Manager returns the plan to the DDI Technical Lead to make needed corrections. After making the requested updates, the DDI Technical Lead submits the prioritization and plan to CSB for approval.
3. **CSB Technical Manager Identifies or Updates Risks and Issues as Needed** – The CSB Technical Manager determines if any existing project risks or issues need to be updated, or if any new project risks or issues need to be entered, based on information discussed during the configuration change prioritization and planning process.
4. **DDI Migration Lead Initiates the Configuration Modifications and Closes Configuration Change Tickets** – Configuration changes are made by the appropriate resources, which may include external entities such as IOT. After performing the change, the successful completion of the change is verified by a resource not involved in making the change, and the completion of the change is communicated to the DDI Migration Lead. The DDI Migration Lead documents the

update to the configuration information and closes the ticket. See the [Communications Management](#) chapter and the Communications Matrix for information on communicating configuration changes to the INvest Project Team.

8.3.2.1 System Security Configuration Hardening Subprocess

The System Security Configuration Hardening subprocess defines a systematic approach to assuring that INvest is being monitored for security vulnerabilities and identifies potential updates. The scheduled reporting cycle is coupled with automated updates (e.g., antivirus software) to cover the vulnerable areas identified in the System Configuration Management Plan. The periodic vulnerability report is created for review by staff identified in the System Configuration Management Plan.

Figure 31 provides the System Security Configuration Hardening subprocess.

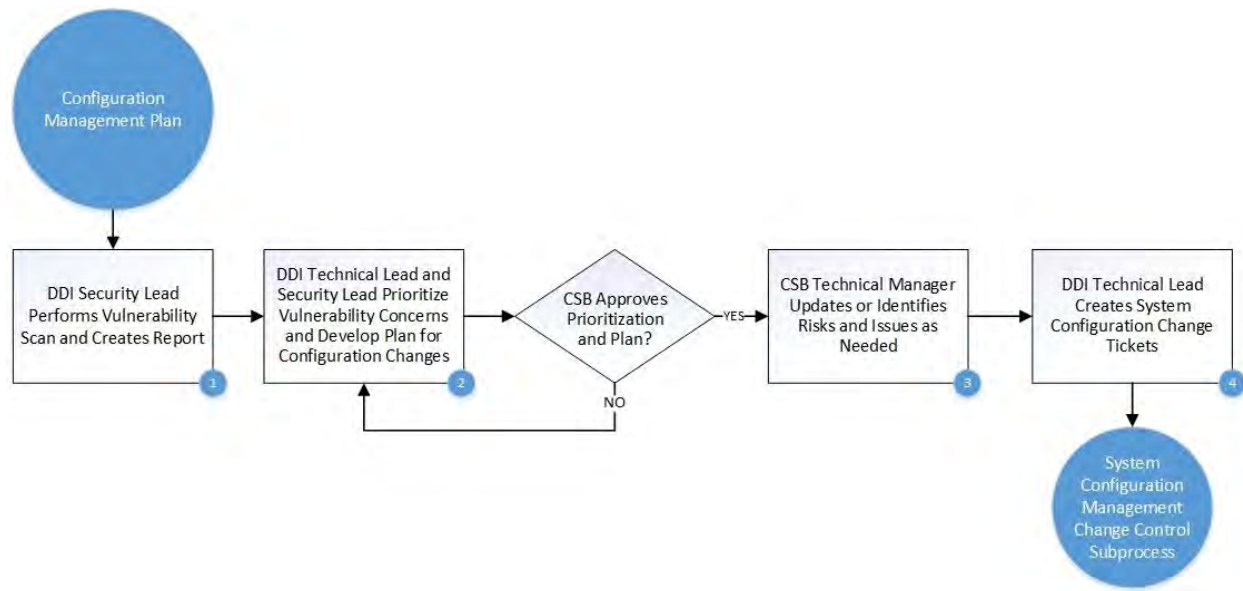


Figure 31: System Security Configuration Hardening Subprocess

1. **DDI Security Lead Performs Vulnerability Scan and Creates Report** – The System Configuration Management Plan defines the schedule for initiation of the system security configuration hardening analysis. The DDI Security Lead conducts the scheduled system security configuration hardening analysis as outlined in the System Configuration Management Plan. The analysis includes vulnerabilities identified by recent application releases and industry information regarding potential security risks.
2. **DDI Technical Lead and Security Lead Prioritize Vulnerability Concerns and Develop Plan for Configuration Changes** – The DDI Technical Lead works with the DDI Security Lead to prioritize potential security concerns and develop a plan for how the configuration changes should be made. The CSB Technical Manager, CSB Chief Architect, and CSB Security Manager review the security vulnerabilities and plan to implement security controls or other updates. If CSB does not approve the prioritization and plan, the CSB Technical Manager returns the plan to the DDI Technical Lead with needed corrections. After making the requested updates, the DDI Technical Lead submits the prioritization and plan to CSB for final approval.

3. **CSB Technical Manager Updates or Identifies Risks and Issues As Needed** – The CSB Technical Manager determines if any existing project risks or issues need to be updated, or if any new project risks or issues need to be entered, based on information obtained from the system security configuration hardening activities.
4. **DDI Technical Lead Creates System Configuration Change Tickets** – The DDI Technical Lead creates the agreed upon system configuration change tickets within Rational CLM for further action as described in the System Configuration Management Change Control process.

8.3.2.2 Periodic System Configuration Audit Subprocess

The Periodic System Configuration Audit subprocess identifies the latest system configuration details through an inspection and reporting process defined in the System Configuration Management Plan. The configuration audit during the Project Phase 1 Pilot implementation establishes the initial baseline. Ongoing audits identify differences between the actual configuration and the expected configuration baseline. Potential configuration issues and constraints and a status summary are included in the audit report.

System configuration audits are conducted following the schedule defined in the System Configuration Management Plan, or on an exception basis at the request of the INvest PMO Manager.

Figure 32 provides the Periodic System Configuration Audit subprocess.

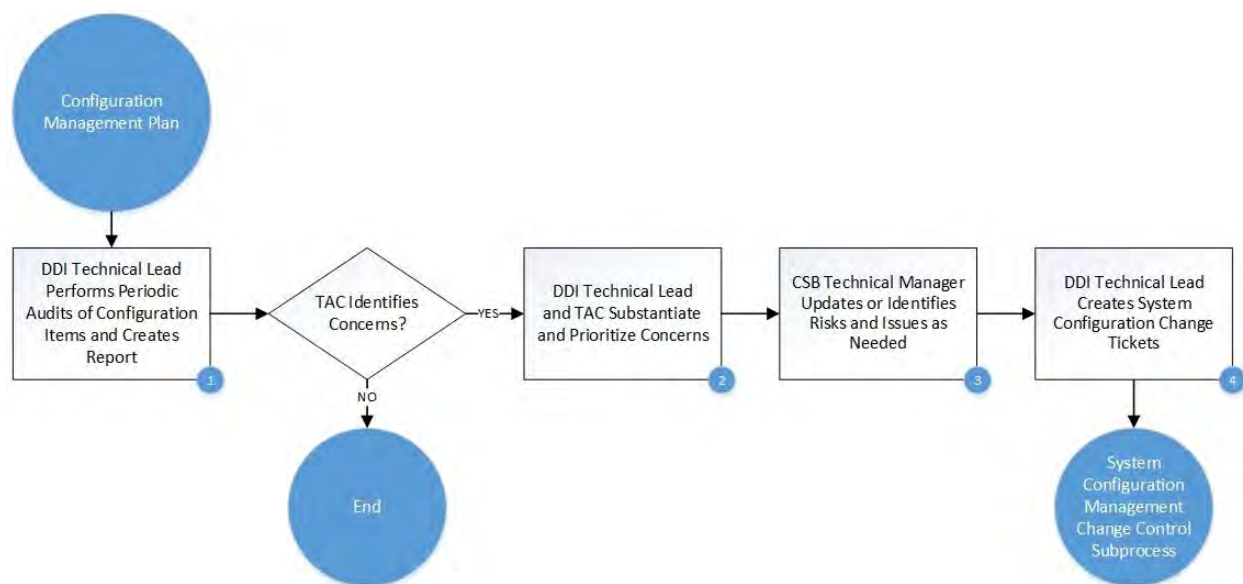


Figure 32: Periodic System Configuration Audit Subprocess

1. **DDI Technical Lead Performs Periodic Audits of Configuration Items and Creates Report** – Periodic audits of the system configuration items provide a mechanism to confirm that the environment is operating as planned. The DDI vendor conducts the audit process and compares the expected configuration, as documented in Rational CLM as the system of record for system configuration information. Automated traceability of all system configuration changes back to the system configuration change ticket is important for efficient tracking and analysis.

The DDI Technical Lead conducts the audit procedures as outlined in the System Configuration Management Plan, including identification of how the changes are being performed. The system configuration audit results must provide summary information such as condensed software release notes, high-level system patch information, network modifications, and security-related updates performed since the last audit. The report identifies any differences between the actual configuration and the expected configuration as shown in the established baselines, and concludes with a listing of potential configuration issues that may limit the collection of configuration information. Any configuration information that is considered a security risk (e.g., firewall specifics, including IP addresses) are masked or reviewed separately by security staff as prescribed in the System Configuration Management Plan. The Technical Advisory Committee (TAC) reviews the audit report findings and determines if any specific configuration items, security findings, or summary information represent concerns. If no concerns are identified by the TAC, the audit ends.

2. **DDI Technical Lead and TAC Substantiate and Prioritize Concerns** – The DDI Technical Lead and TAC determine whether and how to respond to those concerns identified through the audit activities.
3. **CSB Technical Manager Updates or Identifies Risks and Issues as Needed** – The CSB Technical Manager determines if any existing project risks or issues need to be updated, or if any new project risks or issues need to be entered, based on information obtained from the system security configuration hardening activities.
4. **DDI Migration Lead Creates System Configuration Change Tickets** – Where agreed between the DDI Technical Lead and the TAC, system configuration change tickets are created by the DDI Migration Lead for any corrective actions. System configuration change tickets are processed according to the System Configuration Management Change Control subprocess.

8.4 Templates

(Note: There are no templates defined for the Configuration Management process. Templates will be defined as part of the System Configuration Management Plan once the DDI vendor is engaged.)

PROJECT EXECUTION

9.0 DELIVERABLE REVIEW AND ACCEPTANCE

(Placeholder: This chapter is pending update until selection of a DDI vendor. This section will be updated in accordance with DDI vendor activities to ensure continuity with INvest Project Phase 1.)

9.1 General Introduction and Overview

(Updates to this chapter will be based on the revised process flow shown in Figure 33; the remainder of the content in this section is extracted from Part 14.1.1, Artifact Acceptance sub-process, of the prior version of the INvest Governance Manual.)

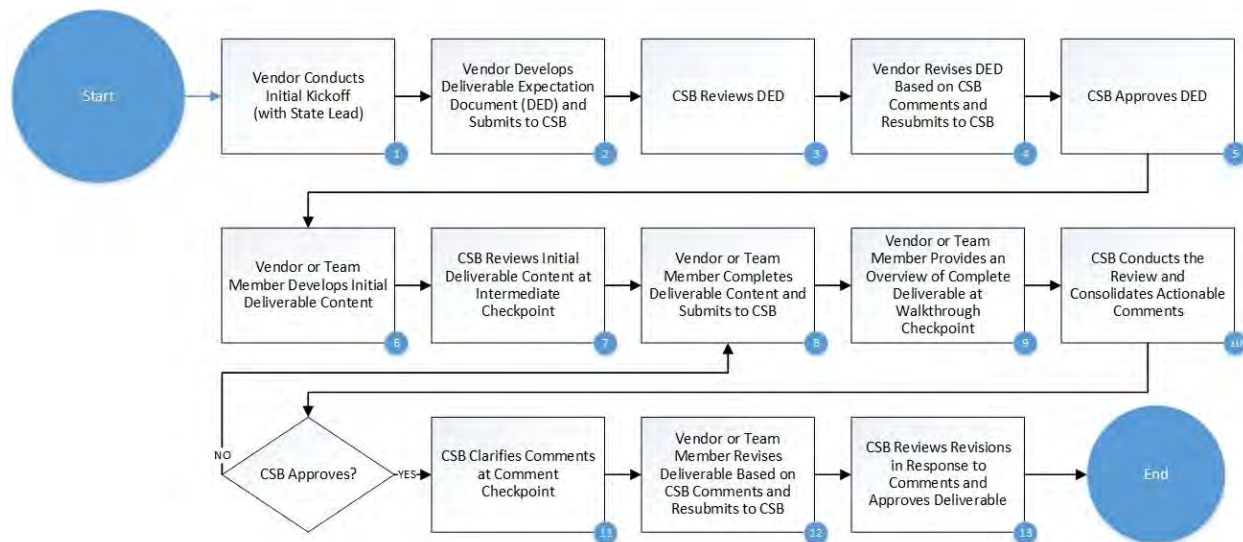


Figure 33: Deliverable Review and Acceptance Process

9.2 Key Roles and Responsibilities

(Note: Key roles and responsibilities for the Deliverable Review and Acceptance process will be documented in detail when the chapter is updated.)

9.3 Process Overview and Activities

The objective of the Artifact Acceptance sub-process is to validate that submitted project artifacts from each phase of the project are compliant with the standards and guidelines required by the INvest Governance Manual and ensure the content of submitted artifacts meets a level of quality that promotes project progress.

Figure 34 provides the Artifact Acceptance subprocess.

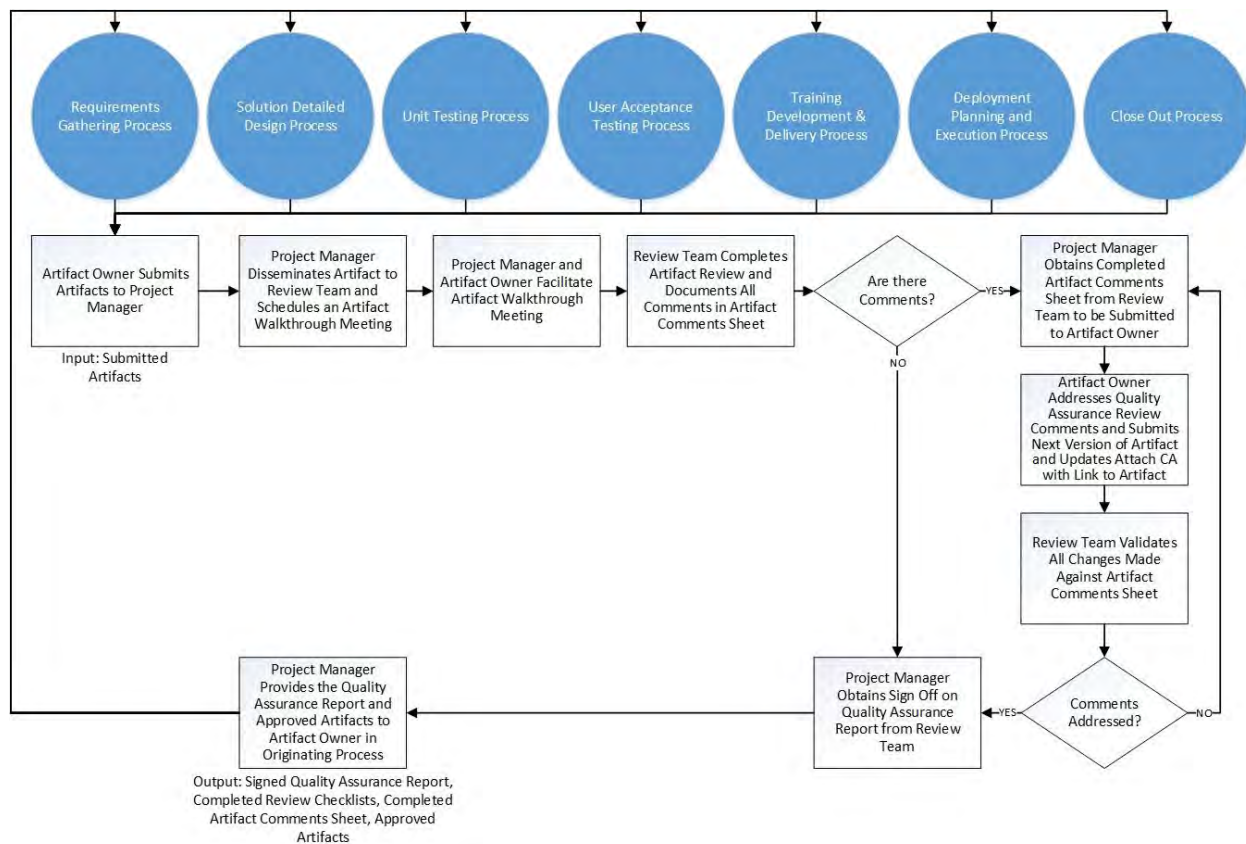


Figure 34: Artifact Acceptance Subprocess

The Artifact Acceptance sub-process is initiated anytime an artifact that requires QA review is completed by an Artifact Author. In order for the artifact to be formally approved, it has to go through the Artifact Acceptance process where the artifact is validated for content as well as INvest Governance Manual standards and guidelines compliance.

The Artifact Acceptance subprocess begins when an Artifact Owner submits a completed artifact to the Project Manager for review. An artifact is a formal project work product or deliverable which is created by an Artifact Author during one of the INvest Governance Manual processes. Examples of artifacts include Business Requirements Specifications Document, Solution Architecture Document, Solution Detailed Design Document, Test Report, and Deployment Strategy and Plan Document. An Artifact Owner is an INvest staff member or an external vendor who has the primary responsibility for completion of the artifact being reviewed. Typical roles to also assume the role of an Artifact Owner include, but are not limited to, Business Analyst, Designer, Developer, Tester, and Project Manager.

When the artifact is received for review, the Project Manager disseminates the artifact to the Review Team. The Review Team is comprised of Content Reviewer(s), Quality Assurance Analyst(s), and any other participants identified in the Quality Assurance section of the Project Management Plan. The Quality Assurance Analyst leads the Review Team and is responsible for all artifact hand-offs between the Review Team and the Project Manager. The Content Reviewer(s) and Quality Assurance Analyst review the artifact as follows:

- The Content Reviewer(s) use applicable checklist(s) and reviews the submitted artifact from a content perspective. The checklists are specific to the System Development Life Cycle phase and provide a list of conditions / questions which help the Content Reviewer(s) validate that key factors were considered and addressed in the development of the artifact. Typical roles which may assume the role of a Content Reviewer include, but are not limited to, Business Process Owner, Architect, Technical Lead, Test Supervisor, Project Manager, or other supervisor-type role. Depending on the project, the Content Reviewer(s) could be a Child Support Bureau (CSB) or INvest resource or a vendor acting on behalf of CSB / INvest (e.g., staff augmentation resource, not the vendor providing the services that create artifact).
- The Quality Assurance Analyst performs a standards and guidelines review. The Quality Assurance Analyst reviews applicable checklists and templates to verify the artifacts submitted and checks for completeness of documents submitted to comply with INvest Governance Manual standards. The Quality Assurance Analyst reviews artifacts and validates that all necessary checklists and templates have been completed. Depending on the project, the Quality Assurance Analyst could be a CSB or INvest resource or a vendor acting on behalf of CSB / INvest (e.g., staff augmentation resource, not the vendor providing the services that create artifact).

The Project Manager and Artifact Owner facilitate an artifact walkthrough meeting where the Artifact Owner presents the artifact(s) under review to the Review Team and any other identified participants. The participants of this meeting are identified in the Quality Assurance section of the Project Management Plan which identifies the Review Team including the Quality Assurance Analyst, the Content Reviewer(s) (e.g., the Business Process Owner, Sponsor, technical resource, etc.) and any additional participants based on the type of artifact and the phase of the project. The intent of the artifact walkthrough meeting is to acquaint the reviewers with the artifact, answer any initial questions, and to document any initial comments. The task of scheduling and conducting an artifact walkthrough meeting must be completed within five business days of submission of the initial version (v0.1) of the artifact or as otherwise scheduled. After the initial artifact walkthrough, the Review Team has 10 additional business days (or 15 business days from the receipt of the artifact) to finalize their review and document all comments in the Artifact Comments Sheet.

If there are no comments to be addressed as a result of the artifact review activities (i.e., the walkthrough or the subsequent artifact document review) the Project Manager obtains all necessary sign-offs on the Quality Assurance Report and attaches the report to the reviewed artifact(s) certifying that the artifacts are acceptable from a quality standpoint. The Project Manager provides the signed Quality Assurance Report, completed Review Checklists, and approved artifact(s) to the Artifact Owner in the originating process.

If there are comments that need to be addressed, as a result of the artifact review activities (i.e., the walkthrough or the subsequent artifact document review) the Project Manager obtains completed Artifact Comments Sheet from the Review Team and submits the Artifact Comments Sheet to the Artifact Owner within 15 business days of the submission of the initial version (v0.1) of the artifact.

The Artifact Owner reviews and addresses all comments and submits the subsequent version of the artifact (v0.2) to the Review Team within 10 business days of receipt of the Artifact Comments Sheet. The Review Team reviews the revised version of the artifact and documents whether or not the original comments were addressed in the Artifact Comments Sheet within 10 business days of receipt of the revised version. If there are still comments that must be addressed, the Project Manager submits the updated Artifact Comments Sheet to the Artifact Owner who addresses the subsequent comments and publishes the revised version (v0.3) of the artifact within 10 business days of receipt of the revised Artifact Comments sheet.

Once all comments have been resolved, the Project Manager obtains all necessary sign-offs on the Quality Assurance Report from the Review Team. The Project Manager attaches the Quality Assurance Report to the approved artifact(s) certifying that the artifacts are acceptable from a quality standpoint and updates the QA Project Artifact Matrix with the link to the approved artifacts. The Project Manager then forwards the signed Quality Assurance Report, completed Review Checklists, completed Artifact Comments Sheet, and approved (v1.0) artifact(s) to the originating process. This step completes the Artifact Acceptance process. The Review Team signs-off and publishes v1.0 within 10 business days of the final submission by the Artifact Owner.

9.4 Templates

(Note: There are no templates defined for the Deliverable Review and Acceptance process. Templates will be defined once the DDI vendor is engaged.)

10.0 REQUIREMENTS MANAGEMENT

10.1 General Introduction and Overview

The Requirements Management process includes all activities required to plan and validate requirements for execution of the SDLC. CSB previously elicited and gathered requirements for many, but not all, of the INvest functional processes using Business Requirements Specifications (BRS), including Use Cases (UCs) and Business Process Models (BPMs).

CSB BPOs lead requirements validation sessions to define basic child support functional areas as well as additional services that support INvest. The goal of the requirements validation sessions is to ensure the DDI vendor staff have detailed knowledge and understanding of the functional requirements CSB has developed. Requirements validation is an input to solution validation.

The DDI vendor conducts requirements elicitation sessions to define requirements for those functional processes where requirements are not currently defined or are incomplete. The DDI vendor plans for the requirements elicitation sessions as part of their project planning activities. Requirements elicitation is also an input to solution validation.

The DDI vendor conducts solution validation sessions to ensure the DDI vendor's clear understanding of the requirements presented during requirements validation sessions. The DDI vendor plans for and facilitates solution validation sessions. The DDI vendor also conducts an Architectural Proof-of-Concept (A-POC) during this period.

The DDI vendor conducts requirements traceability for each functional and non-functional requirement, from its origin through Statewide implementation of INvest using Rational CLM.

10.2 Key Roles and Responsibilities

Table 27 provides a summary of key roles and primary responsibilities involved in the Requirements Management process.

Table 27: Requirements Management Key Roles and Responsibilities

Key Role	Responsibilities
CSB BPO	<ul style="list-style-type: none"> Prepares BRSs for requirements validation sessions Schedules and leads requirements validation sessions Provides expertise in requirements elicitation and solution validation sessions
CSB Chief Architect	<ul style="list-style-type: none"> Reviews and approves the A-POC

Key Role	Responsibilities
CSB Functional Manager	<ul style="list-style-type: none"> • Manages the CSB BPO team • Manages day-to-day activities related to requirements management • Ensures DDI vendor solution meets all functional requirements and non-functional requirements • Provides oversight for any research related to functional and non-functional requirements • Reviews and approves requirements elicitation documentation (e.g., BPMs, UCs) • Reviews and approves the Solution Validation Deliverable
CSB Technical Manager	<ul style="list-style-type: none"> • Reviews the A-POC • Reviews the Solution Validation Deliverable • Provides oversight and assistance for any research related to technical aspect of the requirements
DDI Business Analyst	<ul style="list-style-type: none"> • Participates in requirements validation and elicitation sessions • Leads solution validation sessions • Ensures all INvest requirements are entered into Rational CLM • Generates requirements documentation
DDI Chief Architect	<ul style="list-style-type: none"> • Develops the A-POC
DDI Functional Lead	<ul style="list-style-type: none"> • Participates in requirements validation and elicitation sessions • Leads solution validation sessions • Prepares and submits Solution Validation Deliverable • Ensures traceability of all requirements for INvest throughout the SDLC • Resolves issues and action items associated with requirements
DDI Functional Staff	<ul style="list-style-type: none"> • Participates in requirements validation sessions • Conducts requirements elicitation sessions • Participates in solution validation sessions • Documents requirements, action items, or issues
DDI Project Manager	<ul style="list-style-type: none"> • Develops the PMP, including the Requirements Management Plan • Ensures DDI vendor participation in requirements validation sessions • Ensures the DDI vendor staff lead requirements elicitation and solution validation sessions • Ensures the DDI vendor develops the A-POC • Ensures the DDI vendor submits Solution Validation and A-POC deliverables
DDI Technical Lead	<ul style="list-style-type: none"> • Participates in requirements validation sessions and solution validation sessions • Ensure traceability of technical requirements for INvest throughout the SDLC
INvest PMO	<ul style="list-style-type: none"> • Updates the project schedule as requirements management activities are completed

10.3 Process Overview and Activities

This section explains the four Requirements Management subprocesses in detail. Figure 35 provides the Requirements Management process and a high-level overview of how the subprocesses interact.

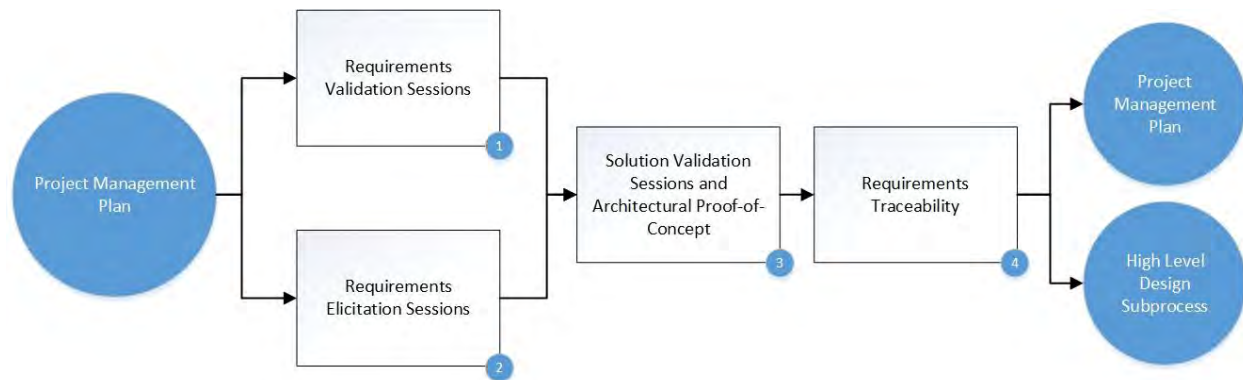


Figure 35: Requirements Management Process

1. **Requirements Validation Sessions** – Planning for the requirements validation sessions allows the CSB Functional Manager and CSB BPOs to identify each required validation session. The CSB BPOs conduct each session to clarify existing requirements. The CSB BPOs conduct these sessions by following a case from initiation to closure, known as “life of case.” This provides the CSB BPOs the opportunity to work collaboratively with the DDI vendor staff to ensure understanding of INvest requirements. **Part 10.3.1** of this section provides further details on requirements validation.
2. **Requirements Elicitation Sessions** – The DDI Functional Lead leads the requirements elicitation sessions to document requirements for functional areas where requirements are missing or incomplete. The approach to requirements elicitation is defined in the DDI vendor’s PMP. **Part 10.3.2** of this section provides further details on requirements elicitation.
3. **Solution Validation Sessions and Architectural Proof-of-Concept** – The DDI functional staff, under the direction of the DDI Functional Lead, plan for and conduct solution validation sessions. The solution validation sessions allow the DDI vendor to demonstrate to the CSB BPOs that they clearly understand INvest requirements. In parallel, the DDI vendor technical staff, under the direction of the DDI Chief Architect, develop the A-POC to ensure the DDI vendor’s proposed hardware and software solution integrates properly and will operate effectively. The DDI vendor cannot move to design until CSB approves the deliverables received from both the solution validation and A-POC activities. **Part 10.3.3** and **Part 10.3.4** of this section provide further details on solution validation and A-POC.
4. **Requirements Traceability** – The INvest Project Team stores each functional and non-functional requirement in Rational CLM. The DDI Functional Lead updates and maintains Rational CLM throughout the SDLC. **Part 10.3.5** provides further details on requirements traceability.

The outputs from this section are inputs to the High Level Design (HLD) subprocess and the PMP. High Level Design cannot begin until CSB approves the Solution Validation Deliverable and the A-POC Deliverable.

The remainder of this chapter provides additional detail related to the requirements management subprocesses. Templates for these subprocesses are shown in Table 33.

10.3.1 Requirements Validation Subprocess

The CSB Functional Manager coordinates with the CSB BPOs and the DDI Functional Lead to plan for the requirements validation sessions within the framework of the INvest Master PMP. The requirements validation sessions review all requirements documentation stored in Rational CLM. CSB conducted an analysis of all core functional requirements earlier in the INvest Project. Figure 36 provides the Requirements Validation subprocess.

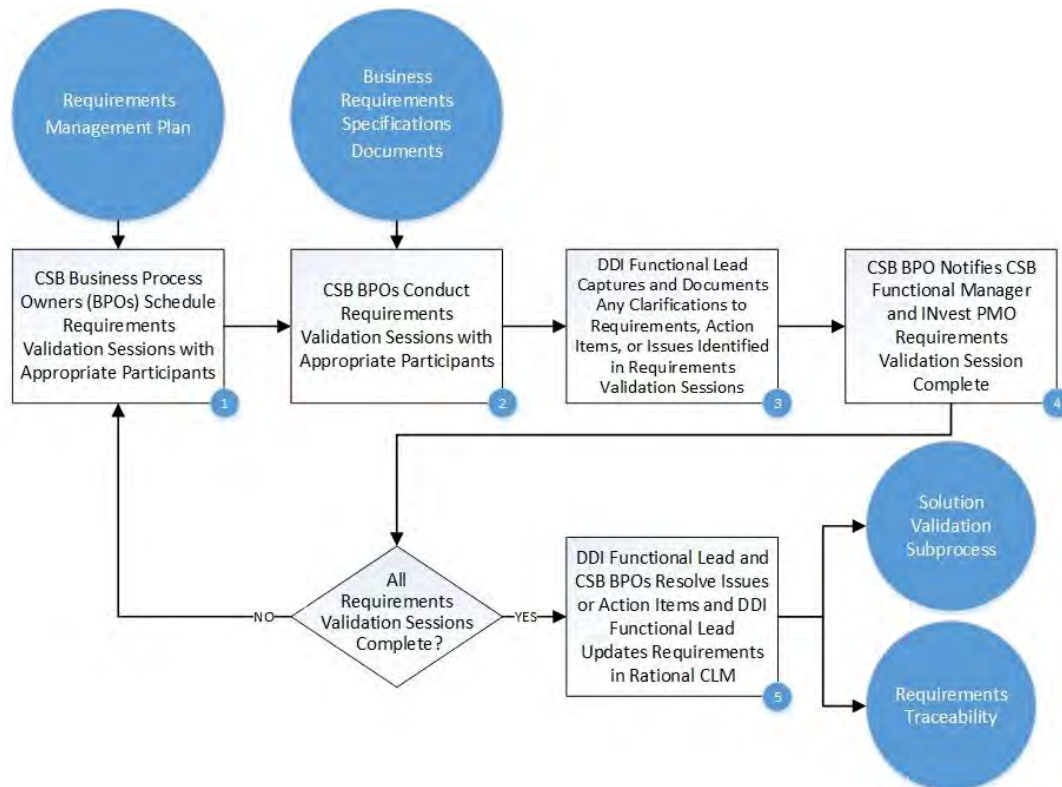


Figure 36: Requirements Validation Subprocess

1. **CSB Business Process Owners (BPOs) Schedule Requirements Validation Session with Appropriate Participants** – The CSB BPOs identify the requirements validation sessions they will conduct with the DDI vendor and schedule each session. Each CSB BPO may schedule multiple sessions during this phase of INvest. The CSB BPOs coordinate with the DDI Functional Lead to ensure all key personnel who need to participate receive an invitation.
2. **CSB BPOs Conduct Requirements Validation Sessions with Appropriate Participants** – The CSB BPOs conduct collaborative requirements validation sessions with the DDI functional staff. CSB BPOs conduct these sessions consecutively, allowing them to cover all requirements using the BRSS stored in Rational CLM.
3. **DDI Functional Lead Captures and Documents Any Clarifications to Requirements, Action Items, or Issues Identified in Requirements Validation Sessions** – During the requirements validation sessions, the DDI Functional Lead captures any clarifications to requirements, identified action items, or issues. The DDI vendor identifies an owner and the due date, and provides a brief description of the issue or action item. After CSB BPO approval, the DDI vendor updates Rational CLM to reflect clarifications to requirements.

4. **CSB BPO Notifies CSB Functional Manager and INvest PMO Requirements Validation Session Complete** – After completing the requirements validation sessions, the CSB BPOs notify the CSB Functional Manager and the INvest PMO the requirements validation sessions are complete. This allows the INvest PMO to monitor and track the requirements validation sessions against the project schedule to monitor actual dates against planned dates for completing these sessions. If all requirements validation sessions are not complete, the CSB BPOs identify and schedule subsequent sessions.
5. **DDI Functional Lead and CSB BPOs Resolve Issues or Action Items and DDI Functional Lead Updates Requirements in Rational CLM** – The DDI Functional Lead, with assistance from the CSB BPOs, either resolves any issues or action items identified during the requirements validation session or ensures the assigned owner completes the activity. The DDI Functional Lead makes appropriate changes to Rational CLM based on any clarifications to existing requirements. The DDI Functional Lead resolves all issues and action items, and makes all updates to requirements in Rational CLM, prior to initiating the solution validation sessions.

10.3.1.1 Requirements Validation Session Approach

During a requirements validation session, the CSB BPO walks participants through each BPM. CSB BPOs guide each session, and clarify any requirements that are not clearly stated. The DDI vendor captures process flow information and requirements, highlighting changes within the BRs where identified. The DDI vendor documents decisions, issues, and action items during the sessions.

10.3.2 Requirements Elicitation Subprocess

The DDI vendor conducts requirements elicitation sessions with appropriate CSB representation to identify missing or incomplete requirements and document them directly into Rational CLM. Figure 37 provides the Requirements Elicitation subprocess.

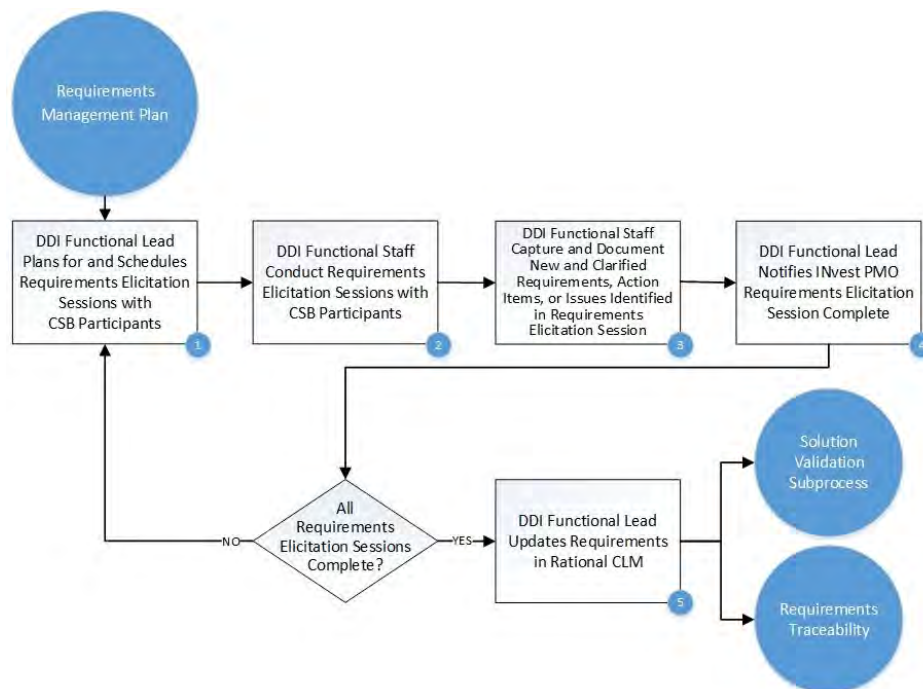


Figure 37: Requirements Elicitation Subprocess

1. **DDI Functional Lead Plans for and Schedules Requirements Elicitation Sessions with CSB Participants** – The DDI Functional Lead plans for the requirements elicitation session by working with the CSB Functional Manager to determine which specific processes have missing or incomplete requirements. After identifying the requirements elicitation sessions, the DDI Functional Lead coordinates with the appropriate CSB BPO to invite the proper CSB participants who will attend each requirements elicitation session.
2. **DDI Functional Staff Conduct Requirements Elicitation Sessions with CSB Participants** – The DDI functional staff conducts each requirements elicitation session with CSB participants to identify and clarify all missing or incomplete requirements. These sessions are a collaboration between the DDI functional staff and CSB. These sessions may be conducted concurrently.
3. **DDI Functional Staff Capture and Document New and Clarified Requirements, Action Items, or Issues Identified in Requirements Elicitation Session** – During the requirements elicitation sessions, the DDI functional staff captures any issues or action items in the project repository. The DDI functional staff identifies an owner and the due date, and provides a brief description of the issue or action item. In addition, the DDI Functional Lead captures any new requirements identified during the requirements elicitation session. The DDI functional staff updates Rational CLM to reflect new requirements by creating the BPM and UC for the functional process. To ensure that requirements are stated clearly and completely, the CSB BPOs and the DDI functional staff refer to **Attachment RQM-04 Requirements Types and Attributes Standards and Guidelines**.
4. **DDI Functional Lead Notifies INvest PMO Requirements Elicitation Session Complete** – After completing the requirements elicitation session, the DDI Functional Lead notifies the INvest PMO the requirements elicitation session is complete. This allows the INvest PMO to monitor and track the requirements elicitation sessions against the project schedule to monitor actual dates against planned dates for completing these sessions. If not all requirements elicitation sessions are complete, the DDI Functional Lead schedules subsequent sessions.
5. **DDI Functional Lead Updates Requirements in Rational CLM** – The DDI Functional Lead ensures all issues and action items identified during the requirements elicitation session are resolved and updates all requirements information in Rational CLM prior to solution validation sessions.

10.3.2.1 Requirements Elicitation Session Approach

(Note: This is a placeholder. The DDI vendor selected to design, develop, and implement INvest will provide details on the requirements elicitation approach.)

10.3.3 Solution Validation Subprocess

After the CSB BPOs complete the requirements validation sessions and the DDI Functional Lead completes the requirements elicitation sessions, the DDI Functional Lead plans and schedules the solution validation sessions. The participants from the requirements validation sessions must attend the solution validation sessions. The goal of these sessions is to demonstrate the DDI vendor's understanding of functional requirements to the INvest Project Team.

Figure 38 provides the Solution Validation subprocess.

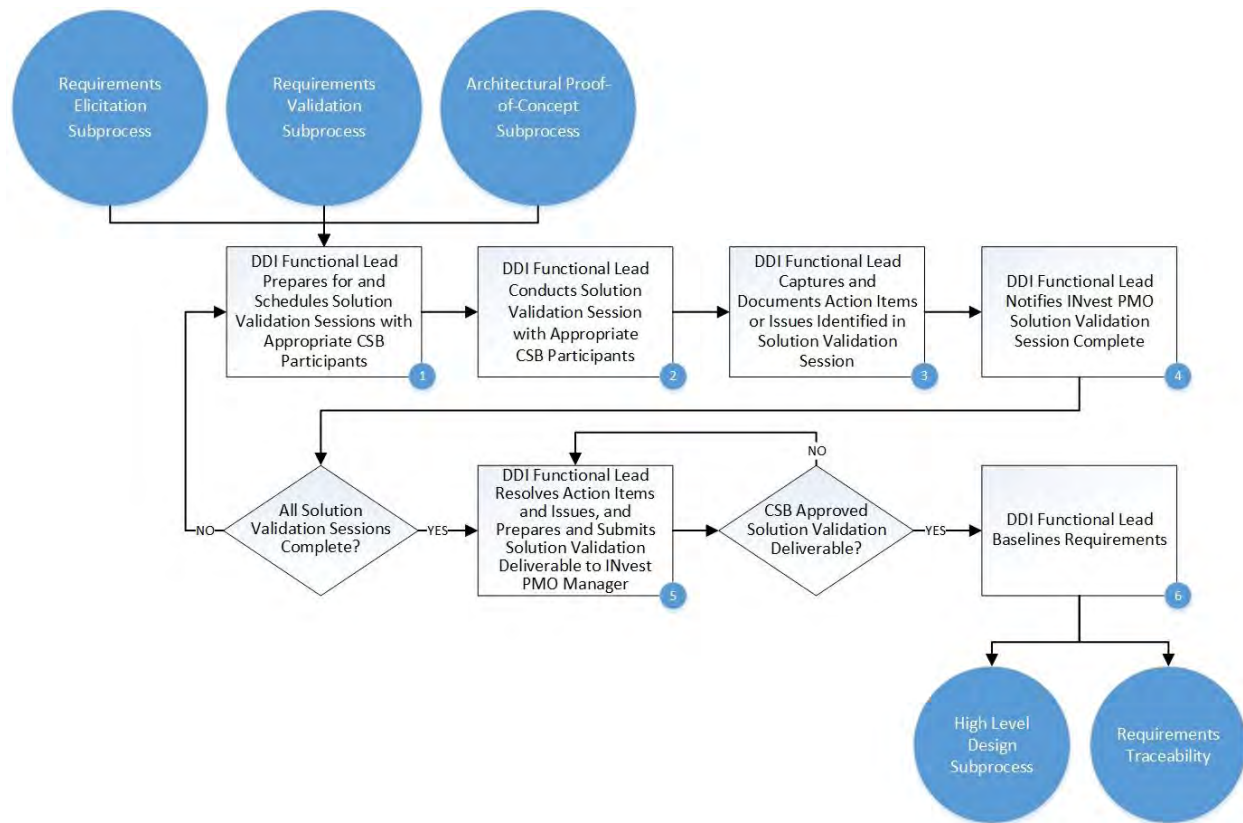


Figure 38: Solution Validation Subprocess

1. **DDI Functional Lead Prepares for and Schedules Solution Validation Sessions with Appropriate CSB Participants** – The DDI Functional Lead plans and schedules solution validation sessions after completion of all requirements validation and requirements elicitation sessions. The DDI Functional Lead works with the CSB BPOs to identify the participants for each solution validation session. The participants from the requirements validation session generally participate in these sessions. The DDI Functional lead prepares, at a minimum, process flows and screen mock-ups to demonstrate the DDI vendor understands the INvest requirements as presented in the requirements validation sessions and defined in the requirements elicitation sessions.
2. **DDI Functional Lead Conducts Solution Validation Session with Appropriate CSB Participants** – The DDI Functional Lead demonstrates the process flows and screen mock-ups for CSB participants to validate the DDI vendor’s understanding of the INvest requirements and to confirm a shared understanding of INvest functionality.
3. **DDI Functional Lead Captures and Documents Action Items or Issues Identified in Solution Validation Session** – During the solution validation sessions, the DDI Functional Lead captures any issues or action items in the project repository. The DDI Functional Lead identifies an owner and the due date, and provides a brief description of the issue or action item. If an action item or issue causes an impact to the approved project baseline, the DDI Functional Lead raises an issue as described in the [Risk and Issue Management](#) chapter.
4. **DDI Functional Lead Notifies INvest PMO Solution Validation Session Complete** – After completing the solution validation session, the DDI Functional Lead notifies the INvest PMO the

solution validation session is complete. This allows the INvest PMO to monitor and track the solution validation session against the project schedule to monitor actual dates against planned dates for completing these sessions. If not all solution validation sessions are complete, the DDI Functional Lead identifies and schedules subsequent sessions.

5. **DDI Functional Lead Resolves Action Items and Issues, and Prepares and Submits Solution Validation Deliverable to INvest PMO Manager** – The DDI Functional Lead either resolves any issues or action items identified during the solution validation session or ensures the assigned owner completes the activity. The DDI Functional Lead makes appropriate changes to Rational CLM. The DDI Functional Lead ensures resolution of all issues and action items, and updates requirements in Rational CLM, prior to submitting the Solution Validation Deliverable to CSB. After all solution validation sessions are complete and all action items and issues have been addressed, the DDI Project Manager submits the Solution Validation deliverable to the INvest PMO Manager for CSB approval. If CSB does not approve the deliverable, the INvest PMO Manager returns it to the DDI Project Manager for revision. After making the requested updates, the DDI PMO Manager submits the deliverable to the INvest PMO Manager for final approval.
6. **DDI Functional Lead Baselines Requirements** – The final task in this process is to baseline all requirements for the INvest Project. These represent the complete set of requirements that must be part of the INvest solution.

10.3.4 Architectural Proof-of-Concept Subprocess

Figure 39 provides the Architectural Proof-of-Concept subprocess.

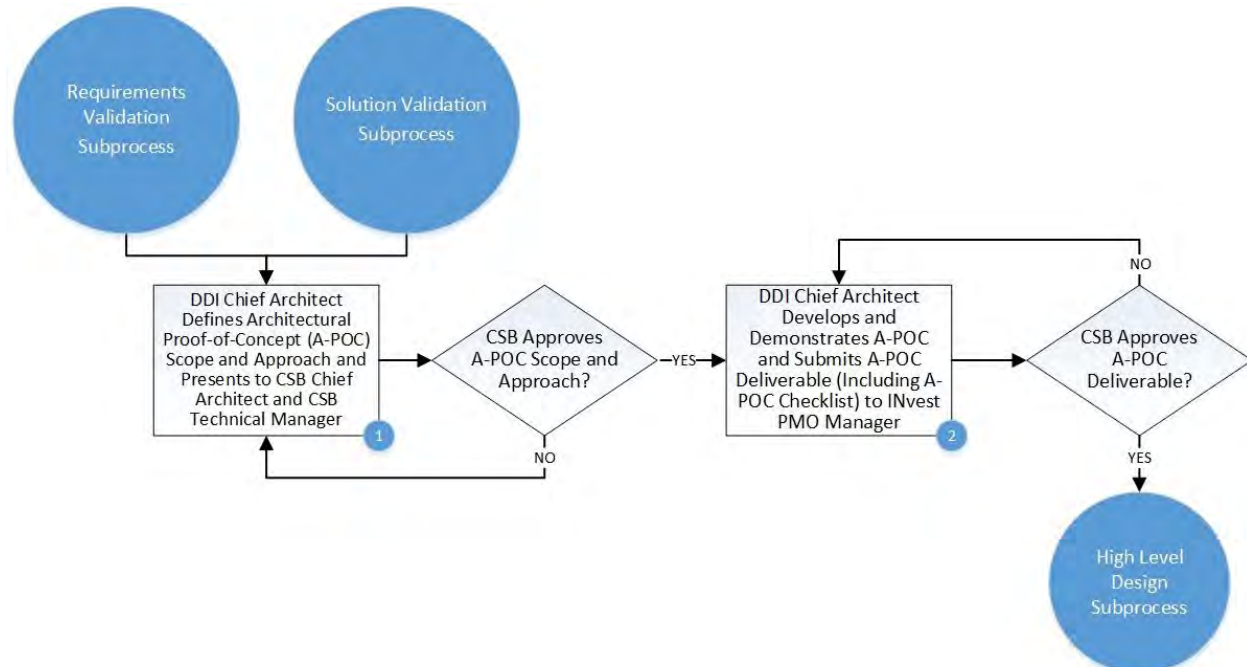


Figure 39: Architectural Proof-of-Concept Subprocess

1. **DDI Chief Architect Defines Architectural Proof-of-Concept (A-POC) Scope and Approach and Presents to CSB Chief Architect and CSB Technical Manager** – The DDI Chief Architect reviews the architectural requirements, defines an A-POC to demonstrate key aspects of the proposed solution, and presents the scope and approach to the CSB Chief Architect and CSB Technical Manager for approval. If the CSB Chief Architect and CSB Technical Manager do not approve the scope and approach of the A-POC, the documentation is returned to the DDI Chief Architect for revision. Following any necessary updates, the DDI Chief Architect resubmits the documentation to the CSB Chief Architect and CSB Technical Manager for approval
2. **DDI Chief Architect Develops and Demonstrates A-POC and Submits A-POC Deliverable (Including A-POC Checklist) to INvest PMO Manager** – The DDI technical staff, under the leadership of the DDI Chief Architect, executes the A-POC and compiles a deliverable, including the A-POC Checklist, as defined in the A-POC scope and approach. The DDI Chief Architect submits the A-POC deliverable and A-POC Checklist to the INvest PMO Manager to coordinate CSB approval by the CSB Chief Architect and CSB Technical Manager. If CSB does not approve the A-POC deliverable, the INvest PMO Manager returns it to the DDI Chief Architect for revision. After making the requested updates, the DDI Chief Architect submits the A-POC deliverable and A-POC Checklist to the INvest PMO Manager to coordinate final approval by the CSB Chief Architect and CSB Technical Manager.

10.3.4.1 Solution Validation Session Approach

(Note: This is a placeholder. The DDI vendor selected to design, develop, and implement INvest will provide details on the solution validation approach.)

10.3.5 Requirements Traceability

Requirements traceability ensures INvest delivers the desired requirements exactly as specified, and traces the impact of a requirement in both forward and backward directions to show how upstream and downstream changes affect requirements. The components that document the decomposed requirement details are the BPM, feature, UC, and service.

Traceability in Rational CLM establishes the interaction points between the unique identification numbers assigned to each component (i.e., the BPM, feature, UC, service, storyboard, or rule).

10.3.5.1 Traceability Link Relationships

The DDI Functional Lead ensures Rational CLM reflects all baselined requirements for traceability through design, development, and testing. Rational CLM allows the DDI vendor to assure CSB all requirements within scope for INvest are included in the solution.

INvest uses an iterative approach to design and develop a Statewide system. This approach allows the DDI vendor to develop multiple modules in multiple iterations. As the DDI vendor completes development and Unit Testing of each module, the DDI vendor performs System Test. During each module and iteration, it is critical the DDI vendor can trace development back to design, which traces back to the requirements in System Test; this includes common services and supplemental specifications. After the DDI vendor completes development and System Test of each module, CSB conducts User Acceptance Testing (UAT). In the same context, tracing UAT to specific requirements through Rational CLM allows CSB to ensure the developed system meets all requirements included in the build. Figure 40 provides an overall view of these relationships.

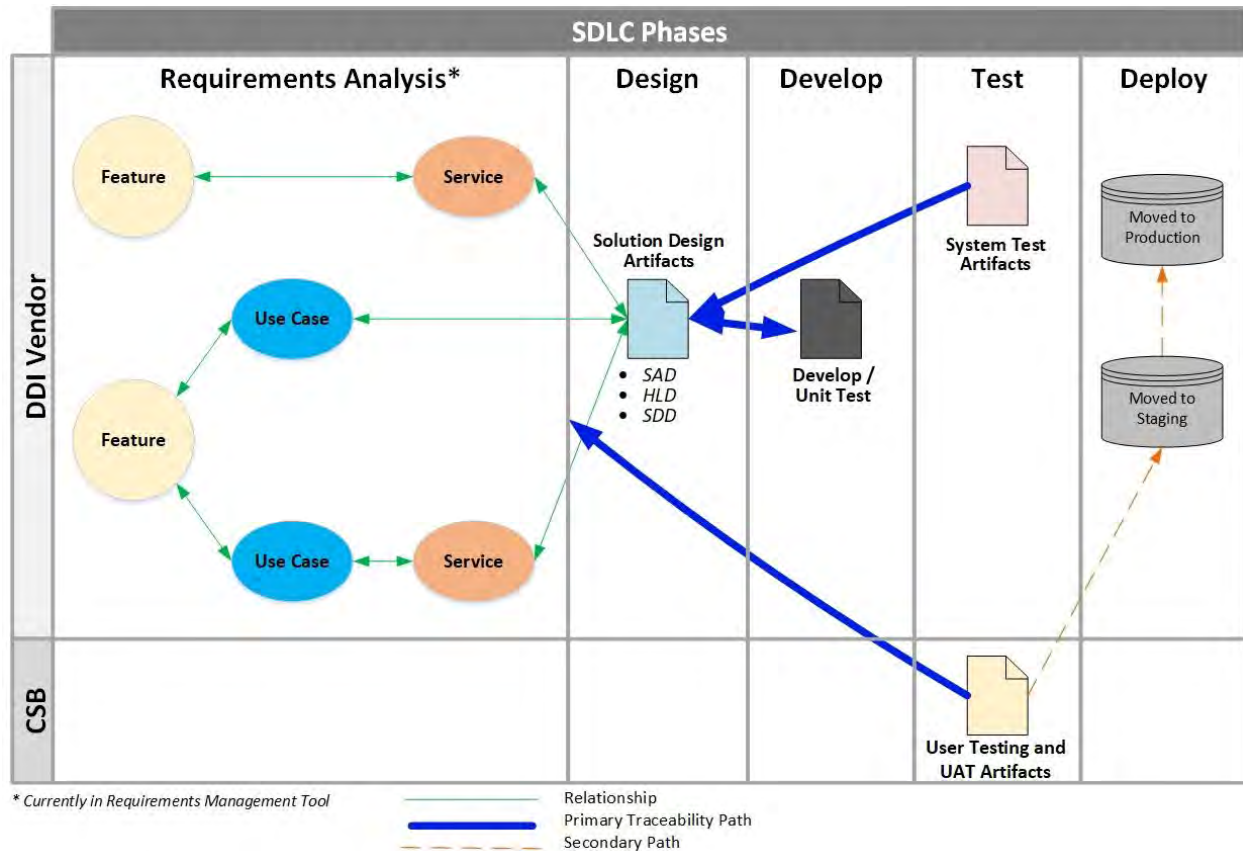


Figure 40: INvest Traceability Context

Table 28 provides a list of artifacts and their links forward and backward as part of the SDLC.

Table 28: Traceability Link Relationship

Requirement Type	Forward Links To	Backward Links To
Feature	<ul style="list-style-type: none"> • UC • Service 	
UC	<ul style="list-style-type: none"> • Design • User Testing and UAT 	<ul style="list-style-type: none"> • Feature
Service	<ul style="list-style-type: none"> • Design • User Testing and UAT 	<ul style="list-style-type: none"> • UC • Feature
Design	<ul style="list-style-type: none"> • Development / Unit Test • System Test 	<ul style="list-style-type: none"> • UC • Service
Develop / Unit Test	<ul style="list-style-type: none"> • System Test 	<ul style="list-style-type: none"> • Design
System Testing		<ul style="list-style-type: none"> • Development / Unit Testing • Design
User Testing and UAT		<ul style="list-style-type: none"> • Service • UC

During the requirements identification and requirements gathering processes earlier in the INvest Project, CSB developed a requirements traceability matrix. Figure 41 provides a requirements traceability illustration for reference. Details regarding traceability to Federal Certification Guide requirements can be found in the [Federal Certification](#) chapter.

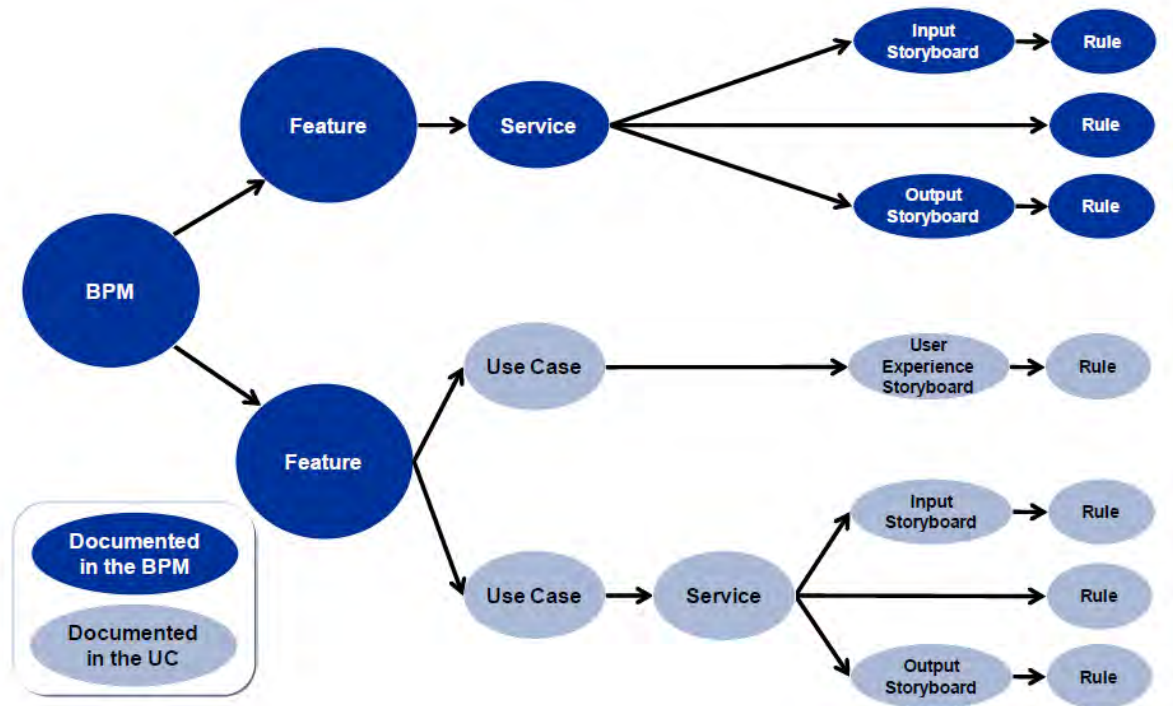


Figure 41: Requirements Traceability Illustration

10.3.6 Tools and Templates

The following provides a brief explanation of the tools and templates used in requirements management. The CSB BPO and DDI vendor use these as part of requirements validation and requirements elicitation.

10.3.6.1 Business Requirements Specifications

A BRS captures functional and non-functional requirements required for INvest. The BRS contain three components as shown in Figure 42. Each component consists of one or more separate sections.



Figure 42: Business Requirements Specifications

The DDI vendor uses Rational CLM throughout the requirements management process to capture details associated with each requirement and to update the BRS documents.

Business Process Model

The BPM is a collection of related structures, activities, or tasks that produce a specific service or product. An example of a BPM is shown in Figure 43. Rational CLM is the repository for all BPMs. The DDI vendor uses **Attachment RQM-01 Business Process Model Template** to capture activities or tasks for requirements developed during requirements elicitation sessions. The DDI vendor may update BPMs if existing requirements need clarification out of the requirements validation sessions or create new BPMs during the requirements elicitation sessions.

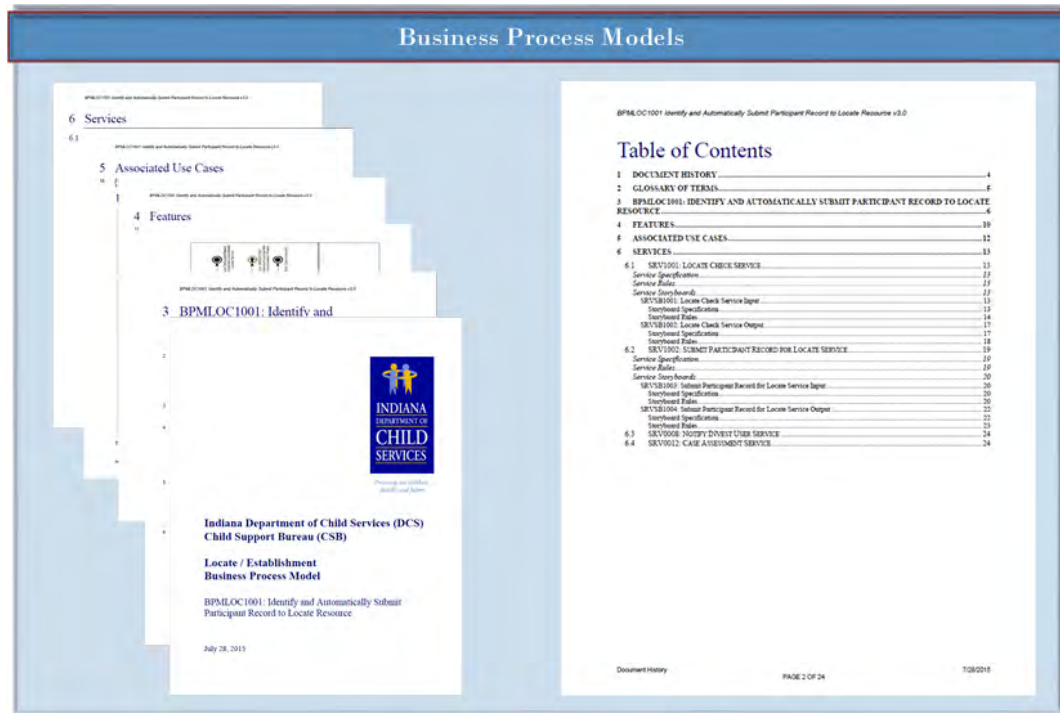


Figure 43: Business Process Model

Table 29 provides the components of the BPM.

Table 29: BPM Components

Component	Description
Document History	<ul style="list-style-type: none"> Provides a space for logging changes made to each version of the BPM
Glossary of Terms	<ul style="list-style-type: none"> Provides reference to the INvest Functional Requirements Glossary
Business Process Description	<ul style="list-style-type: none"> A unique identification number and the BPM name and a high level description of the process / functionality of the BPM
Business Process Diagram	<ul style="list-style-type: none"> Provides a visual representation of the flow of steps making up the process
Features	<ul style="list-style-type: none"> Provides major, high-level requirements of the tool, significant functions it performs, or lets the user perform and capture within the Business Process Model Template
Associated Use Cases	<ul style="list-style-type: none"> Provides a reference to the UCs involved in the BPM
Services	<ul style="list-style-type: none"> Provides three main sections that repeat for each Service in the BPM: <ul style="list-style-type: none"> Service Specifications – Describe INvest tasks that occur in a process and or a user interaction Service Rules – Describe what INvest must do when a certain condition exists Service Storyboards – Define input data elements and output data elements used in a Service; Service Storyboards provide specifications and rules associated with that specific storyboard

Use Case

A UC explains the interaction between a user or any external entity and INvest. A UC not only describes the typical interaction, but any exceptions as well. More than one UC may be associated with each BPM. An Actor associated with a UC shows which user is taking the action in the UC.

The outline of the UCs is shown in Figure 44. Rational CLM is the repository for all UCs. The DDI vendor uses **Attachment RQM-02 Use Case Template** to capture interactions between a user and INvest developed during requirements elicitation sessions. The DDI vendor may update UCs if existing requirements need clarification out of the requirements validation sessions and create new UCs during the requirements elicitation sessions.

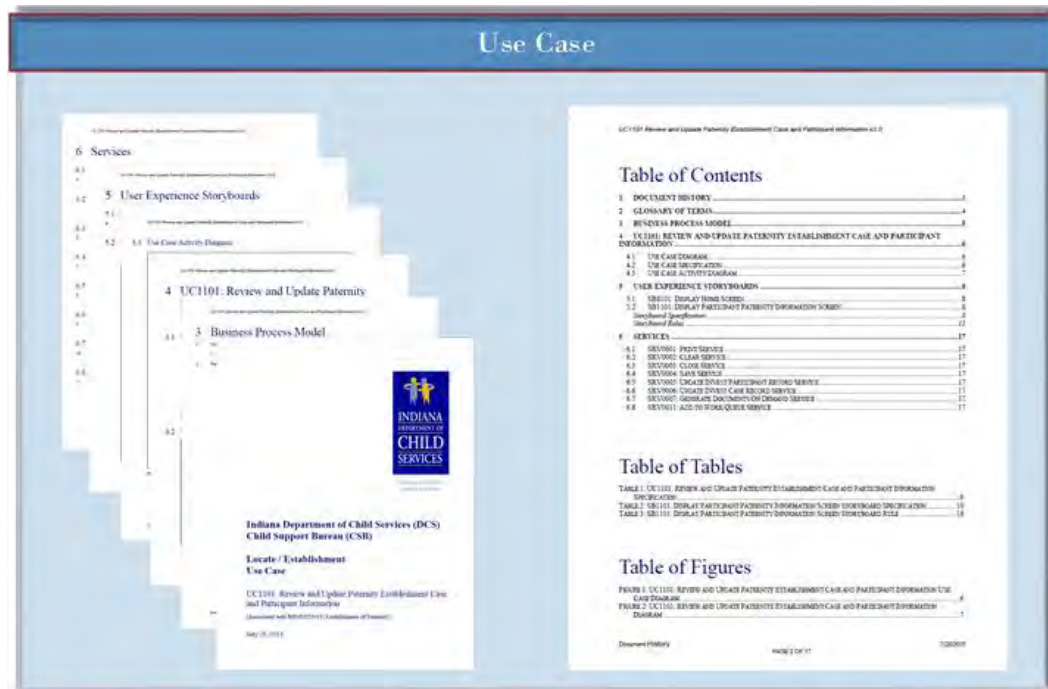


Figure 44: Use Case

Table 30 provides the components of the UC.

Table 30: Use Case Components

Component	Description
Document History	<ul style="list-style-type: none"> Provides a space for logging changes made to each version of the UC
Glossary of Terms	<ul style="list-style-type: none"> Provides reference to the INvest Functional Requirements Glossary
Business Process Model	<ul style="list-style-type: none"> Refers to any BPMs associated with this UC
Use Case ID and Name	<ul style="list-style-type: none"> Section comprises three components: <ul style="list-style-type: none"> Use Case Diagram – Provides a high-level visual depiction of how the user or other external entity interacts with INvest Use Case Specification – Provides additional detail about the interaction Use Case Activity Diagram – Provides a visual representation of the steps the user performs or follows in the interaction with INvest

Component	Description
User Experience Storyboards	<ul style="list-style-type: none"> Details all screens, reports, files, or notices involved in the user's interaction with INvest; the Storyboard Specifications and Storyboard Rules section repeats for each defined User Experience Storyboard
Services	<ul style="list-style-type: none"> Comprises three main sections: <ul style="list-style-type: none"> Service Specifications – Describes INvest tasks that occur in the user interaction Service Rules – Describes what INvest must do when a certain condition exists Service Storyboards – Define the input data elements and output data elements used in a Service; Service Storyboards provide the specifications and rules associated with that specific storyboard

Supplementary Specifications

Supplementary Specifications capture non-functional requirements indicating how the DDI vendor will develop INvest and how INvest will “look and feel” to the user. Figure 45 provides a view of **Attachment RQM-03 Supplementary Specifications Template**. Rational CLM is the repository for all Supplementary Specifications.



Figure 45: Supplementary Specifications

Table 31 provides the components of the Supplementary Specifications document.

Table 31: Supplementary Specifications Components

Component	Description
Global Rules	<ul style="list-style-type: none"> • Captures non-functional requirements for INvest
Style Guide	<ul style="list-style-type: none"> • Captures non-functional requirements related to INvest’s presentation or interface with users
Key Performance Indicators	<ul style="list-style-type: none"> • Captures standard units of measure used to assess INvest’s performance quantitatively

10.3.6.2 Supporting Documents

There are two supporting documents in addition to the three main BRS components. Figure 46 provides a view of each BRS Index for every module and the Common Services Library. Rational CLM is the repository for the BRS Index and Common Services Library.



Figure 46: Supporting Documents

Business Requirements Specifications Index

The BRS Index, shown in Figure 47, provides a list of all components included in INvest's BRS, including a mapping of UCs to BPMs. This document exists for each INvest functional area listing the associated BPMs and UCs. The BRS Index in paper form is outdated and is not used for INvest. The function of the BRS Index is accomplished by the relationship links in Rational CLM.

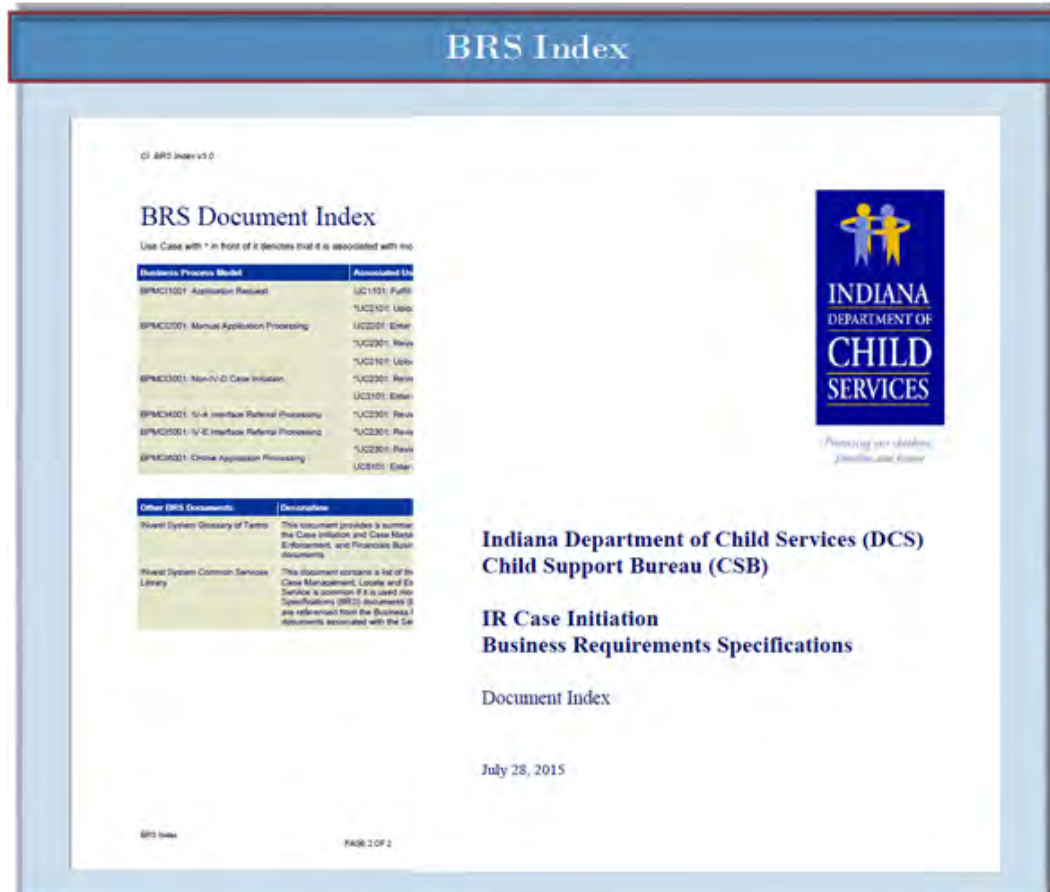


Figure 47: Business Requirements Specifications Index

Common Services Library

The Common Services Library, shown in Figure 48, contains a list of common services used for INvest, where they exist more than once across BRS components (BPMs or UCs). (The services are referenced from the BPMs and UCs associated with the service.)

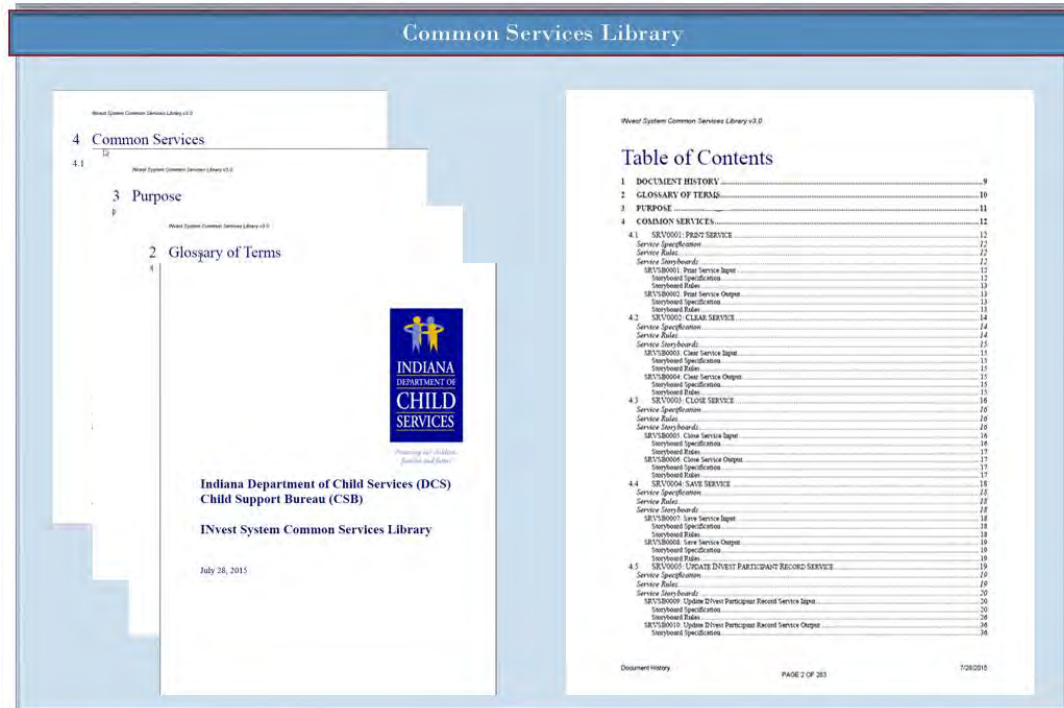


Figure 48: Common Services Library

Table 32 provides the components of the Common Services Library.

Table 32: Common Services Library Components

Component	Description
Document History	<ul style="list-style-type: none"> Provides a space for logging changes made to each version
Glossary of Terms	<ul style="list-style-type: none"> Provides reference to the INvest Functional Requirements Glossary
Common Services	<ul style="list-style-type: none"> Contains a list of the common services used for a project: <ul style="list-style-type: none"> A service is common if it is used more than once across the BRS. The services are referenced from the BPMs and UCs associated with the service. Examples are Print Services, Close Services, and Save Services

10.3.6.3 Requirements Types and Attributes

BRS templates use Types and Attributes to provide additional requirement details that allow for the grouping or categorization of requirements for later reference. See **Attachment RQM-04 Requirements Types and Attributes Standards and Guidelines** for a definition of requirements types and a list of attributes and their values.

10.3.6.4 Rational CLM

Rational CLM is the INvest requirements management tool used to populate requirement types and attributes when capturing requirement details. The tool allows the creation of artifacts for use throughout the INvest Project. In addition, Rational CLM provides traceability and documents prioritization ranking for requirements.

10.4 Templates

Table 33 provides a summary of the templates used for the Requirements Management process.

Table 33: Requirements Management Templates

Template Name	Description	Attachment ID
Business Process Model Template	<ul style="list-style-type: none"> Captures the process model, goals, features, and service specifications and rules, and references associated UCs 	RQM-01
Use Case Template	<ul style="list-style-type: none"> Captures diagrams, storyboard specifications and rules, and service specifications and rules associated with human interaction (or other interaction with any external entity to the system) 	RQM-02
Supplementary Specifications Summary Template	<ul style="list-style-type: none"> Captures non-functional requirements associated with the process 	RQM-03
Requirements Types and Attributes Standards and Guidelines	<ul style="list-style-type: none"> Describes the various types of requirements captured during the requirements step of the SDLC, characteristics of a good requirement, guidelines used when gathering requirements, and the naming convention used in developing the BRS. Shows the traceability links from and to all requirements types 	RQM-04

(Note: These templates are for initial reference purpose only. Templates will be defined once the DDI vendor is engaged.)

11.0 DESIGN

11.1 General Introduction and Overview

The Design process includes all activities required to translate validated requirements into efficient, repeatable patterns for development of final application code for INvest. Design activities for INvest reflect three central requirements:

- Layered architecture
- Modular software construction
- Service Oriented Architecture best practices

The SDLC steps for INvest overlap due to the iterative methodology being used for the INvest Project. Designs are updated on an ongoing basis after feedback from initial coding. The design process is broken into two separate, but related subprocesses:

- Solution architecture
- High level design (HLD)

Details regarding these two subprocesses are documented in **Section 11.3**.

(Note: This chapter may be revised once the DDI vendor is engaged.)

11.2 Key Roles and Responsibilities

Table 34 provides a summary of the key roles and primary responsibilities involved in the Design process.

Table 34: Design Key Roles and Responsibilities

Key Role	Responsibilities
CSB BPO	<ul style="list-style-type: none"> • Provides the DDI Designer with insight into the intent of requirements • Reviews and accepts playback during Design Joint Application Development (DJAD) sessions to confirm requirements are met • Coordinates with the DDI Designer to get clarifications as needed while translating requirements into system designs • Participates in the CDR and suggests updates to the HLDs as necessary
CSB Chief Architect	<ul style="list-style-type: none"> • Participates in the Preliminary Design Review (PDR) and approves the Solution Architecture Design (SAD) • Approves Proof-of-Concept (POC) design and development when required
CSB Functional Manager	<ul style="list-style-type: none"> • Participates in the CDR and suggests updates to the HLDs as necessary
CSB Technical Manager	<ul style="list-style-type: none"> • Participates in the PDR and suggests updates to the SAD as necessary • Approves HLDs • Participates in the Critical Design Review (CDR) and suggest updates to the HLDs as necessary
DDI Application Supervisor	<ul style="list-style-type: none"> • Evaluates POC results for feasibility and recommends related approaches • Identifies DDI Designers for completing HLDs

Key Role	Responsibilities
DDI Chief Architect	<ul style="list-style-type: none"> Develops the SAD Leads POC design and development
DDI Data Architect	<ul style="list-style-type: none"> Designs, develops, and documents the Logical Data Model (LDM) Designs, develops, and documents the Physical Data Model (PDM)
DDI Designer	<ul style="list-style-type: none"> Develops the HLD and associated coding for design for a specific set of requirements Coordinates with the appropriate CSB BPO to ensure all business requirements are met by the proposed system design Develops preliminary designs for user interface (UI) screens and report formats Plans, schedules, and conducts DJAD
DDI Technical Lead	<ul style="list-style-type: none"> Conducts the PDR and captures updates to the SAD as necessary Conducts CDRs and suggests updates to HLD as necessary

11.3 Process Overview and Activities

The remainder of this chapter explains the design processes in detail. Figure 49 provides the Design process, which is a conceptual overview of how the subprocesses interact within the process.

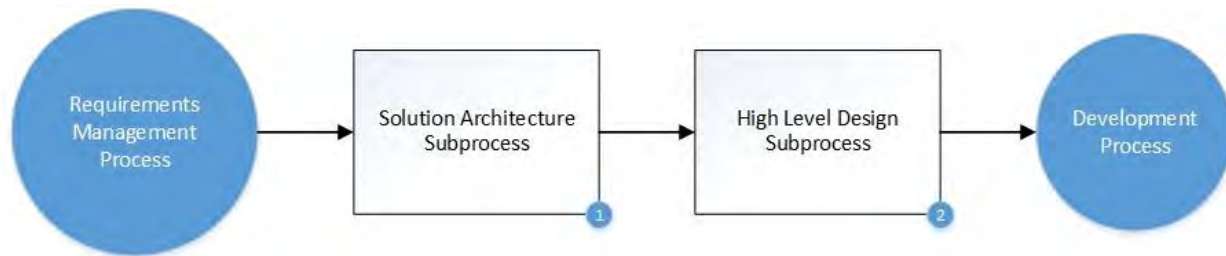


Figure 49: Design Process

- Solution Architecture Subprocess** – The solution architecture subprocess overlaps in execution with the requirements management process, and creates the various architectural views that describe INvest. This subprocess includes identifying project assumptions, constraints, and technical principles that underlie the system. Ten business modules have been identified as a starting point for the modular construction of the overall system. **Part 11.3.1** of this section provides further details on the creation of the SAD.
- High Level Design Subprocess** – The HLD subprocess applies the principles identified in the solution architecture subprocess to specific requirements that have been validated in the requirements management process. This subprocess documents how requirements are realized in specific INvest transactions. The HLD subprocess includes DJAD sessions to define the desired screens (wireframes) and determine the data required to populate the viewing and operating system needs. It also includes a potential for POC initiatives, where needed, to explore areas of technical uncertainty. Additional detail regarding the HLD subprocess is shown in **Part 11.3.2**.

11.3.1 Solution Architecture Subprocess

The solution architecture subprocess overlaps with the requirements management step, beginning after the requirements validation process has completed and while the solution validation activities are taking place. The outcome of the solution architecture subprocess is a SAD that documents the enterprise foundational structure to be used for a specific phase of the INvest Project. This set of reference materials is updated periodically as clarifying information and modifications are identified throughout the remainder of the design and development cycle.

Figure 50 provides the Solution Architecture subprocess.

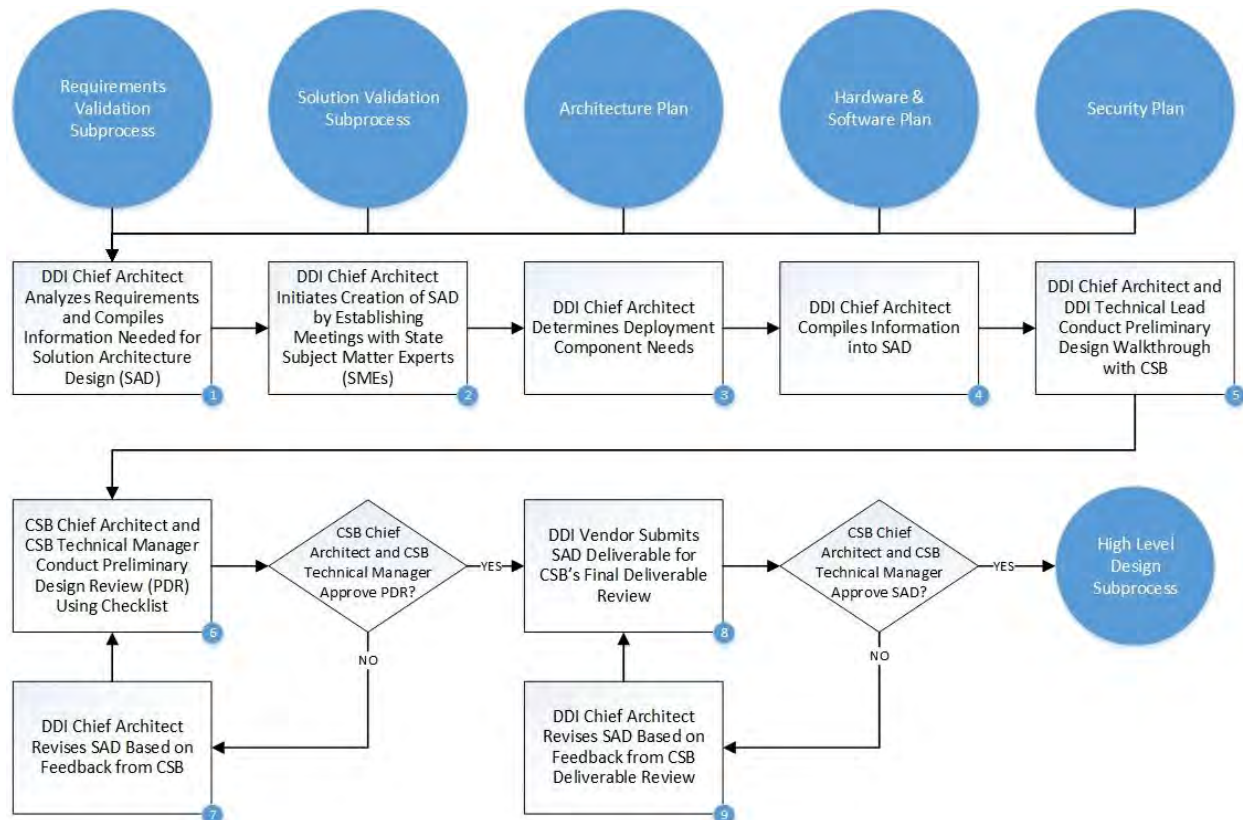


Figure 50: Solution Architecture Subprocess

- 1. DDI Chief Architect Analyzes Requirements and Compiles Information Needed for Solution Architecture Design (SAD)** – The DDI Chief Architect analyzes the requirements being baselined through the requirements validation and solution validation processes and compiles architectural details documented in the Architecture Plan, Hardware and Software Plan, and Security Plan. The SAD contains a comprehensive architectural and high-level overview of INvest, using a series of required architectural views to depict different aspects of INvest. The SAD template consists of five mandatory groupings of views as described in **Part 11.3.1.1**.
- 2. DDI Chief Architect Initiates Creation of SAD by Establishing Meetings with State Subject Matter Experts (SMEs)** – The DDI Chief Architect schedules meetings with CSB SMEs that are required to complete the SAD. These meetings provide specific clarifying information or establish initial assumptions for the various architectural disciplines.

3. **DDI Chief Architect Determines Deployment Component Needs** – After review of existing documentation and meeting with SMEs, the DDI Chief Architect documents the functional Use Cases (UC), data views, and security needs in the SAD. See Table 35 for more detail on the architectural views. Three SADs are prepared for Project Phase 1 (IAAM, Portal, and ECM); for Project Phase 2 a single SAD consolidates information from the Project Phase 1 SADs with changes required to support INvest Core Functionality.
4. **DDI Chief Architect Compiles Information into SAD** – The DDI Chief Architect documents a high-level description of INvest with two major areas of focus: functional and deployment views. Together these architecture overviews provide a full specification for the INvest architecture. The intent is to obtain early consensus and a clear understanding of the INvest architecture for use by affected participants and the development team.
5. **DDI Chief Architect and DDI Technical Lead Conduct Preliminary Design Walkthrough with CSB** – The DDI Chief Architect performs a walkthrough with CSB technical leadership to provide an understanding of the document's contents before the formal PDR is conducted.
6. **CSB Chief Architect and CSB Technical Manager Conduct Preliminary Design Review (PDR) Using Checklist** – The CSB Chief Architect and CSB Technical Manager conduct the PDR using the Preliminary Design Review Checklist. The checklist facilitates a formal inspection and review of the high-level architectural design of INvest, which is conducted to demonstrate that the design satisfies the business and system requirements and conforms to INvest strategy and goals. If CSB does not approve the SAD, CSB returns the SAD to the DDI Chief Architect with the PDR Checklist showing corrections needed to update the SAD.
7. **DDI Chief Architect Revises SAD Based on Feedback from CSB** – The DDI Chief Architect completes the updates identified through the PDR. The CSB Chief Architect and CSB Technical Manager confirm the updates.
8. **DDI Vendor Submits SAD Deliverable for CSB's Final Deliverable Review** – The DDI Chief Architect submits the final version of the SAD after updates identified in the PDR have been made. The CSB Chief Architect and CSB Technical Manager review the final SAD with the INvest Project Executive and CSB-IT Director for final approval. If the SAD is approved, it moves to the High Level Design Subprocess. If CSB does not approve the SAD, CSB returns the SAD to the DDI Chief Architect for revision.
9. **DDI Chief Architect Revises SAD Based on Feedback from CSB Deliverable Review** – If required, the DDI Chief Architect incorporates any additional changes to the SAD identified during CSB's final review of the deliverable. After any final updates, the SAD is baselined and provides a key input to the HLD subprocess.

11.3.1.1 Solution Architecture Design

The DDI Chief Architect documents the INvest architecture through a set of solution architecture views as described in Table 35.

Table 35: Solution Architecture Design Architectural Views

Architectural Views	Description
Security Architecture Views	The Security Architecture views provide a unified security scheme that addresses the requirements and risks of the INvest environment through the identification of security controls. The Security Architecture views span the application scope including access (authentication and authorization), data, infrastructure, and interaction with regulatory entities.
Business Architecture Views	The Business Architecture views involve the process information that illustrates the functionality INvest provides to end users. Class and Sequence diagrams along with UC diagrams are representations of Business Architecture views.
Application Architecture Views	The Application Architecture views inform software development. These views address software development constraints and provide references for selection of software development patterns or other building blocks. The Application Logical Layer diagram and Application Architecture Design Patterns and Styles document are examples of Application Architecture views.
Data Architecture Views	The Data Architecture views illustrate INvest from a database perspective and address storage, retrieval, processing, archiving, and security of data. The Data Architecture views include the LDM, Entity Relationship diagrams, and the Class diagram.
Infrastructure Architecture Views	The Infrastructure Architecture views illustrate the technology architecture. It describes the high-level system configuration required for INvest to operate across all environments. The Deployment diagram represents an Infrastructure Architecture view.
INvest System Architecture View	The INvest System Architecture view includes summary-level information from the five detail views to provide a holistic reference for the overall system.

11.3.2 High Level Design Subprocess

The HLD subprocess begins when the SAD is approved and solution validation activities are complete. The outcome of the HLD subprocess is a series of HLD that guide the creation of the software components required to build the modules in an iterative manner. The HLD are created for each of the eight modules and their component iterations as defined in the design schedule, which is part of the Master Project Schedule. The iterative nature of the design process allows for updates to a single module HLD by designers working on multiple iterations associated with that module. Iteration-specific content is signed off as each iteration is defined, while finalizing the HLD for the module requires all iterations for that module to be complete. The HLD are the basis for the Solution Detailed Design (SDD), which are described in the [Development](#) chapter.

The HLD consists of five mandatory specification categories that become the foundation for technical details for the development of the modular system. **Part 11.3.2.1** provides detail on the HLD.

Figure 51 provides the High Level Design subprocess.

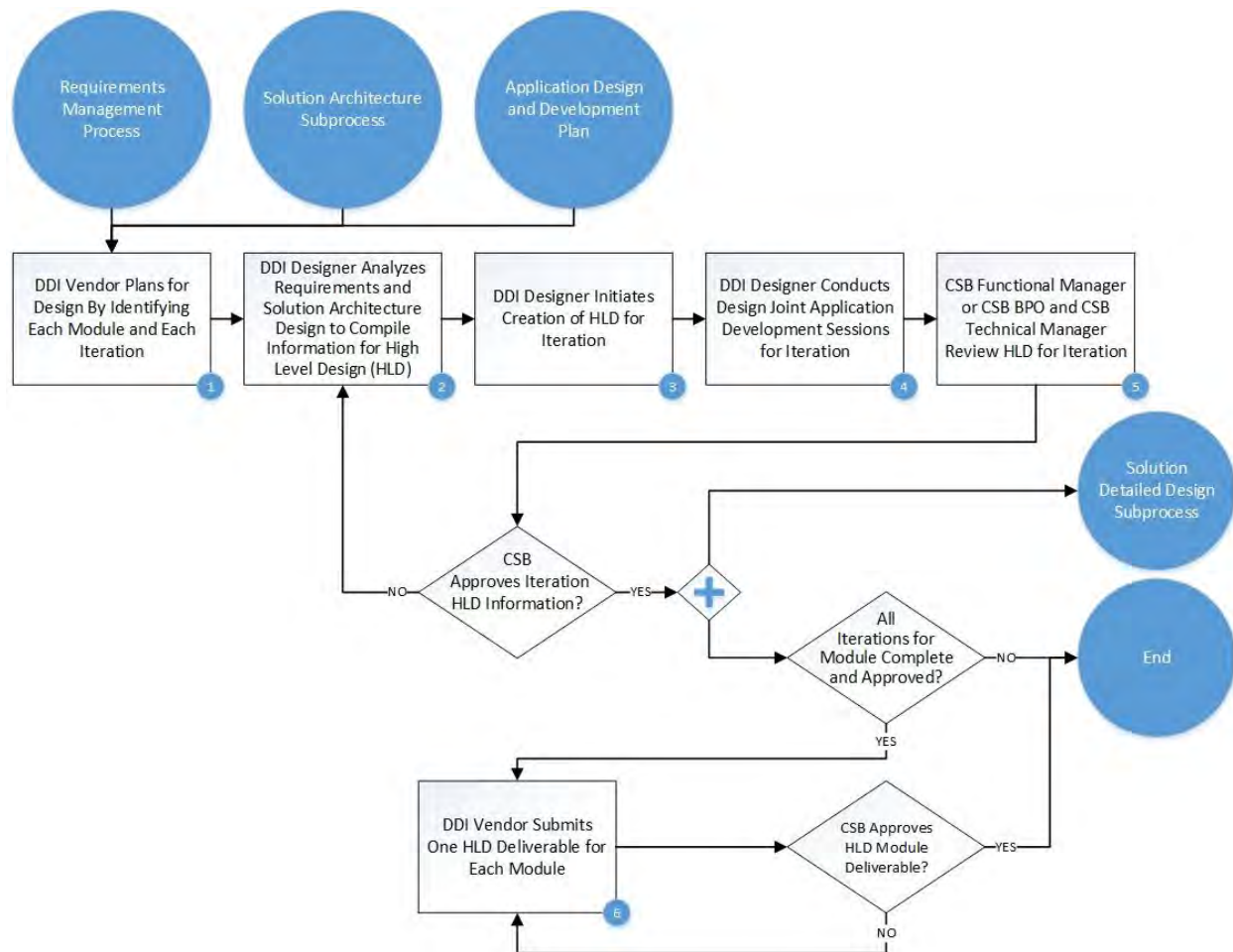


Figure 51: High Level Design Subprocess

1. **DDI Vendor Plans for Design By Identifying Each Module and Each Iteration** – The iterative design and development approach used for INvest breaks down the full set of INvest requirements into a set of modules, which are further decomposed into specific iterations. To initiate the HLD subprocess flow, the DDI Designer works with the DDI Chief Architect using the Application Design and Development Plan and the SOA Governance Plan as a reference. Design components for each module and iteration are identified, which builds the schedule for execution of the iterations.
2. **DDI Designer Analyzes Requirements and Solution Architecture Design to Compile Information for High Level Design (HLD)** – The DDI Designer analyzes the gathered requirements and clarifies any questions about the requirements with the CSB BPOs. The DDI Chief Architect also determines if the development and execution of any POCs are required to address areas of technical uncertainty.
3. **DDI Designer Initiates Creation of HLD for Iteration** – After identifying the module and iteration details and completing information-gathering tasks, the DDI Designer initiates creation of the HLD for a specific iteration. This activity also involves the creation of the accompanying System Interface Document (SID) described in **Part 11.3.2.1**.

4. **DDI Designer Conducts Design Joint Application Development Sessions for Iteration** – If the scope of the iteration includes UIs or reporting requirements, the DDI Designer uses the DJAD subprocess to design and develop UI layouts for application screens and reporting dashboards. The DDI Designer also uses the DJAD subprocess for other components where a demonstration of functionality is required. The DJAD subprocess is iterative, and may involve multiple development and playback cycles as needed to confirm the desired functionality. **Part 11.3.2.2** provides details on the DJAD subprocess. The DDI Designer documents the agreed approach in the HLD.
5. **CSB Functional Manager or CSB BPO and CSB Technical Manager Review HLD for Iteration** – The CSB Functional Manager or CSB BPO and CSB Technical Manager review the HLD to achieve confidence that the design satisfies the business and system requirements and is in conformance with the INvest strategy and goals. The DDI Designer and DDI Technical Lead facilitate the CDR with CSB using the Critical Design Review Checklist. The CDR Checklist facilitates a formal review and inspection of the detailed design of the iteration. If the CSB Functional Manager or CSB BPO and CSB Technical Manager do not approve the HLD for the iteration, the CSB Functional Manager or CSB BPO returns it to the DDI Designer for revision. Once the HLD has been approved for a specific iteration, the detail design and development process for that iteration begins. See the [Development](#) chapter for additional information. If all iterations for the module are not complete, the DDI vendor continues with subsequent iterations in that module.
6. **DDI Vendor Submits One HLD Deliverable for Each Module** – After HLDs have been approved for all iterations that make up a specific module, the DDI Designer compiles the HLD information into a single HLD for that module. The LDM must be complete for the HLD to be approved. The module-level HLD is submitted for formal review and acceptance. If the module-level HLD is not approved, the CSB Functional Manager or BPO returns it to the DDI Designer for revision.

11.3.2.1 High Level Design

The HLD describes the module and component-level technical design. The HLD is a blueprint for development and provides sufficient detail to give the development team a clear picture of the implementation details of the individual technical components and modules, as well as their relationships to one another.

Design views expand on the SAD architecture views and provide a detailed component and data view where applicable.

Table 36 describes the details documented in the HLD.

Table 36: High Level Design Specification Categories

Specification Category	Description
Conceptual Design	The Conceptual Design specifications include the primary user groups, entity relationships, business rules, and general flow of information.
Logical Design	The Logical Design specifications focus on data flows and how the solution works in a coordinated manner.
Physical Design	The Physical Design specifications consist of component (e.g., services) details that guide the application developers.

Specification Category	Description
External Design	The External Design specifications involve what the end user sees (e.g., menus, panels) and data conditions associated with the module.
Internal Design	The Internal Design specifications include interfaces among the software modules and physical components.

The HLD also contains the content of the System Interface Document (SID). The SID lists any interfaces associated with the iteration or module and documents information required to develop the interface.

11.3.2.2 Design Joint Application Development Subprocess

The objective of the DJAD subprocess is to create a mockup of system components that can further be used to facilitate and accelerate system development. DJADs may also be used to refine and finalize UIs and to define report formats and dashboards by conducting interactive sessions with relevant stakeholders in order to achieve the desired functionality.

Figure 52 provides the Design Joint Application Development subprocess, which serves as an overview of the steps used to plan and execute the DJAD activities in support of the HLD subprocess described in task #4 of Figure 51.

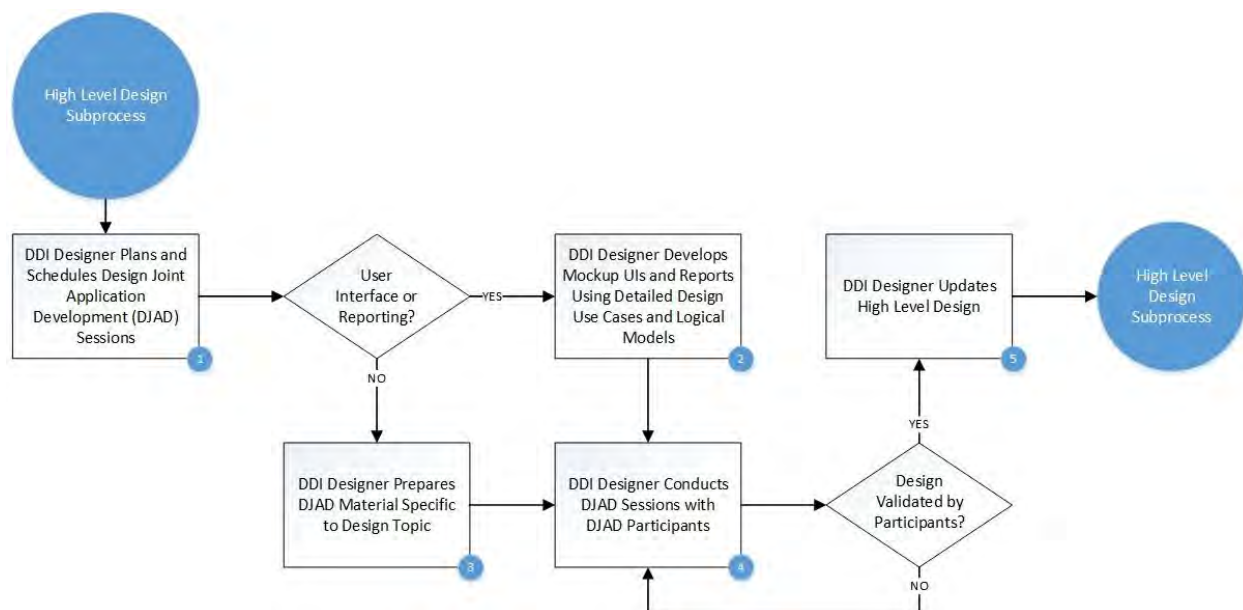


Figure 52: Design Joint Application Development Subprocess

- DDI Designer Plans and Schedules Design Joint Application Development (DJAD) Sessions** – By analyzing the HLD, the SAD, and the requirements traceability information in Rational CLM, the DDI Designer compiles a list of requirements that mandate the creation of a UI or a reporting dashboard. Common types of requirements that drive the creation of a UI are captured as User Experience Storyboards. Based on an estimated number of UIs and reports, the DDI Designer plans and schedules DJAD sessions with a set of identified participants, including business SMEs as needed. The DDI Designer's analysis of the requirements determines the materials necessary for the DJAD session. If the DJAD session focus is primarily on UIs or reporting, then the DDI Designer develops mockup UIs or reports. If the DJAD session is not specific to UIs or reporting, then the DDI Designer develops materials specific to the design topic.

2. **DDI Designer Develops Mockup UIs and Reports Using Detailed Design Use Cases and Logical Models** – If the DDI Designer's analysis of the requirements shows that DJAD sessions are primarily targeted towards design of UIs and reports, the DDI Designer develops mockups of the proposed UI design, report formats, and dashboard layouts as applicable.
3. **DDI Designer Prepares DJAD Material Specific to Design Topic** – If the DJAD sessions are not specific to UI and reports, the DDI Designer prepares the DJAD material that is specific to the topic being addressed in the DJAD sessions.
4. **DDI Designer Conducts DJAD Sessions with DJAD Participants** – Using the proposed UI design, report formats, dashboard layouts, or other materials identified for a specific topic, the DDI Designer conducts the DJADs. The DDI Designer demonstrates the UI mockups or other materials that have been created, and gathers feedback from the DJAD participants on any changes that may need to be made. The goal of the demonstration is to validate the layout for UIs, reports, and any other system elements that need to be designed with all DJAD participants. The DJAD playback process is iterative and may involve multiple cycles to address all feedback.
5. **DDI Designer Updates High Level Design** – The DDI Designer modifies the HLD based on the feedback from the DJAD participants.

11.3.2.3 Proof-of-Concept Subprocess

A POC is a small exercise to test a discrete design approach or assumption, and is initiated on an exception basis to address areas of technical uncertainty. The objective of the POC subprocess is to implement a proposed solution and demonstrate its feasibility. Figure 53 provides the Proof-of-Concept subprocess.

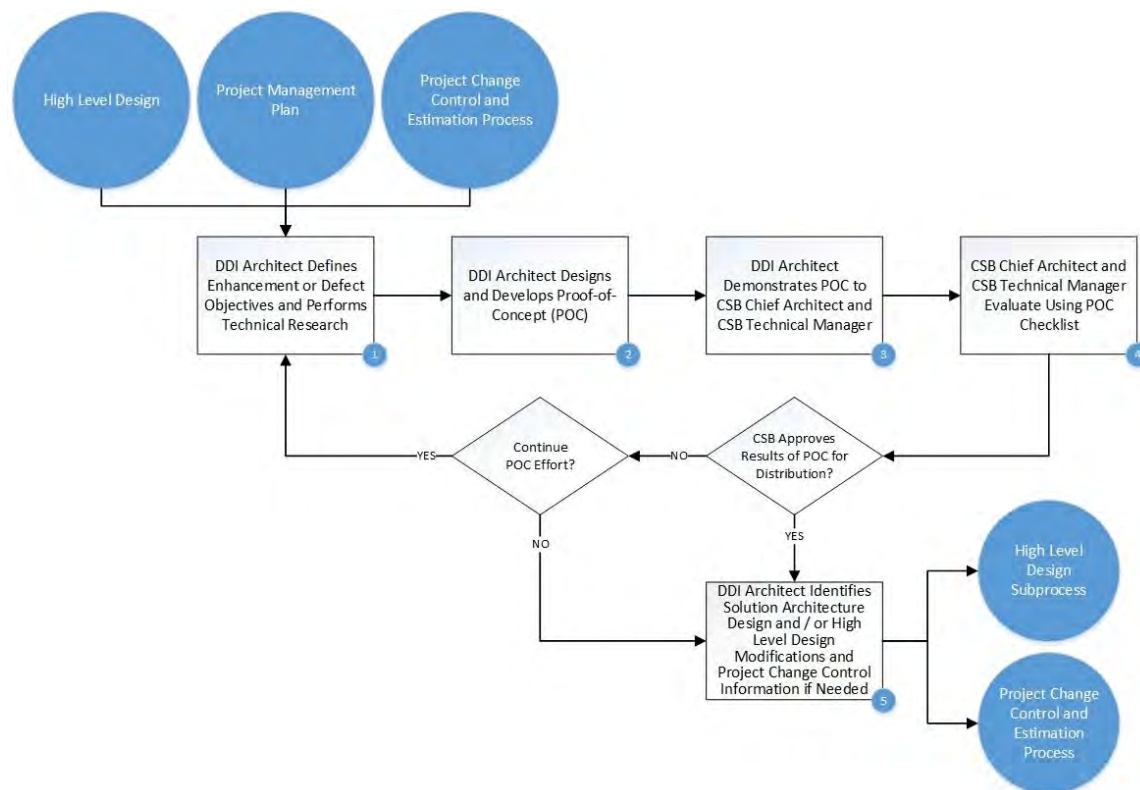


Figure 53: Proof-of-Concept Subprocess

1. **DDI Architect Defines Enhancement or Defect Objectives and Performs Technical Research** – The DDI Chief Architect determines the need to initiate a POC effort to demonstrate feasibility of the proposed design, which may be tied to the baselined requirements or to a proposed solution being discussed as part of the Project Change Control and Estimation process. The DDI Chief Architect conducts any technical research needed to define the POC or to identify viable alternatives. The Master Project Schedule is referenced to determine the appropriate time in the schedule to perform a POC.
2. **DDI Architect Designs and Develops Proof-of-Concept (POC)** – The DDI Chief Architect reviews the design information available in the HLD, as well as the associated business requirements, and determines what must be included in the POC to adequately resolve the area of technical uncertainty. The DDI Chief Architect engages technical resources as required to execute the POC.
3. **DDI Architect Demonstrates POC to CSB Chief Architect and CSB Technical Manager** – The DDI Chief Architect demonstrates the completed POC to the CSB Chief Architect and CSB Technical Manager and any additional participants (technical or business SMEs) required to evaluate the results of the POC. The demonstration is combined with a presentation to provide the context to the participants.
4. **CSB Chief Architect and CSB Technical Manager Evaluate Using POC Checklist** – The CSB Chief Architect and CSB Technical Manager use the POC checklist to analyze the results of the POC effort. If CSB approves the results of the POC effort the DDI Architect identifies SAD and HLD modifications. If CSB does not approve the POC, a determination is made by the CSB Chief Architect and CSB Technical Manager whether to continue or end the POC.
5. **DDI Architect Identifies Solution Architecture Design and / or High Level Design Modifications and Project Change Control Information if Needed** – Based on the specifics of the POC, updates may be required to the SAD or HLD. Where a POC is related to a potential change, information is provided to the Project Change Control and Estimation process for review and action.

11.4 Templates

Table 37 provides a summary of the templates used for the Design process.

Table 37: Design Templates

Template Name	Description	Attachment ID
Solution Architecture Design Template	<ul style="list-style-type: none"> The SAD template provides the details of architectural design in the form of various architectural views. The purpose of the SAD is to capture and convey the significant architectural decisions that have been made to INvest. 	DES-01
High Level Design Document Template	<ul style="list-style-type: none"> The HLD document refines the design details gathered in the SAD in the form of various architectural views corresponding to the SAD. The HLD document template conveys the detailed, component level design of INvest, which serves as a blueprint for development. 	DES-02

(Note: These templates are for initial reference purpose only. Templates will be defined once the DDI vendor is engaged.)

12.0 DEVELOPMENT

12.1 General Introduction and Overview

The Development process includes the steps required to code the components of INvest as determined in the Design process. The Development process also involves Unit Testing of the code to determine if the component is working as desired prior to integrating the individual component with other components. As an iterative development process has been selected for INvest, the SDLC steps for INvest overlap; Development overlaps with the Design process on the front end and the Test Management process on the back end. The code construction effort may also lead to design updates where needed. The Development process is broken down into two separate, but related, subprocesses:

- Code Development, Documentation, and Unit Test Planning
- Unit Test Execution

Details regarding these two subprocesses are documented in **Section 12.3**.

(Note: This chapter may be revised once the DDI vendor is engaged.)

12.2 Key Roles and Responsibilities

Table 38 provides a summary of the key roles and primary responsibilities involved in the Development process.

Table 38: Development Key Roles and Responsibilities

Key Role	Responsibilities
CSB Chief Architect	<ul style="list-style-type: none"> • Reviews the SDD documentation to ensure that application architecture standards are followed and suggests updates as appropriate
CSB Technical Manager	<ul style="list-style-type: none"> • Approves SDD documentation • Coordinates CSB Technical Team activities and tasks • Participates in the development checkpoint reviews (e.g., code reviews, Unit Test Report reviews) and suggests updates to the SDD as necessary
DDI Chief Architect	<ul style="list-style-type: none"> • Evaluates the detailed design as documented in the SDD • Reviews the SDD to ensure that application architecture standards are adhered to and suggests updates as appropriate
DDI Developer	<ul style="list-style-type: none"> • Completes the Unit Test Report • Implements detailed design • Performs code reviews • Troubleshoots failed Unit test cases and corrects deficiencies • Updates requirements information in Rational CLM
DDI Lead Developer	<ul style="list-style-type: none"> • Analyzes detailed design documentation • Baselines final version of code in the configuration management system • Documents detailed code information in the SDD • Leads code review meetings • Updates requirements information in Rational CLM

Key Role	Responsibilities
DDI Project Manager	<ul style="list-style-type: none"> Manages and oversees overall progress for the module (e.g., schedule activities) for successful completion Submits the module SDD for formal CSB approval
DDI Technical Lead	<ul style="list-style-type: none"> Coordinates the creation and content details of the SDD Updates requirements traceability information in Rational CLM Reviews and evaluates the technical design as documented in the SDD Manages day to day activities and progress updates pertaining to solution development
DDI Unit Tester (Note: role may be fulfilled by a DDI Developer)	<ul style="list-style-type: none"> Creates the Unit Test plan and executes Unit test cases

12.3 Process Overview and Activities

The remainder of this chapter explains the Development process in detail. Figure 54 provides the Development process, which is a conceptual overview of how the subprocesses interact within the process.

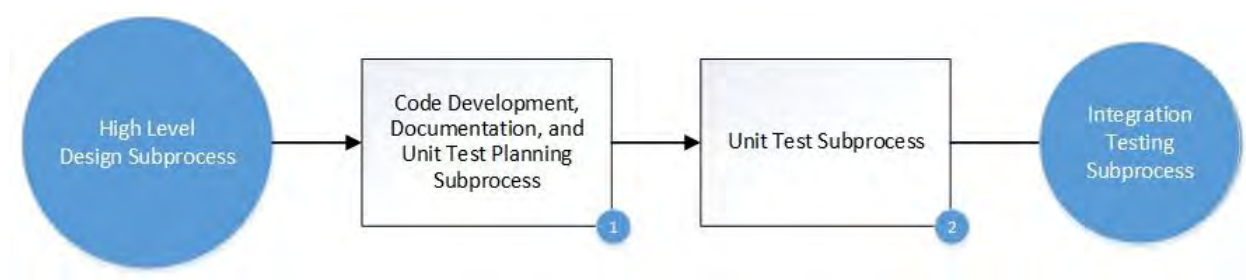


Figure 54: Development Process

- Code Development, Documentation, and Unit Test Planning Subprocess** – The Code Development, Documentation, and Unit Test Planning subprocess begins with the module and iteration specifications established in the Design process. The DDI vendor creates the SDD documentation, using the modular HLD as a reference to guide creation of the component code for each of the modules. While the components are being developed, the DDI vendor creates Unit test cases for Unit Testing. **Part 12.3.1** of this section provides further details on the creation of the SDD and preparation for the Unit Test subprocess.
- Unit Test Subprocess** – The Unit Test subprocess contains the tasks and approval steps required prior to baselining code for promotion to testing as well as version control. Unit Test documentation is submitted with the module SDD. Additional detail regarding the Unit Test subprocess is shown in **Part 12.3.2**.

12.3.1 Code Development, Documentation, and Unit Test Planning Subprocess

The primary output of the Code Development, Documentation, and Unit Test Planning subprocess is an SDD that documents the specific coding approach for each of the eight modules, which is updated incrementally as individual iterations within the module are developed. The Unit Test Plan, which is documented using **Attachment DEV-03 Unit Test Plan and Report Template** and verifies that desired functionality has been achieved, is developed in parallel with the coding activities.

This subprocess includes two checkpoints to confirm adherence to design and coding standards. The initial CSB checkpoint reviews a clear description of the major component dependencies, touchpoints, and coding standards to be used for the coding effort. The second checkpoint verifies that coding expectations have been met, and the Unit test cases are adequate to validate the functionality.

Figure 55 provides the Code Development, Documentation, and Unit Test Planning subprocess.

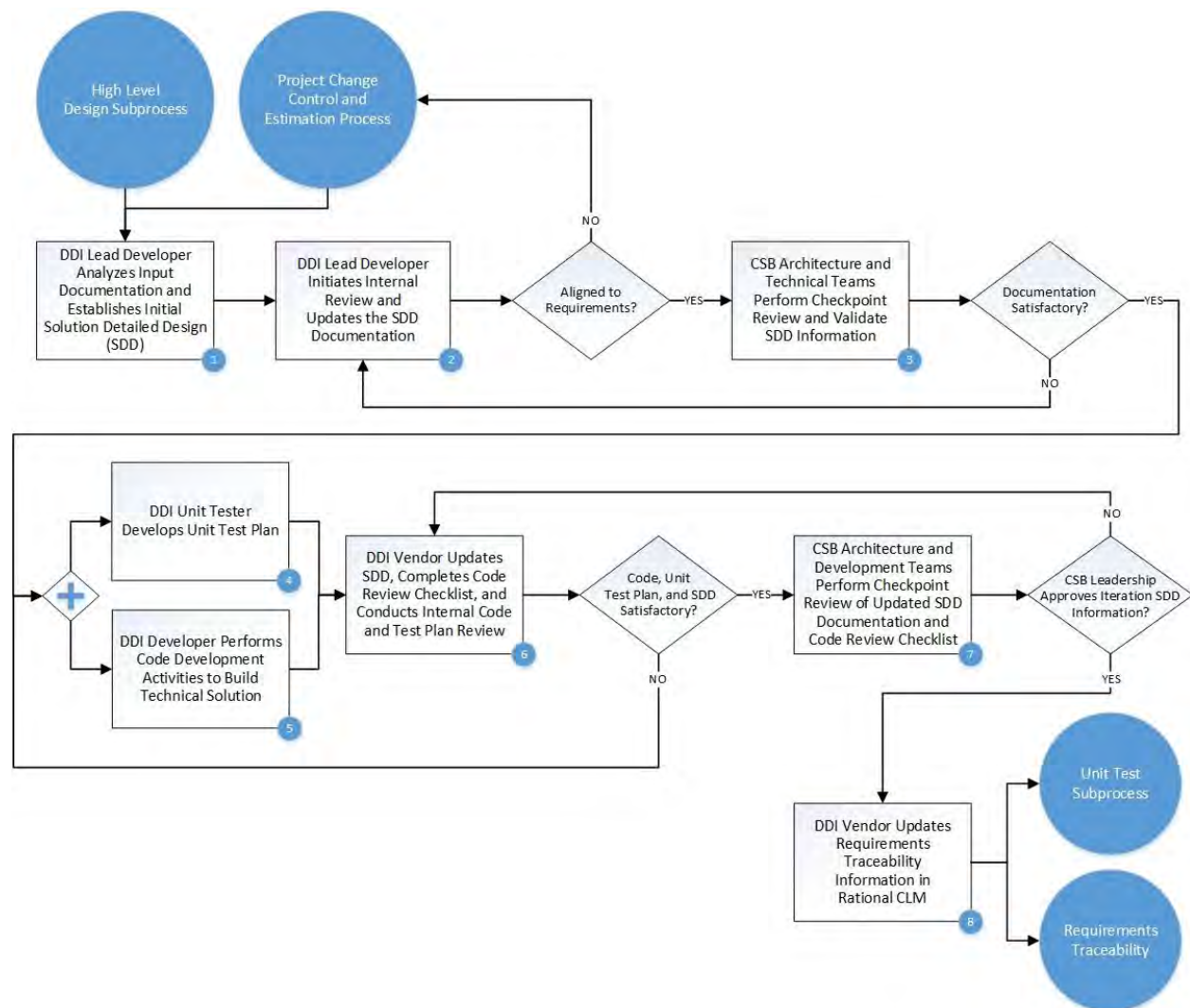


Figure 55: Code Development, Documentation, and Unit Test Planning Subprocess

1. **DDI Lead Developer Analyzes Input Documentation and Establishes Initial Solution Detailed Design (SDD)** – Once Design is completed for an iteration and the specifications exist within the HLD for the module, the Code Development, Documentation, and Unit Test Planning subprocess begins. The DDI Lead Developer obtains and analyzes the HLD, the SAD, and requirements traceability information contained in Rational CLM. The DDI Lead Developer may request additional documentation if necessary. The DDI Lead Developer then creates the SDD using **Attachment DEV-01 Solution Detailed Design Template**.
2. **DDI Lead Developer Initiates Internal Review and Updates the SDD Documentation** – The DDI Technical Lead uses the Component and Module Development Review Criteria section of **Attachment DEV-02 Application Development Review Checklist** to review the SDD and determine the viability of the detailed design. If necessary, the DDI Technical Lead returns the proposed SDD to the DDI Lead Developer for rework until the design is determined to be viable. In exceptional cases where design constraints do not allow complete fulfillment of a requirement, the Project Change Control and Estimation process is followed (see the [Project Change Control and Estimation](#) chapter for additional detail).
3. **CSB Architecture and Technical Teams Perform Checkpoint Review and Validate SDD Information** – The CSB Architecture and Technical Teams review the SDD and updated Component and Module Development Review Criteria section of the Application Development Review Checklist to validate conformance to technical requirements and address any questions. If the technical design is determined not to be viable, the DDI Technical Lead returns the proposed SDD to the DDI Lead Developer for rework.
4. **DDI Unit Tester Develops Unit Test Plan** – The DDI Unit Tester uses the Unit Test Plan and Report Template to create the Unit Test Plan documenting the Unit test cases to be executed in Unit Testing. The Unit test cases are used to validate the functionality of the code that has been written or configured. Unit test cases are constructed to address the following questions: What is being verified? What is being used, entered, or selected? What data is being worked with? What is this being tested to achieve verification? Unit test cases are also constructed to show dependencies on other Unit test cases. Unit test cases are built to support both structural and unit-level testing. Instructions on how to complete the Unit Test Plan and Report Template are included on the instructions tab of the template.
5. **DDI Developer Performs Code Development Activities to Build Technical Solution** – The DDI Developer implements the detailed design following the HLD and SDD specifications. Developing the solution includes writing code, building interfaces, and configuring the environment according to standards and procedures (e.g., code source control, change documentation) provided in the Application Design and Development Plan and System Configuration Management Plan. Once the technical construction is completed, the DDI Developer determines if any change in the baseline SDD is required based on the actual components and modules that have been developed. If a change to the SDD is required, it is returned to the DDI Lead Developer to revise.

6. **DDI Vendor Updates SDD, Completes Code Review Checklist, and Conducts Internal Code and Test Plan Review** – The DDI Developer requests a code review meeting with the DDI Lead Developer. The DDI Lead Developer selects development team members to assist with the review and schedules the code review meeting. If changes to the code or configuration are required, the DDI Lead Developer sends the Code Review Criteria section of the Application Development Review Checklist documenting the defects to be corrected to the DDI Developer. If defects are identified, the DDI Developer sends the code back through the Code Development, Documentation, and Unit Test Planning subprocess. When required changes in the code or configuration have been addressed, the DDI Developer updates Rational CLM to support requirements traceability.
7. **CSB Architecture and Development Teams Perform Checkpoint Review of Updated SDD Documentation and Code Review Checklist** – The DDI Lead Developer facilitates the checkpoint meeting with the CSB Architecture and Development Teams. The review is executed by reviewing the code using the Code Review Criteria section of the Application Development Review Checklist. The Code Review Checklist is used to ensure that development standards are adhered to and confirm that the code is error free. If changes to the code or configuration are required, the DDI Lead Developer sends the updated Code Review Criteria section of the Application Development Review Checklist documenting the defects to be corrected to the DDI Developer. After the defects have been resolved the DDI Developer sends the code back through the Code Development, Documentation, and Unit Test Planning subprocess.
8. **DDI Vendor Updates Requirements Traceability Information in Rational CLM** – When no further changes in the code or configuration are required, the DDI Developer updates Rational CLM to support requirements traceability.

12.3.2 Unit Test Subprocess

The objective of the Unit Test subprocess is to validate the smaller building blocks of the INvest technical solution prior to testing the combination of components of INvest as a whole. Unit Testing also ensures that the units of code conform functionally and technically to the HLD and SDD documentation.

Figure 56 provides the Unit Test subprocess.

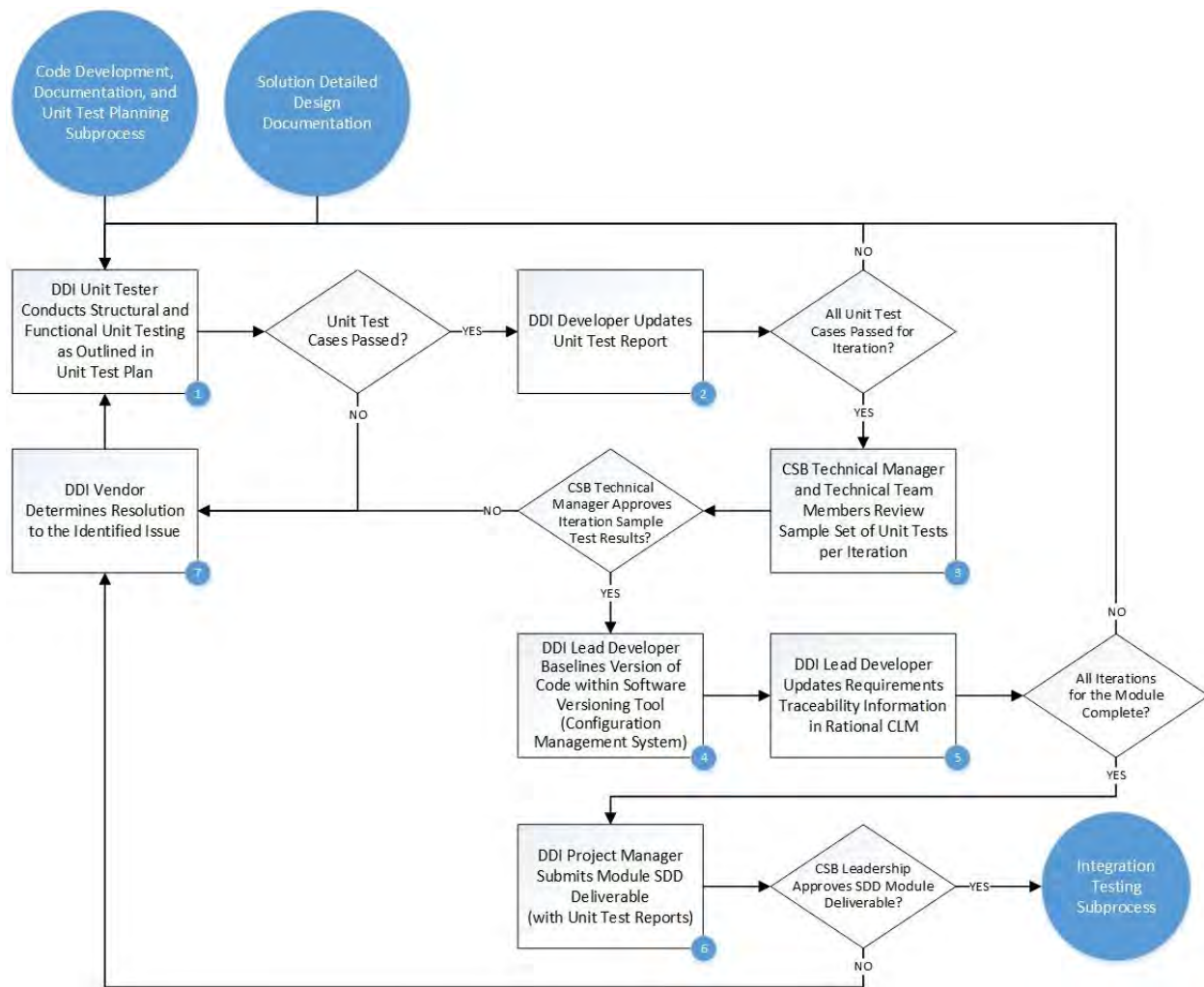


Figure 56: Unit Test Subprocess

1. **DDI Unit Tester Conducts Structural and Functional Unit Testing as Outlined in Unit Test Plan** – Once the components are developed and validated through internal code review meetings, the DDI Unit Tester obtains the code, the HLD, and the Unit test cases documented in the Unit Test Plan and reviews them in preparation for Unit Testing. The DDI Unit Tester conducts the testing as outlined in the Unit Test Plan, and summarizes the scope and results of the testing activities in the report section. If all designated Unit test cases do not pass the DDI Unit Tester determines the appropriate resolution to the identified issues. When all Unit Tests have passed, the DDI Developer updates the Unit Test Report. These activities may be performed by the DDI Developer.
2. **DDI Developer Updates Unit Test Report** – Once the code has successfully passed Unit Testing, the DDI Developer completes the remaining sections of the Unit Test Report using the Unit Test Plan and Report Template.
3. **CSB Technical Manager and Technical Team Members Review Sample Set of Unit Tests per Iteration** – The CSB Technical Manager and technical team members review the Unit Test Report and select a sample of units for detail code inspection. The Unit Test Report is rejected if

it is determined that further Unit Testing must be performed or if mistakes must be corrected. If the CSB Technical Manager does not approve the sample set of Unit Tests for the iteration, the iteration is returned to the DDI vendor for revision.

4. **DDI Lead Developer Baselines Final Version of Code within Software Versioning Tool (Configuration Management System)** – Once the Unit Test Report is approved, the DDI Lead Developer baselines the final version of code and checks the code into the configuration management system.
5. **DDI Lead Developer Updates Requirements Traceability Information in Rational CLM** – The DDI Lead Developer updates Rational CLM. If all iterations for the module are not complete, the DDI Unit Tester conducts Unit Testing for the remaining iterations. Upon completion of all iterations for the module the DDI Project Manager submits the module SDD deliverable to the INvest PMO Manager.
6. **DDI Project Manager Submits Module SDD Deliverable (with Unit Test Reports)** – The DDI Project Manager submits the SDD to the INvest PMO Manager for CSB approval. If the INvest PMO Manager does not approve the deliverable, the DDI Project Manager determines the appropriate resolution to the identified issues.
7. **DDI Vendor Determines Resolution to the Identified Issue** – Any items that fail Unit Testing are analyzed to determine the reason for failure. The DDI Developer modifies the code to address the deficiency. The DDI Tester reruns the tests until all items pass all Unit test cases.

12.4 Templates

Table 39 provides a summary of the templates used for the Development process.

Table 39: Development Templates

Template Name	Description	Attachment ID
Solution Detailed Design Template	<ul style="list-style-type: none"> Used to document the detailed design and to show how the components and modules of INvest will be structured to satisfy the requirements identified in the HLD Used to translate design specifications into a description of the software structure, software components, interfaces, and data necessary for development 	DEV-01
Application Development Review Checklist	<ul style="list-style-type: none"> Used to verify that components and modules are developed in a supportable language and in the correct order required Also used to ensure development standards are adhered to and to determine if the code is clean and error free 	DEV-02
Unit Test Plan and Report Template	<ul style="list-style-type: none"> Summarizes the results of the Unit Testing procedures and documents whether the modules are ready for release to Integration Testing 	DEV-03

(Note: These templates are for initial reference purpose only. Templates will be defined once the DDI vendor is engaged.)

13.0 TEST MANAGEMENT

13.1 General Introduction and Overview

The **Test Management** chapter includes the activities to plan for and execute testing to validate INvest requirements and to resolve any identified test defects. This includes the DDI vendor test activities (Integration, System, Performance, and Federal Certification) and CSB test activities (User Testing and UAT), which the DDI vendor supports. User Testing involves testing by CSB staff against INvest functional requirements for individual modules, but does not include formal acceptance. User Acceptance Testing (UAT) involves CSB and County Partner staff testing against functional requirements at the end of each project phase. Formal acceptance for the project phase is given after successful completion of UAT. This section describes testing subprocesses:

- Integration Testing;
- System Testing (both module and phase level);
- Performance Testing;
- Federal Certification Testing;
- User Testing;
- User Acceptance Testing; and
- Defect Resolution.

It is critical for CSB to ensure testing adequately demonstrates that INvest meets CSB’s functional and non-functional requirements. Both the DDI vendor and CSB have roles in the testing process. The DDI Master Test Plan defines the DDI vendor’s strategy, approach, and methodology. CSB also creates a test plan that addresses initial User Testing of individual modules and final UAT of the system functionality delivered for each project phase. More detail regarding Integration Testing, System Testing, Performance Testing, and Federal Certification Testing is provided in **Part 13.3.2**. More detail regarding User Testing and UAT is provided in **Part 13.3.3**. The results of the testing activities are documented incrementally in the Final Test Report throughout the testing cycles.

The DDI Master Test Plan and CSB UAT Master Test Plan are components of the INvest Master PMP.

(Note: The QA Team will review this section for any updates based on the selected DDI vendor’s approach to and methodology for testing.)

13.2 Key Roles and Responsibilities

Table 40 provides a summary of key roles and primary responsibilities involved in the Test Management process.

Table 40: Test Management Key Roles and Responsibilities

Key Role	Responsibilities
CSB BPO	<ul style="list-style-type: none"> ● Develops and refines UAT cases ● Creates User Testing and UAT scripts ● Executes User Testing and UAT scripts ● Enters defects into Rational CLM ● Retests reported defects to ensure correct resolution

Key Role	Responsibilities
	<ul style="list-style-type: none"> • Supports the efforts of the DDI vendor test team • Analyzes defect resolution issues • Clarifies and validates approved business requirements with testers and key users
CSB Functional Manager	<ul style="list-style-type: none"> • Reviews UAT scripts • Serves as the business authority for day-to-day activities related to UAT • Ensures the DDI vendor solution meets functional requirements through UAT • Ensures a user / business perspective drives the majority of system decisions in resolving testing defect issues • Provides a complete review and approval of the DDI Master Test Plan • Provides input to the CSB UAT Master Test Plan • Ensures Federal Certification Testing results align with federal requirements • Assists the CSB Testing and Help Desk Manager with UAT
CSB Security Manager	<ul style="list-style-type: none"> • Assists with security testing • Reviews DDI Master Test Plan for security testing approach • Reviews CSB UAT Master Test Plan for security testing approach • Reviews security testing results and resolution of any findings
CSB Technical Manager	<ul style="list-style-type: none"> • Assists and provides technical expertise during System Testing • Clarifies technical requirements during testing when required • Provides oversight of development and Unit Testing for defect fixes and performs code reviews on fixed defects • Monitors the Federal Certification Testing environment
CSB Test Lead	<ul style="list-style-type: none"> • Reviews the DDI Master Test Plan • Reviews and supports the efforts of the DDI vendor test team • Updates Rational CLM as part of defect resolution • Reviews and analyzes CSB User Testing and UAT test results • Clarifies requirements with CSB BPOs when required • Manages UAT defects when identified • Coordinates resolution of test failures not related to defects • Reviews DDI Final Test Report entries • Reviews and updates the Final Test Report with UAT results
CSB Tester	<ul style="list-style-type: none"> • Reviews the DDI Master Test Plan • Assists the DDI vendor with System Testing • Reviews and supports the efforts of the DDI vendor test team • Develops and refines UAT cases • Creates User Testing and UAT scripts • Executes User Testing and UAT scripts • Enters defects into Rational CLM • Retests reported defects to ensure correct resolution • Reviews the Final Test Report

Key Role	Responsibilities
CSB Testing and Help Desk Manager	<ul style="list-style-type: none"> • Manages CSB's testing resources • Provides oversight and technical expertise for the testing activities • Provides oversight for testing standards and best practices • Ensures the DDI vendor solution meets all functional requirements through System Testing • Leads the UAT effort with assistance from the CSB Functional Manager and provides status reporting • Provides a complete and thorough review and approval of the DDI Master Test Plan • Manages the Financial Distribution Test Deck run • Authors the CSB UAT Master Test Plan with input from the CSB Functional Manager • Reviews and supports the efforts of the DDI vendor test team • Reviews results of System Testing performed by the DDI vendor • Reviews UAT defect resolution and tracking • Approves Final Test Report
CSB User	<ul style="list-style-type: none"> • Executes User Testing and UAT scripts • Documents User Testing and UAT results • Documents reported defects • Retests reported defects to ensure correct resolution
County Partner staff	<ul style="list-style-type: none"> • Executes UAT scripts • Documents UAT results • Documents reported defects • Retests reported defects to ensure correct resolution
DDI Developer	<ul style="list-style-type: none"> • Analyzes reason(s) for reported defects • Modifies code to address defects
DDI Functional Lead	<ul style="list-style-type: none"> • Reviews System test scripts • Serves as the business authority for day-to-day activities related to testing • Ensures the solution meets functional requirements through testing • Assists in development of the DDI Master Test Plan • Ensures Federal Certification Testing results align with federal requirements • Assists with System Testing in coordination with DDI Testing Lead • Reviews the Financial Distribution Test Deck results with CSB Functional Manager and CSB Testing and Help Desk Manager and responds to feedback • Works closely with the INvest Project Team to resolve federal certification issues
DDI Lead Developer	<ul style="list-style-type: none"> • Reviews reported defects in each test subprocess • Organizes and leads code reviews for code modified to address defects • Baselines the final version of code • Updates Rational CLM during defect resolution

Key Role	Responsibilities
DDI Security Lead	<ul style="list-style-type: none"> Assists with security testing and resolution of any findings Contributes to the DDI Master Test Plan Ensures security testing is conducted during development and any findings are resolved
DDI Technical Lead	<ul style="list-style-type: none"> Assesses the impact of test results on design and development efforts Conducts code reviews during defect resolution after Unit Test of defect fixes
DDI Tester	<ul style="list-style-type: none"> Develops and refines cases in Rational CLM Creates scripts in Rational CLM Executes scripts Enters defects into Rational CLM Retests reported defects to ensure correct resolution
DDI Testing Lead	<ul style="list-style-type: none"> Develops and tracks the DDI Master Test Plan, including support for UAT Manages ongoing testing activities Collaborates with CSB Testing and Help Desk Manager to implement an effective testing process Ensures creation of test infrastructure that supports continuous integration and automated testing Reviews Integration, System, Federal Certification, and Performance Testing results Provides status to CSB Updates the Final Test Report with the results of each testing subprocess, except UAT

13.3 Process Overview and Activities

The input to the Test Management process is the approved DDI vendor's Solution Validation Deliverable. The DDI vendor designs, develops, and tests INvest in a structure that may include multiple iterations within a module, and will include multiple modules within a project phase.

- Integration Testing occurs at the iteration level.
- System Testing occurs at the module level after development of all iterations for a module is complete and includes security testing, web services testing, localization testing, browser compatibility testing, personal computer configuration / operating system testing, mobile testing, and interface testing.
- User Testing occurs for the module after the DDI vendor completes System Testing for that module.
- When all modules for a project phase have been System and User Tested, the DDI vendor performs an end-to-end System Test at the project phase level. End-to-end testing ensures all interdependent functions within INvest work correctly from start to finish, including any interfaces. The INvest Project phase level is a single package of integrated components for implementation into production.

- Once the end-to-end System Test is complete, CSB performs end-to-end UAT for all modules in that project phase.

Automated testing is a key component of DDI testing activities, i.e., System and Federal Certification, and is essential for Regression Testing during all testing processes. The DDI vendor will use the latest version of Rational Functional Tester for the automated testing activities.

The DDI vendor assists and supports CSB with the execution of test scripts and the resolution of identified defects during User Testing and UAT.

Figure 57 provides the Test Management process.

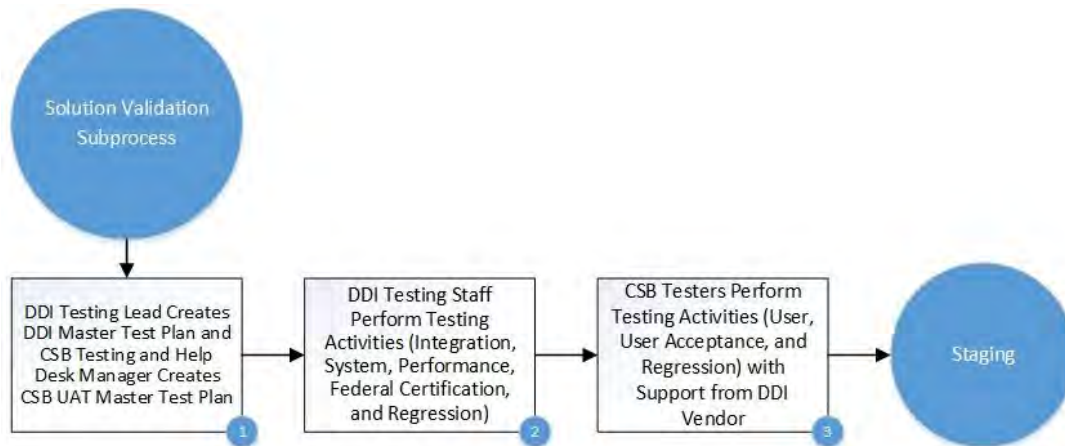


Figure 57: Test Management Process

- DDI Testing Lead Creates DDI Master Test Plan and CSB Testing and Help Desk Manager Creates CSB UAT Master Test Plan** – After CSB approves the DDI vendor’s ADDP and Solution Validation Deliverables, the DDI Testing Lead creates the DDI Master Test Plan, and the CSB Testing and Help Desk Manager, with assistance from the CSB Functional Manager, creates the CSB UAT Master Test Plan. The DDI Master Test Plan is a document that details the DDI vendor’s test strategy, approach, and methodology for performing testing activities to ensure INvest is a federally certified system and meets all baselined CSB requirements. The CSB UAT Master Test Plan documents activities that detail CSB’s User Testing and UAT strategy, approach, and activities to ensure INvest meets all requirements and is ready for release to production. **Part 13.3.1** provides details on the development and CSB approval of the DDI Master Test Plan and the CSB UAT Master Test Plan.
- DDI Testing Staff Perform Testing Activities (Integration, System, Performance, Federal Certification, and Regression)** – The DDI testing staff conduct all testing activities other than User Testing and UAT. The DDI vendor conducts Integration, System, Performance, and Federal Certification Testing in designated environments. Testing activities occur at the iteration, module, and project phase levels.
 - Iteration level** – The DDI vendor designs, develops, and tests INvest in iterations within a module. Integration Testing occurs at each iteration.
 - Module level** – After the DDI vendor completes development and Integration Testing of iterations within a module, System Testing is performed for that module. The DDI vendor also performs Regression Testing to ensure new or modified code does not cause conflict with other components of INvest.

- c. **Project Phase level** – After System Testing is completed for all the modules included in a project phase, the DDI vendor conducts an end-to-end System Test across all modules. The DDI vendor also performs Regression Testing to ensure new or modified code does not cause conflict with other components of INvest.

Integration, System, Performance, Federal Certification, and Regression Testing activities follow the Defect Resolution subprocess identified in **Part 13.3.5**.

3. **CSB Testers Perform Testing Activities (User, User Acceptance, and Regression) with Support from DDI Vendor** – CSB conducts all User Testing and UAT activities in the UAT environment, with support from the DDI vendor. User Testing activities occur within each module after the DDI vendor completes System Testing for that module. UAT is the last testing activity prior to moving code into a staging environment prior to moving INvest to production. During UAT, CSB may perform Regression Testing to ensure code fixes do not cause conflict with other components of INvest. User Testing and UAT activities follow the Defect Resolution subprocess identified in **Part 13.3.5**.

13.3.1 Master Test Planning

The objective of master test planning is to develop an overall test strategy describing what to test, how to test it, when to test it, and who performs the test. The Master Test Planning subprocess has two major activities:

- The development of a DDI Master Test Plan that includes the test strategy for Integration Testing, System Testing, Performance Testing, and Federal Certification Testing and outlines all test activities. The DDI Master Test Plan provides a mechanism to control the scope of the DDI vendor testing efforts.
- The development of a CSB UAT Master Test Plan that includes the test strategy for User Testing at the module level and UAT at the project phase level. The CSB UAT Master Test Plan provides a mechanism to control the scope of CSB testing activities.

As INvest will be developed in two project phases, with development structured in modules with component iterations, it is critical that testing for all project phases, modules, and iterations is thoroughly planned and executed. The DDI vendor must develop a DDI Master Test Plan that includes all testing activities conducted for each project phase, module, and iteration. The DDI Master Test Plan and CSB UAT Master Test Plan are living documents that the DDI vendor and CSB, respectively, update periodically throughout the INvest Project.

13.3.1.1 DDI Master Test Plan Development

The purpose of the DDI Master Test Plan is to document the overall test strategy and to outline all the test activities performed by the DDI vendor.

Figure 58 provides the DDI Master Test Plan Development subprocess.

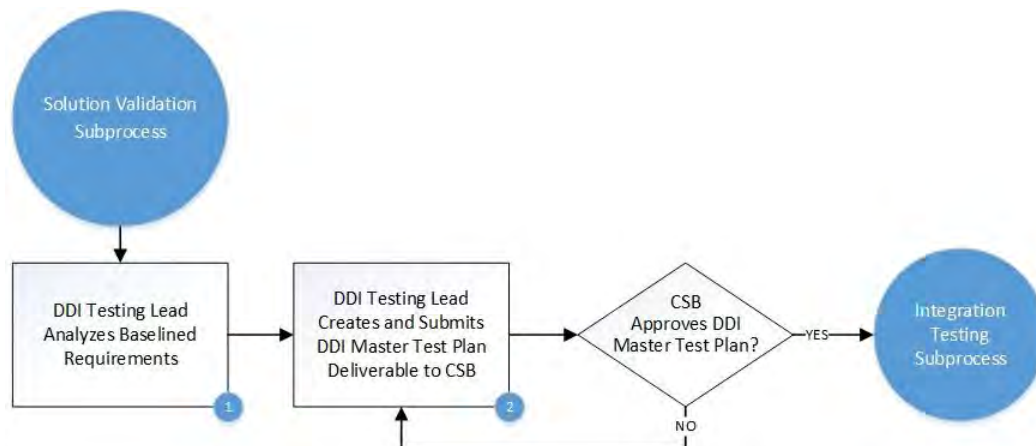


Figure 58: Test Planning – DDI Master Test Plan Development Subprocess

1. **DDI Testing Lead Analyzes Baselined Requirements** – The test planning subprocess begins when requirements are baselined following the approval of Solution Validation Deliverables. The DDI Testing Lead analyzes the baselined requirements to determine the best approach and methodology for testing activities. The DDI Testing Lead reviews the INvest Master PMP and the Master Project Schedule to facilitate the planning of Integration Testing, System Testing, Performance Testing, and Federal Certification Testing. The DDI Master Test Plan describes activities that support CSB testing activities at both the module level (User Testing) and the project phase level (UAT).
2. **DDI Testing Lead Creates and Submits DDI Master Test Plan Deliverable to CSB** – The DDI Master Test Plan is a DDI vendor deliverable that documents the overall test strategy and outlines all DDI vendor test activities to ensure INvest functions as designed. The DDI Master Test Plan also includes identification of the testing resources and their associated responsibilities, the test schedule, as well as any known risks and plans for their mitigation. The DDI Master Test Plan template is provided as **Attachment TST-01 DDI Master Test Plan Template**. After the DDI vendor submits the DDI Master Test Plan for formal review, CSB reviews the deliverable and either approves or returns it to the DDI vendor for revision.

13.3.1.2 CSB UAT Master Test Plan Development

The purpose of the CSB UAT Master Test Plan is to document the overall UAT strategy and to outline all the test activities performed by CSB during User Testing and UAT.

Figure 59 provides the CSB UAT Master Test Plan Development subprocess.

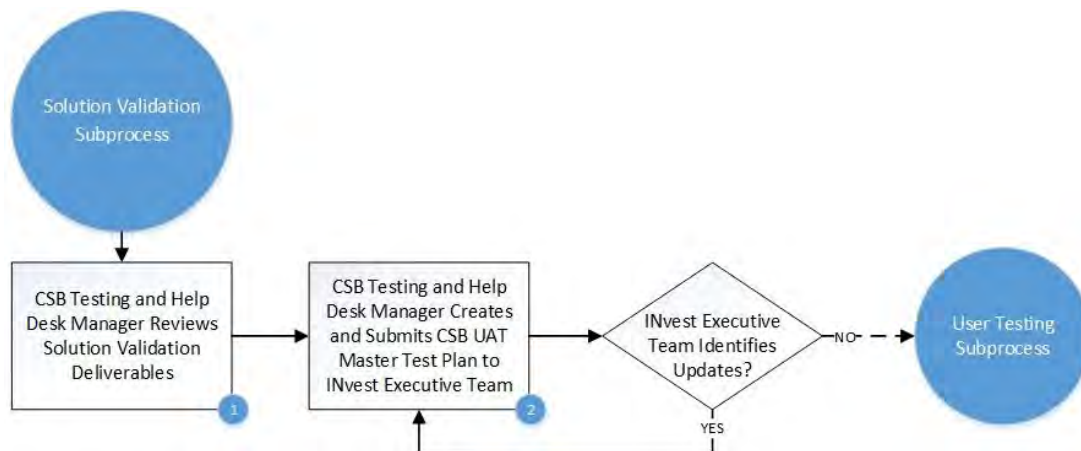


Figure 59: Test Planning – CSB UAT Master Test Plan Development Subprocess

1. **CSB Testing and Help Desk Manager Reviews Solution Validation Deliverables** – The CSB UAT Master Test Plan subprocess begins when requirements are baselined with the approval of Solution Validation Deliverables. The CSB Testing and Help Desk Manager may also review the DDI Master Test Plan and the project schedule for reference or request additional documentation to facilitate the planning effort for UAT.
2. **CSB Testing and Help Desk Manager Creates and Submits CSB UAT Master Test Plan to INvest Executive Team** – The CSB Testing and Help Desk Manager, with assistance from the CSB Functional Manager, creates and submits the CSB UAT Master Test Plan to the INvest Executive Team for review. The CSB UAT Master Test Plan documents the overall User Testing and UAT strategy and outlines all test activities required to confirm that INvest meets all functional and non-functional requirements. The CSB UAT Master Test Plan template is provided as **Attachment TST-02 CSB UAT Master Test Plan Template**. The CSB Testing and Help Desk Manager submits the CSB UAT Master Test Plan to the CSB Executive Team for review. If revisions are required, The CSB Executive Team returns the plan to the CSB Testing and Help Desk Manager for update.

13.3.2 DDI Vendor Testing Activities

After the approval of the DDI Master Test Plan, the DDI vendor begins to identify test cases and associated data. DDI vendor testing activities include Integration Testing, System Testing, Performance Testing, and Federal Certification Testing. Regression Testing is also performed by the DDI vendor to ensure new or modified code does not cause conflict with other components of INvest. The DDI vendor also supports CSB testing activities described in **Part 13.3.3**.

13.3.2.1 Integration Testing Subprocess

Integration Testing activities begin after the successful completion of Unit Testing for an iteration (see the **Development** chapter for information related to Unit Testing). Integration Testing activities occur in both Project Phase 1 and Project Phase 2 of the INvest Project.

Groups of components are composed to form larger structural units. The DDI vendor measures Integration Testing against specified INvest functional design and sub-system or composite technical design. After grouping the components into larger structural units, the DDI vendor must confirm the correct integration and collaboration of components through testing. The objective of Integration Testing is to expose faults in the interaction between integrated components.

Automated testing is a key component of DDI testing activities for each testing environment. The DDI vendor will use the latest version of Rational Functional Tester for the automated testing activities.

Figure 60 provides the Integration Testing subprocess.

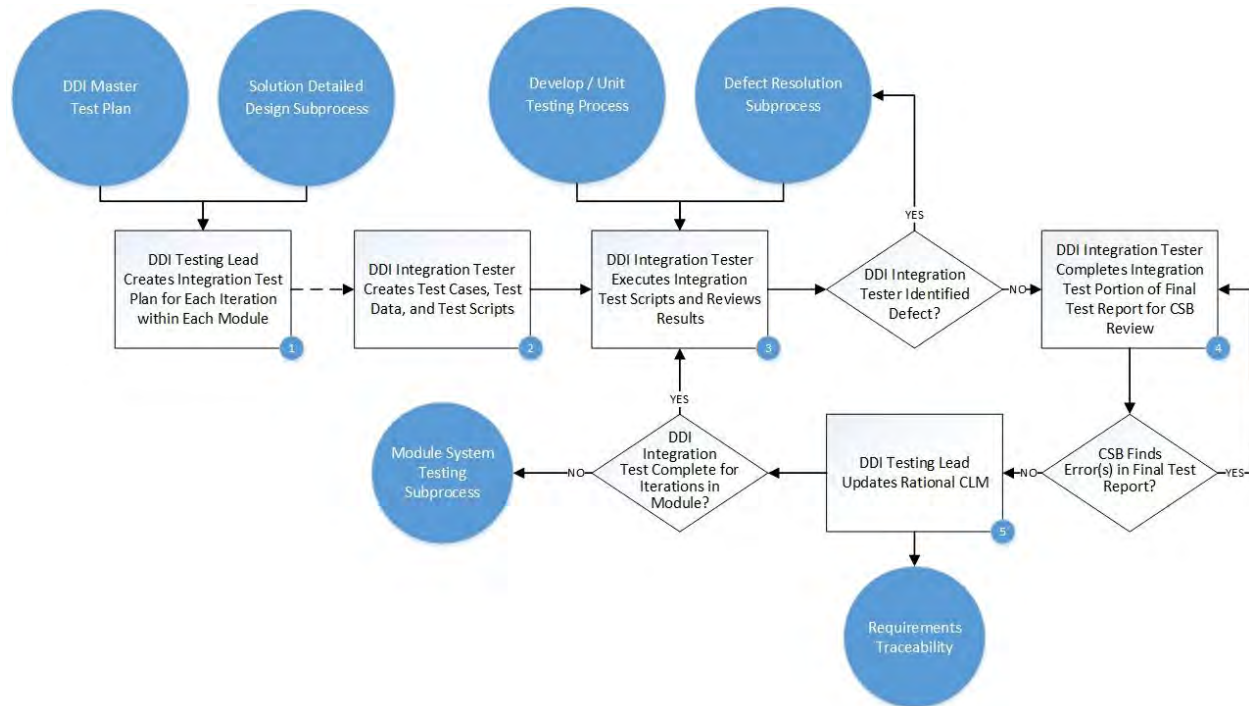


Figure 60: Integration Testing Subprocess

1. **DDI Testing Lead Creates Integration Test Plan for Each Iteration within Each Module –** Integration Testing activities begins with CSB’s approval of the DDI Master Test Plan and the SDD at each project phase. The DDI vendor creates an Integration Test Plan in Rational CLM, which includes identification of scope, entry and exit criteria, resources, risk assessment, and the environment for all iterations within a module.
2. **DDI Integration Tester Creates Test Cases, Test Data, and Test Scripts –** The DDI vendor creates the Integration test cases, test data, and test scripts for each iteration within the module in Rational CLM.
3. **DDI Integration Tester Executes Integration Test Scripts and Reviews Results –** The DDI Technical Lead confirms that the environment for Integration Testing exists for each project phase and is ready to support Integration Testing. The DDI Integration Tester executes the integration test scripts using Rational CLM to document test results. The DDI Integration Tester reviews the test results and documents any identified defects. If the DDI Integration Tester finds a defect, test script results and noted defects are forwarded through the Defect Resolution subprocess.

4. **DDI Integration Tester Completes Integration Test Portion of Final Test Report for CSB Review**
– As the DDI Integration Tester executes a test script, the tester updates the results in the Integration Test portion of **Attachment TST-03 Final Test Report Template**; this includes test scripts with a defect. CSB reviews the Integration Test portion of the Final Test Report and notifies the DDI Testing Lead of any errors. The DDI Testing Lead updates the Final Test Report based on CSB feedback. When all errors have been addressed, the DDI Testing Lead updates Rational CLM.
5. **DDI Testing Lead Updates Rational CLM** – After CSB reviews the Integration Testing section of the Final Test Report, the DDI vendor updates Rational CLM to indicate Integration Testing for the identified requirement(s) is complete. The DDI vendor continues to perform Integration Testing until all iterations for a module are developed and no defects remain for that module. At this point, the DDI vendor may perform System Testing for that module.

13.3.2.2 Module System Testing Subprocess

System Testing at the module level occurs after all iterations within a module are developed and no Integration Testing defects remain.

Module System Testing confirms that the module functions as designed. The DDI System Tester performs System Testing on each module after Integration Testing is complete. Module System Testing measures specific system functional requirements and quality attributes. The objective of Module System Testing is to verify that the integrated module meets the stated system requirements.

Automated testing is a key component of DDI testing activities, i.e., System and Federal Certification, and is essential for Regression Testing during all testing processes. The DDI vendor will use the latest version of Rational Functional Tester for the automated testing activities.

Figure 61 provides the Module System Testing subprocess.

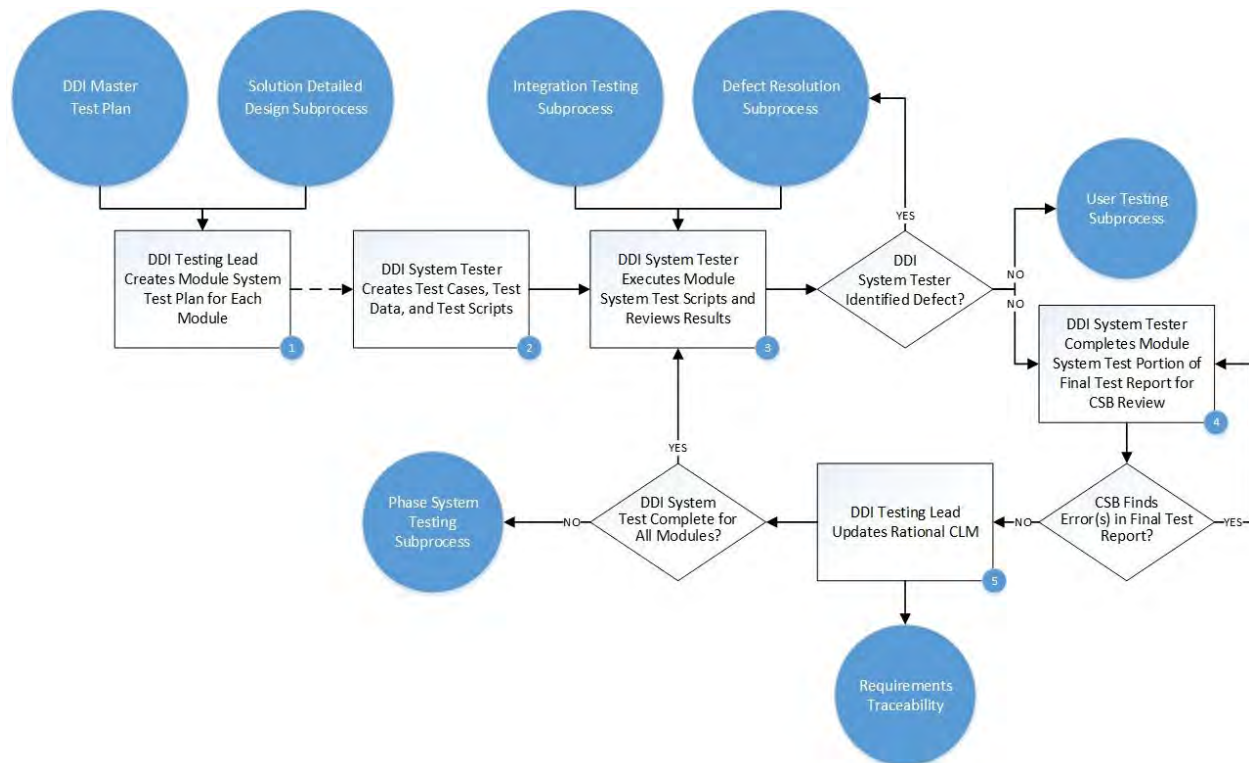


Figure 61: Module System Testing Subprocess

1. **DDI Testing Lead Creates Module System Test Plan for Each Module** – Module System Testing activities begin with the SDD for a module; one module may have multiple SDDs. The DDI Testing Lead creates a Module System Test Plan in Rational CLM, which includes identification of scope, entry and exit criteria, resources, risk assessment, and environment for a module.
2. **DDI System Tester Creates Test Cases, Test Data, and Test Scripts** – The DDI vendor creates the System test cases, test data, and test scripts for each module using Rational CLM.
3. **DDI System Tester Executes System Test Scripts and Reviews Results** – The DDI Technical Lead confirms that the environment for System Testing exists for module testing. The DDI System Tester executes the System Test script using Rational CLM to document test results. The DDI System Tester reviews the test results and documents any identified defects. If the DDI System Tester finds a defect, test script results and noted defects pass to the Defect Resolution subprocess. See **Part 13.3.5**.
4. **DDI System Tester Completes Module System Test Portion of Final Test Report for CSB Review** – As the DDI System Tester executes a test script, the tester updates the results in the Module System Test portion of the Final Test Report; this includes test scripts with a defect. CSB reviews the Module System Test portion of the Final Test Report and notifies the DDI Testing Lead of any errors. The DDI Testing Lead updates the Final Test Report based on CSB feedback. When any errors have been addressed, the DDI Testing Lead updates Rational CLM. When all module system test scripts have passed with no defects, the DDI Technical Lead moves the approved code to the User Testing environment for the module.

5. **DDI Testing Lead Updates Rational CLM** – After CSB reviews the Module System Testing section of the Final Test Report, the DDI vendor updates Rational CLM to indicate System Testing is complete for the module. At this point, CSB may perform User Testing for the module.

13.3.2.3 Phase System Testing Subprocess

Phase System Testing confirms that the project phase for INvest functions as designed. Phase System Testing measures specific system functional requirements and quality attributes. The objective of Phase System Testing is to verify that all modules meet the stated system requirements. Phase System Testing is conducted twice during the course of INvest at the end of each project phase.

The DDI vendor ensures the integration of Project Phase 1 and Project Phase 2 prior to end-to-end System Testing for Project Phase 2. This allows CSB to prepare for Project Phase 2 end-to-end UAT after the DDI vendor completes Phase System Testing and all defects have been corrected. **(Note: Based on the selected DDI vendor's approach, the QA Team will update this Part 13.3.2.3.)**

Automated testing is a key component of DDI testing activities, (i.e. System and Federal Certification) and is essential for Regression Testing during all testing processes. The DDI vendor will use the latest version of Rational Functional Tester for the automated testing activities.

Figure 62 provides the Phase System Testing subprocess.

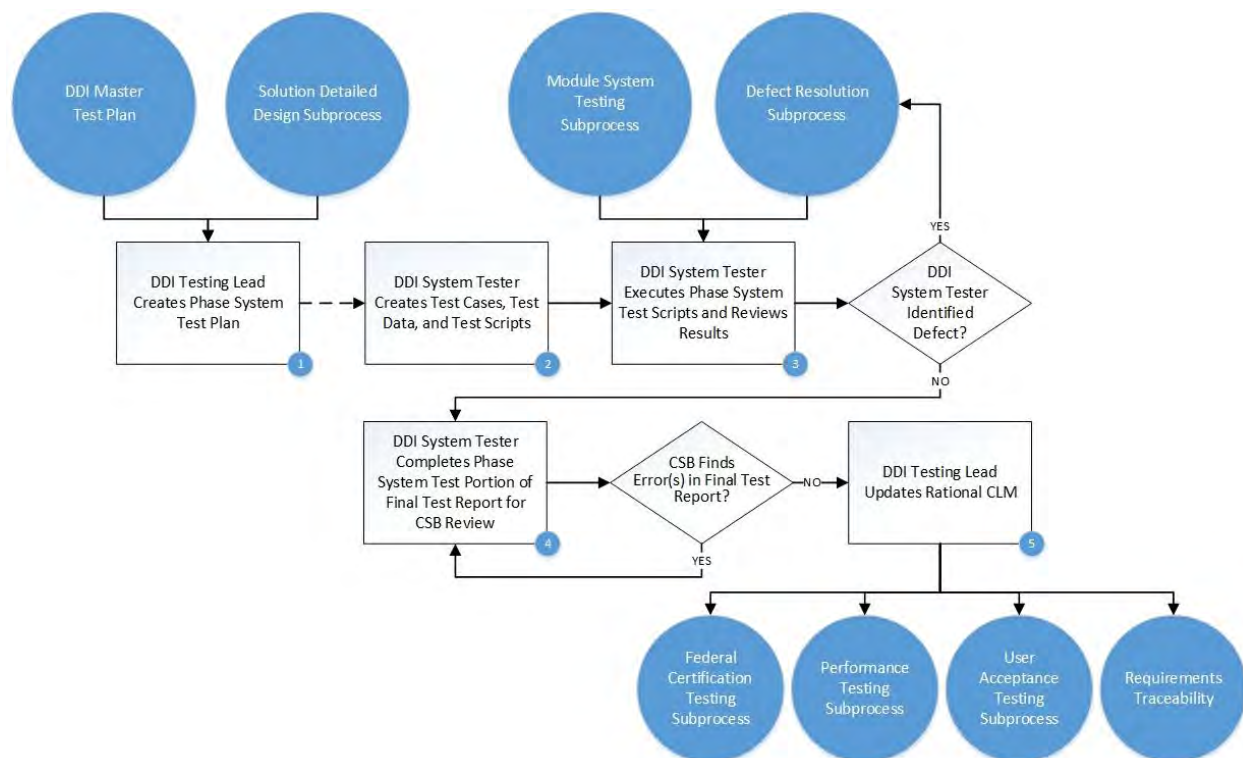


Figure 62: Phase System Testing Subprocess

1. **DDI Testing Lead Creates Phase System Test Plan** – Phase System Testing activities begin with the SDDs for all modules in a phase; one module may have multiple SDDs. The DDI Testing Lead creates a Phase System Test Plan in Rational CLM, which includes identification of scope, entry and exit criteria, resources, risk assessment, and environment for a module.

2. **DDI System Tester Creates Test Cases, Test Data, and Test Scripts** – The DDI vendor creates the System test cases, test data, and test scripts for each module using Rational CLM.
3. **DDI System Tester Executes Phase System Test Scripts and Reviews Results** – The DDI Technical Lead confirms that the environment for System Testing exists for testing for the project phase. The DDI System Tester executes the System Test script using Rational CLM to document test results. The DDI System Tester reviews the test results and documents any identified defects. If the DDI System Tester finds a defect, test script results and noted defects pass to the Defect Resolution subprocess. See **Part 13.3.5**.
4. **DDI System Tester Completes Phase System Test Portion of Final Test Report for CSB Review** – As the DDI System Tester executes a test script, the tester updates the results in the Phase System Test portion of the Final Test Report; this includes test scripts with a defect. CSB reviews the Phase System Test portion of the Final Test Report and notifies the DDI Testing Lead of any errors. The DDI Testing Lead updates the Final Test Report based on CSB feedback. When any errors have been addressed, the DDI Testing Lead updates Rational CLM. When all Phase System test scripts have passed with no defects, the CSB Testing and Help Desk Manager validates the Final Test Report before the DDI Technical Lead moves the approved code to the UAT environment.
5. **DDI Testing Lead Updates Rational CLM** – After CSB reviews the Phase System Testing section of the Final Test Report, the DDI vendor updates Rational CLM to indicate System Testing is complete for the project phase. The DDI vendor continues to perform System Testing until no blocker, critical, or high severity defects remain for any modules in the phase. After Phase System Test, the DDI vendor conducts Performance Testing and Federal Certification Testing, and CSB performs UAT for the project phase.

13.3.2.4 Performance Testing Subprocess

After the System Testing for the project phase ends, the Performance Testing subprocess begins. The Performance Testing subprocess assumes INvest meets all specified system functional requirements and specified system quality attributes in System Testing.

The objective of Performance Testing is to test the performance and stability of INvest under load or stress to ensure INvest is compliant with performance specifications as defined in the non-functional requirements. The DDI vendor continues to conduct Performance Testing until INvest is ready to release to Pilot.

Figure 63 provides the Performance Testing subprocess.

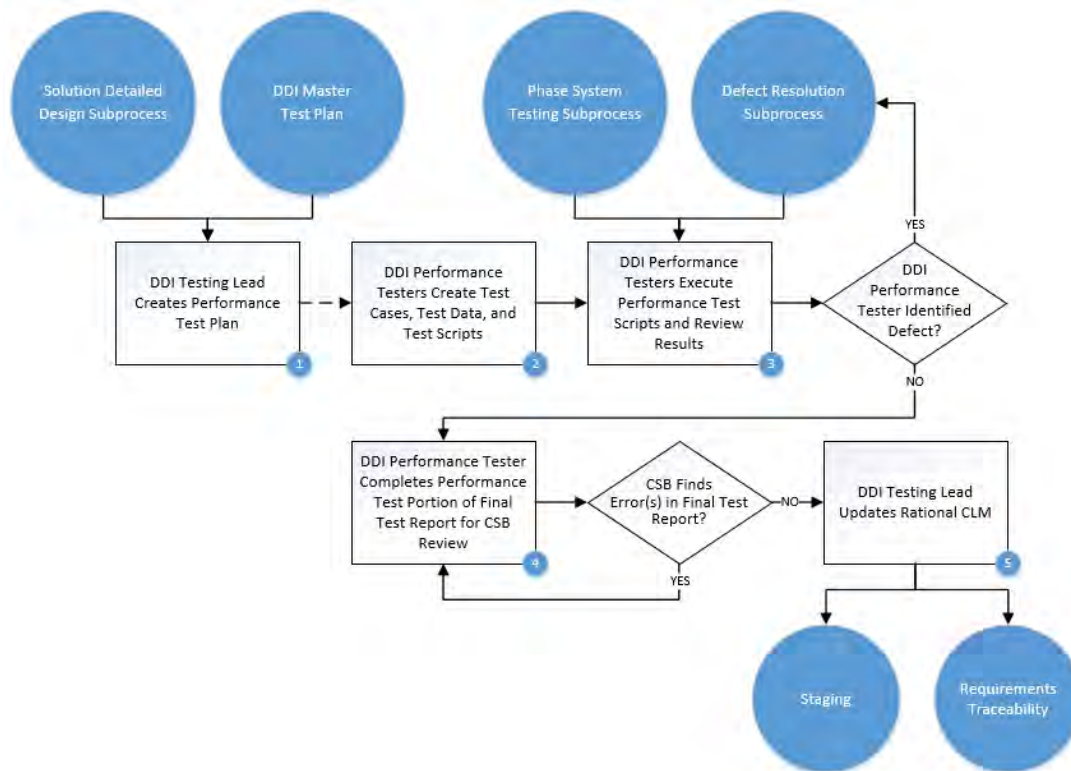


Figure 63: Performance Testing Subprocess

1. **DDI Testing Lead Creates Performance Test Plan** – Performance Testing activities begin with creating a Performance Testing Plan as part of the DDI Master Test Plan. The DDI Testing Lead creates a Performance Test Plan in Rational CLM, which includes identification of scope, entry and exit criteria, resources, risk assessment, and environment.
2. **DDI Performance Testers Create Test Cases, Test Data, and Test Scripts** – The DDI vendor creates the Performance test cases, test data, and test scripts in Rational Performance Tester.
3. **DDI Performance Testers Execute Performance Test Scripts and Review Results** – The DDI Technical Lead confirms that the environment for Performance Testing exists for the project phase and is ready to support Performance Testing. The DDI Performance Tester executes the Performance Test script using Rational CLM to document test results. The DDI Performance Tester reviews the test results and documents any identified defects. If the DDI Performance Tester finds a defect, test script results and noted defects pass to the Defect Resolution subprocess. See **Part 13.3.5**.
4. **DDI Performance Tester Completes Performance Test Portion of Final Test Report for CSB Review** – As the DDI Performance Tester executes a test script, the tester updates the results in the Performance Test portion of the Final Test Report; this includes test scripts with a defect. CSB reviews the Performance Test portion of the Final Test Report and notifies the DDI Testing Lead of any errors identified in the report. The DDI Testing Lead updates the Final Test Report based on CSB feedback. When all errors have been resolved, the DDI Testing Lead updates Rational CLM.

5. **DDI Testing Lead Updates Rational CLM** – After CSB reviews the Performance Testing section of the Final Test Report, the DDI Testing Lead updates Rational CLM to indicate Performance Testing is complete for the project phase.

13.3.2.5 Federal Certification Testing Subprocess

After System Testing of Project Phase 2, and prior to a formal Go/No-Go decision to move to Pilot, the DDI vendor provides testing to ensure INvest meets federal certification requirements, which includes the successful execution of the Financial Distribution Test Deck, including producing and documenting accurate Form OCSE-34 results. Federal Certification Testing must use a clean, dedicated environment each time a test run occurs. Federal Certification Testing assumes INvest meets all specified system functional requirements and specified system quality attributes in System Testing. The DDI vendor must resolve all project phase-level System Testing defects prior to Federal Certification Testing. Federal Certification Testing runs in parallel with UAT.

Automated testing is a key component of DDI testing activities, i.e., System and Federal Certification, and is essential for Regression Testing during all testing processes. The DDI vendor will use the latest version of Rational Functional Tester for the automated testing activities.

Figure 64 provides the Federal Certification Testing subprocess.

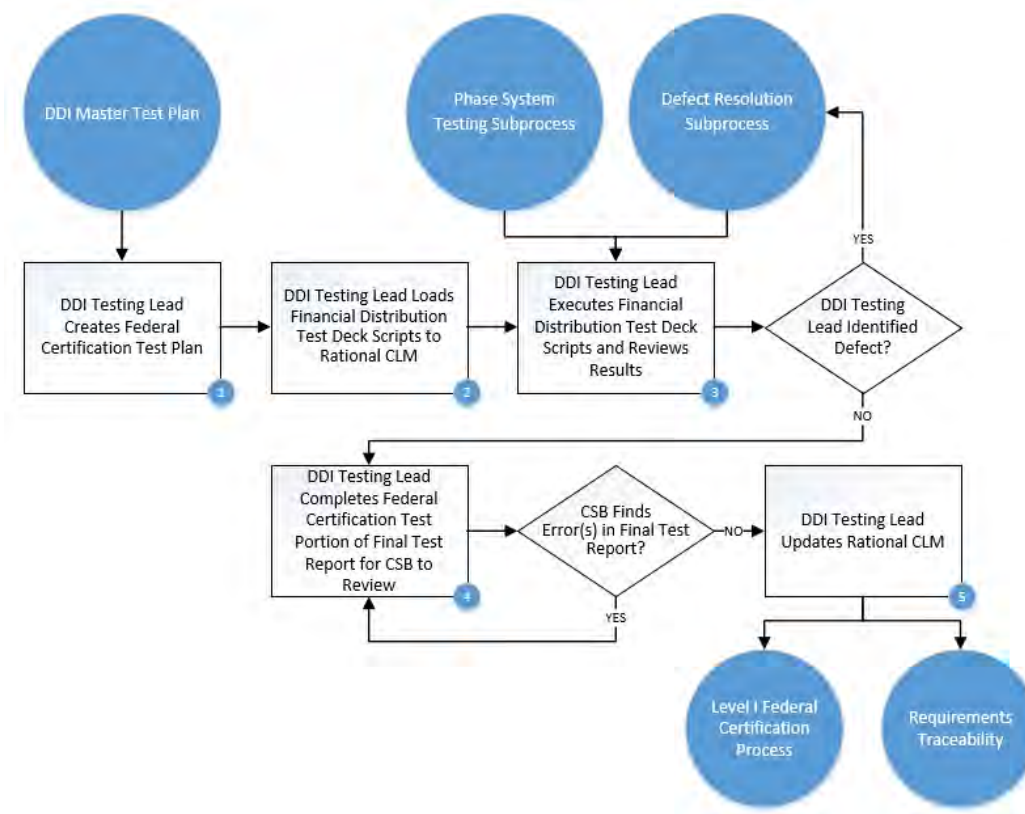


Figure 64: Federal Certification Testing Subprocess

1. **DDI Testing Lead Creates Federal Certification Test Plan** – Federal Certification Testing activities begin with the completion of the Project Phase 2 Phase System Testing activities. The DDI vendor creates a Federal Certification Test Plan in Rational CLM, which includes identification of scope, entry and exit criteria, resources, risk assessment, and environment.

2. **DDI Testing Lead Loads Financial Distribution Test Deck Scripts to Rational CLM** – The DDI vendor loads test scripts identified in the Financial Distribution Test Deck from the Office of Child Support Enforcement (OCSE) into Rational CLM. The Financial Distribution Test Deck scenarios consists of several scenarios that test that the child support system correctly performs Personal Responsibility and Work Opportunity Act distribution requirements and the Deficit Reduction Act of 2005 mandatory assignment rules.
3. **DDI Testing Lead Executes Financial Distribution Test Deck Scripts and Reviews Results** – The DDI Technical Lead confirms that the environment for Federal Certification Testing exists and is ready to support Financial Distribution Test Deck Testing. The DDI Testing Lead executes the Financial Distribution Test Deck scripts using Rational CLM to document test results. The DDI Testing Lead reviews the test results and documents any identified defects. If the DDI Testing Lead finds a defect, test script results and noted defects pass to the Defect Resolution subprocess. See **Part 13.3.5**.
4. **DDI Testing Lead Completes Federal Certification Test Portion of Final Test Report for CSB to Review** – As the DDI Testing Lead executes the Financial Distribution Test Deck, the DDI Testing Lead updates the results in the Federal Certification Test portion of the Final Test Report; this includes test scripts with a defect. CSB reviews the Federal Certification Testing portion of the Final Test Report and notifies the DDI Testing Lead of errors identified in the report. The DDI Testing Lead updates the Final Test Report based on CSB feedback. When all errors have been resolved, the DDI Testing Lead updates Rational CLM.
5. **DDI Testing Lead Updates Rational CLM** – The DDI Testing Lead or designated team member updates Rational CLM to indicate that the Financial Distribution Test Deck has passed testing.

13.3.3 CSB Testing Activities

CSB conducts testing activities following the test strategy described in the UAT Master Test Plan for User Testing at the module level and UAT at the project phase level. The DDI vendor supports CSB with the execution of test scripts and the resolution of identified defects during User Testing and UAT.

CSB creates the CSB UAT Master Test Plan to document how CSB Testers and CSB Users perform User Testing, and how CSB Testers, CSB Users, and County Partner staff perform UAT. These testing activities confirm that the developed functionality meets the approved requirements.

- User Testing occurs after module level System Testing and assumes the DDI vendor addressed all System Testing defects in the integrated module. See **Part 13.3.3.1**.
- UAT occurs after end-to-end System Testing and Performance Testing at the project phase level and assumes the DDI vendor addressed all System Testing and Performance Testing defects for the integrated system. See **Part 13.3.3.2**.

CSB performs UAT with assistance from County Partner staff. CSB develops User Testing and UAT scripts based on features and UCs, which contain business requirements. The objective of User Testing and UAT is to validate that the integrated system meets the specified business requirements.

13.3.3.1 User Testing Subprocess

Figure 65 provides the User Testing subprocess.

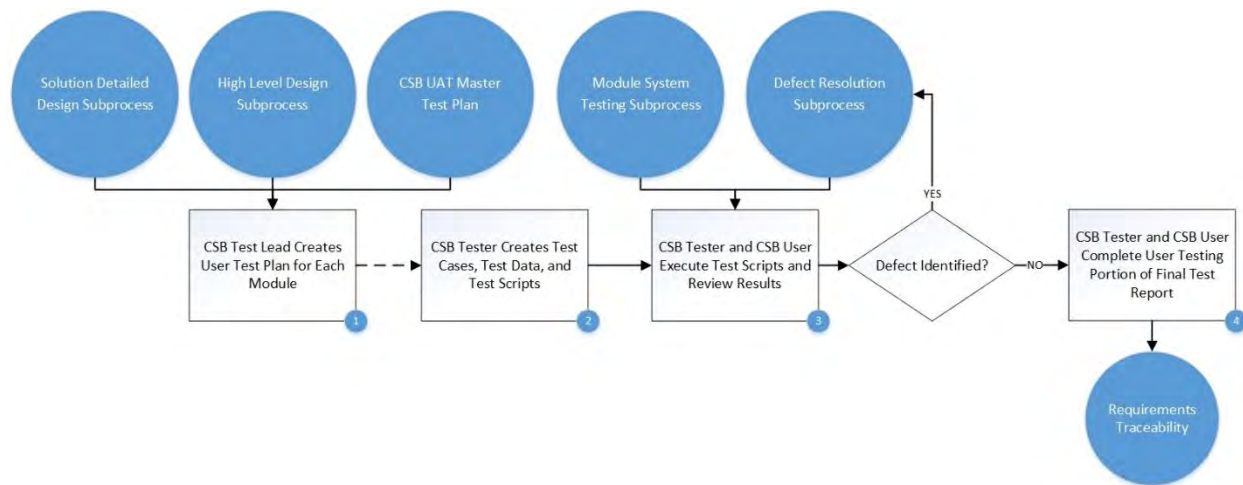


Figure 65: User Testing Subprocess

1. **CSB Test Lead Creates User Test Plan for Each Module** – CSB creates a User Test Plan in Rational CLM, which includes identification of scope, entry and exit criteria, resources, risk assessment, and environment for each module.
2. **CSB Tester Creates Test Cases, Test Data, and Test Scripts** – The CSB Tester creates the test cases, test scripts, and test data in Rational CLM for each module.
3. **CSB Tester and CSB User Execute Test Scripts and Review Results** – The DDI Technical Lead confirms that the environment for User Testing exists and is ready to support User Testing. The CSB Tester and CSB user execute User Testing scripts in the User Testing environment. The CSB Tester and CSB User executes User Testing scripts using Rational CLM to document test results. The CSB Tester and CSB User review the test results and document any identified defects. If the CSB Tester or CSB User finds a defect, test script results and noted defects pass to the Defect Resolution subprocess. See **Part 13.3.5**.
4. **CSB Tester and CSB User Complete User Testing Portion of Final Test Report** – As the CSB Tester or CSB User executes a test script, the tester updates the results in the User Test portion of the Final Test Report; this includes test scripts with a defect. The CSB Tester and CSB User update Rational CLM with the results of User Testing.

13.3.3.2 User Acceptance Testing Subprocess

UAT occurs after end-to-end System Testing and Performance Testing at the project phase level and assumes the DDI vendor has addressed all System Testing and Performance Testing defects for the integrated system.

Figure 66 provides the User Acceptance Testing subprocess.

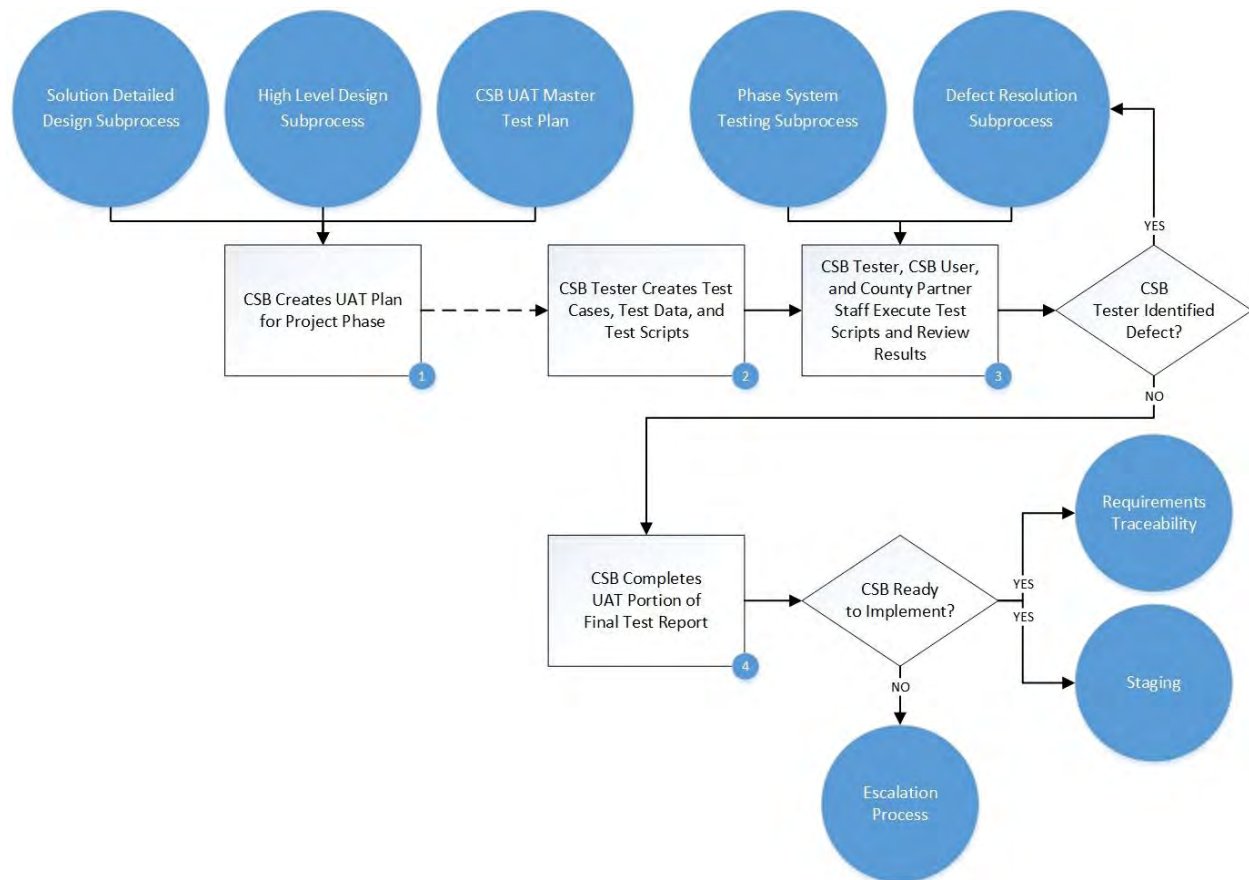


Figure 66: User Acceptance Testing Subprocess

- 1. CSB Creates UAT Plan for Project Phase** – CSB creates a UAT Plan in Rational CLM, which includes identification of scope, entry and exit criteria, resources, risk assessment, and environment for each module.
- 2. CSB Tester Creates Test Cases, Test Data, and Test Scripts** – The CSB Tester creates the test cases, test scripts, and test data in Rational CLM for the project phase.
- 3. CSB Tester, CSB User, and County Partner Staff Execute Test Scripts and Review Results** – The DDI Technical Lead confirms that the environment for UAT exists and is ready to support User Acceptance Testing. The CSB Tester, CSB User and County Partner staff execute UAT scripts in the User Acceptance Testing environment. The CSB Tester, CSB User and County Partner staff execute UAT Scripts using Rational CLM to document test results. The CSB Tester, CSB User and County Partner staff review the test results and document any identified defects. If the CSB Tester, CSB User, or County Partner staff finds a defect, test script results and noted defects pass to the Defect Resolution subprocess. See **Part 13.3.5**.
- 4. CSB Completes UAT Portion of Final Test Report** – As the CSB Tester, CSB User, or County Partner staff executes a test script, the tester updates the results in the UAT portion of the Final Test Report; this includes test scripts with a defect. The CSB Tester, CSB User, and County Partner staff update Rational CLM with the results of User Testing. After executing all UAT scripts, CSB and the DDI vendor assess any outstanding defects to determine if the INvest

Project Phase is ready for implementation. If any blocker, critical, or high prioritized defects are open, the escalation process occurs. If none of these defect priorities exist, the DDI Technical Lead moves all project phase code to the staging environment.

13.3.4 Regression Testing

Regression Testing is a type of software testing verifying that software previously developed and tested still performs correctly after changes or implementation of interfaces with other software. Changes may include software enhancements, patches, or configuration changes. During Regression Testing, the test may uncover new software bugs or regressions. The tester may perform an impact analysis for software changes to determine what functional and non-functional areas of INvest would be impacted by proposed changes.

Regression Testing is vital to the success of the INvest Project's iterative approach to design, development, and testing. As the DDI vendor completes each iteration and module, unintended defects may be introduced with each new iteration. While most Regression Testing occurs during System Testing, UAT will include Regression Testing to validate that potential changes do not cause defects as code is updated and migrated to the UAT environment.

Automated testing is a key component of DDI testing activities, i.e., System and Federal Certification, and is essential for Regression Testing during all testing processes. The DDI vendor will use the latest version of Rational Functional Tester for the automated testing activities.

13.3.5 Defect Resolution Subprocess

Defect Resolution is the subprocess to document and analyze test failures and apply necessary modifications to code to address test failures.

Figure 67 provides the Defect Resolution subprocess.

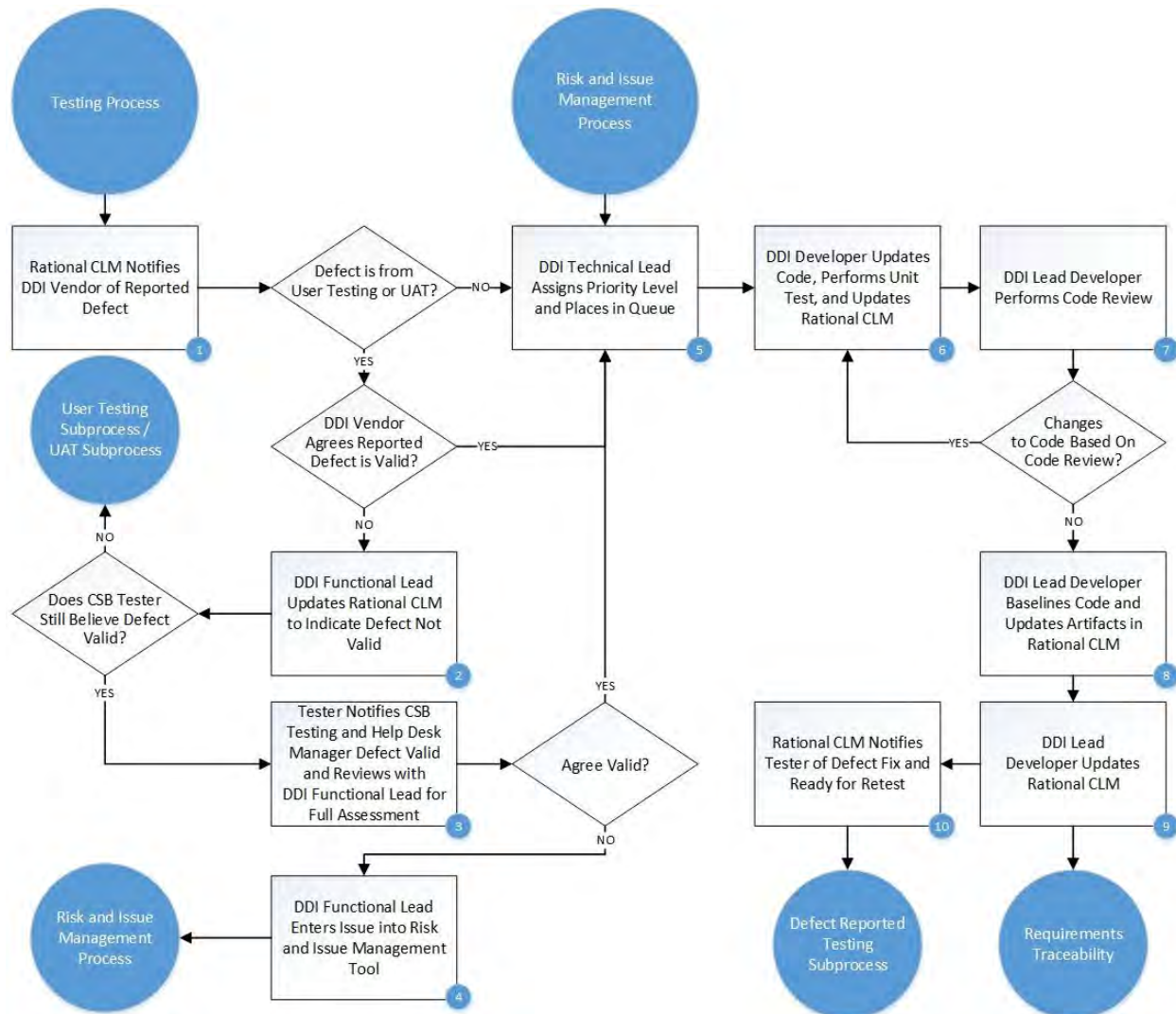


Figure 67: Defect Resolution Subprocess

1. **Rational CLM Notifies DDI Vendor of Reported Defect** – The Defect Resolution subprocess starts when a test script fails execution and the tester identifies a defect from any testing subprocess. The tester enters the defect into Rational CLM as part of the test process and the tool notifies the appropriate DDI vendor staff of the reported defect. The DDI vendor's review determines if the defect is from either the User Testing subprocess or the UAT subprocess. If the defect is not from User Testing or UAT, it is assigned to the queue for correction.
2. **DDI Functional Lead Updates Rational CLM to Indicate Defect Not Valid** – If the reported defect originated from User Testing or UAT, the DDI Functional Lead determines whether the defect is valid. If not valid, the DDI vendor updates Rational CLM. Rational CLM notifies the User Testing or UAT tester of the defect determination. The tester reviews the response from the DDI Functional Lead. If the tester agrees with the DDI vendor assessment, the tester closes the defect. Valid defects are assigned to the queue for correction.

3. **Tester Notifies CSB Testing and Help Desk Manager Defect Valid and Reviews with DDI Functional Lead for Full Assessment** – If the User Testing or UAT tester disagrees with the DDI Functional Lead’s assessment, the tester notifies the CSB Testing and Help Desk Manager that the defect is valid. The tester, the CSB Testing and Help Desk Manager, and the DDI Functional Lead review the script and the reported defect. If the DDI Testing Lead agrees that the defect is valid, the defect is confirmed and is placed in the queue for prioritization.
4. **DDI Functional Lead Enters Issue into Risk and Issue Management Tool** – If the CSB Testing and Help Desk Manager and the DDI Functional Lead do not agree on whether the test script failed and a defect exists, the DDI Functional Lead enters an issue in the risk and issue tool for escalation and resolution of the disagreement at the project level.
5. **DDI Technical Lead Assigns Priority Level and Places in Queue** – When the reported defect is determined to be valid, the DDI vendor assigns the priority level and places the defect in the queue for a code fix. When the Risk and Issue Management process determines that a disputed defect is valid, the DDI Functional Lead updates the defect for prioritization. The DDI Technical Lead assigns priority based on the severity of each defect, using a prioritization approach validated by CSB. The DDI Testing Lead and CSB Testing and Help Desk Manager meet on a regular basis to review priorities. Table 41 details the severity levels and descriptions for defects in INvest.

Table 41: INvest Defect Severity Levels

Severity	Description
Blocker	An item or action that prevents further testing where no workaround is possible
Critical	A major functional piece that is broken, or an issue that affects several areas
High	A function that does not operate as expected / designed or causes other functionalities to fail to meet the requirements
Normal (Medium)	A function that does not operate as expected / designed, where there is an easy workaround to achieve functionality objectives
Minor	Cosmetic issues that do not affect the functionality of INvest, or User Interface problems such as misspelling

6. **DDI Developer Updates Code, Performs Unit Test, and Updates Rational CLM** – The DDI Developer assigned to the defect reviews the affected code and determines the reason for the defect. The DDI Developer updates the affected code to address the deficiency. The DDI Developer performs Unit Testing to validate the code fix resolves the defect. The DDI Developer updates Rational CLM to indicate a fix is ready for a code review.
7. **DDI Lead Developer Performs Code Review** – The DDI Lead Developer and designated DDI development team members perform a code review of the modified code using a code review checklist (see the [Development](#) chapter for more detail regarding code reviews). If the code review requires further changes, the DDI Lead Developer forwards the details to the DDI Developer who further modifies the code to address the review results.
8. **DDI Lead Developer Baselines Code and Updates Artifacts in Rational CLM** – The DDI Lead Developer baselines and updates any artifacts affected by the coding change in Rational CLM. Affected artifacts include, but are not limited to, UCs, services, HLDs , and SDDs.

9. **DDI Lead Developer Updates Rational CLM** – After the DDI Developer corrects the code which caused the defect, the DDI Lead Developer updates Rational CLM that the code fix, Unit Testing, and code review have occurred.
10. **Rational CLM Notifies Tester of Defect Fix and Ready for Retest** – After the DDI Lead Developer updates Rational CLM, the tool notifies the tester the defect is ready for retest.

13.4 Templates

Table 42 provides a summary of the templates used for the Test Management process.

Table 42: Test Management Templates

Template Name	Description	Attachment ID
DDI Master Test Plan Template	<ul style="list-style-type: none"> Documents the overall test strategy and outlines all the test activities performed in testing Describes what to test, how to test, when to test, and who performs testing activities 	TST-01
CSB UAT Master Test Plan Template	<ul style="list-style-type: none"> Documents the UAT test strategy and outlines User Testing and UAT activities Describes what to test, how to test, when to test, and who performs UAT 	TST-02
Final Test Report Template	<ul style="list-style-type: none"> Includes a listing of test cases and documents the results of each test, as well as recommended actions as the result of testing. 	TST-03

(Note: These templates are for initial reference purpose only. Templates will be defined once the DDI vendor is engaged.)

14.0 TRAINING DEVELOPMENT AND DELIVERY

14.1 General Introduction and Overview

The successful implementation of INvest is dependent upon how well management and staff are equipped to operate in a new environment. The INvest training and onsite support effort is vital to the successful implementation and acceptance of INvest. The DDI vendor provides expertise in planning, developing, and implementing training and onsite support using a collaborative approach. The OR Manager provides oversight of the DDI vendor-led training and onsite support effort.

The OR Manager ensures two types of users are ready for INvest rollout:

- Primary users – County Prosecuting Attorneys, County Clerks, Indiana State Central Collections Unit (INSCCU) staff, and CSB staff
- Secondary users – Employers, custodial parents, and non-custodial parents

The DDI Training and Onsite Support Lead develops the Training and Onsite Support Plan to ensure all affected users have a comprehensive understanding of INvest prior to rollout in each region. The plan identifies who is to be trained, the training schedule, and the best training delivery method. Training is developed to support the two INvest Project phases:

- Project Phase 1 – The design, development, and Statewide implementation of IAAM, an Internal Portal, and ECM
- Project Phase 2 – The design, development, and implementation of INvest Core Functionality, an External Portal, and integration of all Project Phase 1 features

The DDI Training and Onsite Support Lead creates and maintains a detailed Training and Onsite Support Plan. The Training and Onsite Support Plan addresses at a minimum: scope, objectives, approach and methodology, roles and responsibilities, training and onsite support planning, knowledge transfer, and schedule. The Training and Onsite Support Plan is a component of the DDI portion of the INvest Master PMP.

The DDI Training and Onsite Support Lead develops training according to the following guidelines:

- A “just-in-time” approach to training is used, allowing the training to occur as close as possible to the associated rollout date.
- Whenever possible, training is executed in an integrated fashion (i.e., amplifying the policy and procedures by utilizing the correct applications or system and, as appropriate, focusing on “hands-on” experiences).
- The training incorporates new / revised policies and procedures resulting from the project implementation. It emphasizes new policies and procedures that have been implemented and how they relate to the user’s role. The training focuses not only how to operate the system, but also how they use the system to do their job.
- The curriculum is divided into sections and segmented by role, thus providing the most relevant information for each group.
- Feedback is captured after training is delivered so that lessons learned can be used to further revise the training materials or delivery method.

- All training materials are designed with repeatability in mind. It is important to recognize that training needs will recur, and the training materials should be developed to facilitate repeated delivery and use.
- A blended learning approach, which combines various training delivery media and methods, is preferable. This approach allows trainees to build on their existing knowledge and gain competency in performing new tasks by leveraging instructor-led training, facilitated learning sessions via webinar or videoconferencing, as well as self-directed training.
- Prior to developing and delivering the training, updates to policies and procedures must be approved.
- Logs of students trained and other administrative information about the training sessions (e.g., facility limitations, connectivity) are maintained.

14.2 Key Roles and Responsibilities

Table 43 provides a summary of the key roles and primary responsibilities involved in the Training Development and Delivery process.

Table 43: Training Development and Delivery Key Roles and Responsibilities

Key Role	Responsibilities
CSB Technical Manager	<ul style="list-style-type: none"> • Provides continuous evaluation and review of all training delivery and materials from a technical perspective • Provides oversight and ensures all training environments are set up, configured and meet requirements
DDI Onsite Support Staff	<ul style="list-style-type: none"> • Provides onsite support for engagement of one-on-one interaction with CSB and County Partners • Engages in consistent positive professional customer service relations • Provides continuous evaluation of all training delivery and materials
DDI Technical Lead	<ul style="list-style-type: none"> • Creates and maintains operational and accessible training environments
DDI Trainer Staff	<ul style="list-style-type: none"> • Provides input into the Training and Onsite Support Plan and schedule • Supports the development of the curriculum, materials, and class schedule • Supports the process for acquiring, scheduling, and ensuring all training facilities are ready for INvest classroom training • Provides continuous evaluation of all training delivery and materials • Delivers classroom training
DDI Training and Onsite Support Lead	<ul style="list-style-type: none"> • Develops the Training and Onsite Support Plan and schedule • Leads onsite support staff engaged in one-on-one interaction with CSB and County Partners • Works collaboratively with the OR Manager to ensure a smooth transition to INvest • Manages the development and maintenance of the curriculum, materials, and class schedule • Ensures training sites meet CSB security requirements • Acquires, schedules, and ensures all training facilities are ready for INvest classroom training

Key Role	Responsibilities
	<ul style="list-style-type: none"> • Provides continuous evaluation of all training delivery and materials • Schedules and provides for dress rehearsals by trainers for evaluation • Schedules and ensures adequately trained personnel are deployed to each office / unit for onsite support
OR Manager	<ul style="list-style-type: none"> • Provides oversight of the DDI vendor's training and onsite support • Completes thorough reviews and coordinates approval of INvest Project deliverable documents and milestones related to training and onsite support • Works closely with the DDI Training and Onsite Support Lead to ensure a smooth transition to INvest • Collaborates with CSB BPOs to ensure the curriculum serves the needs of business users • Provides continuous evaluation of all training delivery and materials and approves all changes • Monitors the effectiveness of the knowledge transfer process from the DDI vendor

14.3 Process Overview and Activities

The DDI Training and Onsite Support Lead and the DDI Trainers develop all materials needed for users, onsite support staff, and super users for the training and onsite support effort. These include, but are not limited to, user manuals, trainer manuals, guides, quick tips, e-learning tutorials, and exercises for the training sandbox. The OR Manager provides a complete and thorough review and approval of the project deliverable documents and milestones related to training, onsite support, and training delivery. The DDI Training and Onsite Support Lead, along with the OR Manager, tracks all areas of Primary and Secondary user training to ensure conformance to the approved Training and Onsite Support Plan, including curriculum, materials, and training and onsite support schedule.

14.3.1 Training and Onsite Support Planning

Figure 68 provides the Training and Onsite Support Planning subprocess.

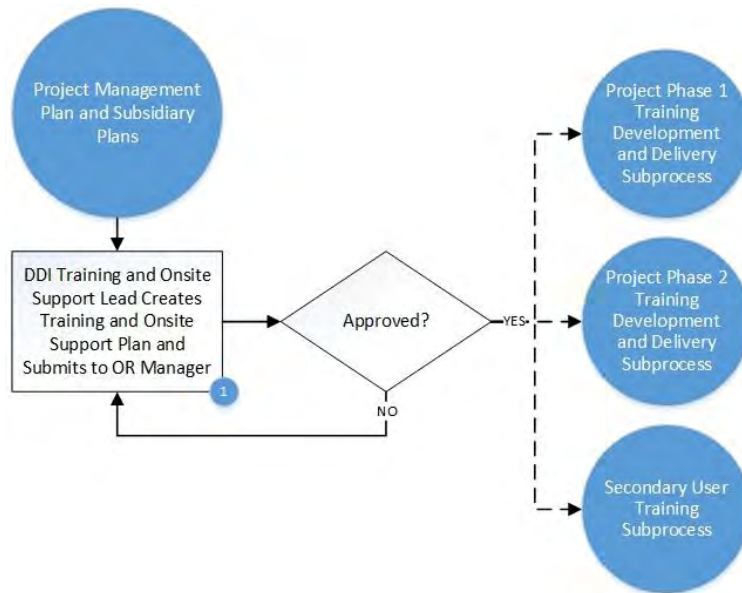


Figure 68: Training and Onsite Support Planning Subprocess

1. **DDI Training and Onsite Support Lead Creates Training and Onsite Support Plan and Submits to OR Manager** – The DDI Training and Onsite Support Lead creates a detailed Training and Onsite Support Plan and submits it to the OR Manager for review and approval. The DDI Training and Onsite Support Lead uses **Attachment TDD-01 Training and Onsite Support Plan Template** that addresses all training and onsite requirements for Project Phase 1, Project Phase 2 and Secondary user training. The OR Manager may identify problems with the Training and Onsite Support Plan and return it to the DDI Training and Onsite Support Lead for updates. After making the requested updates, the DDI Training and Onsite Support Lead resubmits the Training and Onsite Support Plan to the OR Manager for approval.

14.3.2 Project Phase 1 Training Development and Delivery

Figure 69 provides the Project Phase 1 Training Development and Delivery subprocess.

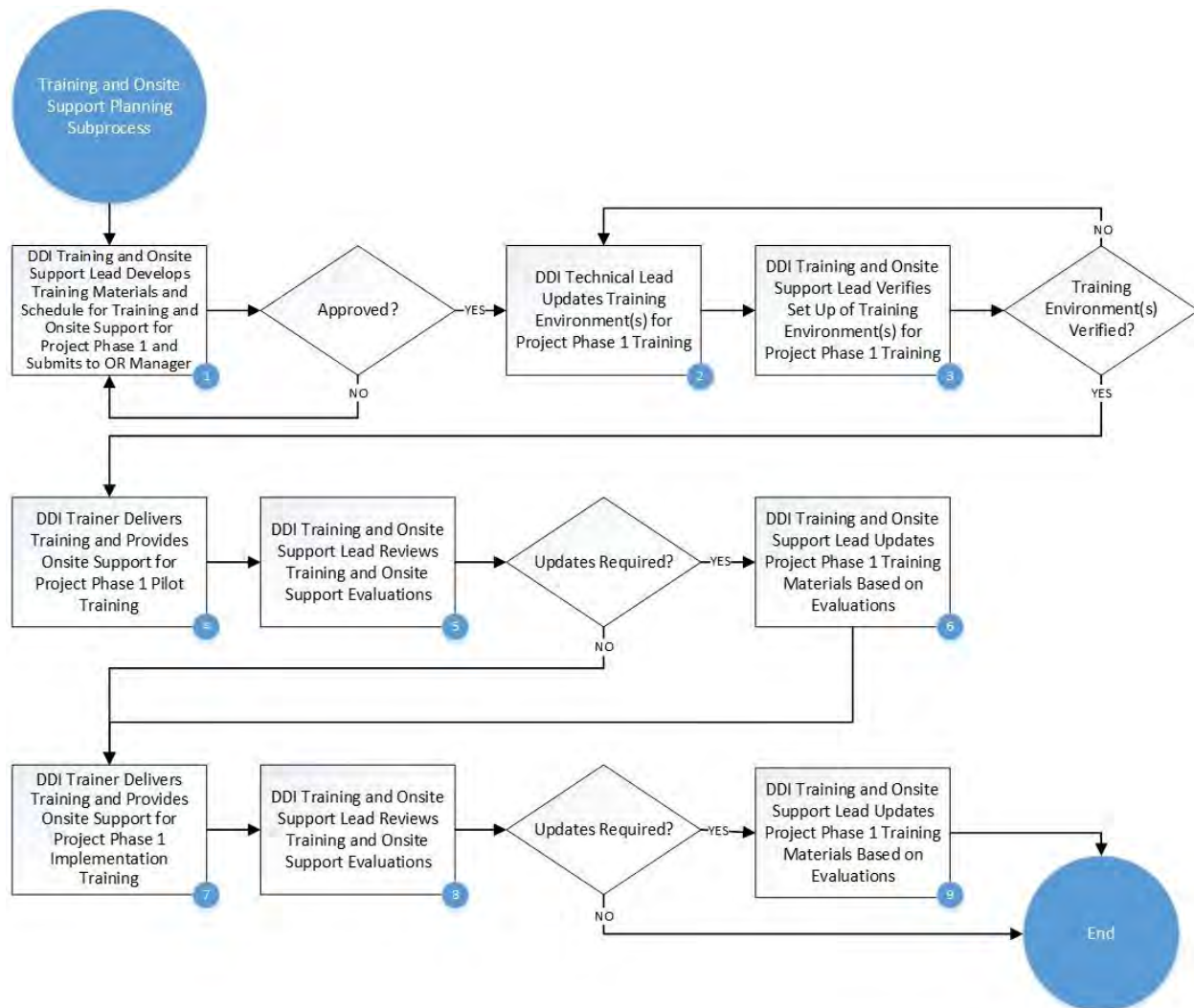


Figure 69: Project Phase 1 Training Development and Delivery Subprocess

1. **DDI Training and Onsite Support Lead Develops Training Materials and Schedule for Training and Onsite Support for Project Phase 1 and Submits to OR Manager** – The DDI Training and Onsite Support Lead ensures just-in-time classroom training is provided for CSB, pilot County offices and Statewide implementation Counties. Just-in-time training is provided no more than two to four weeks prior to go-live. Project Phase 1 of INvest includes ECM, an Internal Portal, and IAAM. The DDI Training and Onsite Support Lead develops training materials, a proposed schedule, and a list of qualified trainers for Project Phase 1 and submits them to the OR Manager for review and approval. The OR Manager may identify problems with the training materials, schedule, or list of qualified trainers and returns them to the DDI Training and Onsite Support Lead for updates. After making the requested updates, the DDI Training and Onsite Support Lead resubmits the training materials, schedule, and list of qualified trainers to the OR Manager for approval.

2. **DDI Technical Lead Updates Training Environment(s) for Project Phase 1 Training** – The DDI Technical Lead updates the training environment(s) needed for Project Phase 1 training for the appropriate release of INvest, and ensures they are operational and accessible for pilot and Statewide implementation training.
3. **DDI Training and Onsite Support Lead Verifies Set Up of Training Environment(s) for Project Phase 1 Training** – The DDI Training and Onsite Support Lead verifies readiness of the end user training environment, as well as the second environment used when multiple training sessions are conducted concurrently across regions and Counties. This includes technical items (e.g., system access from the training sites, confirmation that the training environment meets CSB security requirements) and that the correct data is available for training purposes.
4. **DDI Trainer Delivers Training and Provides Onsite Support for Project Phase 1 Pilot Training** – Once the Training and Onsite Support Plan, curriculum, and schedule are approved by the OR Manager, and the setup of the training environment(s) has been verified, the DDI Training and Onsite Support Lead deploys the training resources to train Primary users for Project Phase 1 Pilot.
5. **DDI Training and Onsite Support Lead Reviews Training and Onsite Support Evaluations** – The Learning Management System (LMS) used by the DDI Training and Onsite Support Lead supports the evaluation of curriculum, onsite support, and DDI Trainers. The DDI Training and Onsite Support Lead reviews evaluations of the curriculum and onsite support after Project Phase 1 Pilot to assess whether updates are warranted; the OR Manager reviews and approves proposed updates. DDI Trainers review evaluations which provide input on how to improve their training delivery. The methods for evaluation are through the LMS, paper evaluations, SurveyMonkey®, and reports from the Help Desk, onsite support staff, and the field. If training or onsite support materials do not require update after Project Phase 1 Pilot, the DDI Trainers conduct training for Statewide implementation.
6. **DDI Training and Onsite Support Lead Updates Project Phase 1 Training Materials Based on Evaluations** – The DDI Training and Onsite Support lead updates Project Phase 1 training materials after reviewing the trainees' evaluations during the Project Phase 1 Pilot.
7. **DDI Trainer Delivers Training and Provides Onsite Support for Project Phase 1 Implementation Training** – Once the Training and Onsite Support Plan, curriculum, and schedule are approved by the OR Manager, and the setup of the training environment(s) has been verified, the DDI Training and Onsite Support Lead deploys the training resources to train Primary users for Project Phase 1 Statewide implementation.
8. **DDI Training and Onsite Support Lead Reviews Training and Onsite Support Evaluations** – The Learning Management System (LMS) used by the DDI Training and Onsite Support Lead supports the evaluation of curriculum, onsite support, and DDI Trainers. The DDI Training and Onsite Support Lead reviews evaluations of the curriculum and onsite support after Project Phase 1 implementation to assess whether updates are warranted; the OR Manager reviews and approves proposed updates. DDI Trainers review evaluations which provide input on how to improve their training delivery. The methods for evaluation are through the LMS, paper evaluations, SurveyMonkey®, and reports from the Help Desk, onsite support staff, and the field. If training or onsite support materials do not require update after Project Phase 1 Statewide implementation, the Project Phase 1 training process ends.

9. **DDI Training and Onsite Support Lead Updates Project Phase 1 Training Materials Based on Evaluations** – The DDI Training and Onsite Support lead updates Project Phase 1 training materials after reviewing the trainees' evaluations during the Project Phase 1 Statewide implementation. When training for Statewide implementation has been completed, the DDI Training and Onsite Support Lead updates the training material and the Project Phase 1 training process ends.

14.3.3 Project Phase 2 Training Development and Delivery

Figure 70 provides the Project Phase 2 Training Development and Delivery subprocess.

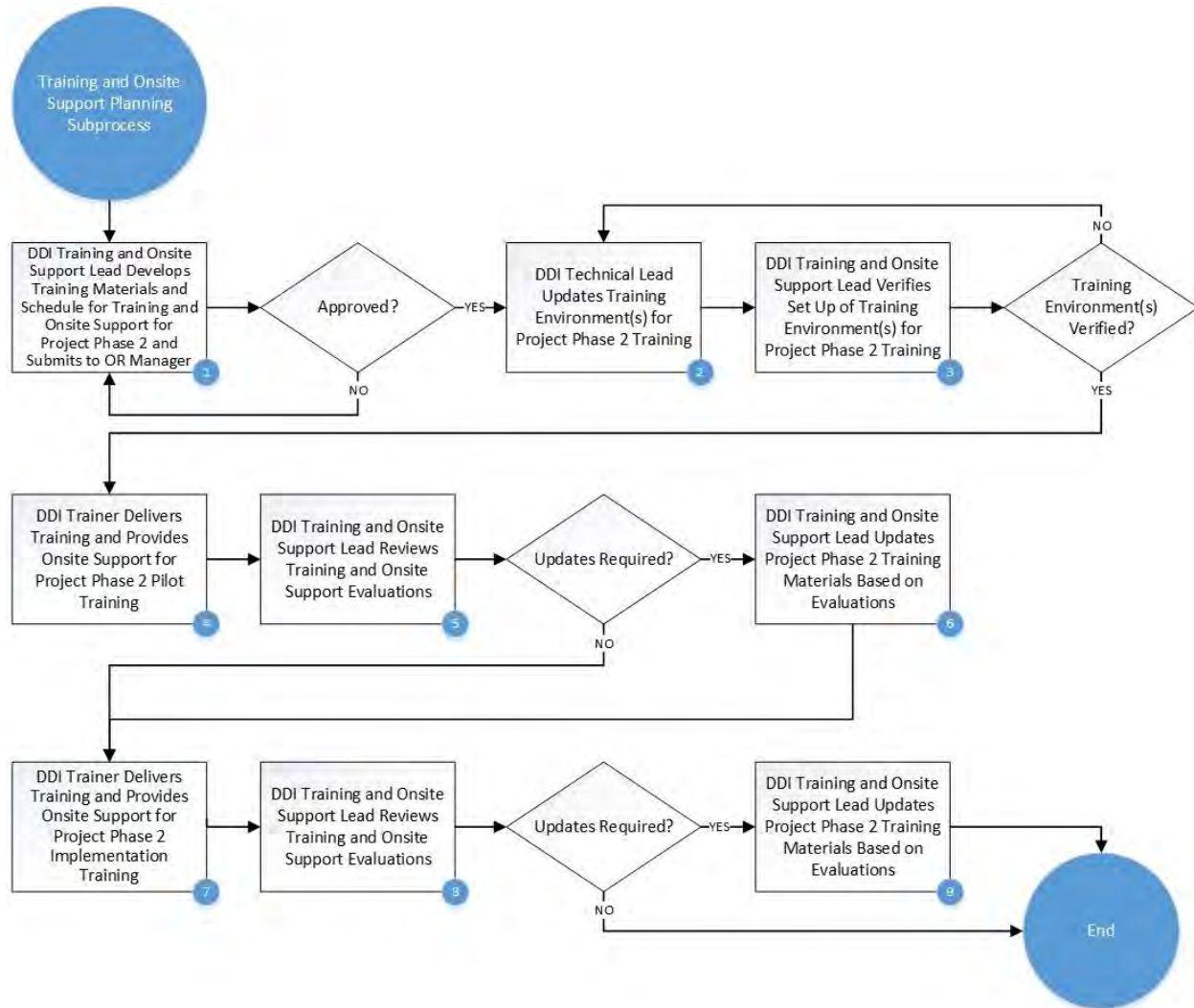


Figure 70: Project Phase 2 Training Development and Delivery Subprocess

1. **DDI Training and Onsite Support Lead Develops Training Materials and Schedule for Training and Onsite Support for Project Phase 2 and Submits to OR Manager** – The DDI Training and Onsite Support Lead ensures just-in-time classroom training is provided for CSB, Pilot County offices, and each region during Regional Rollout of Project Phase 2 functionality. Just-in-time training is provided no more than two to four weeks prior to go-live. The DDI vendor creates INvest overview training and function-specific training or course equivalents that provide

detailed instruction specific to the role of the Primary user based on the core functionality of INvest (e.g., enforcement, financials) or a specific role within an office (e.g., security, administration). The DDI Training and Onsite Support Lead conducts a full dress rehearsal of the INvest classroom training for CSB staff including, but not limited to, classroom presentation, classroom instructional materials (such as guides and manuals), exercises, onsite support materials, and INvest online help. The DDI Training and Onsite Support Lead develops training materials and proposed schedule for Project Phase 2 and submits the documentation to the OR Manager for review and approval. The OR Manager may identify problems with the training materials and schedule and returns the documentation to the DDI Training and Onsite Support Lead for updates. After making the requested updates, the DDI Training and Onsite Support Lead resubmits the training materials and schedule to the OR Manager for approval.

2. **DDI Technical Lead Updates Training Environment(s) for Project Phase 2 Training** – The DDI Technical Lead updates the training environment(s) needed for Project Phase 2 training for the appropriate release of INvest, and ensures they are operational and accessible for pilot and Statewide implementation training.
3. **DDI Training and Onsite Support Lead Verifies Set Up of Training Environment(s)** – The DDI Training and Onsite Support Lead verifies readiness of the end user training environment, as well as the second environment used when multiple training sessions are conducted concurrently across regions and Counties. This includes technical items (e.g., system access from the training sites, confirmation that the training environments meet CSB security requirements) and that the correct data is available for training purposes.
4. **DDI Trainer Delivers Training and Provides Onsite Support for Project Phase 2 Pilot Training** – Once the Training and Onsite Support Plan, curriculum, and schedule are approved by the OR Manager, and the setup of the training environment(s) has been verified, the DDI Training and Onsite Support Lead deploys the training resources to train Primary users.
5. **DDI Training and Onsite Support Lead Reviews Training and Onsite Support Evaluations** – The LMS used by the DDI Training and Onsite Support Lead supports the evaluation of curriculum, onsite support, and DDI Trainers. The DDI Training and Onsite Support Lead reviews evaluations of the curriculum and onsite support with the OR Manager to assess whether updates are warranted; the OR Manager reviews and approves proposed updates DDI Trainers review evaluations which provide input on how to improve their training delivery. The methods for evaluation are through the LMS, paper evaluations, SurveyMonkey®, and reports from the Help Desk, onsite support staff, and the field. If training or onsite support materials do not require update after Project Phase 1 Pilot, the DDI Trainers conduct training for Statewide implementation.
6. **DDI Training and Onsite Support Lead Updates Project Phase 2 Training Materials Based on Evaluations** – The DDI Training and Onsite Support Lead updates Project Phase 2 training materials after reviewing the trainee's evaluations during the Project Phase 2 Pilot.
7. **DDI Trainer Delivers Training and Provides Onsite Support for Project Phase 2 Implementation Training** – Once the Training and Onsite Support Plan, curriculum, and schedule are approved by the OR Manager, and the setup of the training environment(s) has been verified, the DDI Training and Onsite Support Lead deploys the training resources to train Primary users for Project Phase 2 implementation.

8. **DDI Training and Onsite Support Lead Reviews Training and Onsite Support Evaluations** – The LMS used by the DDI Training and Onsite Support Lead supports the evaluation of curriculum, onsite support, and DDI Trainers. The DDI Training and Onsite Support Lead reviews evaluations of the curriculum and onsite support with the OR Manager to assess whether updates are warranted; the OR Manager reviews and approves proposed updates. DDI Trainers review evaluations which provide input on how to improve their training delivery. The methods for evaluation are through the LMS, paper evaluations, SurveyMonkey®, and reports from the Help Desk, onsite support staff, and the field. If training or onsite support materials do not require update and additional regions exist for implementation of Project Phase 2, the DDI Trainers train the next region. If it is the last region, the Project Phase 2 training process ends.
9. **DDI Training and Onsite Support Lead Updates Project Phase 2 Training Materials Based on Evaluations** – The DDI Training and Onsite Support Lead updates Project Phase 2 training materials after reviewing the trainee’s evaluations during the Project Phase 2 pilot or regional rollout implementation. If additional regions need training, the DDI Trainers train the next region. When training for the last region has been completed, the DDI Training and Onsite Support Lead updates the training material and the Project Phase 2 training process ends.

14.3.4 Secondary Users Training Development

Secondary users are provided training through online help and tutorials. Figure 71 provides the Secondary Users Online Help and Tutorial process.

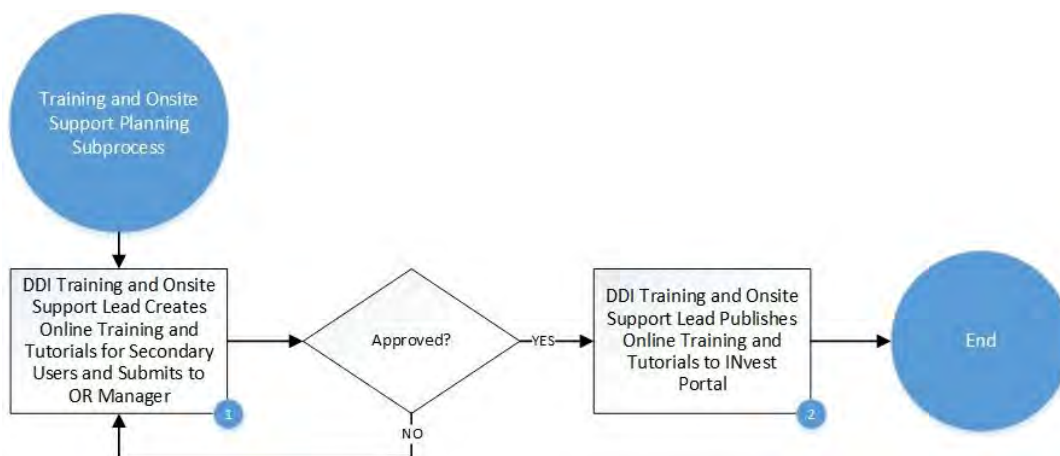


Figure 71: Secondary Users Online Help and Tutorial Process

1. **DDI Training and Onsite Support Lead Creates Online Training and Tutorials for Secondary Users and Submits to OR Manager** – The DDI Training and Onsite Support Lead creates online training and tutorials and submits them to the OR Manager for approval. The OR Manager may identify problems with the Secondary Users Online Help and Tutorial materials and returns them to the DDI Training and Onsite Support Lead for updates. After making the requested updates, the DDI Training and Onsite Support Lead resubmits the Secondary Users Online Help and Tutorial materials to the OR Manager for approval. The DDI Training and Onsite Support Lead creates online training and tutorials that are:
 - a. Complete, easy to understand, logical, applicable, and appropriate for the specific audience.
 - b. Written with language and terminology appropriate for the Indiana IV-D Program.

- c. Supported by strong version control and are easily updated.
 - d. Written in plain language (Plain Writing Act of 2010), tailored to, and appropriate for Secondary users.
2. **DDI Training and Onsite Support Lead Publishes Online Training and Tutorials to INvest Portal** – The DDI Training and Onsite Support Lead publishes the online training and tutorials to the INvest Portal for easy access by Secondary users. Secondary users access the INvest Portal for instructions on how to navigate the site for pertinent information.

14.3.5 Training Environments

The DDI vendor provides and manages three training environments. Two environments are for end user training, one of which is for hosting end user training when multiple training sessions are conducted concurrently across regions and Counties. The third environment is a training sandbox for use by DDI Trainers to prepare formal training materials, which may also be made available to Primary users as an exploratory playground for executing Use Case scenarios, User Testing, or UAT.

14.4 Templates

Table 44 provides a summary of the template used for the Training Development and Delivery process.

Table 44: Training Development and Delivery Template

Template Name	Description	Attachment ID
Training and Onsite Support Plan Template	<ul style="list-style-type: none"> Provides all of the components and format needed for developing the Training and Onsite Support Plan 	TDD-01

(Note: These templates are for initial reference purpose only. Templates will be defined once the DDI vendor is engaged.)

15.0 IMPLEMENTATION

15.1 General Introduction and Overview

System implementation is an effort that coordinates the deployment of software into production, user training for the new software, and the development of a support mechanism to address any challenges that may occur during the transition. The INvest Project has two separate Statewide pilots and implementations. During Statewide pilots and implementations, a technical help desk supports CSB and County Partners. In preparation for each implementation, the DDI vendor executes several business continuity / disaster recovery (BC/DR) drills.

The objective of the Implementation process is to develop and execute an Implementation Plan that addresses the rollout of INvest, including communication and training impacts for CSB, the County Partners, and other Primary and Secondary users of INvest. A successful implementation requires detailed planning and disciplined execution for Statewide pilots and implementations. An Implementation Team that follows the Implementation Plan guides the successful implementation of INvest. The Implementation Plan is a component of the DDI portion of the INvest Master PMP

CSB goals to achieve a successful implementation include, but are not limited to, the following:

- Introduce the functionality of INvest that improves efficiencies, with minimal disruption to CSB and County Partners, by planning and executing all elements of the implementation
- Mitigate risks inherent with the scope of an implementation like INvest

(Note: This chapter may be revised once the DDI vendor is engaged.)

15.2 Key Roles and Responsibilities

Table 45 provides a summary of the key roles and primary responsibilities involved in the Implementation process.

Table 45: Implementation Key Roles and Responsibilities

Key Role	Responsibilities
CCRB	<ul style="list-style-type: none"> • Receives any change requests identified during implementation activities
CSB BPO	<ul style="list-style-type: none"> • Provides input on Go/No-Go decisions • Supports County Partners with pilots and implementations • Supports set up and operation of the INvest Help Desk
CSB Chief Architect	<ul style="list-style-type: none"> • Provides input on Go/No-Go decisions
CSB Site Coordinators	<ul style="list-style-type: none"> • Ensures pilot County offices have executed pre-cutover activities • Ensures County Partners have executed pre-cutover activities in preparation for regional rollouts
CSB Technical Manager	<ul style="list-style-type: none"> • Provides Input on Go/No-Go decisions • Initiates contact with IOT for disaster recovery drills • Reviews Implementation Plan and BC/DR Plan • Provides oversight on Implementation and BC/DR activities

Key Role	Responsibilities
CSB Test Lead	<ul style="list-style-type: none"> Provides input on testing activities Validates that no blocker, critical, or high defects exist prior to Project Phase 1 or Project Phase 2 Pilots or implementations
DDI Chief Architect	<ul style="list-style-type: none"> Coordinates disaster recovery activities for the DDI vendor
DDI Data and Conversion Lead	<ul style="list-style-type: none"> Identifies risks and issues related to data conversion that might occur during implementation activities Provides status of data conversion activities related to pilots or implementations
DDI Functional Lead	<ul style="list-style-type: none"> Validates all functional and non-functional requirements within scope are traced through testing
DDI Implementation Lead	<ul style="list-style-type: none"> Ensures system documentation contains detailed information about INvest's design and functionality to enable effective maintenance Ensures user documentation captures information on how INvest works and specific details on its use Validates training materials are finalized and available for reference by the INvest Help Desk, Communications and Training Unit, end users, and production support Oversees all implementation activities to ensure pilot offices and County Partners are prepared for each project phase of INvest Updates the implementation schedule
DDI Project Manager	<ul style="list-style-type: none"> Manages all project phases of implementation to ensure all activities occur as planned Facilitates completion of the Implementation Plan Facilitates completion of the BC/DR Plan Estimates resources needs for and plans project phase pilots and project phase implementations Develops high-level project phase rollout plans for inclusion in the INvest Master PMP and Master Project Schedule
DDI Technical Lead	<ul style="list-style-type: none"> Coordinates disaster recovery activities for the DDI vendor
DDI Testing Lead	<ul style="list-style-type: none"> Provides input on testing activities Validates that no blocker, critical, or high defects exist prior to Project Phase 1 or Project Phase 2 Pilots or implementations
DDI vendor	<ul style="list-style-type: none"> Establishes and staffs the INvest Help Desk
Field Consultant	<ul style="list-style-type: none"> Assists in selection of pilot County offices Educates pilot County offices regarding pre-cutover tasks
Implementation Team	<ul style="list-style-type: none"> Participates in and coordinates the execution of the overall Implementation Plan Updates and manages release schedules as necessary Conducts a Production Readiness Review Conducts a Site Readiness Review Facilitates execution of migration procedures

Key Role	Responsibilities
INvest Core Committee	<ul style="list-style-type: none"> Approves Go/No-Go decisions for pilots and implementations Resolves escalated issues with the DDI vendor Reviews and approves the Implementation Plan Reviews and approves the BC/DR Plan
INvest Help Desk Supervisor	<ul style="list-style-type: none"> Accepts transition of INvest Help Desk processes and procedures from the DDI vendor
INvest PMO Manager	<ul style="list-style-type: none"> Reviews and approves the Implementation Plan Reviews and approves the BC/DR Plan
OR	<ul style="list-style-type: none"> Works with the DDI vendor to identify pilot County offices for Project Phase 1 and Project Phase 2 Works with the DDI vendor to identify Counties for regional rollouts Facilitates communication with County Partners prior to, during, and following implementation activities

15.3 Process Overview and Activities

The Implementation process for INvest describes the activities that occur to prepare for a pilot, either for Project Phase 1 or Project Phase 2, and Statewide implementations for Project Phase 1 and Project Phase 2.

Figure 72 provides the Implementation process.

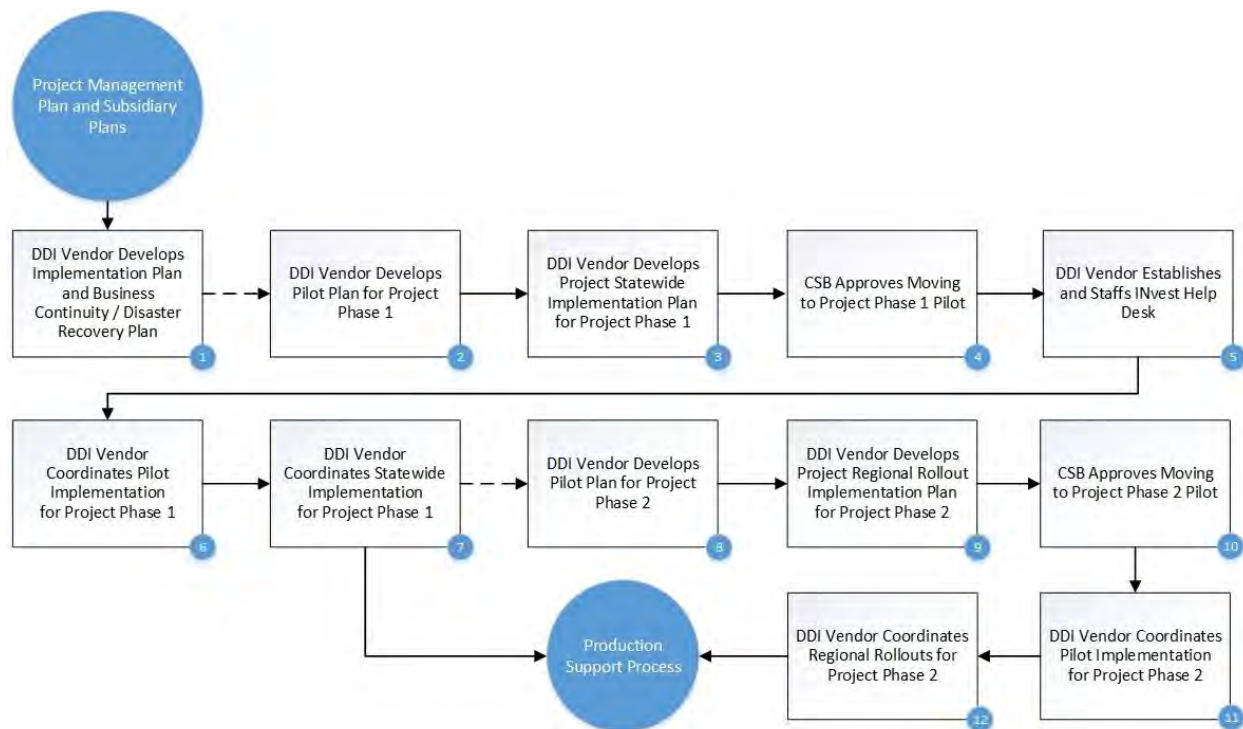


Figure 72: Implementation Process

1. **DDI Vendor Develops Implementation Plan and Business Continuity / Disaster Recovery Plan** – After CSB approves the DDI PMP and all subsidiary plans, the DDI vendor develops the Implementation Plan and the BC/DR Plan. The elements of the Implementation Plan are listed in **Part 15.3.1.1**. The elements of the BC/DR Plan are listed in **Part 15.3.1.2**.
2. **DDI Vendor Develops Pilot Plan for Project Phase 1** – As part of the Implementation Plan, the DDI vendor develops the Pilot Plan for the Project Phase 1 Pilot. The pilot must use at a minimum three Counties, one of which must be in the Central Time Zone.
3. **DDI Vendor Develops Project Statewide Implementation Plan for Project Phase 1** – As part of the Implementation Plan, the DDI vendor develops the Statewide Implementation Plan for Project Phase 1. The Project Phase 1 Implementation Plan describes how the entire State accesses this functionality at the conclusion of the Project Phase 1 Pilot and after receiving approval to implement Statewide.
4. **CSB Approves Moving to Project Phase 1 Pilot** – The INvest Core Committee approves moving to Project Phase 1 Pilot after review of the Site Readiness Checklist, Production Readiness Review Checklist, and the Technical Migration Plan to validate that INvest Project Phase 1 is ready for pilot. The INvest Core Committee reviews all of the checklists and plans, and receives input from the CSB Test Lead, CSB Technical Lead, and CSB Functional Lead to confirm that Project Phase 1 Pilot is ready for implementation.
5. **DDI Vendor Establishes and Staffs INvest Help Desk** – When the INvest Core Committee approves the release of Project Phase 1 Pilot for INvest, the DDI vendor establishes and staffs the INvest Help Desk. The INvest Help Desk provides technical assistance to Primary users needing assistance with system issues or system questions. The INvest Help Desk staff receive training in preparation for the release of each pilot and implementation.
6. **DDI Vendor Coordinates Pilot Implementation for Project Phase 1** – The DDI vendor performs the activities related to Project Phase 1 Pilot. The DDI vendor prepares the pilot County offices for the execution of Project Phase 1 activities, ensures the County Partner staff receive training, and the pilot County offices perform readiness activities prior to the official cutover. When the decision is made to move forward with the Project Phase 1 Pilot, the DDI vendor migrates the code from the staging environment into the production environment. The pilot County offices then validate their accessibility and the usability of Project Phase 1 functionality.
7. **DDI Vendor Coordinates Statewide Implementation for Project Phase 1** – After Project Phase 1 Pilot concludes, a decision is made by the INvest Core Committee to implement Project Phase 1 functionality in the remainder of the County offices. The DDI vendor prepares these County offices for the functionality, ensures the County Partner staff receive training, and validates that County Partner staff have performed readiness activities prior to the official cutover. The DDI vendor prepares the released functionality of INvest to allow complete access by the remainder of the State into the production environment. The County offices then validate their accessibility and the usability of Project Phase 1 functionality.
8. **DDI Vendor Develops Pilot Plan for Project Phase 2** – As part of the Implementation Plan, the DDI vendor develops the Pilot Plan for the Project Phase 2 Pilot. The pilot must use at a minimum three Counties, one of which must be in the Central Time Zone.

9. **DDI Vendor Develops Project Regional Rollout Implementation Plan for Project Phase 2** – As part of the Implementation Plan, the DDI vendor develops the Regional Rollout Implementation Plan for Project Phase 2. The Project Phase 2 Implementation Plan describes how the DDI vendor releases the entire functionality of INvest by regional rollout.
10. **CSB Approves Moving to Project Phase 2 Pilot** – The INvest Core Committee approves moving to Project Phase 2 Pilot after review of the Site Readiness Checklist, Production Readiness Review Checklist, and the Technical Migration Plan to validate that INvest Project Phase 2 is ready for pilot. The INvest Core Committee reviews all of the checklists and plans, and receives input from the CSB Test Lead, CSB Technical Lead, and CSB Functional Lead to confirm that Project Phase 2 Pilot is ready for implementation.
11. **DDI Vendor Coordinates Pilot Implementation for Project Phase 2** – The next activities are related to Project Phase 2 Pilot. The DDI vendor prepares these County offices for full INvest functionality, ensures the County Partner staff have received training, and validates that County Partner staff have performed readiness activities prior to the official cutover. The DDI vendor migrates the code from the staging environment into the production environment that provides full functionality of INvest to the pilot County offices. The pilot County offices then validate their accessibility and the usability of INvest.
12. **DDI Vendor Coordinates Regional Rollouts for Project Phase 2** – The last significant activities for the implementation of INvest are the regional rollouts that provide the full functionality to all staff across the State of Indiana. The INvest Core Committee makes a decision to begin the regional rollouts after assessing and evaluating the Project Phase 2 Pilot. The DDI vendor prepares the County offices included in a regional rollout, ensures the County Partner staff have received training, and validates that County Partner staff have performed readiness activities prior the official cutover. The DDI vendor prepares the production environment to allow full access by the County offices in the region being released. The County offices then validate their accessibility and the usability of INvest.

15.3.1 Implementation Planning

The Implementation Planning process describes the development and approval of the Implementation Plan and the BC/DR Plan. The Implementation Plan guides the INvest Project Team to a successful implementation of both pilots and implementations. The elements of the Implementation Plan are shown in **Part 15.3.1.1**. The elements of the BC/DR Plan are shown in **Part 15.3.1.2**. Figure 73 provides the Implementation Planning process.

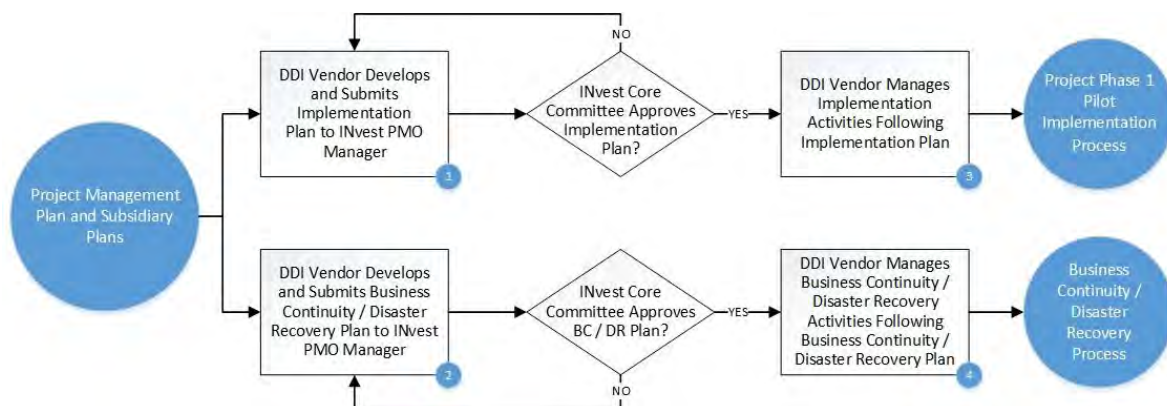


Figure 73: Implementation Planning Process

1. **DDI Vendor Develops and Submits Implementation Plan to INvest PMO Manager** – The Implementation Planning process begins after the approval of the PMP and all subsidiary plans. The DDI vendor develops the INvest Implementation Plan. Elements of the Implementation Plan include Strategy, Roles and Responsibilities, Communications, and Go/No-Go Success Criteria. Subsidiary plans within the Implementation Plan include the Project Phase 1 and Project Phase 2 Pilot Plans, Project Phase 1 and Project Phase 2 Statewide Implementation Plans, and the Organizational Readiness Team Coordination Plan. Further details on the Implementation Plan are shown in **Part 15.3.1.1**. The DDI vendor submits the Implementation Plan to the INvest PMO Manager for approval as a deliverable. If the INvest Core Committee does not approve the Implementation Plan deliverable, the DDI vendor makes the required updates and resubmits the deliverable to the INvest PMO Manager.
2. **DDI Vendor Develops and Submits Business Continuity / Disaster Recovery Plan to INvest PMO Manager** – BC/DR Plan development occurs in conjunction with the Implementation Plan development. The elements of the BC/DR Plan include Purpose and Scope, Business Continuity, and Disaster Recovery. Further details on the BC/DR Plan are shown in **Part 15.3.1.2**. The DDI vendor submits the BC/DR Plan to the INvest PMO Manager for approval as a deliverable. If the INvest Core Committee does not approve the BC/DR Plan deliverable, the DDI vendor makes the required updates and resubmits the deliverable to the INvest PMO Manager.
3. **DDI Vendor Manages Implementation Activities Following Implementation Plan** – After CSB approves the Implementation Plan, the DDI vendor manages all implementation activities following the approved plan. The DDI vendor creates standard operating procedures (SOPs) and checklists as part of the pilot and implementation processes. Each procedure or checklist enables the DDI vendor to validate that activities are performed according to the plan when reporting on status of implementation readiness for Project Phase 1 or Project Phase 2 Pilots and Project Phase 1 and Project Phase 2 Statewide implementations.
4. **DDI Vendor Manages Business Continuity / Disaster Recovery Activities Following Business Continuity / Disaster Recovery Plan** – After CSB approves the BC/DR Plan, the DDI vendor manages BC/DR activities following the approved plan. The DDI vendor conducts drills during pilot project phases and during regional rollouts to ensure required environments can be recovered and business operations can continue with minimal interruption to services.

15.3.1.1 Implementation Plan

The Implementation Plan includes, but is not limited to, the following:

Table 46: Implementation Plan Contents

Section	Contents
Implementation Strategy	<ul style="list-style-type: none"> A description of the strategy for implementing INvest, using best practices and prior experience in implementing a child support system similar to INvest.
Relationship to Other Plans	<ul style="list-style-type: none"> A description of the relationship between the Implementation Plan to other project plans, including the PMP and the Communications Management Plan.

Section	Contents
Roles and Responsibilities	<ul style="list-style-type: none"> A list of the roles and responsibilities needed to implement INvest. <ul style="list-style-type: none"> Roles are key to activities to implement INvest. Responsibilities are clearly stated and related to implementation activities.
Implementation Communications	<ul style="list-style-type: none"> Definition of the approaches to communicate with CSB, to County Partners through OR, and to the QA vendor to prepare for and implement INvest. This is documented in an extract from the Communications Matrix template, which is an attachment to the Communications Management chapter.
Risks, Assumptions, and Dependencies	<ul style="list-style-type: none"> Initial risks, assumptions, and dependencies related to the effort required to implement INvest successfully with two project phases, with each project phase including a pilot and then implementation.
Organizational Readiness Team Coordination Plan	<ul style="list-style-type: none"> References to components of the Organizational Readiness Team Coordination Plan (prepared by OR) that relate to Implementation Plan activities.
Pilot Plan Project Phase 1	<ul style="list-style-type: none"> An explanation of activities that occur leading up to pilot and activities following the pilot implementation. The process for developing SOPs and checklists that are used during the implementation. Lessons learned from other state implementations that have informed development of the plan for INvest.
Pilot Plan Project Phase 2	<ul style="list-style-type: none"> An explanation of activities that occur leading up to pilot and activities following the pilot implementation. The process for developing SOPs and checklists that are used during the implementation. Lessons learned from Project Phase 1 Pilot have informed development of the plan for Project Phase 2 Pilot.
Statewide Implementation Plan Project Phase 1	<ul style="list-style-type: none"> An explanation of activities that occur leading up to and following implementation. An explanation of how pilot objectives and stakeholder readiness will be used to move to Statewide implementation.
Statewide Implementation Plan Project Phase 2	<ul style="list-style-type: none"> An explanation of activities that occur leading up to and following regional rollouts of INvest. An explanation of how pilot objectives and stakeholder readiness will be used to move to regional rollouts.
Go/No-Go Success Criteria	<ul style="list-style-type: none"> Definition of Go/No-Go success criteria that are required to implement a pilot, a Statewide rollout, or a regional rollout.

Section	Contents
Technical Migration / Implementation Methods	<ul style="list-style-type: none"> • Descriptions of the technical migration and implementation methods used to implement INvest in pilots and implementations. • A Technical Migration Plan that provides a detailed schedule of events, persons responsible, and event dependencies required to ensure successful cutover. <ul style="list-style-type: none"> ○ The plan includes such details as Pre-Implementation Activities and Tasks, Implementation Day Activities and Tasks, Post Implementation Activities and Tasks, and Communication Lists. ○ See Attachment IMP-02 Technical Migration Plan Template. The DDI vendor uses the attachment as a guide in developing the Technical Migration Plan for the INvest Project.
Technology, Infrastructure, and Support Considerations	<ul style="list-style-type: none"> • Description of the technology, infrastructure, and support needed by the various County offices when implementing INvest.
Triage / Issue Escalation Processes	<ul style="list-style-type: none"> • Definition of a regular triage process facilitated by the INvest PMO that tracks, prioritizes, and addresses the issues found during implementation. <ul style="list-style-type: none"> ○ The process must include an issue escalation process to resolve disputes.
Rollback Processes	<ul style="list-style-type: none"> • Description of the process to rollback a migration in the event a major issue is identified during, or immediately following, an implementation.
Interface Contingency Plan	<ul style="list-style-type: none"> • A contingency plan for handling any planned interfaces that are not available at the time of implementation.

The DDI vendor uses a Technical Migration Plan that provides a detailed schedule of events, persons responsible, and event dependencies required to ensure successful cutover. The plan includes such details as Pre-Implementation Activities and Tasks, Implementation Day Activities and Tasks, Post Implementation Activities and Tasks, and Communication Lists. See **Attachment IMP-02 Technical Migration Plan Template**. The DDI vendor uses the attachment as a guide in developing the Technical Migration Plan for the INvest Project.

15.3.1.2 Business Continuity / Disaster Recovery Plan

Table 47 provides the elements of the Business Continuity / Disaster Recovery Plan.

Table 47: Business Continuity / Disaster Recovery Plan Contents

Section	Contents
Purpose and Scope	<ul style="list-style-type: none"> • A list of production and non-production environments involved in the implementation; • The relationship of the BC/DR Plan to other project plans; • Defined roles and responsibilities; • The team organization for BC/DR; and • Expectations for training, policy, and procedures.

Section	Contents
Business Continuity	<ul style="list-style-type: none"> Results of the Business Impact Analysis and definition of how organizations recover and restore partially or completely interrupted critical functions within a predetermined time after a disaster or extended disruption. Definition of processes to identify and address potential sources of change, such as new compliance requirements, changes to critical Recovery Time Objectives (RTO), and Recovery Point Objectives (RPO) levels. Definition of the risk assessment methodology, threat identification and analysis, potential damage the events might cause, and impact scenarios.
Disaster Recovery	<ul style="list-style-type: none"> Definition of processes to identify and address potential sources of change, such as new compliance requirements, or changes to critical RTO and RPO levels. A regular schedule for contingency plan testing (e.g., annually or semi-annually) that enables identification and resolution of plan deficiencies to ensure the effectiveness of the disaster recovery plan. IRS Pub 1075 states that a disaster recovery drill is required at least annually. The BC/DR Drill Plan. Expectations for communications during a system disaster and recovery. Identification of measures and controls to confirm achievement of business and technical recovery requirements. Definition of backup and failover processes for all IT assets based on RTO and RPO as determined and mutually agreed upon by the DDI vendor and the State during disaster recovery planning.

15.3.2 INvest Pilot – Project Phase 1

CSB defines a pilot as a contained assessment that begins after the training of pilot users. The Project Phase 1 Pilot is used to validate INvest usability and support processes.

The goals of Project Phase 1 Pilot are to allow:

- CSB to create user accounts within the IAAM functionality;
- Primary users to log in to the portal; and
- Primary users to scan and view documents with ECM functionality.

The Project Phase 1 Pilot verifies the IAAM, ECM, and Internal Portal functionality is ready for Statewide implementation.

The Project Phase 1 Pilot length is estimated by CSB to be a minimum of 10 business days, but no longer than 30 calendar days. CSB expects the DDI vendor to plan and schedule the optimal length for the Project Phase 1 Pilot.

Figure 74 provides the Project Phase 1 Pilot Implementation process.

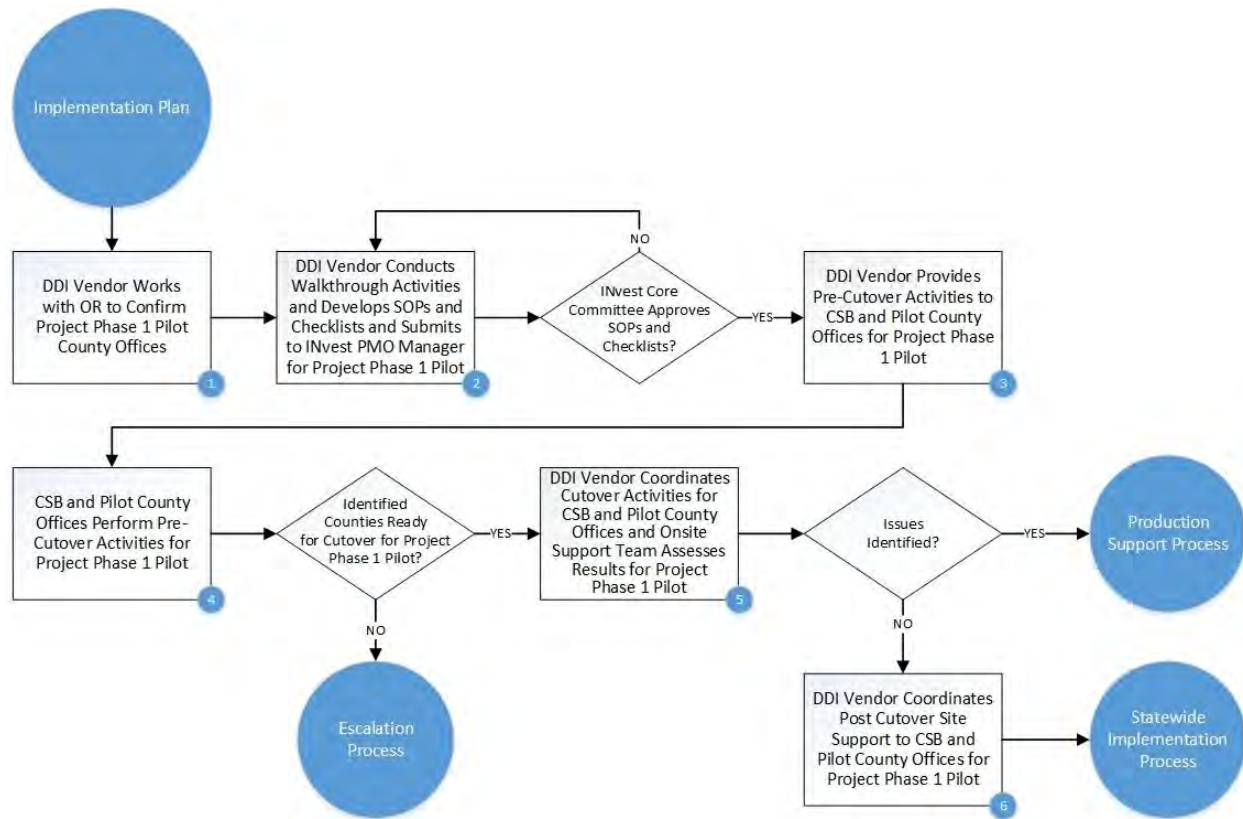


Figure 74: Project Phase 1 Pilot Implementation Process

1. **DDI Vendor Works with OR to Confirm Project Phase 1 Pilot County Offices** – The DDI vendor works with OR to identify pilot County offices for Project Phase 1. The pilot must include CSB staff and at least three County offices of varying geographic distribution and size (for both case counts and number of staff). One of the pilot County offices must be in the Central Time Zone. The CSB BPOs and Field Consultants are available to provide input to the selection of Project Phase 1 Pilot County offices.
2. **DDI Vendor Conducts Walkthrough Activities and Develops SOPs and Checklists and Submits to INvest PMO Manager for Project Phase 1 Pilot** – The DDI vendor conducts a walkthrough of pilot activities and reviews any SOPs and checklists to be used during Project Phase 1 Pilot. The DDI vendor references lessons learned from pilots in previous projects during the walkthroughs. A walkthrough occurs with the Implementation Team prior to the actual execution of each INvest pilot. The DDI vendor then submits the SOPs and checklists to the INvest PMO Manager for approval. The INvest PMO Manager coordinates review and approval with the INvest Core Committee. If the INvest Core Committee does not approve the SOPs and checklists, the INvest PMO Manager returns the documents to the DDI vendor for requested updates. OR works closely with the DDI vendor to ensure onsite support is appropriate in keeping with the tone and vision of the INvest Project.
3. **DDI Vendor Provides Pre-Cutover Activities to CSB and Pilot County Offices for Project Phase 1 Pilot** – (Note: Pre-cutover activities for County Partners begin early in the INvest Project. Counties need at least 12 months advance notice for hardware / software purchases prior to the

actual implementation of INvest.) The DDI vendor provides the required pilot activities, including the approved SOPs and checklists, to CSB and to the pilot County offices with assistance from OR. Technical preparation required for INvest is included in this information, which includes networking, hardware, or software specifications. The Field Consultant for a selected pilot County is the primary resource to accomplish this task.

4. **CSB and Pilot County Offices Perform Pre-Cutover Activities for Project Phase 1 Pilot** – CSB and the Counties are responsible to follow the defined Project Phase 1 Pilot activities, which may require the purchase of hardware / software. As part of the pre-cutover activities, the Counties must ensure the County site is ready for Project Phase 1 Pilot implementation. OR and the DDI vendor assess the preparations for the pilot implementation and work toward a seamless transition with all County Partners, CSB, and other stakeholders. **Attachment IMP-03 Site Readiness Checklist** is a tool used to monitor a site's readiness for pilot implementation. As the scheduled date nears for Project Phase 1 Pilot, the DDI vendor coordinates with OR and the Field Consultants to provide implementation readiness status for the Project Phase 1 Pilot County Offices to the INvest Project Team. If CSB determines any County is not ready for implementation, the DDI vendor, through OR, notifies that Project Phase 1 Pilot County why the decision was made not to implement. The Project Phase 1 Pilot may continue with CSB and any pilot County ready for implementation. If the decision is No-Go, CSB initiates the Escalation process. See the [Introduction](#) chapter for additional information on the Escalation process.
5. **DDI Vendor Coordinates Cutover Activities for CSB and Pilot County Offices and Onsite Support Team Assesses Results for Project Phase 1 Pilot** – After approval to move to Project Phase 1 Pilot, the DDI vendor coordinates all cutover activities for CSB and the Project Phase 1 Pilot County offices. Issues may arise during the pilot implementation. If issues occur, the DDI vendor and CSB onsite support staff review and assess those issues using the SOPs and checklists to identify the severity of the issue. Issues are addressed through the Production Support process. See the [Production Support](#) chapter for additional detail on production support.
6. **DDI Vendor Coordinates Post Cutover Site Support to CSB and Pilot County Offices for Project Phase 1 Pilot** – The DDI vendor, with assistance from the onsite support team and the Field Consultants, provides post implementation site support using **Attachment IMP-04 Post Implementation Checklist** (see [Section 15.4](#)). The checklist provides predetermined touchpoints to ensure the Project Phase 1 Pilot County offices and CSB can access the portal, log in with an appropriate profile or access, access portal data based on security roles, demonstrate ECM functionality, and perform other vital functions. The DDI vendor gathers lessons learned by reviewing the SOPs, checklists, and pilot objectives, including any issues identified and reported. All of this data is used as the INvest Project Team begins preparation for Project Phase 1 Statewide implementation.

15.3.3 INvest Statewide Implementation – Project Phase 1

The INvest Project Team verifies that Project Phase 1 is ready for Statewide implementation. The Implementation Plan details the Go/No-Go success criteria that are reviewed to make this verification. The INvest Core Committee and the Implementation Team review the success of the Project Phase 1 Pilot objectives as well as stakeholder readiness. A key element of implementation requires the DDI vendor to provide just-in-time classroom training followed by onsite and help desk support.

The Project Phase 1 Statewide implementation can be planned as regional rollouts or a Statewide rollout, but must be completed within 30 calendar days of the end of the Project Phase 1 Pilot. If the DDI vendor proposes a regional rollout strategy for Project Phase 1 implementation, the DDI vendor works collaboratively with County Partners and CSB. Although Indiana has 18 child support regions, the DDI vendor may propose a separate rollout strategy that does not align with these regions geographically.

The DDI vendor coordinates Project Phase 1 Statewide implementation with OR. OR executes any communications and interactions with County Partners, other State agencies, or external customers or stakeholders.

The DDI vendor provides system support and addresses any corrective actions needed throughout the Statewide implementations through a regular prioritization process facilitated by the INvest PMO that tracks, prioritizes, and addresses issues identified during Project Phase 1 Statewide implementation.

Figure 75 provides the Project Phase 1 Statewide Implementation process.

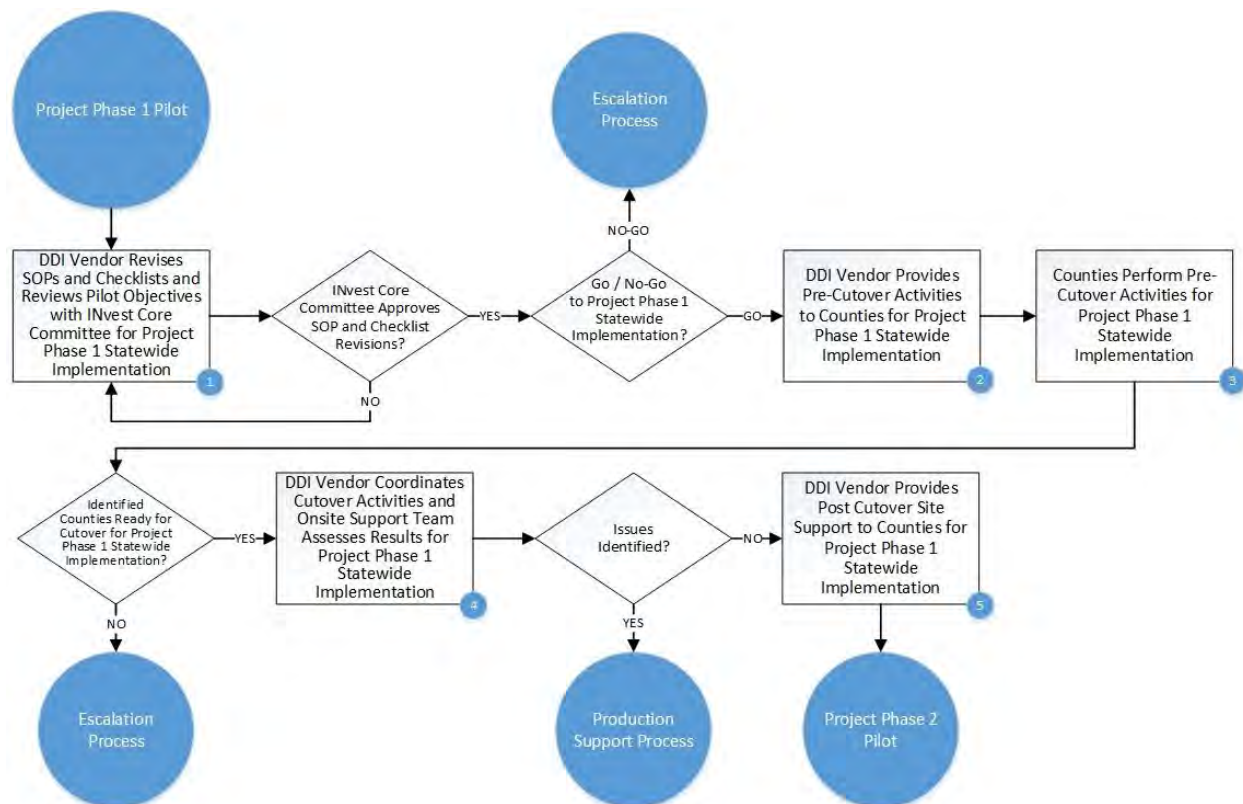


Figure 75: Project Phase 1 Statewide Implementation Process

1. **DDI Vendor Revises SOPs and Checklists and Reviews Pilot Objectives with INvest Core Committee for Project Phase 1 Statewide Implementation** – The DDI vendor revises the SOPs and checklists for Project Phase 1 Statewide implementation based on review, analysis, and lessons learned from the Project Phase 1 Pilot, and provides the revised SOPs and checklists to the INvest PMO Manager. The INvest PMO Manager coordinates review and approval with the INvest Core Committee. If the INvest Core Committee does not approve the revisions, the INvest PMO Manager returns the documents to the DDI vendor for requested updates. The DDI vendor updates the SOPs and checklists based on the INvest Core Committee’s comments and recommendations. After the INvest Core Committee approves the revisions to the SOPs and

checklists for Project Phase 1 implementation, the DDI vendor and the Implementation Team review the pilot objectives with the INvest Core Committee. The INvest Core Committee, with input from the DDI vendor and the QA vendor, makes a Go/No-Go decision about implementation of Project Phase 1. If the decision is No-Go, CSB initiates the Escalation process. See the [Introduction](#) chapter for additional information on the Escalation process.

2. **DDI Vendor Provides Pre-Cutover Activities to Counties for Project Phase 1 Statewide Implementation** – (Note: Pre-cutover activities for County Partners begin early in the INvest Project. Counties need at least 12 months advance notice for hardware / software purchases prior to the actual implementation of INvest.) If the decision is to go forward with Project Phase 1 Statewide implementation, the DDI vendor, with assistance from OR, provides the required implementation activities, including the approved SOPs and checklists, to the Counties. Technical preparation required for INvest is included in this information, which includes networking, hardware, or software specifications that may require procurement prior to Statewide implementation. The Field Consultant for the County is a primary resource to accomplish this task.
3. **Counties Perform Pre-Cutover Activities for Project Phase 1 Statewide Implementation** – The Counties are responsible to follow the defined Project Phase 1 Statewide implementation activities, which may require the Counties to purchase hardware / software. As part of the pre-cutover activities, the Counties must ensure the County site is ready for cutover. OR and the DDI vendor assess the preparations for the implementation and work toward a seamless transition with all County Partners, CSB, and other stakeholders. **Attachment IMP-03 Site Readiness Checklist** is a tool used to monitor a site's readiness for Statewide implementation. As the scheduled date nears for Project Phase 1 Statewide implementation, the DDI vendor coordinates with OR and the Field Consultants to provide implementation readiness status for the Counties to the INvest Project Team. If a decision is made that any County is not ready for implementation, the DDI vendor, through OR, notifies the affected County offices why the decision was made not to implement. Project Phase 1 Statewide implementation may continue with any County ready for Project Phase 1 Statewide implementation. If the decision is No-Go, CSB initiates the Escalation process. See the [Introduction](#) chapter for additional information on the Escalation process.
4. **DDI Vendor Coordinates Cutover Activities for Project Phase 1 Implementation and Onsite Support Team Assesses Results for Project Phase 1 Statewide Implementation** – For any County identified to move forward with Project Phase 1 Statewide implementation, the DDI vendor coordinates all cutover activities with each County. The DDI vendor coordinates when all County users must sign out of ISETS and when the onsite support staff can initially check for full access to INvest. If the onsite support staff identify issues with INvest, the process moves to the Production Support process.
5. **DDI Vendor Provides Post Cutover Site Support to Counties for Project Phase 1 Statewide Implementation** – The DDI vendor, with assistance from the onsite support team and Field Consultants, provides post implementation site support using **Attachment IMP-04 Post Implementation Checklist** (see **Part 15.4**). The checklist provides predetermined touchpoints to ensure the Counties can access the portal, log in with appropriate profile or access, access portal data based on security roles, demonstrate ECM functionality, and perform other vital functions. The DDI vendor gathers lessons learned by reviewing the SOPs, checklists, and pilot objectives, including any issues identified and reported to the INvest Help Desk or escalated to the INvest Core Committee.

15.3.4 INvest Pilot – Project Phase 2

The goals of Project Phase 2 Pilot are to deliver:

- All core functionality
- Integrated and expanded Project Phase 1 functionality
- An external portal for Secondary users

The Project Phase 2 Pilot verifies the above functionality is ready for Statewide implementation.

The DDI vendor executes a 60-calendar day pilot, beginning on the first of a month and including the end of a quarter. The DDI vendor ensures that the Project Phase 2 Statewide implementation takes no longer than one year, ideally within a single Federal Fiscal Year. The Project Phase 2 Pilot ensures CSB and County Partners engage in actual case processing and navigate through business processes, rules, and batch, with actual converted data.

Figure 76 provides the Project Phase 2 Pilot Implementation process.

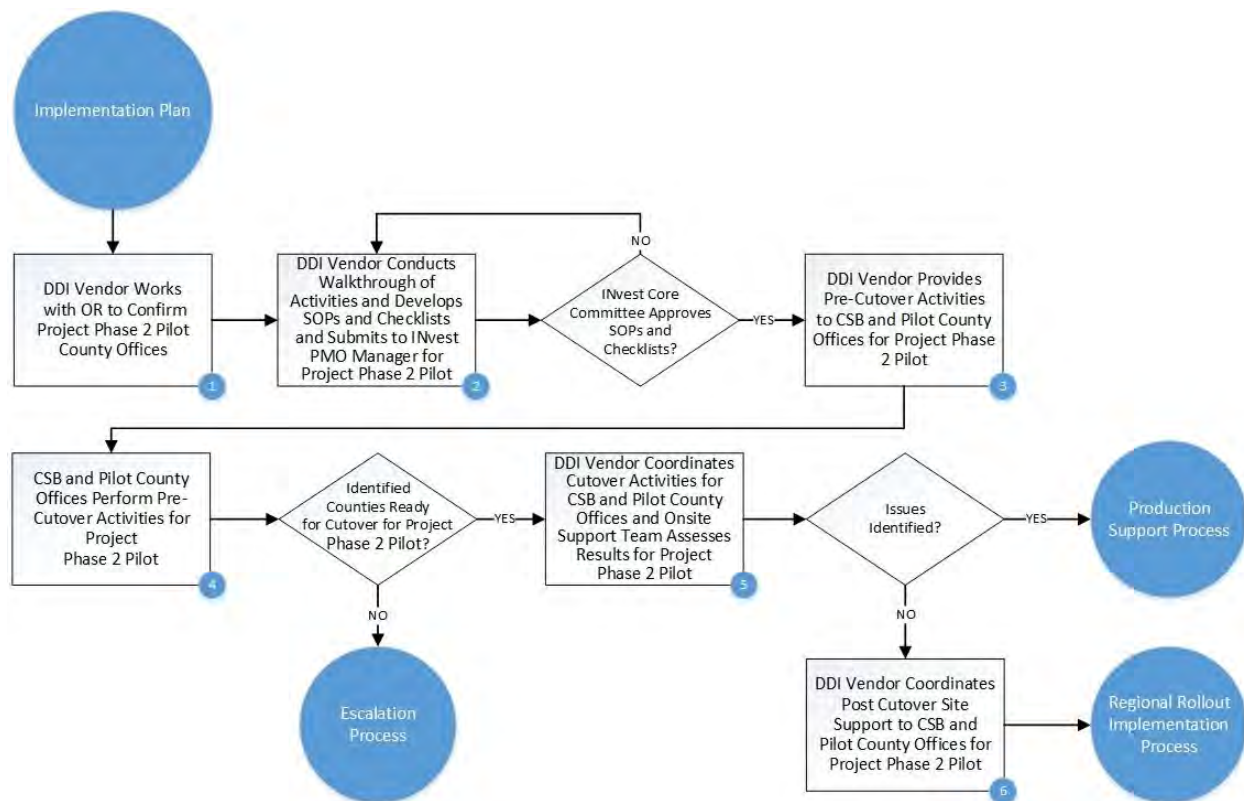


Figure 76: Project Phase 2 Pilot Implementation Process

1. **DDI Vendor Works with OR to Confirm Project Phase 2 Pilot County Offices** – The DDI vendor works with OR to select pilot County offices for Project Phase 2 Pilot. The Project Phase 2 Pilot must include CSB and at least three County offices of varying geographic distribution and size (for both case counts and number of staff). One of the pilot County offices must be in the Central Time Zone. The CSB BPOs and Field Consultants are available to provide input to the selection of Project Phase 2 Pilot County offices.

2. **DDI Vendor Conducts Walkthrough of Activities and Develops SOPs and Checklists and Submits to INvest PMO Manager for Project Phase 2 Pilot** – The DDI vendor conducts a walkthrough of pilot activities and reviews any SOPs and checklists used during the Project Phase 2 Pilot. The DDI vendor references lessons learned from the Project Phase 1 Pilot and previous projects during the walkthroughs. A walkthrough occurs with the Implementation Team prior to the actual execution of Project Phase 2 Pilot. The DDI vendor then submits the SOPs and checklists to the INvest PMO Manager for approval. The INvest PMO Manager coordinates review and approval with the INvest Core Committee. If the INvest Core Committee does not approve the SOPs and checklists, the INvest PMO Manager returns the documents to the DDI vendor for requested updates. OR works closely with the DDI vendor to ensure onsite support is appropriate in keeping with the tone and vision of the INvest Project.
3. **DDI Vendor Provides Pre-Cutover Activities to CSB and Pilot County Offices for Project Phase 2 Pilot** – (Note: Pre-cutover activities for County Partners begin early in the INvest Project. Counties need at least 12 months advance notice for hardware / software purchases prior to the actual implementation of INvest.) The DDI vendor, provides the required pilot activities, including the approved SOPs and checklists, to CSB and the pilot County offices with assistance from OR. Technical preparation required for INvest is included in this information, which includes networking, hardware, or software specifications. The Field Consultant for a selected pilot County is the primary resource to accomplish this task.
4. **CSB and Pilot County Offices Perform Pre-Cutover Activities for Project Phase 2 Pilot** – CSB and the Counties are responsible to follow the defined pilot activities. As part of the pre-cutover activities, CSB and the Counties must ensure the County site is ready for pilot cutover. OR and the DDI vendor assess the preparations for the Project Phase 2 Pilot implementation and work toward a seamless transition with all County Partners, CSB, and other stakeholders. **Attachment IMP-03 Site Readiness Checklist** is a tool used to monitor a site's readiness for Project Phase 2 Pilot. As the scheduled date nears for the Project Phase 2 Pilot, the DDI vendor coordinates with OR and the Field Consultants to provide implementation readiness status for the Counties to the INvest Project Team. If CSB determines that any County is not ready for Project Phase 2 Pilot implementation, the DDI vendor, through OR, notifies the Project Phase 2 Pilot County offices why the decision was made not to implement. Project Phase 2 Pilot may continue with CSB and any pilot County ready for implementation. If the decision is No-Go, CSB initiates the Escalation process. See the [Introduction](#) chapter for additional information about the Escalation process.
5. **DDI Vendor Coordinates Cutover Activities for CSB and Pilot County Offices and Onsite Support Team Assesses Results for Project Phase 2 Pilot** – After approval to move to Project Phase 2 Pilot, the DDI vendor coordinates all cutover activities for CSB and the Project Phase 2 Pilot County offices. Issues may arise during the pilot implementation. If issues occur, the DDI vendor and CSB onsite support staff review and assess those issues using the SOPs and checklists to identify the severity of the issue. All issues are submitted to the Production Support process of the INvest Governance Manual for assessment.
6. **DDI Vendor Coordinates Post Cutover Site Support to CSB and Pilot County Offices for Project Phase 2 Pilot** – The DDI vendor provides post implementation site support, using **Attachment IMP-04 Post Implementation Checklist** (see [Section 15.4](#)), to CSB and the Pilot County offices with assistance from the onsite support team and the Field Consultants. The checklist provides predetermined touchpoints to ensure the Project Phase 2 Pilot County offices can log in with appropriate profile or access, access INvest data based on security roles, and perform other vital functions. The DDI vendor gathers lessons learned by reviewing the SOPs, checklist, and pilot

objectives, including any issues identified and reported to the INvest Help Desk through the Production Support process. All of this data is used as the INvest Project Team begins preparation for Project Phase 2 Regional Rollout implementation.

15.3.5 INvest Regional Rollout Implementation – Project Phase 2

The INvest Project Team verifies that Project Phase 2 is ready for the Statewide regional rollouts. The Implementation Plan details the Go/No-Go items that are reviewed to make this verification. The INvest Core Committee and the Implementation Team review the success of the Project Phase 2 Pilot objectives and stakeholder readiness. A key element of implementation requires the DDI vendor to provide just-in-time classroom training followed by onsite and help desk support.

CSB requires the DDI vendor to execute regional rollouts for Project Phase 2; the rollouts should take no longer than 12 months and occur within one federal fiscal year. The DDI vendor works collaboratively with the County Partners and CSB to determine the regional rollout strategy and structure. Although Indiana has 18 child support regions, the DDI vendor may propose a separate rollout strategy that does not align with these regions geographically. The DDI vendor documents this approach in the Implementation Plan that guides the Implementation Team.

The DDI vendor coordinates Project Phase 2 regional rollout implementation with OR. OR executes any communications and interactions with County Partners, other State agencies, external customers, or stakeholders.

The DDI vendor provides system support and addresses any corrective actions needed throughout the regional rollout implementation through a regular prioritization process facilitated by the INvest PMO that tracks, prioritizes, and addresses issues identified during Project Phase 2 regional rollout implementation.

Figure 77 provides the Project Phase 2 Regional Rollout Implementation process.

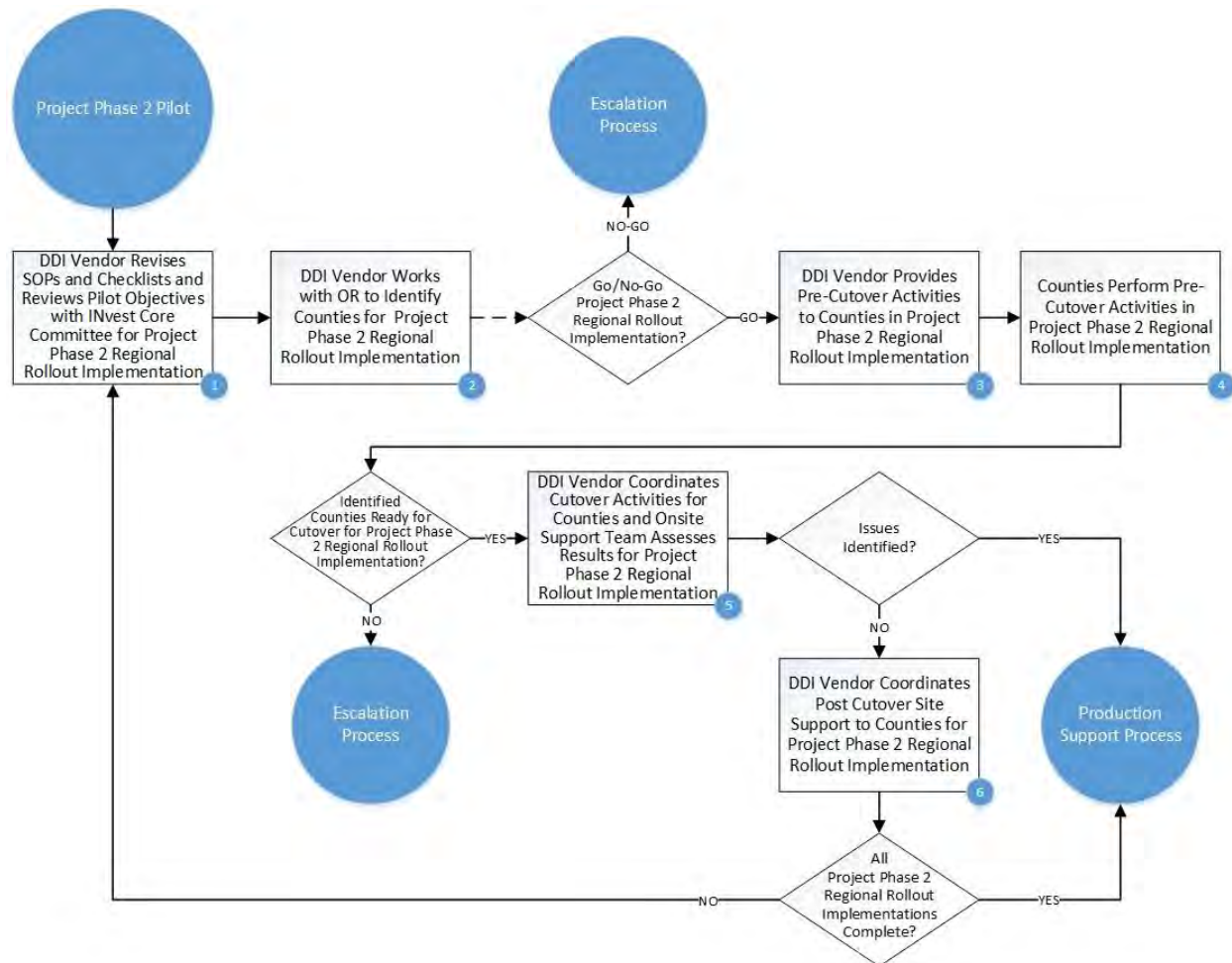


Figure 77: Project Phase 2 Regional Rollout Implementation Process

1. **DDI Vendor Revises SOPs and Checklists and Reviews Pilot Objectives with INvest Core Committee for Project Phase 2 Regional Rollout Implementation** – The DDI vendor revises the SOPs and checklists for Project Phase 2 implementation based on review, analysis, and lessons learned from Project Phase 1 and provides the updated SOPs and checklists to the INvest PMO Manager for approval. The INvest PMO Manager coordinates review and approval with the INvest Core Committee.
2. **DDI Vendor Works with OR to Identify Counties for Project Phase 2 Regional Rollout Implementation** – The DDI vendor works with OR to select regional rollout Counties for Project Phase 2 implementation. The regions do not need to align with the existing 18 child support regions in Indiana. The DDI vendor uses its expertise with regional rollout implementations in discussions with OR to ensure appropriate staffing for a smooth implementation. The CSB BPOs and Field Consultants are available to provide input to the selection of pilot County offices. At the conclusion of Project Phase 2 pilot, CSB provides a Go/No-Go decision to the DDI vendor to finalize preparation for regional rollout implementation. If the decision is No-Go, CSB initiates the Escalation process. See the [Introduction](#) chapter for additional information on the Escalation process.

3. **DDI Vendor Provides Pre-Cutover Activities to Counties in Project Phase 2 Regional Rollout Implementation** – (Note: Pre-cutover activities for County Partners begin early in the INvest Project. Counties need at least 12 months advance notice for hardware / software purchases prior to the actual implementation of INvest.) If the decision is to go forward with Project Phase 2 implementation, the DDI vendor, with assistance from OR, provides the required implementation activities, including the approved SOPs and checklists, to the Counties included in the regional rollout. Technical preparation required for INvest is included in this information, which includes networking, hardware, or software specifications. The Field Consultant for the County is a primary resource to accomplish this task.
4. **Counties Perform Pre-Cutover Activities in Project Phase 2 Regional Rollout Implementation** – As part of the pre-cutover activities, the Counties must ensure the County site is ready for cutover. OR and the DDI vendor assess the preparations for the implementation and work toward a seamless transition with all County Partners, CSB, and other stakeholders. **Attachment IMP-03 Site Readiness Checklist** is a tool used to monitor a site's readiness for regional rollout. As the scheduled date nears for Project Phase 2 Implementation, the DDI vendor coordinates with OR and the Field Consultants to provide County implementation readiness status to the INvest Project Team. If a decision is made that any County is not ready for implementation, the DDI vendor, through OR, notifies the affected County offices why the decision was made not to implement. Project Phase 2 implementation may continue with CSB and any County ready for implementation. If the decision is No-Go, CSB initiates the Escalation process. See the [Introduction](#) chapter for additional information on the Escalation process.
5. **DDI Vendor Coordinates Cutover Activities for Counties and Onsite Support Team Assesses Results for Project Phase 2 Regional Rollout Implementation** – After approval to move to Project Phase 2 regional rollout implementation, the DDI vendor coordinates all cutover activities for CSB and the Project Phase 2 regional rollout Counties. Issues may arise during the regional rollout implementation. If issues occur, the DDI vendor and CSB onsite support staff review and assess those issues using the SOPs and checklists to identify the severity of the issue. All issues are submitted to the Production Support process of the INvest Governance Manual for assessment.
6. **DDI Vendor Coordinates Post Cutover Site Support to Counties for Project Phase 2 Regional Rollout Implementation** – The DDI vendor, with assistance from the onsite support team and the Field Consultants, provides post implementation site support using **Attachment IMP-04 Post Implementation Checklist** (see [Section 15.4](#)). The checklist provides predetermined touchpoints to ensure the Counties can access the portal, log in with appropriate profile or access, access INvest data based on security roles, and perform other vital functions. The DDI vendor gathers lessons learned by reviewing the SOPs, checklists, and pilot objectives, including any issues identified and reported to the INvest Help Desk through the Production Support process.

15.3.6 INvest Help Desk

Primary users need access to a technical help desk that provides answers to system questions and addresses any system issues that arise. The INvest Help Desk routes calls according to standard operating procedures.

The DDI vendor leads and staffs the initial INvest Help Desk, with embedded staff from the current ISETS Help Desk, for Project Phase 1 and Project Phase 2 Pilots and implementations. Once the Statewide implementations are complete, the DDI vendor transitions the INvest Help Desk, including all processes and procedures, to the INvest Help Desk Supervisor.

The INvest Help Desk responds quickly and effectively to resolve user issues, and provides the same customer service levels as the ISETS Help Desk. INvest Help Desk procedures and checklists guide staff on how to answer or research user calls or emails.

The INvest Help Desk hours are from 7:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday, on State business days. During pilots and implementations involving Counties in the Central Time Zone, these hours are extended until 6:00 p.m. Eastern Time. For complex technical issues, an operations team is available to fix the issues based on INvest Help Desk Ticket priorities. Figure 78 provides the INvest Help Desk process.

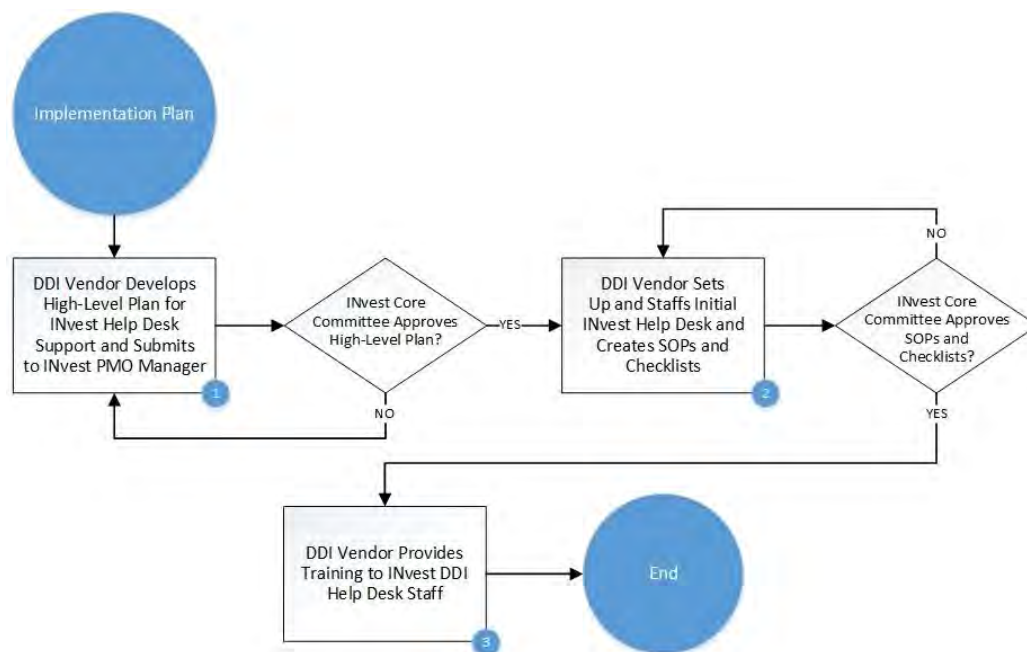


Figure 78: INvest Help Desk Process

1. **DDI Vendor Develops High-Level Plan for INvest Help Desk Support and Submits to INvest PMO Manager** – The DDI vendor develops a high-level plan for both project phases to manage and staff the INvest Help Desk. The plan includes INvest Help Desk resource needs, including embedded CSB staff. The plan is submitted to the INvest PMO Manager for approval. The INvest PMO Manager coordinates review and approval with the INvest Core Committee. If the INvest Core Committee has comments, the DDI vendor makes those updates and resubmits the plan to the INvest PMO Manager.
2. **DDI Vendor Sets Up and Staffs Initial INvest Help Desk and Creates SOPs and Checklists** – Just prior to the Project Phase 1 Pilot, the DDI vendor establishes and staffs the initial INvest Help Desk and creates SOPs and checklists for use by the INvest Help Desk resources and submits them to the INvest PMO Manager for approval. The INvest PMO Manager coordinates review and approval with the INvest Core Committee. If the INvest Core Committee has comments on the SOPs or checklists, the DDI vendor makes those updates and resubmits the SOPs or checklists to the INvest PMO Manager.

3. **DDI Vendor Provides Training to INvest DDI Help Desk Staff** – The DDI vendor provides training for the INvest Help Desk procedures prior to each pilot and implementation after the INvest Core Committee approves the SOPs and checklists. The DDI vendor provides the INvest Help Desk training in a timely manner to ensure successful support of the project phase pilot or project phase implementation.

15.3.7 Implementation Status and Metric Reporting

The pilots measure the following key objectives, as appropriate, for each project phase:

- Usability among different stakeholders
- Effectiveness of training
- Unanticipated legacy or document data conditions
- Data conversion
- Post conversion synchronization process
- Planned schedule for implementation
- Organizational readiness
- Stakeholder communication messages
- Technical readiness of the implementation location
- Software quality
- Security incidents
- Service disruption or system downtime
- Successful interfacing
- Issue escalation process
- Help desk and triage procedures
- User account management
- Participant feedback

The DDI vendor works with CSB to define the measurements that are included in the Weekly Implementation Status Report. These reports are focused in two areas: site readiness and production readiness.

15.3.7.1 Site Readiness

Site readiness reporting provides a snapshot view of how well prepared the organization is to move into pilot or implementation. **Attachment IMP-03 Site Readiness Checklist** details the items the DDI vendor and CSB uses to ensure that Counties are ready before each pilot or implementation; this reporting is also a factor in making Go/No-Go decisions.

15.3.7.2 Production Readiness

Production readiness reporting provides information to the INvest Project Team on the status of all actions completed in the Implementation Plan, and confirms whether the pilot or implementation is ready to move into the production environment. **Attachment IMP-01 Production Readiness Review Checklist** details the items the INvest Core Committee uses to make the critical Go/No-Go decision for each pilot or implementation.

15.3.8 Business Continuity / Disaster Recovery

Continuity of operations encompasses both business continuity planning and disaster recovery planning. Business continuity planning involves development of an action plan to maintain business functions after a disruptive event. Disaster recovery is the process of regaining access to the data, hardware, and software necessary to resume critical business operations after a natural or human-induced disaster.

Disaster recovery planning is a component of the DCS Continuity of Operation Plan, which is maintained by the Indiana Department of Homeland Security. IOT manages disaster recovery planning for INvest, which addresses the recovery planning of servers and applications housed in the primary IOT data center.

INvest uses IOT's process of regular system backup and offsite storage of backups to protect data from loss due to hardware failure or human error. CSB provides knowledge and expertise concerning the current disaster recovery environment to the DDI vendor. In the event of a significant emergency causing destruction of facilities, prolonged interruption of infrastructure or diminished capacity of staff, business continuity actions are focused on State operations.

INvest must be recovered quickly during a disaster, and it must have the ability to recover some high-priority functions sooner than others. The DDI vendor and CSB work to define a prioritized module recovery plan that is part of the overall BC/DR Plan. The prioritized module recovery plan ranks functions and subsystems, such as online transactions, document and report generation, batch, and interfaces, by priority. INvest disaster recovery options include partial shutdown and partial recovery.

The DDI vendor creates a BC/DR Plan (see **Part 15.3.1.2**) specific to INvest. The DDI vendor conducts drills prior to each pilot, during each implementation, and during the warranty period (see the **Production Support** and **Project Closure** chapters). The DDI vendor coordinates with OR, the CSB BPOs, and the CSB technical team to identify business continuity changes needed for CSB and County Partners prior to the pilots.

CSB's Technical Manager initiates communications and coordinates BC/DR activities with IOT for the INvest Project. Figure 79 provides the Business Continuity / Disaster Recovery process.

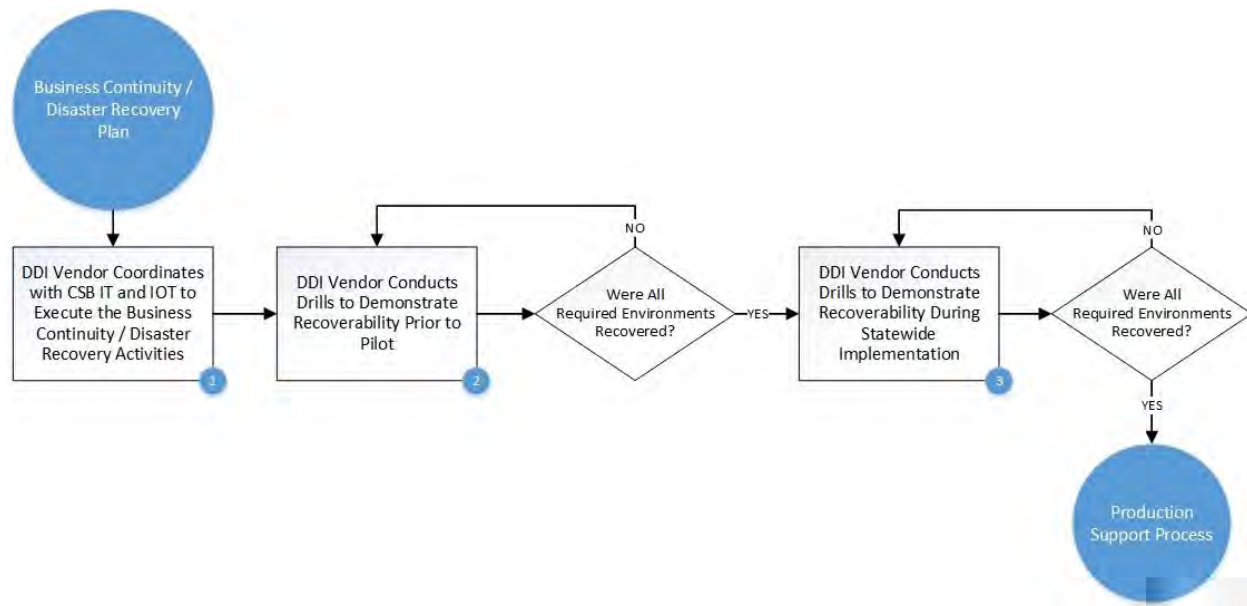


Figure 79: Business Continuity / Disaster Recovery Process

1. **DDI Vendor Coordinates with CSB IT and IOT to Execute the Business Continuity / Disaster Recovery Activities** – The DDI vendor coordinates with CSB and IOT to build and incorporate the INvest disaster recovery plan into the existing IOT disaster recovery infrastructure. The CSB Technical Manager initiates communication and coordinates activities with IOT. Disaster recovery planning is managed by IOT, which addresses the recovery planning of servers and applications housed in the primary IOT data center.
2. **DDI Vendor Conducts Drills to Demonstrate Recoverability Prior to Pilot** – The DDI vendor conducts multiple BC/DR drills to demonstrate INvest's recoverability using the BC/DR Plan and IOT's disaster recovery data center site. Demonstrated recoverability is proven during disaster recovery drills at different project phases of INvest. The first drill occurs prior to each pilot. The DDI vendor ensures the recovery of all required environments in the event of a disaster. CSB coordinates with the DDI vendor and IOT to designate the required environments, as defined in the BC/DR Plan. If the disaster recovery drill does not recover the required environments, the DDI vendor assesses the results and reports findings concerning drill failures, documents lessons learned, and, if appropriate, documents any issues that prevented a successful drill. The DDI vendor must conduct additional drills until the drill recovers all required environments.
3. **DDI Vendor Conducts Drills to Demonstrate Recoverability During Statewide Implementation** – The DDI vendor also conducts multiple drills during Project Phase 1 and Project Phase 2 implementations. The DDI vendor ensures the recovery of all required environments in the event of a disaster. CSB coordinates with the DDI vendor and IOT to designate the required environments, as defined in the BC/DR Plan. If the disaster recovery drill does not recover the required environments, the DDI vendor assesses the results and reports findings concerning drill failures, documents lessons learned, and, if appropriate, documents any issues that prevented a successful drill. The DDI vendor must conduct additional drills until the drill recovers all required environments.

15.4 Templates

Table 48 provides a summary of the templates used for the Implementation process.

Table 48: Implementation Templates

Template Name	Description	Attachment ID
Production Readiness Review Checklist	<ul style="list-style-type: none"> Supports a system review to determine if all of the necessary Implementation Plan actions are complete, and whether INvest is ready to move into the production environment and made available to end users 	IMP-01
Technical Migration Plan Template	<ul style="list-style-type: none"> Provides a detailed schedule of events, persons responsible, and event dependencies required to ensure successful cutover to pilot or implementation during each project phase Includes such details as Pre-Implementation Activities / Tasks, Implementation Day Activities / Tasks, Post Implementation Activities / Tasks, and Communication Lists 	IMP-02
Site Readiness Checklist	<ul style="list-style-type: none"> Provides a list of items that must be completed for each County Partner location to ensure the County is ready for each pilot or implementation 	IMP-03
Post Implementation Checklist	<ul style="list-style-type: none"> Provides a list of items that onsite support personnel use to ensure INvest is accessible and Primary users can access screens and data associated with their roles 	IMP-04

16.0 TRIAGE

(Placeholder: This chapter is pending update until selection of a DDI vendor. This section will be updated in accordance with DDI vendor activities to ensure continuity with INvest Project Phase 1.)

16.1 General Introduction and Overview

(Placeholder section pending update until selection of a DDI vendor.)

16.2 Key Roles and Responsibilities

Table 49 provides a summary of the key roles and primary responsibilities involved in the Triage process.

Table 49: Triage Key Roles and Responsibilities

Key Role	Responsibilities
Triage Committee	<ul style="list-style-type: none"> Reviews and categorizes pending Help Desk Tickets (HDTs) to minimize service interruption Recommends action on requested changes that flow through the Help Desk and remain unresolved

16.3 Process Overview and Activities

The objective of the Triage process is to facilitate the appropriate review and categorization of pending HDTs, which document a proposed or requested system or functional change received by the Help Desk, into three categories: End-User Support, Production Support, and Project Initiation. The category assigned then determines the process that the resolution of that HDT will follow. Figure 80 provides the Triage process.

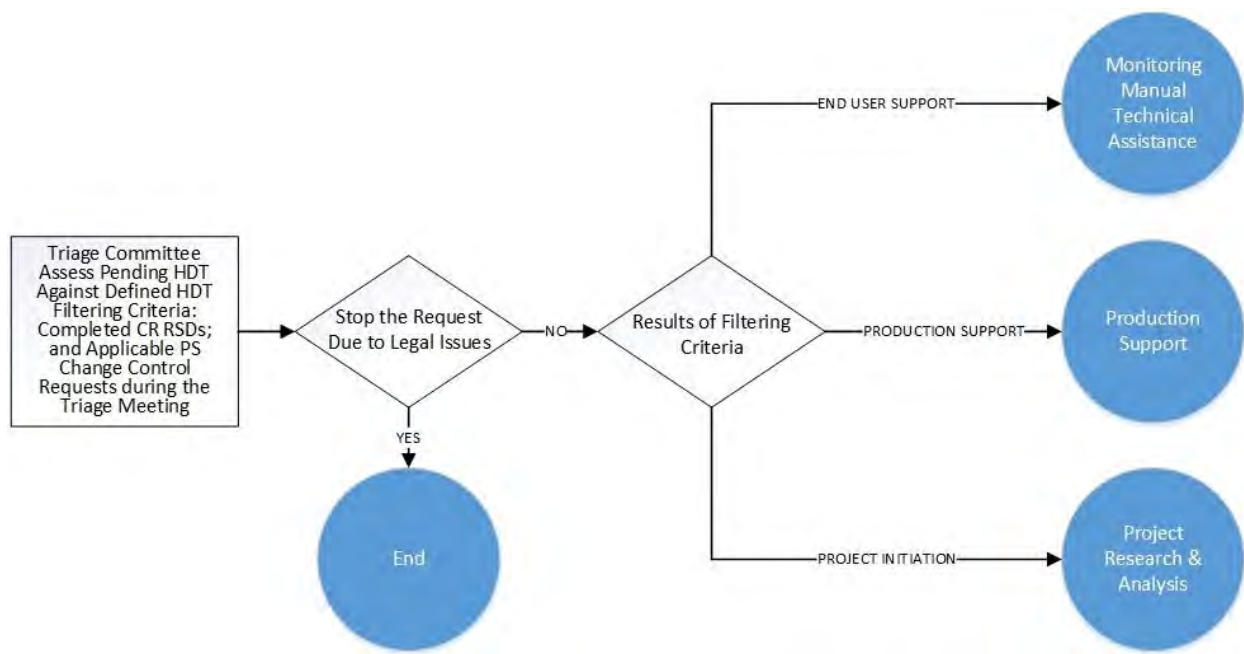


Figure 80: Triage Process

The Triage Committee is comprised of technical and business subject matter experts as defined in **Part 16.3.1**. The Triage Committee reviews items on the Triage Report during the Triage Meeting. The Triage Report includes HDTs that could not be addressed directly by the Help Desk and remain pending. Each item is first reviewed to determine if it should be stopped at this point because the request is not legally permitted. If there are no legal issues with the request, it is assessed against the filtering criteria defined in **Part 16.3.2**. Based on the filtering criteria, each pending HDT is categorized into one of the following three categories:

- **End-User Support** – includes requests for training (CSB) and technical assistance (Help Desk)
- **Production Support** – includes requests related to maintenance of system functionality (break / fix) or enhancement of existing functionality that is relatively small in scope
- **Project Initiation** – includes requests for new functionality, enhancement of existing functionality over the production support threshold (as defined in **Part 16.3.2**), and new business and policy projects

The categorized HDTs are forwarded to other processes based on this categorization. End-User Support items enter the Monitoring Manual Technical Assistance process as outlined in the Department of Child Services (DCS) / CSB Monitoring Manual. Production Support items enter the Production Support process as outlined in the Production Support process in the INvest Governance Manual. Project Initiation items enter the Research and Analysis subprocess of the Project Selection process.

16.3.1 Triage Committee

The Triage Committee reviews and categorizes pending HDTs in a timely manner to minimize service interruption. The group recommends the action on requested changes that flow through the Help Desk and remain unresolved (i.e., End-User Support, Production Support, and Project Initiation).

Table 50 describes the key activities and the composition of the Triage Committee, the key roles that members of the committee perform, and the necessary skills those committee members should possess. Note that one person may have multiple roles across the different committees of which they are members.

Table 50: Triage Committee Composition

Triage Committee Composition	
Key Activities	<ul style="list-style-type: none"> ● Meet at least once per week as needed ● Review items on applicable Triage Report for action ● Stop the review of items which are not legally permitted ● Categorize items to End-User Support, Production Support, or Project Initiation categories using established criteria
Required Members	<ul style="list-style-type: none"> ● Application Maintenance Manager ● Senior Project Manager ● Help Desk Supervisor ● CSB Representative ● Monitoring Core Lead ● Production Support Coordinator

Triage Committee Composition	
Key Roles	<ul style="list-style-type: none"> • Technical Subject Matter Expert • Business Subject Matter Expert • Decision Maker
Skills Needed	<ul style="list-style-type: none"> • Understanding of HDTs, project management, and maintenance / development activities • Ability to estimate Rough Order of Magnitude (ROM) scope level of effort

16.3.2 Help Desk Ticket Filtering Criteria

The Triage Committee uses established criteria to filter and categorize the pending HDTs into End-User Support, Production Support, and Project Initiation categories. Help Desk filtering criteria is detailed in Table 51.

Table 51: Help Desk Ticket Filtering Criteria

Triage Category	Filtering Criteria
End-User Support	<ul style="list-style-type: none"> • System is functioning as intended • Request relates to user interaction with the system
Production Support	<ul style="list-style-type: none"> • Existing functionality is not working as designed • Estimated level of effort associated with the request will require less than three months or 1,440 hours to implement • Elements of the request are not associated with a project and do not exceed the Production Support threshold • Elements of the request are associated with INvest, but are too urgent to wait for the scheduled INvest start date and do not exceed the Production Support threshold • Request reflects change to existing functionality and does not exceed the Production Support threshold • Request suggests new functionality or added feature to an existing system and does not exceed the Production Support threshold
Project Initiation	<ul style="list-style-type: none"> • Work associated with the request is over the Production Support threshold or meets one of the following five Project Criteria Elements: • The request is related to a mandate or compliance issue • The project is to repair functionality and exceeds production support threshold • The project will move a performance measure forward • There is an additional reason to act: <ul style="list-style-type: none"> ○ Public policy considerations ○ Project in progress ○ Funding expiration timing or budget issue • The project is related to brand new functionality or new processes and is not associated with Production Support

A one-page version of the Help Desk Filtering Criteria is provided as **Attachment TRI-01**.

Note that the Production Support level of effort threshold may be evaluated in terms of time (less than three months) or hours (fewer than 1,440 hours). Either is acceptable and may be used depending on the circumstances of the effort under consideration.

If the Triage Committee cannot decide on the triage category, the Rough Order of Magnitude (ROM) can be used as a tool to refine the group’s decision. The ROM would assist the group in determining if the level of effort associated with a request is greater than three months or 1,440 hours to implement. The members of the Triage Committee may gather input from other business and technical SMEs to make the ROM estimate. Once the necessary information is gathered, the Cost Estimation Worksheet may be used to calculate the ROM estimate.

16.4 Templates

Table 52 provides a summary of the template used for the Triage process.

Table 52: Triage Template

Template Name	Description	Attachment ID
Help Desk Filtering Criteria	<ul style="list-style-type: none"> Details of criteria to assess HDTs and determine which process to follow 	N/A

17.0 PRODUCTION SUPPORT

(Placeholder: This chapter is pending update until selection of a DDI vendor. This section will be updated in accordance with DDI vendor activities to ensure continuity with INvest Project Phase 1.)

17.1 General Introduction and Overview

Production Support is the process to maintain the value and effectiveness of ISETS through maintenance and improvement of the system. The **Production Support** chapter is broken down into two subprocesses: Production Support and Query / Data Correction Authorization. The Production Support subprocess addresses break-fix issues and requests to make changes to existing functionality, to add, or to develop new functionality for the existing system that are below the threshold of being an actual project. Production support also includes the Query / Data Correction Authorization subprocess, which addresses research requests and building and running queries for reports, etc. for system stakeholders, as well as Data Correction Authorization requests, which can involve the movement of files, correction of erroneous data, etc., that cannot be performed by end users of the system.

17.2 Key Roles and Responsibilities

Table 53 provides a summary of the key roles and primary responsibilities involved in the Production Support process.

Table 53: Production Support Key Roles and Responsibilities

Key Role	Responsibilities
Application Specialist	<ul style="list-style-type: none"> Reviews Production Support Requests and assigns technical resources to conduct technical research related to Production Support Requests Reviews and approves technical design documents in the Research Solution Document (RSD)
BA	<ul style="list-style-type: none"> Conducts business research and analysis and documents business requirements related to Production Support Requests Reviews and completes Rough Order of Magnitude (ROM) estimate and Time and Cost (T&C) 1 Baseline Completes business requirements and functional design specifications in conjunction with the Application Specialist
Business Manager	<ul style="list-style-type: none"> Assigns or delegates Business Analyst (BA) to the Production Support Request
Business Process Owner	<ul style="list-style-type: none"> Assesses business requirements and functional designs for Production Support Requests
Help Desk	<ul style="list-style-type: none"> Creates HDTs based on end-users' request Conducts HDTs closure when tasks are completed Monitors open HDTs to ensure requests are addressed timely
Maintenance / Production Team	<ul style="list-style-type: none"> Validates Help Desk Tickets (HDTs) referred to Query / Data Correction Authorization Determines if Query / Data Correction Authorization requests are new or existing Executes the Query / requests Data Correction Authorization

Key Role	Responsibilities
Production Support Coordinator	<ul style="list-style-type: none"> Coordinates the completion of the RSD Coordinates the assignment of resources and monitors the completion of work Communicates with all involved teams to resolve issues in a timely manner Makes necessary updates to all production support tools Liaises with business and operational representatives to coordinate the requirements of Change Requests (CRs), projects, and releases Conducts closure activities for completed Production Support Requests
Security Team	<ul style="list-style-type: none"> Compliance - Reviews RSD for consistency with, or deviations from, National Institute of Standards and Technology (NIST) Security Controls, IOT Security Framework, and the CSB Security Framework Security - Reviews RSD against SDLC security best practices
Technical Lead	<ul style="list-style-type: none"> Performs technical research and documents technical requirements Completes the technical design

17.3 Process Overview and Activities

The objectives of the production support subprocess are to:

- Address break-fix issues in a timely manner to restore or improve services to end users.
- Document, evaluate, and manage changes to existing functionality.
- Document, evaluate, and manage requests for new functionality to existing systems that fall within the production support threshold.

17.3.1 Production Support Subprocess

Figure 81 provides the Production Support subprocess.

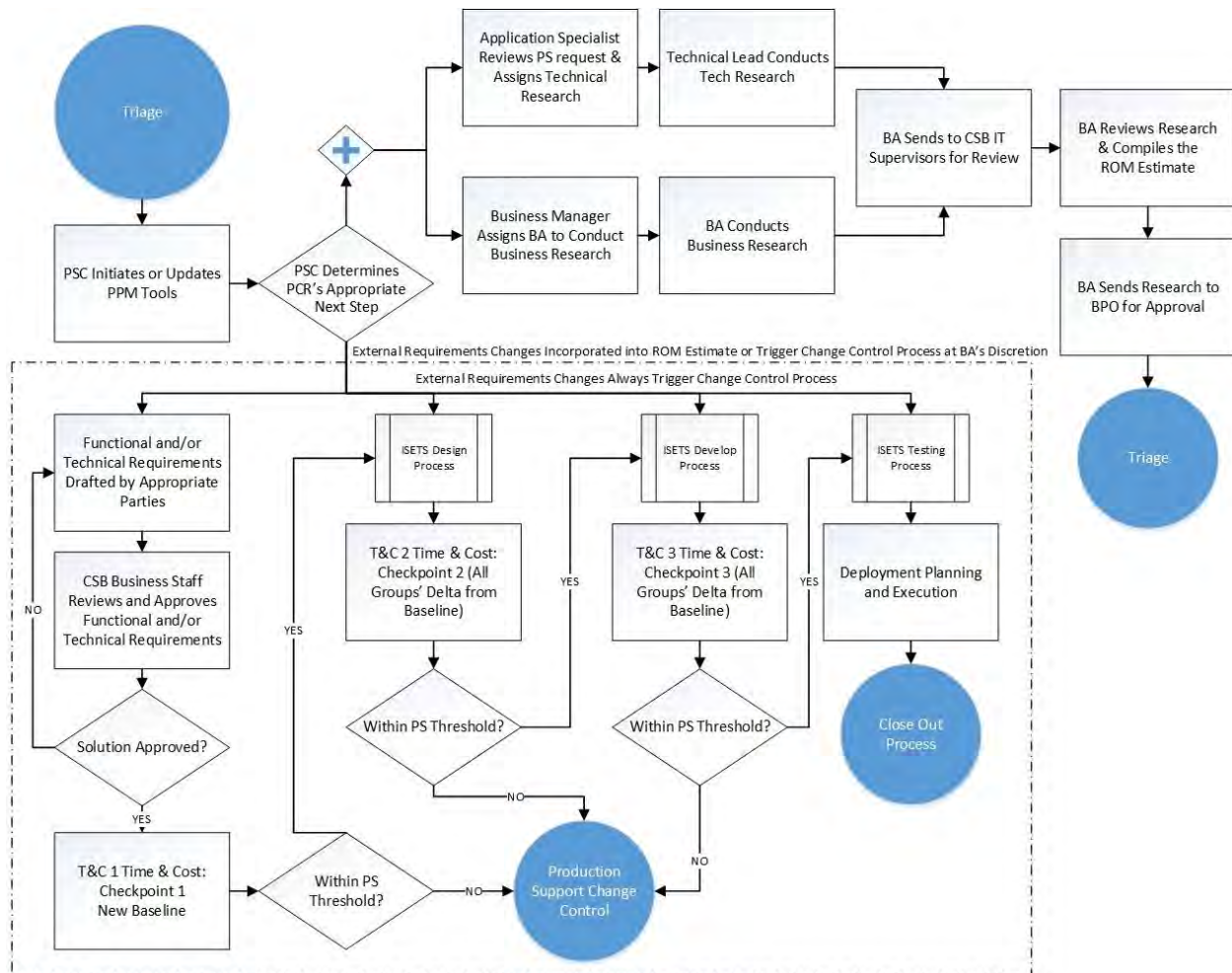


Figure 81: Production Support Subprocess

The Production Support subprocess begins when an unresolved HDT is categorized, pursuant to the Help Desk Filtering Criteria as provided in the Project Initiation section, and referred to Production Support for action. Once the unresolved HDT is received, the Production Support Coordinator converts the HDT to a Production Support Request.

The Application Development Manager and the BA Manager concurrently review the request and assign resources; respectively, the Technical Lead conducts technical research and the BA conducts the business research related to the request.

The BA uses the information contained in the Production Support Request as the basis for beginning the business research and documents the business requirements for the related request. The BA is responsible for contacting appropriate CSB resources, technical resources, or others to obtain the input to accurately document the business research.

Concurrently, the Technical Lead conducts technical research using the established technical research documentation. The Technical Lead is responsible for obtaining the necessary information from all resources required to develop the technical design. The technical research includes gathering technical requirements for screen changes, batch program modifications, changes to reports, etc.

Once the business and technical research efforts are completed, the assigned BA sends the RSD to all of the supervisors in CSB-IT. They review the research and the related level of effort. Supervisors are able to provide their departments' estimates for the ROM estimate. The Security Team also uses this time to review the request for security concerns and notes them before the upcoming formal requirements gathering. The BA then sends the ROM and BA research to the BPO for approval. They either provide further insight into what values to use or approve it as written.

Before the ROM is approved, any additional scope change brought in by the requestor or other parties may or may not be considered at the team's discretion (all impacted departments). If the team decides that the change is more of a scope change than they should allow, it is sent to the Production Support Change Control process.

The technical and business research, along with its completed ROM, is then sent to Triage. The Triage Committee determines if the request falls within the production support threshold (i.e., requires less than three months or 1,440 hours to implement) as defined in the Help Desk Filtering Criteria provided in the Project Initiation section of the INvest Governance Manual. If the request is determined to fall within the production support threshold, the CR is created and assigned a priority at Triage, where new requests are prioritized against the ongoing production support workload. Otherwise, it may trigger the creation of a new project per the Project Initiation section of the INvest Governance Manual.

When SDLC work proceeds on the CR, the BA is responsible for completing the business requirements while the Technical Lead finishes the technical requirements. When they are complete, they are sent to the BPO staff that requested the initial change for approval. If the document is not approved, it is returned for resolution of the identified issues, and then goes back to triage for review and approval to determine if all issues were addressed. When approved, another estimate of the T&C 1 is evaluated given the more defined requirements. This new estimate in costs is considered the baseline. It is also compared to the production support threshold (i.e., a 10% increase over the ROM). If it is within the threshold, the technical team continues with the design process. Once it is in the design process, any changes must go through the Project Change Control and Estimation process. If not within the threshold, the CR is sent back to Triage.

The Technical Lead is responsible for completing the technical design using the technical research that was conducted and the established ISETS Design process. When the design is complete, an optional T&C 2 estimate is done to evaluate the remaining work on the CR. If this step is completed, it is compared to the production support threshold (i.e., a 10% increase over the baseline). If it is within the threshold, the Technical Team continues with the development process. If not within the threshold, the CR is sent back to triage.

The Production Support Coordinator monitors the completion of work through the established ISETS SDLC process. When development is complete, an optional T&C 3 estimate is done to evaluate the remaining work on the CR. If this step is completed, it is compared to the production support threshold (i.e., a 10% increase over the baseline). If it is within the threshold, the technical team continues with the development process. If not within the threshold, the CR is sent back to triage.

The Production Support Coordinator monitors the completion of work through the INvest Governance Manual Test and Deployment processes. The Production Support Coordinator updates all production support tools.

Once the Production Support Request to the ISETS has been deployed, the Production Support Coordinator closes the Production Support ticket and begins the Close Out process (see the [Project Closure](#) chapter).

17.3.2 Production Support Change Control Process

During the work of a CR, several factors may come into play that change the scope of that CR. Additional requirements or unexpectedly long timeframes to accomplish tasks both meets this description. In the event any of these scope changes are noticed to have a potential impact on a CR, the following process is invoked. Figure 82 provides the Production Support Change Control process.

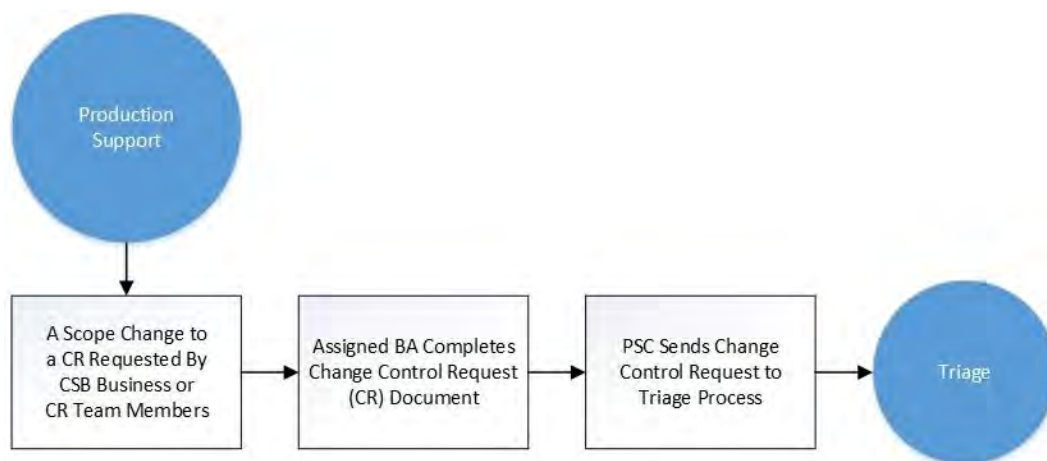


Figure 82: Production Support Change Control Process

The Production Support Change Control Process can begin from several triggers within the Production Support Process. Whatever triggers it, a BA is asked to complete a Change Control Request Document (use attachment BL from Chapter 12 but denote the CR number instead of project name) and deliver it to the PSC. The PSC submits the Change Control Request Document for handling with the Triage Process.

17.3.3 Query / Data Correction Authorization Subprocess

The objective of the Query / Data Correction Authorization subprocess is to address research requests and queries, provide the results to the requestor, and execute Data Correction Authorization requests for requestors to modify data in ISETS or INvest accordingly, as data cannot be modified directly by the end users.

Figure 83 provides the Query / Data Correction Authorization subprocess.

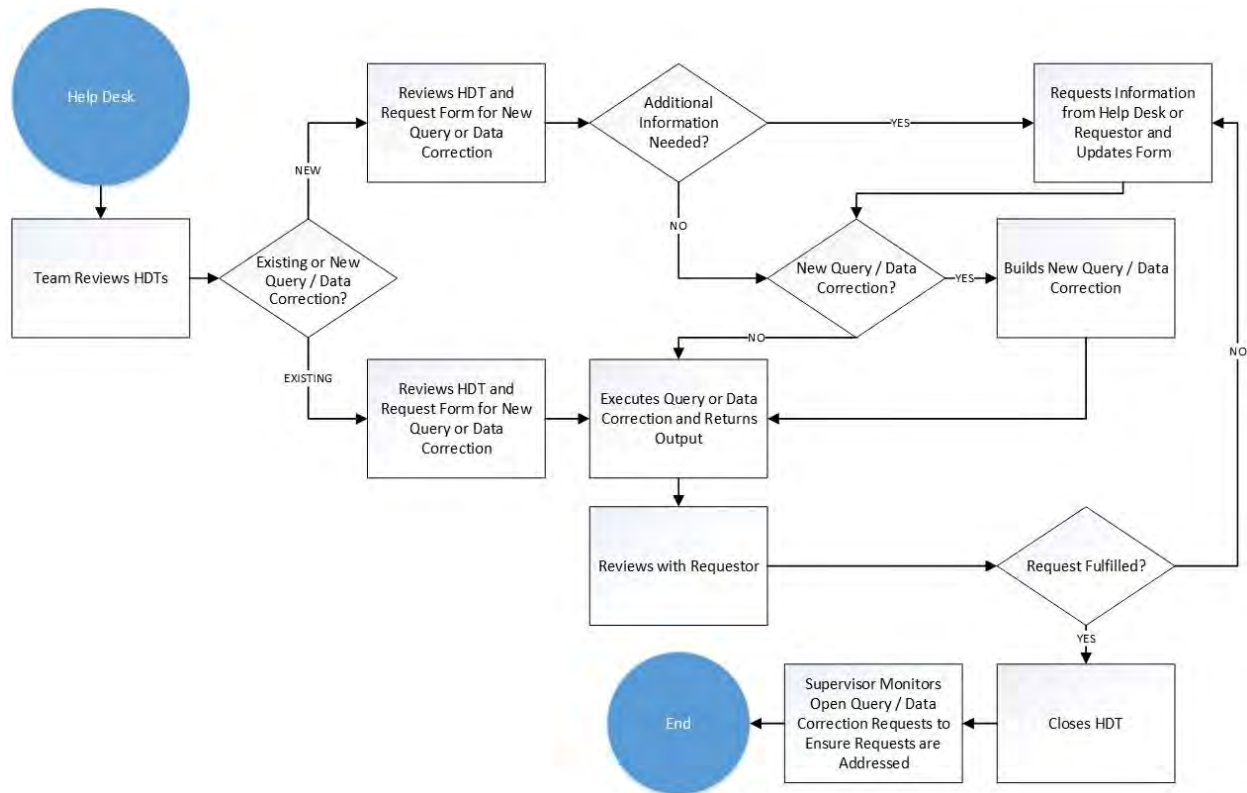


Figure 83: Query / Data Correction Authorization Subprocess

The Query / Data Correction Authorization process begins when either a Query or Data Correction Authorization Request Form is received from the Help Desk. Queries and Data Correction Authorization Request Forms are completed by requestors and sent to the Help Desk. The Help Desk creates a HDT and attaches the Query or Data Correction Authorization Request Form to the HDT, which then flows through triage to production support. Production support personnel then forward all Query and Data Correction Authorization Request Forms to the Maintenance / Production Team for execution.

The Maintenance / Production Team review the Query and Data Correction Authorization Request Forms and determine whether the query or data correction authorization is a new request or an existing query or data correction authorization that just needs to be re-executed. The Query and Data Correction Authorization Request Forms have an area for the requestor to indicate if the request is new; however, the Maintenance / Production Team reviews the forms thoroughly to ensure they are identified as new appropriately.

If the request is to re-execute an existing query or data correction authorization that has already been designed and built, the Maintenance / Production Team references the original Query or Data Correction Authorization Request Form submitted for additional information, then re-executes the request and returns the resulting output to the Help Desk, who in turn will provide the results to the HDT Requestor. If the HDT Requestor is satisfied, the Help Desk will close the HDT. If the Requestor is dissatisfied then the Requestor needs to refine the request, which will constitute a new request.

For new query or data correction authorization requests, the Maintenance / Production Team reviews information in the HDT and Query or Data Correction Authorization Request Form. If additional information is needed in order to fulfill the request, then the Maintenance / Production Team contacts the Help Desk and / or the original HDT Requestor for additional information and, if needed, updates the information in the Query or Data Correction Authorization Request Form. If the request is related to a new query, the Maintenance / Production Team builds the query, executes the query, and returns the results to the Help Desk, who in turn provides the results to the HDT Requestor. Some internal CSB requests may bypass the Help Desk for delivering results, but the Help Desk always facilitates communications with Counties.

If the request is for a new data correction authorization, the data correction authorization is written and executed depending on the action requested (e.g., move case files assigned to one case worker to another, correct erroneous data in the system). The Help Desk is notified when the action is completed. The Help Desk then informs the HDT Requestor that the Data Correction Authorization request has been completed.

If the HDT Requestor is satisfied, the Help Desk closes the HDT. If the HDT Requestor is not satisfied, the Query / Data Correction Authorization Request Form is returned to the Maintenance / Production Team who works with the Help Desk and/or HDT Requestor to refine the requirement of the request and re-execute the request until the HDT Requestor is satisfied and the HDT is closed.

On a daily basis, the Help Desk Supervisor monitors all open HDTs, including those related to query and data correction authorization requests, and ensures that requests are addressed and resolved in a timely manner to the HDT Requestor's satisfaction.

17.4 Templates

Table 54 provides a summary of the templates used for the Production Support process.

Table 54: Production Support Templates

Template Name	Description	Attachment ID
Research Solution Document Template	<ul style="list-style-type: none"> Used to document a proposed modification or change to ISETS Contains sections for business requirements, functional design, and technical design related to the modification 	N/A
Rough Order of Magnitude Calculation Workbook	<ul style="list-style-type: none"> Automates some of the necessary calculations 	N/A

PROJECT MONITORING AND CONTROLLING

18.0 PROGRESS MONITORING AND REPORTING

18.1 General Introduction and Overview

The Progress Monitoring and Reporting process helps ensure an effective reporting cycle is followed and that stakeholders remain aware of project progress. Progress Monitoring and Reporting addresses the processes, templates, and associated expectations for reporting progress through the INvest PMO to INvest Core Committee and other stakeholders. The DDI and QA vendor's PMPs include details on monitoring project progress, including project scope, schedule, budget, risks, issues, communications, and any certification challenges. The INvest Master PMP addresses methods to establish baselines from which to measure project performance, including the baselined project scope, the baselined project schedule, and the baselined project budget. Templates used by CSB and vendor management staff for reporting are included in Table 58, which is located in **Section 18.4**.

18.2 Key Roles and Responsibilities

Table 55 provides a summary of the key roles and primary responsibilities involved in the Progress Monitoring and Reporting process.

Table 55: Progress Monitoring and Reporting Key Roles and Responsibilities

Key Role	Responsibilities
DDI Project Manager	<ul style="list-style-type: none"> Assesses and monitors DDI vendor performance against the approved baselines Prepares the Weekly DDI Status Report Attends Weekly Project Status Meeting and validates status report information for the INvest PMO Manager
INvest Core Committee	<ul style="list-style-type: none"> Reviews monthly status report information Provides guidance to the INvest PMO Manager on project direction Takes any other appropriate action in response to project status
INvest PMO Manager	<ul style="list-style-type: none"> Reviews DDI, QA, and OR status reports to understand project progress Facilitates the Weekly Project Status Meeting with the DDI Project Manager, QA Project Manager, and OR Manager to review project status and validate the information in the status reports Consolidates status report information for the monthly summary status report to the INvest Core Committee
OR Manager	<ul style="list-style-type: none"> Assesses and monitors OR performance against the approved baselines Prepares the periodic OR Status Report Attends Weekly Project Status Meeting and validates status report information for the INvest PMO Manager

Key Role	Responsibilities
QA Project Manager	<ul style="list-style-type: none"> Assesses and monitors QA vendor performance against the approved baselines Prepares the INvest QA Weekly Status Report Attends Weekly Project Status Meeting and validates status report information for the INvest PMO Manager

18.3 Process Overview and Activities

The objective of the Progress Monitoring and Reporting process is to ensure the INvest Core Committee has appropriate visibility to project progress against the INvest Master PMP and associated baselines. Project status is reported by multiple managers to provide comprehensive information about the project at a point in time. The Progress Monitoring and Reporting process continues until project closure.

While multiple sets of reports will be used to manage the INvest Project, this section focuses on the periodic status reports provided to and by the INvest PMO, which are illustrated in Figure 84. Periodic status reporting includes both weekly and monthly reporting cycles; the schedules are aligned with the Risk and Issue Management process so that the latest risk and issue information informs the weekly status reports that feed monthly reporting to the INvest Core Committee. Figure 84 provides the Progress Monitoring and Reporting process.

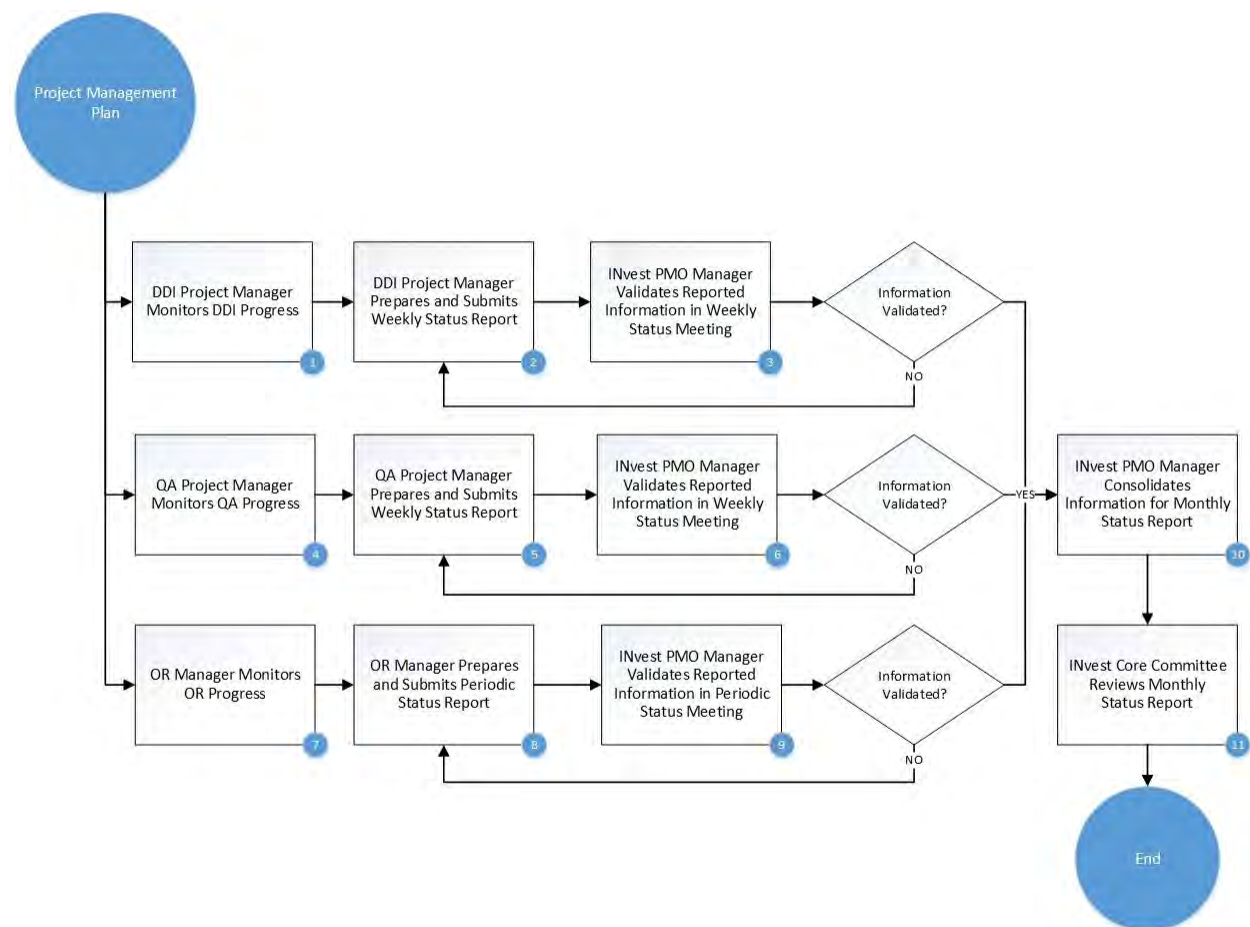


Figure 84: Progress Monitoring and Reporting Process

1. **DDI Project Manager Monitors DDI Progress** – The DDI Project Manager monitors project progress as defined in the DDI PMP, including project scope, schedule, budget, risks, issues, communication, and any certification challenges. The DDI Project Manager routinely tracks progress against the Master Project Schedule by gathering information from team members and from personal observation. Artifacts to be reviewed include, but are not limited to, the following:
 - a. Project Communications Matrix
 - b. Risk and issue information contained in the risk and issue tool
 - c. Risk and Issue Response Plans
 - d. Project Schedule
 - e. Project Change Requests (PCRs)
2. **DDI Project Manager Prepares and Submits Weekly Status Report** – The DDI Project Manager prepares and submits the DDI Weekly Status Report as defined in the DDI PMP using **Attachment PMR-02 INvest Periodic Status Report Template**.
3. **INvest PMO Manager Validates Reported Information in Weekly Status Meeting** – The INvest PMO Manager validates the information contained in the report at the Weekly Project Status Meeting. Validation activities may include checking for consistency within the specific report and with other project documentation (including status reports from other vendors or teams). If the INvest PMO Manager cannot validate the information during the Weekly Project Status Meeting, the DDI Weekly Status Report is returned to the DDI Project Manager for revision.
4. **QA Project Manager Monitors QA Progress** – The QA Project Manager monitors project progress as defined in the QA PMP, including project scope, schedule, budget, risks, issues, communication, and any certification challenges. The QA Project Manager routinely tracks progress against the Master Project Schedule by gathering information from team members and from personal observation. Artifacts to be reviewed include, but are not limited to, the following:
 - a. Project Communications Matrix
 - b. Risk and Issue information maintained in the risk and issue tool
 - c. Risk and Issue Response Plans
 - d. Project Schedule
 - e. PCRs
5. **QA Project Manager Prepares and Submits Weekly Status Report** – The QA Project Manager prepares and submits the QA Weekly Status Report as defined in the QA PMP using the INvest Periodic Status Report Template.
6. **INvest PMO Manager Validates Reported Information in Weekly Status Meeting** – The INvest PMO Manager validates the information contained in the report at the Weekly Project Status Meeting. Validation activities may include checking for consistency within the specific report and with other project documentation (including status reports from other vendors or teams). If the INvest PMO Manager cannot validate the information during the Weekly Project Status Meeting, the QA Weekly Status Report is returned to the QA Project Manager for revision.

7. **OR Manager Monitors OR Progress** – The OR Manager monitors project progress as defined in the INvest Master PMP, including project scope, schedule, budget, risks, issues, communications, and any certification challenges. The OR Manager routinely tracks progress against the Master Project Schedule by gathering information from team members and from personal observation. Artifacts to be reviewed include, but are not limited to, the following:
 - a. Project Communications Matrix
 - b. Risk and issue information maintained in the risk and issue tool
 - c. Risk and Issue Response Plans
 - d. Project Schedule
 - e. PCRs
8. **OR Manager Prepares and Submits Periodic Status Report** – The OR Manager prepares and submits the OR Periodic Status Report as defined in the INvest PMP using the INvest Periodic Status Report. The OR status report will be submitted on a monthly basis until the INvest PMO Manager determines that increased activity warrants a change to a weekly reporting cycle.
9. **INvest PMO Manager Validates Reported Information in Periodic Status Meeting** – The INvest PMO Manager validates the information contained in the report at the periodic INvest Project status meeting. Validation activities may include checking for consistency within the specific report and with other project documentation (including status reports from other vendors or teams). If the INvest PMO Manager cannot validate the information during the Periodic INvest Project status meeting, the OR Periodic Status Report is returned to the OR Project Manager for revision.
10. **INvest PMO Manager Consolidates Information for Monthly Status Report** – The INvest PMO Manager consolidates the validated status reports using **Attachment PMR-01 INvest PMO Monthly Status Report Template** and delivers the consolidated report to the INvest Core Committee.
11. **INvest Core Committee Reviews Monthly Status Report** – The INvest Core Committee reviews the consolidated status report for understanding, and takes action as appropriate.

18.3.1 Status Report Content

The templates for the Status Reports are shown in Table 58 in **Section 18.4**. The status report templates are structured in a consistent manner to allow consolidation and clarity in interpretation. Information contained in status reports is discussed on the following pages.

18.3.1.1 INvest PMO Monthly Status Report to INvest Core Committee

Table 56 provides the information contained in the INvest PMO Monthly Status Report.

Table 56: INvest PMO Monthly Status Report Contents

Section	Contents
Report Information	<ul style="list-style-type: none"> This section contains identifying information for the reporting period and specifies the INvest PMO Manager preparing the report. Status indicators include: <ul style="list-style-type: none"> Project Health Rating: Red, Yellow, or Green as determined by the INvest PMO Manager; DDI Health Rating: Value derived from the most recent DDI Weekly Status Report; QA Health Rating: Value derived from the most recent QA Weekly Status Report; and OR Health Rating: Value derived from the most recent OR Periodic Status Report.
Staffing	<ul style="list-style-type: none"> This section consolidates the staffing information provided from the various weekly or periodic status reports pertaining to the reporting period. <ul style="list-style-type: none"> Full Time Equivalent (FTE) Planned, FTE Actual, and Variance: Values are a simple sum of the values from the three detailed status reports. Explanation: All explanations are derived from the various detailed status reports pertaining to the reporting period. Schedule: The schedule information is consolidated from the various detailed status reports pertaining to the reporting period. Milestones Complete (plan), Milestones Complete (actual), and Variance: Values are a simple sum of the values from the various detailed status reports pertaining to the reporting period.
Explanation	<ul style="list-style-type: none"> All explanations from various detailed status reports are consolidated pertaining to the reporting period.
Risks, Issues, and Certification Challenges	<ul style="list-style-type: none"> This section consolidates risk, issue, and certification challenges information provided from the various weekly or periodic status reports pertaining to the reporting period. <ul style="list-style-type: none"> Risk description and status information is derived from the various detailed status reports for High risks only. Issue description and status information is derived from the various detailed status reports for High issues only. Information for all certification challenges is derived from the various detailed status reports.
Summary	<ul style="list-style-type: none"> This section provides a cross-reference showing what information exists in the various detailed status reports. An X in a specific box indicates that information on the specific topic (e.g., staffing variance) can be seen in the detailed status report (e.g., DDI requirements).

18.3.1.2 INvest Periodic Status Reports to INvest PMO Manager

The DDI vendor, QA vendor, and OR use a single status report template, with some content modified to meet specific needs. Areas where the reports vary are highlighted in Table 57.

Table 57: Status Report Components

Section	Contents
Report Information	<ul style="list-style-type: none"> This section contains identifying information for the reporting period (e.g., weekly) and the name of the Project Manager preparing the report.
Health Rating	<ul style="list-style-type: none"> A rating of Red, Yellow, or Green is assigned as determined by the respective project manager.
Staffing	<ul style="list-style-type: none"> This section reflects staffing information for the organization submitting the report. <ul style="list-style-type: none"> FTE Planned, FTE Actual, and Variance: These values reflect the total planned and actual staff, and any variance. Explanation: Details are provided if there is a variance, using one line for each position.
Schedule	<ul style="list-style-type: none"> This section consolidates schedule information for the organization submitting the report. <ul style="list-style-type: none"> Milestones Complete (plan), Milestones Complete (actual), and Variance: These values reflect the total planned and actual cumulative milestone completion and any variance. Explanation: Details are provided if there is a variance, using one line for each milestone.
Risks, Issues, and Certification Challenges	<ul style="list-style-type: none"> This section contains information on risks, issues, and certification challenges assigned to the organization submitting the report. <ul style="list-style-type: none"> Risk description and status information is derived from the risk register maintained in the risk and issue tool for any new, updated, or closed High or Medium risks. Issue description and status information is derived from the issue register maintained in the risk and issue tool for any new, updated, or closed High or Medium issues. Any certification challenges identified by the Project Manager are listed, using one line for each certification challenge. Explanation: Details are provided for any High or Medium risks and issues, or for any certification challenges which have changed since the previous reporting period.
Details	<ul style="list-style-type: none"> This section varies in use by the QA vendor, OR, and the DDI vendor. The QA vendor and OR complete only the Details section and delete the remaining rows; the DDI vendor deletes the Details section and completes the template for the six DDI work streams (i.e., Requirements, Design and Development, Data Conversion, Testing, Training, and Implementation). <ul style="list-style-type: none"> Past Period Activities: A summary of significant activities completed during the past reporting period is provided. Next Period Activities: A summary of significant activities to be completed in the next reporting period is provided.

18.3.2 Other Reports

Other related reports for the INvest Project are presented here for reference.

18.3.2.1 Monthly Executive Status Report with DDI Vendor

The INvest Monthly Executive Report delivered to the CSB Executive Sponsor, INvest Project Executive, CSB-IT Director, and INvest PMO provides, at a minimum, the following Dashboard Summary and key project metrics, as shown in Figure 85. Details will be agreed upon with the DDI vendor.

GENERAL INFORMATION	
Project Status "As of" Date	MM/DD/YY
Original Project Budget	N/A
Current Project Budget	N/A
Project Status Indicators	
Green	On track; only minor issues
Yellow	One or more areas of concern
Red	Significant issues that limit the success of the project
N/A	Not applicable
Trend Indicators	
"+" = Improving	
"-" = Declining	
"N/C" = No Change	

OVERALL KEY PROJECT METRICS		
Status		
Previous	Current	Current Trend
Yellow	Green	+

Figure 85: Dashboard Summary

Key project metrics and associated reporting formats will be defined through agreement with the DDI vendor. Reporting is expected to include a definition of the Red, Yellow, and Green thresholds and to include period-to-period trending data. Metrics are expected to be agreed upon in the following areas:

- Project performance standards
- System performance standards
- Work performance standards

18.3.2.2 Monthly Metrics Report from QA Vendor

The QA vendor will report QA contract cost and schedule data based on the agreed-upon project metrics on a monthly basis.

18.4 Templates

Table 58 provides a summary of the templates used for the Progress Monitoring and Reporting process.

Table 58: Progress Monitoring and Reporting Templates

Template Name	Description	Attachment ID
INvest PMO Monthly Status Report Template	<ul style="list-style-type: none"> Provided by the INvest PMO Manager to the INvest Core Committee on a monthly basis 	PMR-01
INvest Periodic Status Report Template	<ul style="list-style-type: none"> Provided by the DDI and QA Project Managers and the OR Manager to the INvest PMO Manager on a weekly basis 	PMR-02

(Note: These templates are for initial reference purpose only. Templates will be defined once the DDI vendor is engaged.)

19.0 PROJECT CHANGE CONTROL AND ESTIMATION

19.1 General Introduction and Overview

The Project Change Control and Estimation process addresses coordination, planning, documentation, and approval of requested changes to the INvest Project. This control process is critical to avoid unauthorized “scope creep,” as well as unanticipated issues or impacts. The Project Change Control and Estimation process is followed throughout the project. Once baselines have been established for scope, cost, and schedule, all changes to those baselines are managed using this process, which addresses the following:

- Project Change Control roles and responsibilities
- The sequence of events once a change is proposed including:
 - Initiation and impact analysis
 - Reviews and decisions
 - Execution planning
- Criteria for determining decision thresholds and estimation methodologies

PCRs may impact specific project areas (e.g., requirements, design, or implementation), approved project artifacts (e.g., PMP, SDLC requirements), or they may occur at the overall project level (e.g., changes to the project schedule).

The Project Change Control and Estimation process is supported by a Change Register used by the INvest PMO to track information related to proposed changes. The Change Register is a centralized electronic repository containing information contained in Project Change Request forms and related documentation. Details of the Change Register will be developed prior to INvest execution.

19.2 Key Roles and Responsibilities

Table 59 provides a summary of the key roles and primary responsibilities involved in the Project Change Control and Estimation process.

Table 59: Project Change Control and Estimation Key Roles and Responsibilities

Key Role	Responsibilities
BAC	<ul style="list-style-type: none"> ● Evaluates accuracy and completeness of PCR information concerning functional requirements, resources, and timing impacts ● Provides guidance and information to the INvest PMO Manager and CCRB regarding possible business process impacts of proposed PCRs
CCRB	<ul style="list-style-type: none"> ● Reviews submitted PCRs ● Ensures submitted PCRs are assessed from both business and technical viewpoints and, where appropriate, are combined with related PCRs ● Requests extended impact analysis where appropriate ● Approves, denies, defers, or escalates PCRs as defined in the PCR decision thresholds
INvest Executive Team	<ul style="list-style-type: none"> ● Reviews escalated PCRs ● Approves or denies escalated PCRs

Key Role	Responsibilities
INvest Project Manager	<ul style="list-style-type: none"> Reviews and posts PCRs to the Change Register Reviews PCR Form information for accuracy and completeness Escalates PCRs to the INvest PMO Manager Updates the Change Register with decisions Coordinates execution plans for approved PCRs
INvest PMO Manager	<ul style="list-style-type: none"> Reviews posted PCRs for accuracy and decision-making Approves, denies, or escalates PCRs to the CCRB based on the PCR decision thresholds Facilitates CCRB meetings and presents PCRs to the CCRB Coordinates updates to the Change Register with the INvest Project Manager
Master Scheduler	<ul style="list-style-type: none"> Identifies relevant project schedule activities for analysis and estimation of changes Provides project scheduling details (e.g., critical path, slack opportunities) for impact analysis
Requestor Project Manager	<ul style="list-style-type: none"> Identifies and documents change requests using Attachment PCC-01 Project Change Request Form Works with business and technical unit managers and SMEs to identify resources to review the impact of PCRs Directs the activities to assess and estimate the initial scope, schedule, resourcing, and cost impacts to the INvest Project Updates PCR Forms with impact analysis information Submits PCR Forms to the INvest Project Manager
TAC	<ul style="list-style-type: none"> Evaluates accuracy and completeness of PCR information concerning technical requirements, resources, timing, and privacy and security impact Provides guidance and information to the INvest PMO Manager and CCRB regarding possible technical impact of proposed PCRs

The key roles identified in Table 59 rely on various SMEs and project team members to support the identification and analysis of potential changes so that project leadership can make the best decisions. Rigorous application of the Project Change Control and Estimation process is required to avoid the risk of “scope creep,” miscommunication, rework, and late deliveries.

19.3 Process Overview and Activities

Figure 86 provides the Project Change Control and Estimation process.

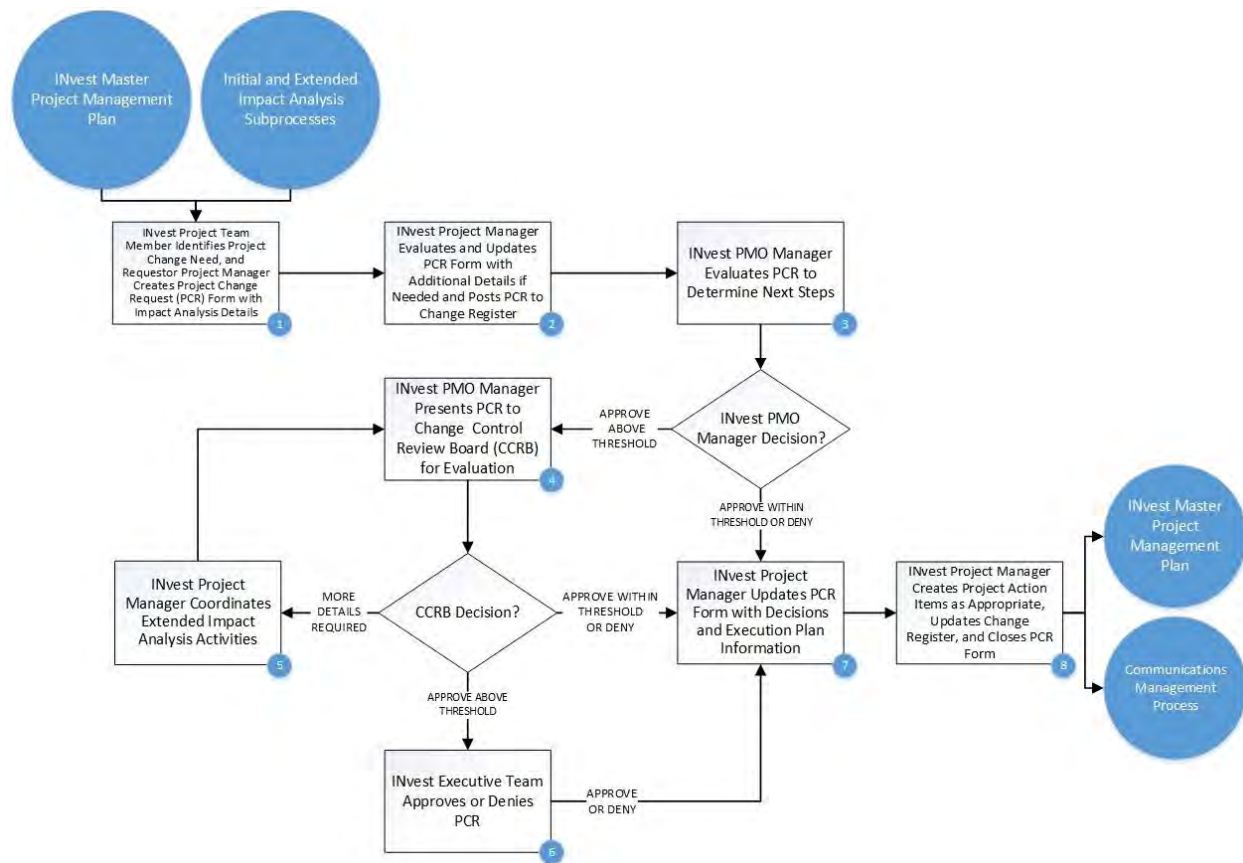


Figure 86: Project Change Control and Estimation Process

1. **INvest Project Team Member Identifies Project Change Need, and Requestor Project Manager Creates Project Change Request (PCR) Form with Impact Analysis Details** – Any INvest Project Team member can initiate a PCR by working with any INvest Project Manager (the Requestor Project Manager). The Requestor Project Manager completes the Request Highlights section of the PCR Form as thoroughly as possible. The Requestor Project Manager provides a suggested short name for the PCR along with contact names for reference purposes. The Requestor Project Manager also includes an initial priority level using the following guidelines:
 - a. **Urgent** – Decision should be made within one week to prevent serious delay in critical project accomplishments. Other urgent qualifiers may include: no workaround available, major security vulnerabilities, loss of compliance, mandated regulatory, contractual, or legislative conditions, and the potential for a significant delay in the go-live date.
Note: A PCR identified as Urgent may be expedited and require CCRB, BAC, TAC, and INvest Executive Team involvement prior to general schedule expectations.
 - b. **High** – Decision should be made within two weeks to prevent delay in project activities. It is possible to proceed without the change, but the workaround may cause significant negative impacts on cost, operation, and user experience.

- c. **Medium** – Decision should be made within four weeks from initiation before any impact occurs. This priority level generally has a satisfactory workaround available, however, this workaround may have negative impacts on cost, operation, and user experience.
- d. **Low** – Decision should be made within 12 weeks. The change is low risk and the outcomes are typically well understood. This priority level does not adversely affect a required operational or project essential capability.

The initial priority may be adjusted as more information becomes available. See **Part 19.3.3.1** for additional detail on assessment of impact levels.

Final steps involve the Requestor Project Manager providing detailed description and justification information for the PCR. Upon completion of the preliminary request information, the Requestor Project Manager submits the PCR Form to the INvest Project Manager for review and processing.

2. **INvest Project Manager Evaluates and Updates PCR Form with Additional Details if Needed and Posts PCR to Change Register** – Upon receipt of the PCR Form, the INvest Project Manager discusses the contents with the Requestor Project Manager and evaluates the request for accuracy and completeness. The evaluation may leverage applicable project documentation or reference materials to determine whether or not the request qualifies as a PCR. If needed, the INvest Project Manager also updates the Request Highlights in the PCR Form.

The INvest Project Manager posts PCRs to the Change Register. The INvest Project Manager reviews the initial impact analysis to validate the information and confirm the initial priority ranking as shown in Table 61. The high-level impact review process involves aligning the existing information to the three primary project impact constraints as follows:

- a. **Scope** – Determining if the requirements information and tasks, deliverables, and milestones provided are concise. Confirming the number of impacted modules to assist with determining thresholds values.
- b. **Schedule** – Defining impacts to various critical paths and deliverable due dates to declare potential schedule changes.
- c. **Cost** – Assuring that tasks are accurately associated to CSB and DDI vendor staffing to appropriately estimate costs for personnel. Information system costs need to be confirmed as well.

The result of the review process provides a starting point for the INvest PMO Manager's determination of escalation needs, including whether the potential change is within the INvest PMO Manager's approval threshold.

3. **INvest PMO Manager Evaluates PCR to Determine Next Steps** – The INvest PMO Manager reviews the PCR content for accuracy and may approve or deny a PCR if the level of impact falls within the associated threshold level. When a PCR is approved, the request moves to task #7 for execution. When a PCR is denied, the INvest PMO Manager notifies the INvest Project Manager to update the Change Register, notify the Requestor Project Manager, and archive the request. All completed PCRs that exceed the INvest PMO Manager's approval threshold are designated for review by the CCRB. The results of the INvest PMO Manager's initial impact analysis and recommendation are recorded in the Initial Impact Summary section of the PCR Form.

PCRs escalated to the CCRB are accumulated until the next scheduled meeting, unless the INvest PMO Manager initiates an emergency CCRB meeting. The INvest PMO Manager has the opportunity to group PCRs with like PCRs for review purposes. The grouping can be actual merging of PCR content, or the grouping may be logical for approval purposes or cost reasons.

4. **INvest PMO Manager Presents PCR to Change Control Review Board (CCRB) for Evaluation –**

The CCRB meets on a regularly scheduled basis unless an urgent PCR is identified by the INvest PMO Manager. CCRB meetings are formal; documentation includes an agenda, meeting minutes, action items, and a decision log. The meetings are used to review PCRs and to approve, deny, defer, or request additional impact analysis information concerning specific PCRs. The INvest PMO Manager facilitates the CCRB meeting using:

- a. The reference list of PCRs approved, denied, or deferred by the INvest PMO Manager;
- b. The list of PCRs presented for initial review and action;
- c. The list of PCRs presented for review and action following extended impact analysis; and
- d. A report showing the status of PCRs escalated to the INvest Executive Team.

The CCRB reviews PCRs that have been updated by the INvest PMO Manager with information from the initial impact analysis activities. The CCRB may approve or reject a PCR based on the initial impact analysis information.

The CCRB may request an extended impact analysis if evaluation of the PCR requires additional information. The CCRB determines the start and completion dates for the extended impact analysis and identifies individuals or groups (e.g., BAC and TAC) expected to perform the analysis. The request for extended impact analysis may be deferred to a later date if the CCRB determines the PCR should wait for other project events to take place or due to other conflicting priorities. The DDI vendor may also be asked to submit a quote or additional details to support the analysis. The level of detail prescribed for the extended impact analysis is based on the type of change being requested, the magnitude and complexity of the change, and the degree to which the governance body is familiar with the requested change. Upon completion of the extended impact analysis, the CCRB reviews the results and takes appropriate action.

If the PCR's impact is above the CCRB's threshold for approval as shown in **Part 19.3.2.1**, the CCRB submits the requested change to the INvest Executive Team for review and action after documenting the recommendation of the CCRB.

When a PCR is approved, the request moves to task #6 for execution. When a PCR is rejected, it is returned to the INvest Project Manager to update the Change Register, notify the Requestor Project Manager, and archive the request.

5. **INvest Project Manager Coordinates Extended Impact Analysis Activities –** An extended impact analysis provides the CCRB with additional information needed to determine whether or not to approve a PCR. A process flow depicting the impact analysis subprocesses and additional information is shown in **Part 19.3.3**.

The extended impact analysis coordinated by the INvest Project Manager may involve a variety of participants depending on the specifics of the change being evaluated. In cases involving vendor services, the INvest Project Manager may request a formal quote from the vendor project manager in addition to an internal estimate developed using the impact analysis subprocesses.

Results of the extended impact analysis are documented in the Extended Impact Analysis section of the PCR Form, and a summary is provided in the Decision Results section. The Impact Chart is a rollup of the cost and hours values from a completed **Attachment PCC-02 Cost Estimation Template**, and brief statements regarding what is impacted for the tasks and deliverables listed in the Initial Impact Analysis section of the PCR Form. The Quote / Estimate Information chart lists additional quotes or estimates for comparison purposes.

Details documented in the Extended Impact Analysis section of the PCR Form are referenced during execution planning to ensure that all affected baselines and artifacts are updated consistently.

6. **INvest Executive Team Approves or Denies PCR** – The INvest Executive Team reviews escalated PCRs and takes appropriate action. When a PCR is approved, the request moves to task #7 for execution planning. When a PCR is rejected, it is returned to the INvest Project Manager to update the Change Register, notify the Requestor Project Manager, and archive the request.
7. **INvest Project Manager Updates PCR Form with Decisions and Execution Plan Information** – When a PCR has been approved, the INvest Project Manager coordinates the effort to obtain the information needed for the comprehensive execution plan from the Requestor Project Manager or other project staff. When a PCR has been denied, the PCR Form is updated to reflect the decision.

The INvest Project Manager updates the Execution Plan section of the PCR Form with any communication needs, deliverable updates, or additional activities related to the change. The following factors are considered in the development of the execution plan:

- a. Scope of the PCR (e.g., is it a change in methodology or a change in deliverables?)
- b. Target implementation date for the change
- c. Priority of the change relative to other project requirements
- d. Any procurement activities to be coordinated by the INvest PMO Manager

The Execution Plan section of the PCR Form contains four major parts:

- a. **Communications Management Plan** – Additional details for notifications to affected stakeholders;
- b. **Deliverable Update Plan** – Details for artifact or deliverable changes;
- c. **Budget / Funding Release Plan** – Information necessary for applying any cost changes impacting the overall budget and metrics; and
- d. **Master Project Schedule Activities** – Each specific activity needed to implement the change, the responsible owner, and expected start and finish dates.

8. **INvest Project Manager Creates Project Action Items as Appropriate, Updates Change Register, and Closes PCR Form** – If the PCR is approved, the identified individuals or teams work to implement the change via project action items identified in the execution plan and posted to the project site. Whether the PCR is approved or denied, the INvest Project Manager updates the Change Register, and the change process is complete.

19.3.1 Process Tasks

Table 60 provides additional details, including timeframe expectations, for the Project Change Control and Estimation process.

Table 60: INvest Project Change Control and Estimation Process Details

Task	Process Task	Performer	PCR Form Section	Task Timeframe
1.	INvest Project Team Member Identifies Project Change Need, and Requestor Project Manager Creates PCR Form with Impact Analysis Details	Requestor Project Manager	1. Request Details	1-5 business days, depending on the complexity of the change being requested
2.	INvest Project Manager Evaluates and Updates PCR Form with Additional Details if Needed and Posts PCR to the Change Register	INvest Project Manager	2.1 INvest Project Manager PCR Review and 3.0 Decision Results	1-2 business days from receiving the PCR Form from the Requestor Project Manager
3.	INvest PMO Manager Evaluates the PCR to Determine Next Steps	INvest PMO Manager	2.2 INvest PMO Manager PCR Review and 3.0 Decision Results	1-2 business days from PCR Form being posted
4.	INvest PMO Manager Presents PCR to CCRB for Evaluation	INvest PMO Manager, CCRB	2.3 CCRB Meeting PCR Review and 3.0 Decision Results	2 business days minimum, CCRB meetings are normally regularly scheduled events
5.	INvest Project Manager Coordinates Extended Impact Analysis Activities	INvest Project Manager, Requestor Project Manager, Master Scheduler, BAC, and TAC, DDI Project Manager, QA Project Manager, and others as appropriate	2.4 Extended Impact Analysis	1-5 business days from receiving CCRB request for additional information
6.	INvest Executive Team Approves or Denies PCR	INvest Executive Team	3. Decision Results	2 business days
7.	INvest Project Manager Updates PCR Form with Decisions and Execution Plan Information	INvest Project Manager	4. Execution Plan	2 business days
8.	INvest Project Manager Creates Project Action Items as Appropriate, Updates the Change Register, and Closes the PCR Form	INvest Project Manager	5. PCR Close-Out	3 business days

19.3.2 Project Change Requests

Project Change Requests are documented using **Attachment PCC-01 Project Change Request Form**. Details include assessment of impact, current status, and execution plan details. The PCR Form is initiated by the Requestor Project Manager and updated periodically by the INvest Project Manager and INvest PMO Manager throughout the change control process.

An INvest Project Team member should work with the Requestor Project Manager to initiate a PCR when there is:

- A change to the project scope (requirements), schedule (task, deliverable, or milestone), or cost (budget) as defined in the PMP
- A change in the project concept, the business needs, solution architecture, or system design
- A change that impacts a sign-off of a deliverable or artifact
- A new or revised State or federal mandate that should be applied to the scope of the project

Key concepts for the Project Change Control and Estimation process are:

- The Requestor Project Manager coordinates the analysis and documents the details of the PCR
- PCRs alter one or any combination of approved scope, schedule, or cost baselines
- PCRs may be approved by the INvest PMO Manager, the CCRB, or the INvest Executive Team, based on their respective approval thresholds

19.3.2.1 Project Change Request Decision Thresholds

Approval authority for PCRs is defined by a set of thresholds related to scope, schedule, and cost. When the estimated impact of a PCR is above any of these thresholds in relation to the project baselines, the PCR must be escalated to the next level. Details are shown in Table 61. Where a PCR involves impact to more than one of the baselined values (e.g., scope as well as schedule or cost), it requires approval from the most senior decision-making body identified for any of the dimensions. Additionally, the CCRB is responsible for monitoring and escalating related PCRs in cases where a single PCR does not exceed a specific threshold, but multiple related PCRs exceed the threshold.

Table 61: Project Change Request Decision Thresholds

Decision-Maker	Scope / Schedule / Cost Thresholds
INvest PMO Manager	<p>The INvest PMO Manager may approve or deny a PCR that meets the following criteria:</p> <ul style="list-style-type: none"> • Scope: Minor functionality changes that have an impact to one module • Schedule: Activities impacting individual project tasks • Cost: Total estimated additional cost up to \$10,000 <p>The INvest PMO Manager must escalate PCRs to the CCRB if the proposed change meets any of the following criteria:</p> <ul style="list-style-type: none"> • Functionality that impacts multiple modules • Tasks that are part of the critical path for an individual module • Tasks that would impact a deliverable due date • Cost estimates above \$10,000

Decision-Maker	Scope / Schedule / Cost Thresholds
CCRB	<p>The CCRB may approve or deny a PCR that meets the following criteria:</p> <ul style="list-style-type: none"> • Scope: Any functionality changes • Schedule: Activities impacting tasks and deliverables • Cost: Total estimated additional cost up to \$75,000 <p>An extended impact analysis is required if the proposed change involves any of the following criteria:</p> <ul style="list-style-type: none"> • Functionality that impacts multiple dependent modules • Tasks that are part of the INvest Project critical path <p>The CCRB must escalate PCRs to the INvest Executive Team if the proposed change meets either of the following criteria:</p> <ul style="list-style-type: none"> • Tasks and deliverables that impact a milestone due date • Cost estimates above \$75,000
INvest Executive Team	<p>The INvest Executive Team approves or denies a PCR if the proposed change meets any of the following criteria:</p> <ul style="list-style-type: none"> • Scope: Major functionality changes in one or multiple modules • Schedule: Tasks that impact a milestone • Cost: Total estimated additional cost above \$75,000 • Any PCR or combination of PCRs, regardless of threshold criteria, where the CCRB feels escalation for further review is needed

19.3.2.2 Project Change Request Form

Table 62 provides a summary of the elements of the PCR Form.

Table 62: Project Change Request Form Elements

Primary Form Element	Description
Document Information	Indicates current version, author, and owner of the PCR
Document History	Provides a record of the PCR's version history
Document Status	Indicates PCR status and other identification information
Section 1 Request Details	
Request Submission Information	General information related to the short name of the change request, individuals involved, and the submission date
Priority	The urgency assigned to the PCR
Request Cause	A set of options to categorize what triggered the initiation of the request
Project Modules	Categories of functional requirement areas that generally align with the Federal Certification Guide
Request Description	A detailed description of the PCR
Request Justification	Detailed description of the business justification for the PCR, including an assessment of the impact if the change is not approved
Initial Impact Analysis	Documentation of the anticipated level of impact on key project constraint criteria

Primary Form Element	Description
Section 2 Review Details	
INvest Project Manager Initial Review Summary & Recommendations	The INvest Project Manager's initial impact assessment of the PCR, including potential alternatives and verification and accuracy of impact information
INvest PMO Manager Decision	The INvest PMO Manager's decision regarding the PCR
Initial CCRB Ruling Information	The CCRB's initial analysis of the PCR
Extended Impact Analysis	Impact estimates relative to approved PMP baselines
BAC and TAC Recommendation	Further analysis of the PCR provided by the BAC and TAC members
Final Recommendation Description	Resulting recommendation details based on the results of an extended impact analysis
Section 3 Decision Results	
Final Decision Result	The outcome of the PCR
INvest PMO Manager, CCRB, and INvest Executive Team	Recommendation and any further analysis for the PCR as it relates to the specific governance review body
Section 4 Execution Plan	
Communication, deliverable update, and execution plans	Detailed action steps to satisfy the areas identified in the Extended Impact Analysis (which may include actions taken if the PCR is not approved)
Section 5 PCR Close-Out	
PCR Close-Out	Documentation of any remaining items to complete execution of the PCR, as well as any other final notes for reference

19.3.2.3 Project Change Request Status Values

As the PCR moves through the change control process, the INvest Project Manager or the INvest PMO Manager updates the status of the PCR and notifies those affected. PCR status values include:

- **Posted.** PCR has been submitted, undergone initial review, and posted to the Change Register.
- **CCRB Queue.** PCR is pending review and disposition by the CCRB.
- **Defer.** PCR has been determined not to be an immediate priority, but may be brought up for further consideration in the future.
- **Extended Impact Analysis.** PCR is undergoing extended impact analysis activities at the direction of the CCRB.
- **INvest Executive Team Queue.** PCR is pending review and disposition by the INvest Executive Team.
- **Execution Planning.** PCR has been approved and execution planning activities are in process.
- **Closed.** A decision has been made and all execution planning and activities are complete.

The INvest Project Manager or the INvest PMO Manager is also responsible for updating the Document History section of the PCR Form to provide a recorded history of revisions, additional input, and decisions.

19.3.3 Estimating Change Impact Subprocesses

The remainder of this chapter explains the two project change control impact analysis methods. Figure 87 provides the Initial and Extended Impact Analysis subprocesses.

The Initial and Extended Impact Analysis subprocesses address the four key project constraints (scope, schedule, resources, and cost), which are depicted as logical horizontal swim lanes in Figure 87. Consistent execution of the impact analysis subprocesses ensures that estimation information is uniform and reliable, and allows collection of historical data that is reusable for ongoing estimating efforts. The two methods for obtaining estimates follow a “building blocks” approach where scope information is an input to schedule analysis, which in turn enables cost estimation.

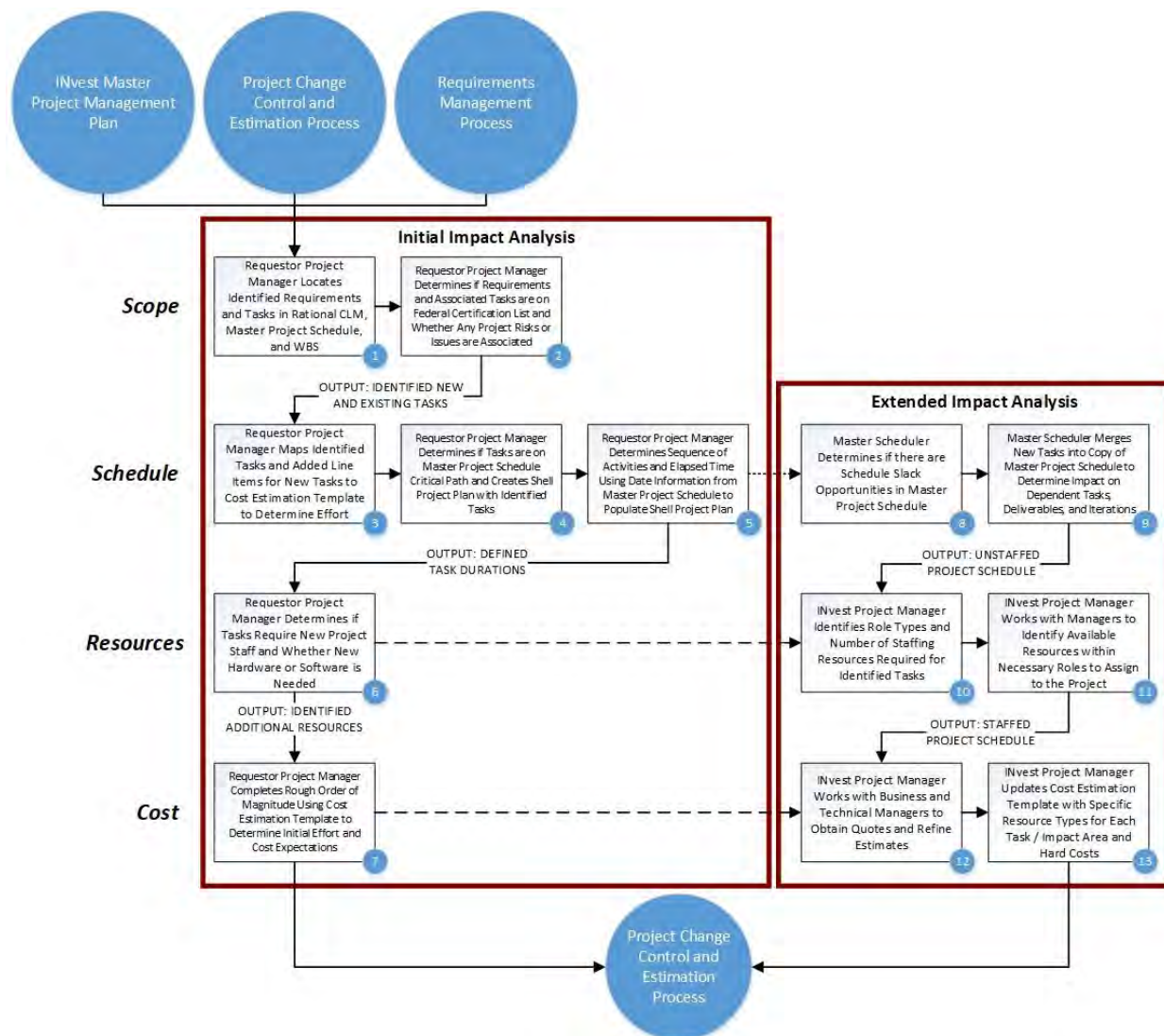


Figure 87: Initial and Extended Impact Analysis Subprocesses

Additional information is provided in the following parts for each of the two impact analysis subprocesses.

19.3.3.1 Initial Impact Analysis Subprocess

The Requestor Project Manager performs the initial impact analysis by following the steps shown in Figure 87. The objective of the initial impact analysis subprocess is to determine the potential impact of the proposed change to the baseline project scope, schedule, and budget. The primary inputs to the initial impact analysis subprocess are the project baseline data, requirements information, project change control information, and previous estimation data.

1. **Scope – Requestor Project Manager Locates Identified Requirements and Tasks in Rational CLM, Master Project Schedule, and WBS** – The Requestor Project Manager locates the requirements associated with the suggested change in Rational CLM and the Master Project Schedule. The WBS may be used as reference to ensure relevant scope-related changes, including relationships to project modules, are understood. This cross referencing activity of scope-related information verifies that the correct tasks and deliverables have been identified and that the reference materials are current. Any new tasks are identified at this point. The outcome of the scope analysis is a list of tasks that are impacted by the change in scope. This list of tasks is used to structure the estimation effort for schedule, resources, and cost.
2. **Scope – Requestor Project Manager Determines if Requirements and Associated Tasks are on Federal Certification List and Whether Any Project Risks or Issues are Associated** – The Requestor Project Manager references the project WBS to determine any related system functional or non-functional requirements and identify any risks and issues. To understand the full impact of the identified requirements and tasks, the decision-makers need to know if the change is related to a federal certification requirement and whether there are any existing project risks or issues that may impact the priority of the request. If the requirements are directly related to new or existing federal certification requirements there are potential opportunities to compare sizing and cost estimation information with other states.
3. **Schedule – Requestor Project Manager Maps Identified Tasks and Added Line Items for New Tasks to Cost Estimation Template to Determine Effort** – The Requestor Project Manager continues the initial analysis process by leveraging the scope information to estimate the effort required to accomplish the proposed change. The Requestor Project Manager notes the tasks identified in the Master Project Schedule in the Cost Estimation Template. The Requestor Project Manager then estimates the duration of each task affected by the PCR using the three-point estimation technique. The three-point estimation technique produces an end value that is the weighted average of three estimates; this end value is used to understand the degree of change from the baseline schedule.

To accomplish the three-point estimation technique for a task or set of tasks, the Requestor Project Manager develops general estimates for:

- a. Optimistic (O) – the shortest duration expected
- b. Pessimistic (P) – the longest duration expected
- c. Most Likely (M) – the duration most likely to be realized

The three estimates may be informed by multiple sources, including historical task duration information (if available from prior projects), expert judgment based on the project team's input, industry literature, or best practices.

These estimates are then weighted by the tool using the following formula:

$$\text{Estimate} = (O + 4M + P) / 6$$

Adding the optimistic (O) estimate plus four times the most likely (M) plus the pessimistic (P) estimate and then dividing that total by six. This formula gives the Requestor Project Manager a duration estimate that takes the various possible outcomes into account.

4. **Schedule – Requestor Project Manager Determines if Tasks are on Master Project Schedule Critical Path and Creates Shell Project Plan with Identified Tasks** – The Requestor Project Manager works with the Master Scheduler to determine if the identified tasks are part of a module critical path or the project critical path. A shell project plan is created to model the tasks with updated duration estimates for each task.
5. **Schedule – Requestor Project Manager Determines Sequence of Activities and Elapsed Time Using Date Information from Master Project Schedule to Populate Shell Project Plan** – The Requestor Project Manager sequences the tasks using additional date information from the Master Project Plan to determine a best case elapsed time for the project change to be accomplished. The Requestor Project Manager also defines any new dependencies between tasks that are introduced by the proposed change.
6. **Resources – Requestor Project Manager Determines if Tasks Require New Project Staff and Whether New Hardware or Software is Needed** – Given the scope and schedule estimates, the Requestor Project Manager determines if any of the tasks require any new project staff. Staff changes may involve the identification of new roles or confirming availability of staff fulfilling existing roles. The effort typically consists of determining if there are any specialty roles needed for the change.

Needs for any new hardware or software are evaluated at this time, and preliminary specifications are developed to enable cost estimation. These cost estimates may be rough estimates to be updated later in the process.
7. **Cost – Requestor Project Manager Completes Rough Order of Magnitude Using Cost Estimation Template to Determine Initial Effort and Cost Expectations** – The Requestor Project Manager uses the Cost Estimation Template information to calculate cost estimates based on the durations established using three-point estimation, hourly costs for CSB and DDI vendor staff. Cost estimates for any additional hardware and software needs are included so that the full cost of the proposed change is understood.

Impact Ranking

After performing the initial impact analysis activities, the Requestor Project Manager assesses the impact ranking for each of the impact types described in Table 63 prior to proceeding to the Extended Impact Analysis subprocess.

Table 63: PCR Impact Level Guidelines

Impact Type	Low	Medium	High
Scope	<ul style="list-style-type: none"> Decreasing functionality 	<ul style="list-style-type: none"> Minor increase in functionality 	<ul style="list-style-type: none"> Major increase in functionality
Schedule	<ul style="list-style-type: none"> PCRs that only involve impacts to project tasks 	<ul style="list-style-type: none"> Impact to deliverables Does not alter critical path 	<ul style="list-style-type: none"> Critical path schedule change extending phase, module, or iteration completion dates
Resources	<ul style="list-style-type: none"> No new project resources required Low number of project resources required 	<ul style="list-style-type: none"> One or two new resources required and up to six project resources to be assigned 	<ul style="list-style-type: none"> Three or more new resources needed and several project resources to be assigned
Cost	<ul style="list-style-type: none"> Estimated total cost to implement is expected to be less than \$25,000 	<ul style="list-style-type: none"> Estimated total cost to implement is expected to be \$25,000 - \$75,000 	<ul style="list-style-type: none"> Estimated total cost to implement is expected to be more than \$75,000

Note: There are other variables to take into consideration when ranking impact types, such as level of knowledge on the subject matter or complexity of a specific function (e.g., financials tend to be complex due to the dependencies involved). Initial rankings can be modified throughout the Project Change Control and Estimation process as more information is available.

The Requestor Project Manager discusses the proposed changes with the INvest Security Team to determine if there are any privacy-and-security-related concerns. Any potential project risks that would be introduced by implementing the change need to be noted in the detailed description section.

The overall impact ranking for the initial impact analysis is a judgement based on the accumulated rankings for each of the impact types. A note is added to the Request Justification section of the PCR Form providing reasoning for the ranking provided.

19.3.3.2 Extended Impact Analysis Subprocess

The Extended Impact Analysis subprocess depicted in Figure 87 uses the information gathered and created through the initial impact analysis. The extended impact analysis addresses the following for each PCR:

- The effect of the requested change on the project baselines in terms of effort, cost, resource requirements, and schedule delay or acceleration
- Additional management effort needed to revise the schedule and notify affected stakeholders
- Any cascading consequences or impacts of the requested change including project deliverables, resource requirements and costs, and SDLC steps
- The comparison of costs to official quotes and third party estimations

The INvest Project Manager, as shown in task #5 of Figure 86, coordinates the extended impact analysis effort by following the tasks #8 – #13 as shown in Figure 87.

8. **Schedule – Master Scheduler Determines if there are Schedule Slack Opportunities in Master Project Schedule** – The Master Scheduler continues the estimation process by reviewing the Master Project Schedule for any slack opportunities that would allow the proposed change to be implemented without impacting a critical path.
9. **Schedule – Master Scheduler Merges New Tasks into Copy of Master Project Schedule to Determine Impact on Dependent Tasks, Deliverables, and Iterations** – The Master Scheduler uses the results of the three-point estimation technique to enter task durations into a working copy of the Master Project Schedule, identifies any new dependencies, and determines the final impact to the Master Project Schedule.
10. **Resources – INvest Project Manager Identifies Role Types and Number of Staffing Resources Required for Identified Tasks** – The INvest Project Manager refines the estimate of human resources needed to support the execution and management of the PCR, expressed as an incremental change to the approved baseline. The INvest Project Manager works with the appropriate project management personnel to determine if the roles exist, and documents new roles and costing reference information if required.
11. **Resources – INvest Project Manager Works with Managers to Identify Available Resources within Necessary Roles to Assign to the Project** – The INvest Project Manager works with the appropriate project management personnel to determine if the resources are available for execution of the activities involved. The effort often involves determining whether any specialty roles are needed.
12. **Cost – INvest Project Manager Works with Business and Technical Managers to Obtain Quotes and Refine Estimates** – Where appropriate, the INvest Project Manager obtains one or more quotes for comparison. As the bulk of INvest effort is executed by the DDI vendor under a fixed-price contract with fixed deliverables and milestones, many changes require the INvest Project Manager to coordinate receipt of a quote from the DDI vendor as part of the impact analysis. When considering a quote from the DDI vendor, the INvest Project Manager also initiates an internal estimation process to validate the scope, schedule, and cost impact of the proposed change. The internal estimation process is also used in cases where a proposed change does not involve the DDI vendor.
13. **Cost – INvest Project Manager Updates Cost Estimation Template with Specific Resource Types for Each Task / Impact Area and Hard Costs** – Once the copy of the Master Project Schedule has been updated for the new and revised tasks, the INvest Project Manager sums the change in hours for the tasks in the Master Project Schedule by SLDC step and by role, and enters the totals into the Cost Estimation Template. The INvest Project Manager also identifies other one-time and recurring costs such as software, hardware, equipment rental, license fees, and adds the total to the labor resource costs to calculate the total cost estimate for the PCR.

Note that the Project Planning and Management hours are automatically calculated in the Cost Estimation Template. The Project Planning and Management is calculated at 25% of total project hours based on industry standard. This includes estimated work hours required for each role, including direct hours for that role and related, indirect hours for the PMO, BAC, TAC, and the INvest Executive Team.

19.4 Templates

Table 64 provides a summary of the templates used for the Project Change Control and Estimation process.

Table 64: Project Change Control and Estimation Templates

Template Name	Description	Attachment ID
Project Change Request Form	<ul style="list-style-type: none"> Used to document a requested change, its impact, the decision to approve or deny the change, and the execution plan to finalize the PCR 	PCC-01
Cost Estimation Template	<ul style="list-style-type: none"> Calculates the labor and other costs for the requested project change Included within the Cost Estimation Template workbook is the Three-Point Estimation Template worksheet, which is used to calculate hours for each additional task required to execute a proposed PCR 	PCC-02

(Note: These templates are for initial reference purpose only. Templates will be defined once the DDI vendor is engaged.)

PROJECT / PHASE CLOSURE

20.0 FEDERAL CERTIFICATION

20.1 General Introduction and Overview

In order for CSB to receive federal financial participation (FFP) reimbursement of its costs, INvest must be a federally certified system in accordance with the Automated Systems for Child Support Enforcement: A Guide for States (Federal System Certification Guide); updated 2017 (published by OCSE). The INvest Project requires both vendor and State resources to monitor issues, progress, and reporting related to federal certification closely.

The purpose of the **Federal Certification** chapter is to document the processes leading to certification of INvest. This section addresses the following:

- Federal certification requirements;
- Federal certification planning;
- OCSE federal certification review; and
- Federal certification of INvest.

20.1.1 Federal Certification Requirements

To achieve federal certification, CSB, with DDI vendor assistance, must demonstrate INvest can:

- Meet all requirements specified in the Federal System Certification Guide, as well as requirements specified in any updates to that guide.
- Process the Financial Distribution Test Deck successfully.
- Pass the OCSE Level I and Level II Federal Certification onsite reviews, including CSB and County Partner site visits.

Note: The Federal System Certification Guide updated 2017 refers to Phase I and Phase II Certification. The INvest Governance Manual uses Level I and Level II Federal Certification to represent these processes.

The DDI vendor and CSB executives give this area high priority and continual oversight. In addition, the QA Team works to support planning and preparation for certification. **Section 20.1.3** describes specific roles for CSB, the DDI vendor, and the QA vendor.

Federal certification preparation begins early in the INvest Project. The DDI vendor must create the Federal Certification Questionnaire using the Federal System Certification Guide. As the project begins design, the DDI Federal Policy / Certification Specialist documents how INvest meets each federal certification requirement.

20.1.2 Federal Certification Planning Activities

The DDI vendor will lead the planning activities to prepare for OCSE federal certification onsite reviews for INvest to receive federal certification. The preparation begins early in the project. The DDI vendor will account for all OCSE federal certification activities in the DDI PMP and project schedule. The DDI vendor will design, develop, and implement INvest adhering to all federal certification requirements. To ensure INvest includes all federal certification requirements, the DDI vendor will fully test INvest during Project Phase 2 System Testing, including executing test scripts associated to the Financial Distribution Test Deck (see [Test Management](#) chapter). In a Federal Certification Testing environment, the DDI vendor must successfully test the Financial Distribution Test Deck, adhering to the Personal Responsibility and Work Opportunity Act of 1996 and the Deficit Reduction Act of 2005 mandates. After the DDI vendor completes Project Phase 2 System Testing, CSB conducts UAT to ensure INvest meets all federal certification requirements.

20.1.3 OCSE Federal Certification Reviews

OCSE federal certification onsite reviews are a component of the overall Federal Certification process.

- Level I Federal Certification onsite review occurs during Project Phase 2 Pilot, when an automated system is installed and operational in one or more pilot locations, with the focus on ensuring INvest meets all federal certification requirements.
- Level II Federal Certification onsite review occurs after Project Phase 2 Statewide implementation and includes site visits to County offices to observe the system in use at the local level.

Both federal certification reviews normally take two to five days to perform.

The DDI vendor creates and completes **Attachment FED-01 Federal Certification Questionnaire** documenting how INvest meets federal certification requirements. The DDI vendor identifies appropriate cases, documents the results that meet the specific federal requirement, and CSB submits the documentation to OCSE for review approximately two months prior to the Level I Federal Certification onsite review. Included in this documentation are the results from the prescribed test scripts as part of the Financial Distribution Test Deck.

OCSE reviews the Federal Certification Questionnaire responses and Financial Distribution Test Deck results prior to the Level I Federal Certification onsite review. During the Level I Federal Certification onsite review, the OCSE Certification Team requests CSB to demonstrate some functions in the INvest production environment and verify the outcome to ensure it satisfies the federal certification requirements.

OCSE provides a draft report containing any findings from the Level I Federal Certification onsite review, containing two categories of findings:

- **Certification Findings** – functions that did not meet the requirements for certification that CSB must correct based on recommendations in the report before granting federal certification.
- **Management Findings** – not considered certification issues, but report functions that only marginally meet the requirements for certification, or areas where an opportunity exists for improved performance or automation.

During the Level II Federal Certification onsite review, CSB must demonstrate the resolution of each open federal certification finding identified during the Level I Federal Certification onsite review.

Included in the Level II Federal Certification onsite review are visits to the selected County offices (see **Attachment FED-02 OCSE Checklist for Local Office Visits**).

20.1.4 Federal Certification of INvest

At the end of the Level I Federal Certification onsite review, OCSE submits their draft report with “certification findings” to CSB. The DDI vendor and CSB will remediate certification findings immediately. The DDI vendor develops and implements an action plan to resolve these certification findings. Any certification findings CSB and the DDI vendor believe are in error, CSB immediately contacts the OCSE Certification Team lead. Once the DDI vendor has resolved and tested all findings, CSB will work with OCSE to schedule the Level II Federal Certification review. The Level II Federal Certification review will include site visits to demonstrate remediation of Level I Federal Certification findings and for OCSE to observe the system in use at the local level, the State Disbursement Unit (SDU), data center, and other designated locations. OCSE provides federal certification after approving all open federal certification findings (Level I and Level II). After reviewing and approving all open certification findings by the OCSE Certification Team, OCSE updates all certification findings to “Closed.” OCSE then issues a report formally with a cover letter indicating INvest is federally certified.

20.2 Key Roles and Responsibilities

Table 65 provides a summary of the key roles and primary responsibilities involved in the Federal Certification process.

Table 65: Federal Certification Key Roles and Responsibilities

Key Role	Responsibilities
CSB Certification BPO	<ul style="list-style-type: none"> Serves as the CSB Certification Lead Ensures Financial Distribution Test Deck results are valid Guides CSB SMEs through the Federal Certification process Reviews Financial Distribution Test Deck results and provides feedback prior to submission to OCSE Reviews, finalizes, and submits responses to questions related to the Federal Certification process Coordinates Level I and Level II Federal Certification onsite reviews with OCSE Supports DDI Federal Policy / Certification Specialist in development and maintenance of the Federal Certification Questionnaire
CSB Functional Manager	<ul style="list-style-type: none"> Assists the CSB Certification BPO in executing the role of CSB Certification Lead Participates in pre-implementation reviews of INvest modules Leads the system certification process, including walkthroughs, for OCSE Leads the CSB Certification Team of selected SMEs Guides CSB SMEs through the Federal Certification process Reviews, finalizes, and submits responses to questions related to the Federal Certification process Ensures implementation of all federal certification requirements

Key Role	Responsibilities
	<ul style="list-style-type: none"> Coordinates with DDI vendor to select cases for federal certification review Ensures the INvest Project Team resolves all federal certification requirement issues Responds to OCSE comments / questions related to all federal certification requirement activities
DDI Federal Policy / Certification Specialist	<ul style="list-style-type: none"> Serves as the DDI Certification Lead Provides verification of requirements traceability to all federal certification requirements in INvest Creates Federal Certification Questionnaire and continually documents how INvest meets federal certification requirements Creates written responses for the Federal Certification Questionnaire Assists CSB with the development of presentations and preparation for onsite visits with OCSE Executes the Financial Distribution Test Deck, including creating all documentation to explain and document results Provides an ongoing analysis of any federal certification and / or Financial Distribution Test Deck gaps believed to exist Produces a quarterly Certification Report detailing certification efforts, issues, and resources Participates in federal certification requirements validation Ensures DDI vendor staff comprehend federal certification requirements Documents changes, as needed, to respond to OCSE federal certification draft reports and findings Documents changes to requirements or functionality to adhere to any future federal certification requirements Provides weekly INvest Project Status Report, which shows critical federal certification challenges, risks, and issues
DDI Functional Lead	<ul style="list-style-type: none"> Assists the DDI Federal Policy / Certification Specialist Ensures implementation of all federal certification requirements Assists the DDI Federal Policy / Certification Specialist to select cases for federal certification review Ensures the INvest Project Team resolves all federal certification requirement issues
INvest PMO	<ul style="list-style-type: none"> Coordinates federal certification activities of both the QA and DDI vendors Monitors progress of all federal certification activities
OR	<ul style="list-style-type: none"> Assists with OCSE certification meetings and County site visits
OR Manager	<ul style="list-style-type: none"> Coordinates with Counties for certification site visit preparation (Level II Federal Certification)
OCSE	<ul style="list-style-type: none"> Provides a certification questionnaire Provides the Financial Distribution Test Deck Schedules and conducts certification reviews

Key Role	Responsibilities
	<ul style="list-style-type: none"> Identifies Counties for site visits to review system functionality Conducts exit conference with CSB Provides a report with items and findings that need to be addressed
QA Certification Lead	<ul style="list-style-type: none"> Verifies DDI vendor deliverables support OCSE federal certification requirements through QA checklists and walkthroughs Evaluates OCSE federal certification compliance within INvest Reviews documentation and artifacts for OCSE federal certification onsite reviews Reviews OCSE Draft Report to identify observations and risks and provides recommendations for corrective action

20.3 Process Overview and Activities

These processes describe the planning activities necessary to ensure monitoring occurs throughout design, development, and implementation activities so INvest is ready for federal certification.

The Federal Certification process contains two processes:

- Level I Federal Certification Activities.** This process describes preparing for and conducting the Level I Federal Certification review. This initial review occurs during the Pilot of Project Phase 2 when INvest that moves into a production environment that includes all INvest functionality.
- Level II Federal Certification Activities.** This process describes conducting the Level II Federal Certification review. The Level II Federal Certification review activities occur after Project Phase 2 Statewide implementation.

20.3.1 Level I Federal Certification Activities

Figure 88 provides the Level I Federal Certification process, which details the federal certification activities during Project Phase 2 Pilot, when INvest is in the production environment.

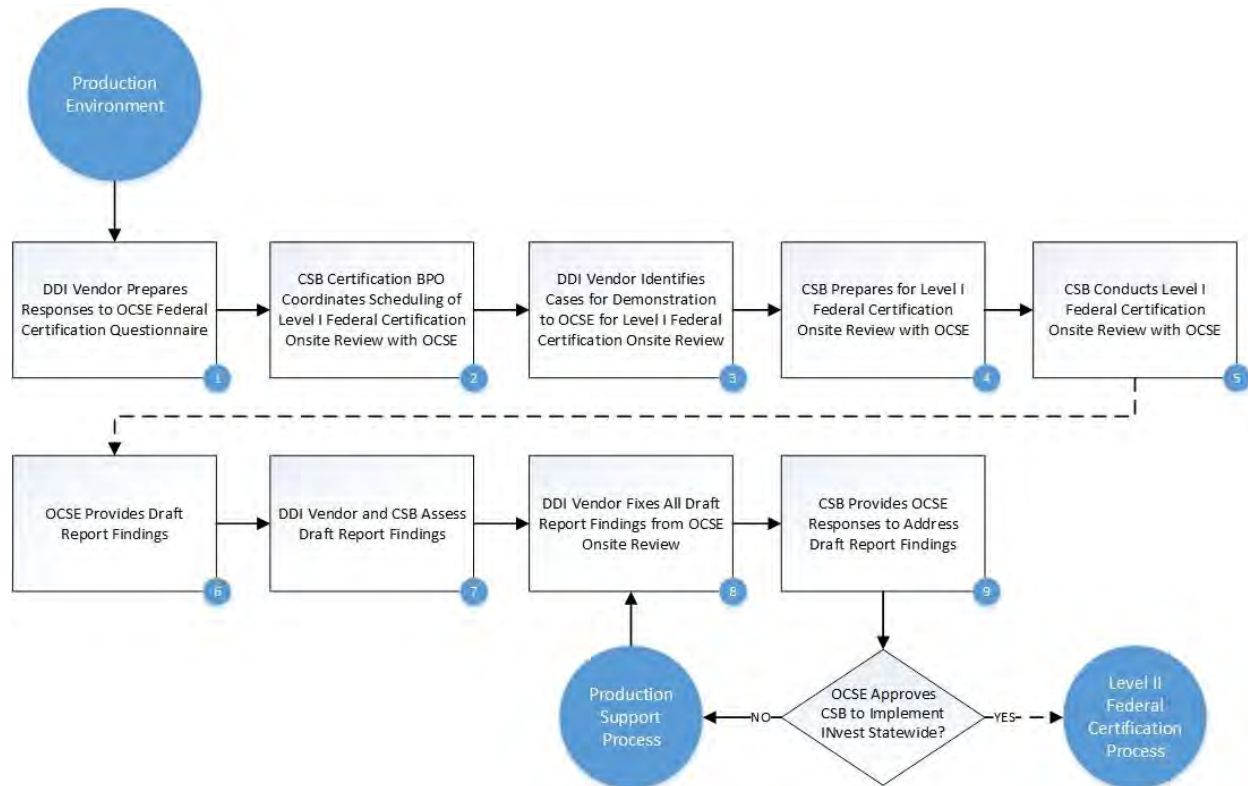


Figure 88: Level I Federal Certification Process

1. **DDI Vendor Prepares Responses to OCSE Federal Certification Questionnaire** – Federal certification preparation begins early in the INvest Project. The DDI vendor must create the Federal Certification Questionnaire using the Federal System Certification Guide. As the project begins design, the DDI Federal Policy / Certification Specialist documents how INvest meets each federal certification requirement. Working with CSB, the DDI vendor prepares final responses to the Federal Certification Questionnaire. The final compilation of the Federal Certification Questionnaire activity for submission to OCSE begins at least six months prior to the start of certification of INvest after Project Phase 2 Pilot implementation. The responses, along with supporting documentation, provide OCSE details on how INvest meets each federal certification requirement. CSB submits these responses to OCSE about two months in advance of the Level I Federal Certification onsite review.
2. **CSB Certification BPO Coordinates Scheduling of Level I Federal Certification Onsite Review with OCSE** – After CSB submits all documentation to OCSE, the CSB Certification BPO coordinates with the OCSE Division of State and Tribal Systems (DSTS) analyst to schedule the federal certification onsite review. OCSE will prepare an agenda for the review.
3. **DDI Vendor Identifies Cases for Demonstration to OCSE for Level I Federal Certification Onsite Review** – In preparation for the Level I Federal Certification review, the DDI vendor, along with the CSB Functional Manager, identifies cases to demonstrate system functionality. Case data comes from the production environment for CSB or County Partner offices participating in Project Phase 2 Pilot. If a production case is not available to demonstrate the functionality, CSB staff may use a test environment and test case data as agreed upon with the federal review team.

4. **CSB Prepares for Level I Federal Certification Onsite Review with OCSE** – CSB coordinates with the DDI vendor to prepare for the OCSE federal certification onsite reviews, including determining which State staff will conduct demonstrations and mock runs of the demonstrations. The mock runs prepare CSB staff to respond to potential questions from OCSE during the onsite reviews. CSB must fully understand how INvest functions and meets specific federal certification requirements.
5. **CSB Conducts Level I Federal Certification Onsite Review with OCSE** – During the OCSE Level I Federal Certification onsite review, CSB staff leads the demonstrations during the onsite review with the OCSE Certification Team. CSB staff will use a production version of the system to demonstrate how INvest meets each objective using actual cases. If a production case is not available to demonstrate the functionality, CSB staff may use a test environment and test case data as agreed upon with the federal review team. The DDI and QA vendors provide CSB support, when needed.
6. **OCSE Provides Draft Report Findings** – At the end of the Level I Federal Certification onsite review, OCSE provides a draft report of findings that CSB must address. OCSE findings assist CSB to ensure INvest meets all federal certification requirements. The DDI vendor, however, is responsible for resolution of all OCSE findings.
7. **DDI Vendor and CSB Assess Draft Report Findings** – The DDI vendor and CSB assess the OCSE report, and develop a plan to complete all needed fixes. The DDI vendor is responsible for ensuring each finding has an action plan to resolve the finding quickly. The DDI vendor will address all system fixes identified as findings by OCSE. If CSB and the DDI vendor believe any findings in the draft report are in error, CSB contacts the OCSE Certification Team lead.
8. **DDI Vendor Fixes All Draft Report Findings from OCSE Onsite Review** – Based on the action plan developed with CSB, the DDI vendor addresses all issues, generally following the Production Support process. Updates to requirements traceability and all appropriate system documentation may be required (see the [Project Change Control and Estimation](#) chapter for information regarding changes to requirements).
9. **CSB Provides OCSE Responses to Address Draft Report Findings** – The DDI vendor is responsible to update and prepare responses to each of the findings in the OCSE draft report. CSB reviews those responses with the DDI vendor to obtain clear understanding of the responses. CSB then provides the documents to OCSE that indicate how INvest addresses the findings in the OCSE draft report. OCSE has 60 days to respond to the submission. The OCSE response may identify fixes that do not fully meet OCSE expectations. (See Production Support process.)

20.3.2 Level II Federal Certification Activities

Figure 89 provides the Level II Federal Certification process, which details the federal certification activities after INvest Project Phase 2 Statewide implementation. During the Level II Federal Certification onsite review, OCSE will meet with CSB for demonstration of remediation of any findings during the Level I Federal Certification onsite review and make site visits to several pre-selected County offices to observe INvest functionality. OCSE may ask County workers specific questions about how they use INvest to perform their daily work.

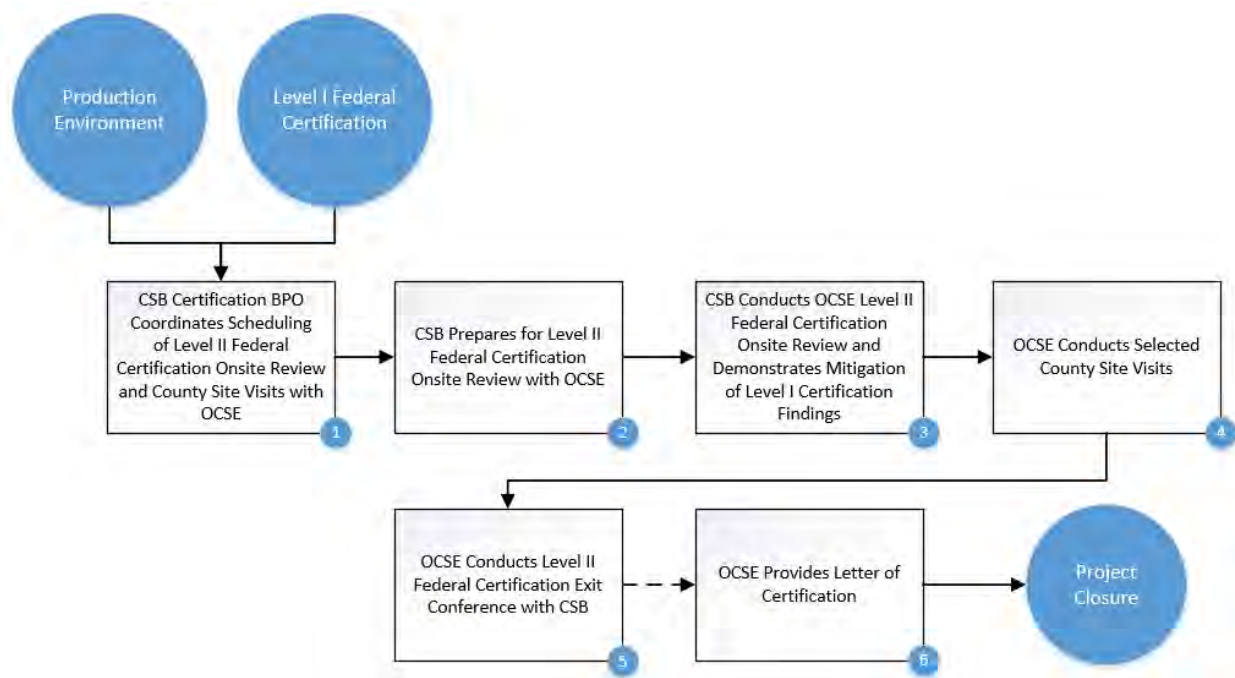


Figure 89: Level II Federal Certification Process

1. **CSB Certification BPO Coordinates Scheduling of Level II Federal Certification Onsite Review and County Site Visits with OCSE** – The CSB Certification BPO coordinates with the OCSE DSTS analyst that CSB is ready for Level II Federal Certification onsite review, OCSE schedules the review, and selects the Counties for site visits.
2. **CSB Prepares for Level II Federal Certification Onsite Review with OCSE** – CSB coordinates with the DDI vendor to prepare for the OCSE federal certification onsite reviews. CSB must fully understand how INvest functions and meets specific federal certification requirements. OR uses this opportunity to begin working with the DDI Onsite Support Team to prepare the selected County offices for the OCSE site visit.
3. **CSB Conducts OCSE Level II Federal Certification Onsite Review and Demonstrates Mitigation of Level I Certification Findings** – During the Level II Federal Certification onsite review, CSB staff lead the meetings with the OCSE Certification Team. CSB demonstrates the mitigation of each open certification finding from the Level I Federal Certification onsite review for the OCSE Certification Team. The DDI and QA vendors are not present in the Level II Federal Certification meetings, but provide CSB support, when needed.
4. **OCSE Conducts Selected County Site Visits** – The OCSE Certification Team first meets with County managers for an overview of the organization of the office. Based on this discussion, the OCSE Certification Team provides a list of functions and / or caseworker tasks to observe at that County office. The OCSE Certification Team observes caseworkers using the new system, and asks questions on how they use the system in their day-to-day activities. The OCSE Certification Team may also visit the SDU, data center, and disaster recovery site.
5. **OCSE Conducts Level II Federal Certification Exit Conference with CSB** – At the conclusion of the Level II Federal Certification onsite review, OCSE holds an exit conference with CSB to review any additional findings from site visits with County offices.

6. **OCSE Provides Letter of Certification** – After CSB demonstrates that INvest meets all federal certification findings and all certification findings are in a closed status, OCSE issues the final report, formally, with a cover letter stating INvest is federally certified.

20.4 Templates

Table 66 provides a summary of the templates used for the Federal Certification process.

Table 66: Federal Certification Templates

Template Name	Description	Attachment ID
Federal Certification Questionnaire	<ul style="list-style-type: none"> Documents how INvest meets each federal certification requirement 	FED-01
OCSE Checklist for Local Office Visits	<ul style="list-style-type: none"> Documents the federal certification requirements to be demonstrated during onsite reviews 	FED-02

(Note: The DDI vendor will create the Federal Certification Questionnaire response template and completes the OCSE Checklist for Local Office Visits.)

21.0 POST IMPLEMENTATION

21.1 General Introduction and Overview

The DDI vendor begins Post Implementation execution activities for the INvest Project once all milestones for implementation are approved for each project phase. The DDI vendor dedicates staff to support Post Implementation activities, including:

- Developing the Maintenance and Operations Plan
- Developing the Knowledge Transfer Plan
- Executing the Knowledge Transfer Plan

The Maintenance and Operations Plan and Knowledge Transfer Plan are components of the DDI portion of the INvest Master PMP.

(Note: This chapter may be revised once the DDI vendor is engaged.)

21.2 Key Roles and Responsibilities

Table 67 provides a summary of the key roles and primary responsibilities for the Post Implementation process.

Table 67: Post Implementation Key Roles and Responsibilities

Key Role	Responsibilities
CSB Functional Manager	<ul style="list-style-type: none"> • Approves the Maintenance and Operations Plan • Approves Post Implementation Assessments (Project Phase 1 and Project Phase 2)
CSB Security Manager	<ul style="list-style-type: none"> • Reviews Post Implementation Assessments (Project Phase 1 and Project Phase 2)
CSB Technical Manager	<ul style="list-style-type: none"> • Approves the Maintenance and Operations Plan • Approves Post Implementation Assessments (Project Phase 1 and Project Phase 2)
CSB-IT Director	<ul style="list-style-type: none"> • Approves the Knowledge Transfer Plan
DDI Lead	<ul style="list-style-type: none"> • Coordinates knowledge transfer to CSB-IT (technical and business staff), including scheduled training
DDI Project Manager	<ul style="list-style-type: none"> • Develops the Maintenance and Operations Plan • Develops the Knowledge Transfer Plan • Gathers information for development of Post Implementation Assessments (Project Phase 1 and Project Phase 2) • Develops Post Implementation Assessments (Project Phase 1 and Project Phase 2) • Submits Post Implementation Assessments to CSB (Project Phase 1 and Project Phase 2) • Refines and implements actions to address items identified in Post Implementation Assessments (Project Phase 1 and Project Phase 2)

Key Role	Responsibilities
INvest Core Committee	<ul style="list-style-type: none"> Reviews the plan of action to address issues identified in Post Implementation Assessments (Project Phase 1 and Project Phase 2) Assesses CSB's ability to maintain INvest
INvest PMO	<ul style="list-style-type: none"> Coordinates approval of Maintenance and Operations Plan Coordinates approval of Knowledge Transfer Plan Coordinates approval of Post Implementation Assessments (Project Phase 1 and Project Phase 2)
INvest Project Executive	<ul style="list-style-type: none"> Approves the Knowledge Transfer Plan
OR	<ul style="list-style-type: none"> Reviews Post Implementation Assessments to understand stakeholder change acceptance
OR Manager	<ul style="list-style-type: none"> Approves the Knowledge Transfer Plan

21.3 Process Overview and Activities

At the successful conclusion of Statewide implementation for each project phase, the DDI vendor performs several Post Implementation activities to ensure INvest has sufficient support after implementation so that stakeholders can achieve optimal usage of INvest, and that federal certification is achieved.

Figure 90 provides the Post Implementation process.

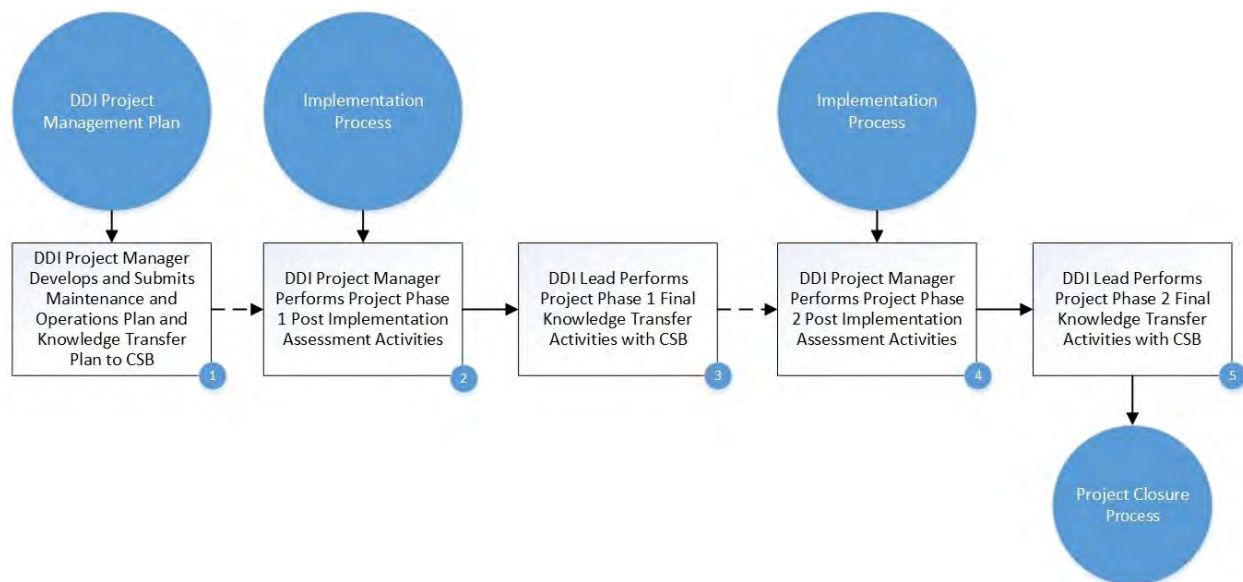


Figure 90: Post Implementation Process

- DDI Project Manager Develops and Submits Maintenance and Operations Plan and Knowledge Transfer Plan to CSB** – Based on the approved DDI PMP, the DDI Project Manager develops the Maintenance and Operations Plan and the Knowledge Transfer Plan. **Part 21.3.1.1** describes the elements of the Maintenance and Operations Plan. **Part 21.3.1.2** describes the elements of the Knowledge Transfer Plan. See the **Production Support** chapter for details regarding maintenance and operations activities.

2. **DDI Project Manager Performs Project Phase 1 Post Implementation Assessment Activities –**
The DDI Project Manager identifies successes, improvement opportunities, and issues in the Project Phase 1 assessment. The assessment results are inputs to the INvest Project Team's development of lessons learned. These lessons learned assist the DDI vendor and the INvest Core Committee in ensuring successes are documented, improvement opportunities are implemented, and the same issues do not arise during Project Phase 2. The DDI Project Manager creates a Post Implementation Assessment within 60 calendar days of Project Phase 1 implementation.
3. **DDI Lead Performs Project Phase 1 Final Knowledge Transfer Activities with CSB –** The DDI Lead performs knowledge transfer to CSB-IT throughout the SDLC using embedded CSB-IT staff to perform noncritical path tasks to develop an understanding of how INvest operates. As the INvest Project moves into the Post Implementation phase, CSB-IT begins taking on a greater role in maintaining INvest. The DDI Lead schedules ongoing training for CSB-IT, including any DDI vendor-provided or DDI vendor-supplied Commercial Off-the-shelf (COTS) or customized software where CSB-IT will be making process, rule, role, or security changes.
4. **DDI Project Manager Performs Project Phase 2 Post Implementation Assessment Activities –**
The Project Phase 2 assessment documents successes, improvement opportunities, and issues identified during the pilot or Statewide rollouts. The final assessment consolidates this information for use on future CSB projects. The DDI Project Manager creates a Post Implementation Assessment within 120 calendar days of Project Phase 2 implementation. The Project Phase 2 assessment provides information on issues identified during the pilot or Statewide rollouts.
5. **DDI Lead Performs Project Phase 2 Final Knowledge Transfer Activities with CSB –** The DDI Lead performs knowledge transfer to CSB-IT throughout the SDLC using embedded CSB-IT staff to perform noncritical path tasks to develop an understanding of how INvest operates. As the INvest Project moves into the Post Implementation phase, CSB-IT begins taking on a greater role in maintaining INvest. The DDI Lead schedules ongoing training for CSB-IT, including any DDI provided or supplied COTS or customized software where CSB-IT will be making process, rule, role, or security changes.

21.3.1 Post Implementation Planning

The Post Implementation Planning subprocess describes the development and approval of the Maintenance and Operations Plan and the Knowledge Transfer Plan. The Maintenance and Operations Plan details how the DDI vendor manages non-warranty issues that arise with INvest after Statewide implementation. The Knowledge Transfer Plan details how the DDI vendor transitions technical support activities to CSB at the end of the warranty and maintenance and operations phase. **Part 21.3.1.1** describes the elements of the Maintenance and Operations Plan. **Part 21.3.1.2** describes the elements of the Knowledge Transfer Plan.

Figure 91 provides the Post Implementation Planning subprocess.

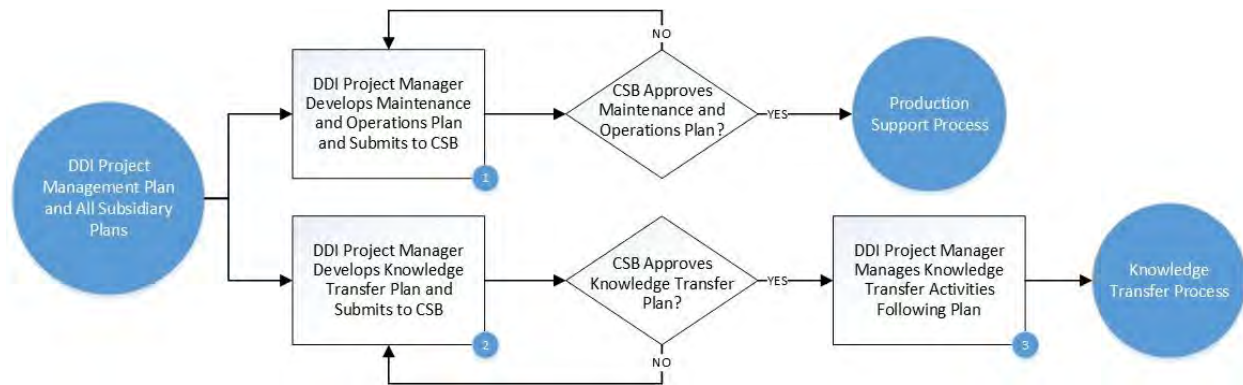


Figure 91: Post Implementation Planning Subprocess

1. **DDI Project Manager Develops Maintenance and Operations Plan and Submits to CSB** – The DDI Project Manager develops the Maintenance and Operations Plan. Elements of the Maintenance and Operations Plan include Purpose and Scope, Approach, Objectives, Policies, Procedures, and Checklists. **Part 21.3.1.1** provides further details on the Maintenance and Operations Plan. The DDI Project Manager submits the Maintenance and Operations Plan to CSB for approval. If CSB does not approve the Maintenance and Operations Plan, the DDI Project Manager makes required updates and resubmits the deliverable to CSB.
2. **DDI Project Manager Develops Knowledge Transfer Plan and Submits to CSB** – The DDI Project Manager develops the Knowledge Transfer Plan. The elements of the Knowledge Transfer Plan include Purpose and Scope, Approach, Objectives, and Methods of Knowledge Transfer. **Part 21.3.1.2** provides further details on the Knowledge Transfer Plan. The DDI Project Manager submits the Knowledge Transfer Plan to CSB for approval. If CSB does not approve the Knowledge Transfer Plan, the DDI Project Manager makes required updates and resubmits the deliverable to CSB for approval.
3. **DDI Project Manager Manages Knowledge Transfer Activities Following Plan** – The DDI Project Manager ensures knowledge transfer activities follow the approved plan. See **Part 21.3.3** for details of the Knowledge Transfer process. The DDI vendor conducts training activities throughout the SDLC for both Project Phase 1 and Project Phase 2 implementations and continues knowledge transfer activities throughout maintenance and operations activities to ensure CSB staff are equipped to maintain INvest after DDI vendor services are complete.

21.3.1.1 Maintenance and Operations Plan

The DDI vendor creates and executes a Maintenance and Operations Plan. The plan includes, but is not limited to, the following:

- Purpose and Scope
- Relationship to Other Plans
- Maintenance and Operations Approach
- Maintenance and Operations Objectives
- Maintenance and Operations Resources
- Maintenance and Operations Security

- Maintenance Policies, Procedures, and Checklists
- Maintenance Planning and Scheduling
 - INvest maintenance schedule
 - Third party hardware / software maintenance schedule
 - Communication messages / schedule
- Maintenance and Operations Feedback and Reporting
- Maintenance and Operations Transition Plan
- Third Party Hardware / Software Procured by Vendor

21.3.1.2 Knowledge Transfer Plan

The DDI vendor creates and executes a Knowledge Transfer Plan. The plan includes, but is not limited to, the following:

- Purpose and Scope
- Relationship to Other Plans
- Knowledge Transfer Approach
- Knowledge Transfer Objectives
- Knowledge Transfer Plans by CSB Team
- Knowledge Transfer Resources
- Knowledge Transfer Risks
- Methods of Knowledge Transfer
- Curriculum, Materials, and Setup
- Knowledge Transfer Schedule
- Knowledge Transfer Communication
- Knowledge Transfer Monitoring, Metrics, and Evaluation Criteria
- Third Party Vendor Knowledge Transfer

21.3.2 Post Implementation Assessment

The DDI vendor completes a Post Implementation Assessment after each project phase. Each assessment is a formal evaluation and review of the implementation. The INvest Project Team uses the assessment results in developing lessons learned to ensure successes are documented, improvement opportunities are implemented, and issues are prevented from occurring in future project phases, including the transition of INvest to CSB.

21.3.2.1 Project Phase 1 Post Implementation Assessment

Figure 92 provides the Project Phase 1 Post Implementation Assessment subprocess.

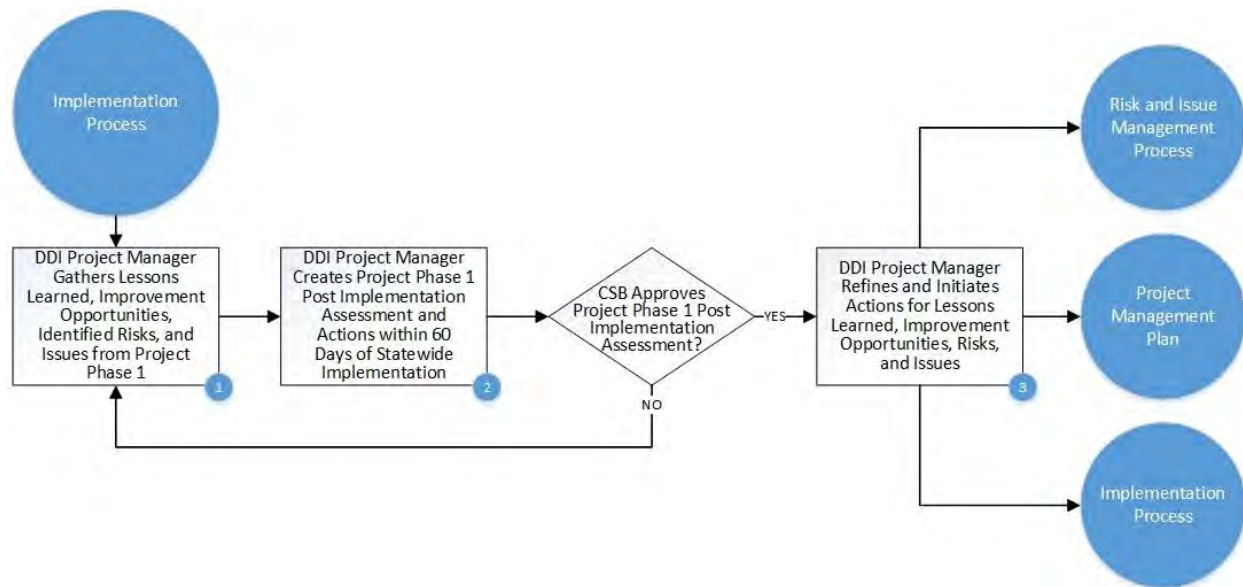


Figure 92: Project Phase 1 Post Implementation Assessment Subprocess

1. **DDI Project Manager Gathers Lessons Learned, Improvement Opportunities, Identified Risks, and Issues from Project Phase 1** – The DDI Project Manager begins the process of gathering appropriate lessons learned, risks, issues, and opportunities for improvement as Project Phase 1 Statewide implementation begins. These items will have generally been captured through ongoing project processes.
2. **DDI Project Manager Creates Project Phase 1 Post Implementation Assessment and Actions within 60 Days of Statewide Implementation** – The DDI Project Manager submits a Post Implementation Assessment to the INvest Core Committee within 60 days of the Project Phase 1 Statewide implementation. The Post Implementation Assessment is a self-assessment and describes actions that have been taken and recommendations for actions needed to make improvements for Project Phase 2. **Part 21.3.2.3** describes the elements of the Post Implementation Assessment, including lessons learned, improvement opportunities, identified risks and their statuses, and any issues that surfaced during the implementation. The INvest Core Committee reviews the Post Implementation Assessment to determine if the implementation results meet CSB goals and objectives. If the INvest Core Committee does not approve the assessment and recommended actions, the INvest Core Committee returns the assessment to the DDI Project Manager to make corrections. The DDI Project Manager resubmits the assessment to the INvest Core Committee after making the requested changes.
3. **DDI Project Manager Refines and Initiates Actions for Lessons Learned, Improvement Opportunities, Risks, and Issues** – The DDI Project Manager refines the actions based on feedback from the INvest Core Committee and initiates the appropriate actions. Actions may involve risks and issues, the Project Management Plan, or implementation planning for Project Phase 2.

21.3.2.2 Project Phase 2 Post Implementation Assessment

Figure 93 provides the Project Phase 2 Post Implementation Assessment subprocess.

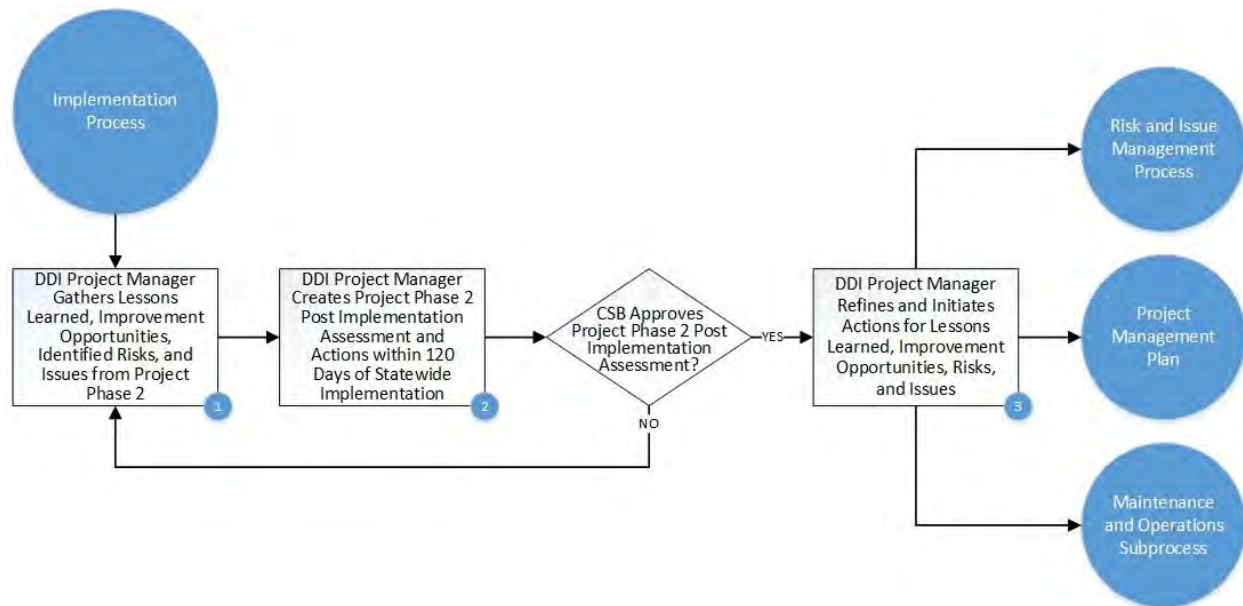


Figure 93: Project Phase 2 Post Implementation Assessment Subprocess

1. **DDI Project Manager Gathers Lessons Learned, Improvement Opportunities, Identified Risks, and Issues from Project Phase 2** – The DDI Project Manager begins the process of gathering any lessons learned, risks, issues, and opportunities for improvement as Project Phase 2 Statewide implementation begins. These items will generally have been captured through ongoing project processes.
2. **DDI Project Manager Creates Project Phase 2 Post Implementation Assessment and Actions within 120 Days of Statewide Implementation** – The DDI Project Manager submits a Post Implementation Assessment to the INvest Core Committee within 120 days of the Project Phase 2 Statewide implementation. The Post Implementation Assessment is a self-assessment and describes actions that have been taken and recommendations for actions needed to improve the implementation of Project Phase 2. **Part 21.3.2.3** describes the elements of the Post Implementation Assessment, including lessons learned, improvement opportunities, identified risks and their statuses, and any issues that surfaced during the implementation. The INvest Core Committee reviews the Post Implementation Assessment to determine if the implementation results meet CSB goals and objectives. If the INvest Core Committee does not approve the assessment and recommended actions, the INvest Core Committee returns the assessment to the DDI Project Manager to make corrections. The DDI Project Manager resubmits the assessment to CSB after making the requested changes.
3. **DDI Project Manager Refines and Initiates Actions for Lessons Learned, Improvement Opportunities, Risks, and Issues** – The DDI Project Manager refines the actions based on feedback from CSB and initiates the appropriate actions. Actions may include creating or updating risks and issues, updating the Project Management Plan, or updating the Maintenance and Operations Plan.

21.3.2.3 Post Implementation Assessment

The Post Implementation Assessment contains, at a minimum, summaries of the relevant project phase, including the following items:

- Executive summary
- Post implementation project results measured against CSB goals and objectives
- Actual costs and schedule compared to baselined costs and schedule
- Stakeholder change acceptance
- Training effectiveness
- Federal certification (Project Phase 2 only)
- Resources
- Risks and issues
- INvest Governance Manual effectiveness
- Business processes – requirements met, working as designed
- Technical processes – requirements met, working as designed
- System performance
- Architecture compliance
- Defect measures
- Data and document conversion measures
- Quality Assurance or Independent Verification and Validation findings
- Lessons learned from the implementation(s)
- Continuous improvement

21.3.3 Knowledge Transfer

A key task that occurs throughout the INvest Project is the transfer of system knowledge to CSB-IT. During Post Implementation, the DDI vendor ensures that CSB-IT has the knowledge necessary to support INvest successfully.

Initially, the DDI vendor uses embedded CSB-IT staff for noncritical path tasks. The DDI vendor prepares CSB-IT staff through formal, procedural, or hands on training. The INvest Project Team evaluates the effectiveness of this work effort as a baseline to gauge whether CSB-IT staff have learned and demonstrated the required skills. The DDI vendor provides formal training to CSB-IT staff on how to maintain INvest after transition from the DDI vendor. This training addresses the following items:

- Database, hardware, and software maintenance;
- Application development / batch support;
- Architecture design and maintenance;
- Security maintenance;
- Testing specifications;
- Primary user training tools, methods, and materials;
- System administration; and
- INvest Help Desk training and knowledge transfer.

Any DDI vendor-supplied COTS or customized software where CSB-IT staff will be making process, rule, role, or security changes requires a final transition of knowledge and training (e.g., Business Process Modeling, rules engine, IAAM).

The final weeks of the maintenance and operations period consist of DDI vendor staff shadowing CSB-IT staff. CSB-IT staff perform the maintenance and operations tasks, while DDI vendor staff monitor the performance of CSB-IT staff to ensure tasks are completed correctly and to answer CSB-IT questions.

Figure 94 provides the Knowledge Transfer subprocess.

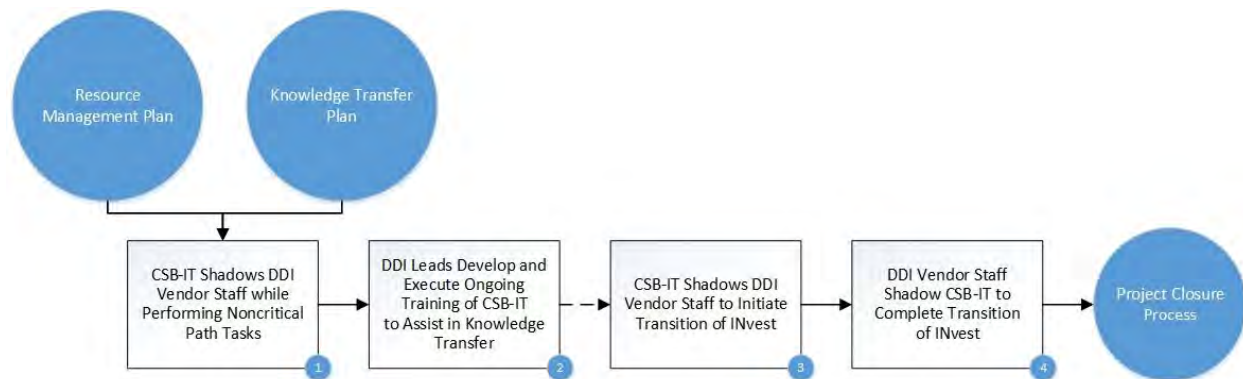


Figure 94: Knowledge Transfer Subprocess

1. **CSB-IT Shadows DDI Vendor Staff while Performing Noncritical Path Tasks** – CSB-IT embeds staff during all parts of the SDLC that allow performance of noncritical path tasks. The DDI Lead for a specific technical area assigns noncritical path tasks after CSB-IT shadows DDI vendor staff to learn the INvest development processes. The objective is to start the process of knowledge transfer early in the SDLC. The DDI Lead for each technical area assigns work to embedded CSB-IT staff.
2. **DDI Leads Develop and Execute Ongoing Training of CSB-IT to Assist in Knowledge Transfer** – The DDI Lead ensures ongoing training occurs for the purpose of knowledge transfer. The training may be formal, procedural, or hands on. The objective is to increase CSB-IT’s knowledge of how to maintain INvest after DDI vendor services end. The DDI Lead for each technical area develops training materials, user guides, and checklists to enhance the training efforts, based on SOPs and deliverables. **Part 21.3.3.1** provides additional detail on the content of knowledge transfer documentation. The trainees evaluate the training after each training activity to provide feedback on their level of confidence, the relevance of the training, and their understanding of the process. The DDI Leads use this feedback to improve training to ensure CSB is ready to take over full support of INvest when the project closes out.
3. **CSB-IT Shadows DDI Vendor Staff to Initiate Transition of INvest** – After knowledge transfer begins, CSB-IT staff shadow DDI vendor staff for all activities. The shadowing allows CSB-IT staff the opportunity to observe how DDI vendor staff use SOPs, checklists, and user guides when coding, testing, etc. The shadowing strengthens CSB-IT staff’s understanding and knowledge to eventually manage INvest when the DDI vendor transitions maintenance and operations to CSB.

4. **DDI Vendor Staff Shadow CSB-IT to Complete Transition of INvest** – During maintenance and operations activities, DDI vendor staff begin to shadow CSB-IT staff while they perform the activities needed to manage INvest using the documentation provided by the DDI vendor. This includes CSB BPOs, developers, and testers who will eventually take over the maintenance of INvest. The INvest Core Committee assesses CSB-IT staff's ability to assume ownership of INvest before project closure. Prior to the end of the warranty and maintenance and operations period of the INvest Project, the INvest Core Committee determines the readiness of CSB-IT staff.

21.3.3.1 Knowledge Transfer Documentation

The DDI vendor creates transition documentation such as SOPs, job aids, checklists, and training materials as needed on the following topics:

- Database and hardware / software maintenance;
- Application development / batch support;
- Architecture design and maintenance;
- Security maintenance;
- Testing specifications;
- Primary user training tools, methods, and materials;
- System administration; and
- INvest Help Desk training and knowledge transfer.

21.4 Templates

(Note: There are no templates defined for the Post Implementation process. Templates will be defined once the DDI vendor is engaged.)

22.0 PROJECT CLOSURE

22.1 General Introduction and Overview

Project Closure ensures that INvest has been completed and transitioned to ongoing operations, confirms the satisfaction of project stakeholders, and captures key lessons learned from the project for use in planning and managing future projects. The lessons learned and techniques employed on projects can be easily lost without careful archiving and storage of information. The **Project Closure** chapter consists of only one process.

22.2 Key Roles and Responsibilities

Table 68 provides a summary of the key roles and primary responsibilities involved in the Project Closure process.

Table 68: Project Closure Key Roles and Responsibilities

Key Role	Responsibilities
DDI Project Manager	<ul style="list-style-type: none"> Conducts the final closure and final lessons learned sessions with CSB Initiates the Project Close Out Report and submits the report to the INvest Executive Team and the INvest PMO Manager
INvest Core Committee	<ul style="list-style-type: none"> Participates in the final closure and final lessons learned sessions
INvest Executive Team	<ul style="list-style-type: none"> Approves the Project Close Out Report
INvest PMO Manager	<ul style="list-style-type: none"> Coordinates Project Closure activities, including the Project Close Out Report

22.3 Process Overview and Activities

Project Closure occurs when stakeholders and the INvest Executive Team are satisfied that:

- OCSE has provided federal certification;
- Stakeholders have accepted and are using INvest;
- All project and system documentation has been updated and is stored in the appropriate INvest Project tool;
- Knowledge transfer has been completed successfully; and
- Maintenance and operations have been transitioned successfully to CSB.

After the DDI vendor ensures the fulfillment of all agreed-upon requirements, the DDI vendor conducts a final lessons learned session. The CSB Executive Sponsor and INvest Project Executive provide approval to close out the project.

Figure 95 provides the Project Closure process.

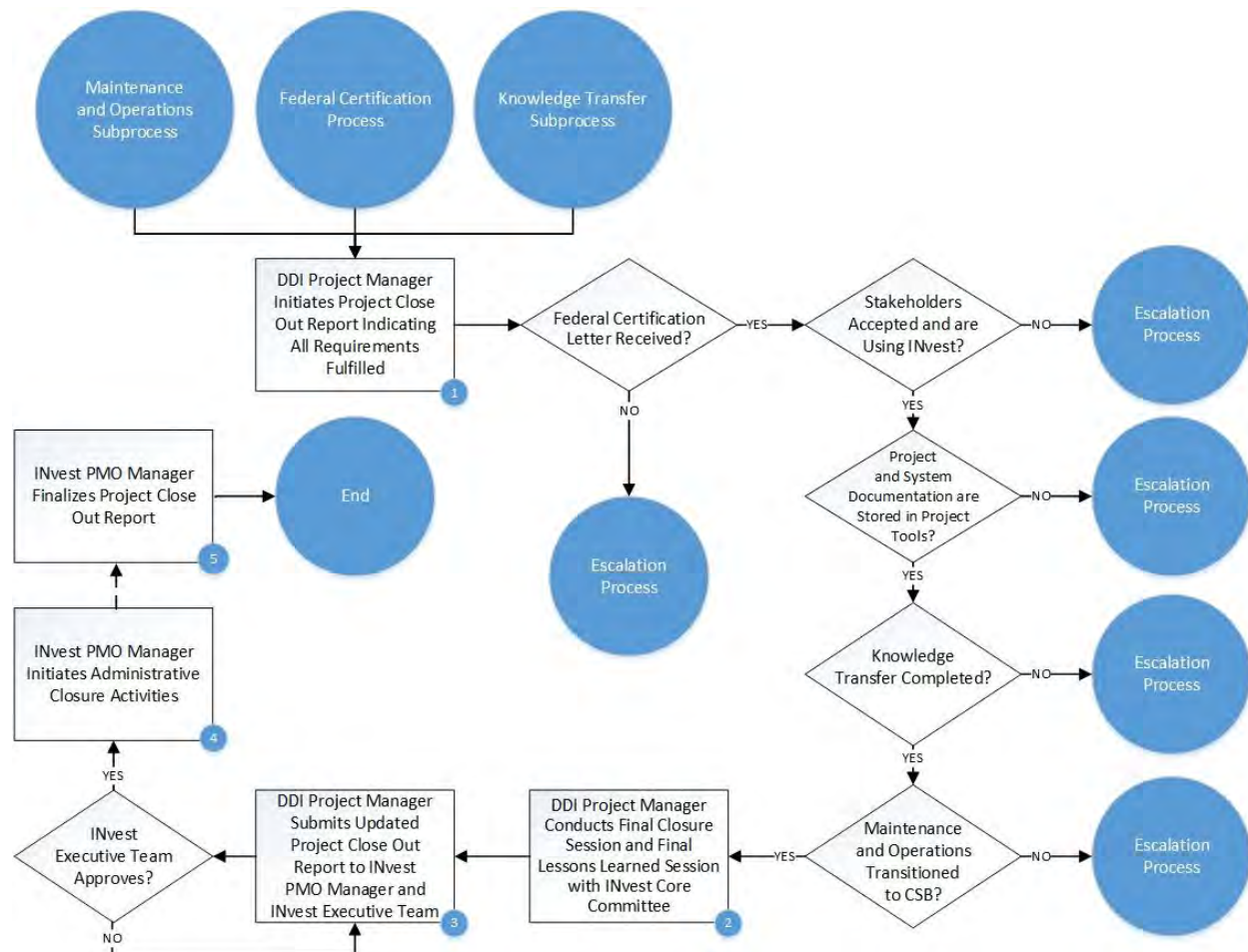


Figure 95: Project Closure Process

1. **DDI Project Manager Initiates Project Close Out Report Indicating All Requirements Fulfilled –**
After Statewide implementation of INvest and prior to the end of the warranty period for Project Phase 2, the DDI Project Manager initiates the close out process. The DDI Project Manager reviews the PMP, Master Project Schedule, and project status reports to analyze planned versus actual performance in terms of schedule, cost, and scope. The initial report includes a statement indicating that the INvest Project satisfies all contractual requirements. The DDI Project Manager checks to ensure the completion of these five items before conducting a final closure session and a final lessons learned session:
 - a. Federal Certification Letter received from OCSE;
 - b. Stakeholders accept and use INvest;
 - c. All project and system documentation is stored in an appropriate project tool;
 - d. Knowledge transfer from DDI to CSB has been completed successfully; and
 - e. Maintenance and operations have been transitioned to CSB.

If any of the items are not true, the DDI Project Manager addresses resolution of any open items.

2. **DDI Project Manager Conducts Final Closure Session and Final Lessons Learned Session with INvest Core Committee** – The DDI Project Manager conducts the final closure session and the final lessons learned session with the INvest Core Committee. (Note: Processes and templates related to capturing lessons learned are addressed in the INvest Master PMP. See the [Project Management Plan Development](#) chapter for more detail on the INvest Master PMP). The DDI Project Manager provides a final list of all required deliverables and confirms that the deliverables are complete and have been approved by CSB.
3. **DDI Project Manager Submits Updated Project Close Out Report to INvest PMO Manager and INvest Executive Team** – After the final closure and final lessons learned sessions, the DDI Project Manager submits the updated Project Close Out Report, using **Attachment PCL-01**, to the INvest PMO Manager. The INvest PMO Manager reviews the Project Close Out Report for completeness prior to submission to the INvest Executive Team. If the INvest Executive Team does not approve the updated Project Close Out Report, the INvest PMO Manager returns the document to the DDI Project Manager to address comments by the INvest Executive Team. When the INvest Executive Team accepts the updated Project Close Out Report from the DDI vendor, the INvest PMO Manager begins the final processes to close out the INvest Project.
4. **INvest PMO Manager Initiates Administrative Closure Activities** – The INvest PMO Manager initiates final closure of the INvest Project by ensuring the Project Close Out Report includes documentation that validates the following activities have been completed:
 - a. Receipt of all Organizational Process Assets;
 - b. Close out of all financial accounts for project; and,
 - c. Payment of all contractor invoices.

The INvest Master PMP for INvest contains the details regarding the tasks associated with final closure of the INvest Project. See the [Project Management Plan Development](#) chapter for additional detail concerning the INvest Master PMP.

5. **INvest PMO Manager Finalizes Project Close Out Report** – The INvest Project is officially closed when the CSB Executive Team approves the Project Close Out Report.

22.4 Templates

Table 69 provides a summary of the template used for the Project Closure process.

Table 69: Project Closure Template

Template Name	Description	Attachment ID
Project Close Out Report Template	<ul style="list-style-type: none"> Serves as the final document in the project life cycle, providing a summary of the project, explanation of variances, performance reviews, a plan for transition to operations, and lessons learned 	PCL-01

DELIVERABLE SIGN-OFF AND APPROVAL

The signatures following indicate that this Deliverable #03 – **INvest Governance Manual** has been reviewed by the INvest PMO Manager and all the necessary project stakeholders, and that the authorized signers accept and approve the content herein.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed by their duly authorized representatives.

QA Project Manager**INvest Project Manager**

AUTHORIZED SIGNATURE

AUTHORIZED SIGNATURE

Jeff Eckert

S. Joe Jean

NAME

NAME

QA Project Manager

INvest Project Manager (Acting)

TITLE

TITLE

DATE

DATE**INvest PMO Manager**

AUTHORIZED SIGNATURE

S. Joe Jean

NAME

INvest PMO Manager (Acting)

TITLE

DATE

Instructions - Resource Management Template									
The Resource Management Table provides information related to onboarding and offboarding of vendor staff. The sheet is provided to Organizational Readiness at the beginning of each month for staff changes occurring the following month. Columns A, B, H, and J require text. Columns C, D, and E are drop down boxes. Columns F, G, and I require a date.									
Example									
INvest DDI Roles									
Name	Job Title	Key Person (Y/N)	Part Time (Y/N)	Off Site (Y/N)	Onboard Date	Off Board Date	CSB Team Lead	Approval Date	Vendor Team Lead
John Smith	Technical Lead	Yes	No	No	8/4/2017		Jane Doe	6/28/2017	Sam Jones
Special Instructions - Resource Management Template									
The Resource Management Template provides only those names that have been approved by the appropriate INvest Project CSB Area Lead. The CSB Area Lead works with their peer on the vendor side to provide approvals for all additional and departing resources.									

INvest Governance Manual

[illegible]

Instructions - Vendor Information Form

The Vendor Information Form is filled out for every DDI staff person addition or departure from the INvest Project. A Vendor Information Form is filled out for each person on the Staffing Changes Sheet. The Vendor Information Form initiates the onboarding and off boarding process. The vendor must maintain a copy of the filled out form from onboarding to use when the staff person leaves the project.



VENDOR STAFF INFORMATION FORM FOR INvest

Instructions: Please complete all information below, sign, scan and return to OR for resource actions.

Copy: DCSCSBINvestCommunications@dcs.in.gov

INFORMATION NEEDED:		FILL IN INFORMATION BELOW:	
ONBOARDING			
1	START DATE: (MM/DD/YYYY)		
2	PREVIOUS STATE SERVICE?		
2.a.	If yes, what was PeopleSoft ID assigned (11 digits)		
3	NAME: (First, Middle, and Last)		
4	GENDER:		
5	DATE OF BIRTH: (MM/DD/YYYY)		
6	DRIVER'S LICENSE NUMBER:		
7	STATE THAT ISSUED THE DRIVER'S LICENSE No.:		
8	VENDOR NAME:		
9	POSITION TITLE:		

Completed by (Printed Name)

Signature

Date

OFF BOARDING			
1	END DATE: (MM/DD/YYYY)		
2	BADGE NUMBER:		
3	REASON FOR LEAVING: (Resigned, Terminated, Rolling off Project)		

Completed by (Printed Name)

Signature

Date



Indiana Department of Child Services Child Support Bureau

<Instructions for completing this form are provided in green and between brackets (e.g., "< instructions >"). Please delete all instructions, including this one, prior to finalizing the document.>

INvest Project Management Plan

Document Information

Document Title	Attachment PMP-01 Project Management Plan Template
Version	<v1.0>
Author	<Author>
Owner (if different from Author)	<Owner>

The controlled master of this document is available in the Project Library. Hard copies of this document are for information only and are not subject to document control.

Document History

Version	Date	Prepared / revised by	Change description (additions / modifications)
<v0.1>	<MM/DD/YYYY>	<Author>	<Initial draft>
<v0.2>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>
<v1.0>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>

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1.0 PROJECT OVERVIEW

<The Project Overview chapter of the Project Management Plan (PMP) provides a high level description of the Indiana Verification and Enforcement of Support (INvest) Project, and describes the INvest Project's benefits and the respective organization's artifacts and deliverables. The INvest Project Charter is referenced for information to include in these sections. Unless noted, all PMPs will contain content in all sections.>

1.1 Purpose, Scope, Goals, and Objectives

<This section of the PMP addresses the scope of the INvest Project, elaborating on the scope statement from the INvest Project Charter with additional details, including what the project does and does not include. This helps to avoid confusion on the part of project team members and stakeholders.>

1.2 Assumptions, Constraints, and Risks

<This section lists all known assumptions (treating something as true for the purpose of planning), constraints (limits or restrictions), and risks (the possibility that something negative will occur) for the INvest Project. These may have been identified as part of the INvest Project Charter, but should be elaborated on in this section.>

1.3 Glossary of Terms

<This section includes a link to a file of summary explanations and definitions of terms associated with the INvest Project, which is maintained by the INvest Project Management Office (PMO).>

2.0 PROJECT ORGANIZATION

<This chapter of the PMP outlines the management structure for the project. The sections describe, in general terms, the roles and project team members' levels of authority. They also address which organizations provide which resources for the project and any resource constraints or limitations.>

2.1 Project Governance

<This section contains details regarding how decisions will be made, including formal approval of vendor deliverables. If there are any decisions which must be made by specific individuals, such as authorizing additional funding by the project sponsor for example, this should also be stated here.>

2.1.1 Methodology

<This part provides a descriptive explanation on the methodology the INvest Project will follow and how the INvest Governance Manual will be followed.>

2.1.2 Tools

<This part provides a list of any specific tools that the INvest Project Team will use.>

2.1.3 Document Management

<This part provides the policies the INvest Project Team will follow for maintaining and updating project documentation (i.e., SharePoint).>

2.1.4 Periodic Review and Approval

<This part provides a schedule for the frequency of reviewing the INvest Governance Plan and the approval cycle to support any updates.>

2.2 Organizational Structure

<This section includes the organizational charts and associated detail for the Child Support Bureau (CSB), the Design, Development, and Implementation (DDI) vendor, and the Quality Assurance (QA) vendor for execution of the INvest Project.>

2.3 Roles and Responsibilities

<Key roles and associated responsibilities for the INvest Project are documented in this section.>

3.0 PROJECT MANAGEMENT PROCESSES

<Project management is the discipline of initiating, planning, executing, controlling, and closing the work of a team to achieve specific goals. The following sections outline what is required through these different phases to meet project goals.>

3.1 Project Deliverables

<This section of the PMP discusses the Work Breakdown Structure (WBS), the WBS dictionary, key deliverables and milestones, the schedule baseline, as well as how they will be used in managing the project's scope. The schedule baseline and WBS should be created using the current version of Microsoft Project.>

3.1.1 Work Breakdown Structure

<The WBS includes a listing of the work packages to be performed for the completion of the project, as well as a WBS dictionary defining the work packages.>

3.1.2 Milestones

<The Milestones part describes key deliverables and a summary list of milestones, including dates for each milestone and actions to be taken if any changes to the milestones or delivery dates occur.>

3.1.3 Baseline Schedule

<The schedule baseline provides a reference point for managing project progress as it pertains to the schedule and timeline.>

3.2 Resource Management Plan

<The purpose of the Resource Management Plan is to ensure that appropriate resources are planned for ahead of time, acquired with the necessary skills, are seamlessly transitioned on and off of the project at the appropriate times during INvest, and are managed effectively. The Resource Management Plan addresses four key components:

- Plan resource management;
- Acquire resources;
- Develop resources; and
- Manage resources.

3.3 Vendor Management Plan

<This section addresses the management of vendor contracts, including contract administration, financial arrangements, and issue resolution.>

3.4 Deliverables Management Plan

<The Deliverables Management Plan establishes criteria for how deliverables are created, submitted, reviewed, and approved. The following tasks are considered in developing this section:

- Criteria for accepting project deliverables;
- Roles and responsibilities for submitting, reviewing, and accepting deliverables;
- Time considerations for review and acceptance; and
- Deliverables acceptance log and comments.

Further information is available in the Deliverable Review and Acceptance section of the INvest Governance Manual.>

3.5 Requirements Management Plan

<The Requirements Management Plan process includes all activities required to plan and validate requirements for the Execution Phase of the System Development Life Cycle (SDLC). The Requirements Management Plan addresses:

- Requirements validation;
- Requirements elicitation;
- Conceptual solution validation and architectural proof of concept;
- Requirements traceability; and
- Tools and templates.>

3.6 Schedule Management Plan

<This section of the PMP provides a general framework for the approach to creation and management of the project schedule. Effective schedule management is necessary to ensure tasks are completed on time, resources are allocated appropriately, and project performance is measured. This section addresses:

- Scheduling tool and format;
- Schedule milestones;
- Schedule development roles and responsibilities;
- Schedule control;
- Schedule changes and thresholds; and
- Schedule impacts due to scope changes.>

3.7 Cost Management Plan

<This section defines how the costs of the INvest Project will be managed throughout the project's life cycle. It sets the format and standards by which the project costs are measured, reported, and controlled.

Contents should include, but are not limited to:

- Who is responsible for managing costs
- Who has the authority to approve changes to the project or its budget
- How cost performance is measured and reported upon
- Report formats, frequency, and to whom they are presented>

3.8 Quality Management Plan

<This section of the PMP discusses how quality management will be used to ensure that the deliverables for the project meet formally established standards for acceptance. This section should include quality roles and responsibilities for quality control, quality assurance, and quality monitoring.>

3.9 Stakeholder Management Plan

<The Stakeholder Management Plan ensures project stakeholders are effectively involved in planning and execution throughout the life cycle of the INvest Project. The plan identifies all internal and external stakeholders, documents stakeholder management strategies, and addresses monitoring and control of the stakeholder management process.>

3.10 Communications Management Plan

<The purpose of the Communications Management Plan is to define the communication requirements for the project and how information will be distributed to ensure project success. Communications includes the steps required to identify, plan, and execute project-level communications to internal and external stakeholders.

The INvest Project has three separate communication paths that should be considered when developing communication plans by all parties:

- CSB internal INvest Project communications;
- Organizational Readiness (OR) external communications; and
- Strategic initiatives external communications.>

3.11 Progress Monitoring and Reporting

<The Progress Monitoring and Reporting section addresses the processes, templates, and associated expectations for reporting progress through the INvest PMO to INvest leadership and other stakeholders.>

3.12 Risk and Issue Management Plan

<The Risk and Issue Management Plan addresses the identification, communication, assessment, response, and monitoring of risks and issues that impact or threaten to impact achievement of the INvest Project's objectives. This section includes a general description for the approach taken to identify and manage the risks and issues associated with the project. The risk section also includes a list of known risks when respective organization PMPs are developed.>

3.13 Project Change Control Plan

<The Project Change Control Plan ensures the ongoing integrity of the project's scope and budget and documents how changes are coordinated, planned for, and approved through the proper channels.

The following content is included in the Project Change Control sections of the PMP:

- Guidelines and method for requesting changes;
- Process for submitting changes to artifacts;
- Roles and responsibilities for submitting, analyzing, and approving project change requests;
- Criteria for determining impact to the baselines for scope, schedule, or budget;
- Thresholds for approval by INvest PMO Manager, the Change Control Review Board, or the INvest Executive Team; and
- Communications of changes (approved or denied) to INvest Project Team.>

3.14 Lessons Learned Plan

< The Lessons Learned Plan documents expectations for ongoing capture and review of lessons learned throughout the course of the INvest Project, leading to final documentation in the Project Closure Report.>

3.143.15 Project Closure Plan

<The Project Closure Plan addresses the steps needed to ensure that INvest has been completed and transitioned to ongoing operations, confirms the satisfaction of project stakeholders, and captures key lessons learned from the project for use in planning and managing future projects.>

4.0 PROJECT SUPPORTING PROCESSES

<The following are additional PMP sections addressing project approaches used in the execution of the INvest Project, generally containing specific detail in technical areas. A Lessons Learned Register will be utilized throughout the INvest Project to capture organizational experience gained through the INvest Project. The Lessons Learned Register Template is provided as Attachment 02.>

4.1 Configuration Management Plan

<The Configuration Management Plan addresses the steps required to establish, approve, and execute configuration control for the various system components of INvest. Contents of the Configuration Management Plan include, but are not limited to:

- Roles and responsibilities
- Configuration change control
- Configuration management database
- Configuration status accounting
- Configuration audits>

4.2 Test Management Plan

<The Test Management Plan includes the activities to plan for and execute testing to validate INvest requirements and to resolve any identified test defects.

The objective of test planning is to develop an overall test strategy describing what to test, how to test it, when to test, and who performs the test.>

4.3 Security Management Plan

<The Security Management Plan describes the implementation of controls related to the confidentiality, integrity, and availability of information. The Security Management Plan addresses processes for capturing, maintaining, and disposing of data in accordance with all State and federal data security standards and policies. The plan also addresses interactions with State security resources to ensure compliance throughout the entire SDLC.>

4.4 Data Conversion Plan

<The Data Conversion Plan will describe the process of transferring data from one location, storage medium, or hardware / software system to another. The Data Conversion Plan addresses processes for cleansing, transferring, validating, and synchronizing the data throughout the entire process.>

4.5 Data Governance Plan

<The Data Governance Plan describes the policies for the management of data assets and the performance of data functions. The Data Governance Plan includes the framework that encompasses the availability, usability, integrity, and security of data.

The plan will include but is not limited to the following:

- Policy, Standards, and Strategy
- Data Quality
- Privacy, Compliance, and Security
- Data Architecture and Data Integrity
- Business Intelligence / Reporting>

4.6 Implementation Plan

<The Implementation Plan documents activities required to coordinate the deployment of software into production, user training for the new software, and the development of a support mechanism to address any challenges that may occur during the transition.>

4.7 Knowledge Transfer Plan

<The Knowledge Transfer Plan addresses the multiple components required to transition support of INvest to the CSB Application Development, System Services, and INvest Help Desk teams for ongoing maintenance. Components of the knowledge transfer approach include, but are not limited to:

- Implementation of a peer-to-peer approach with management staff
- Embedding CSB staff, as appropriate, within various vendor teams
- Formal knowledge transfer activities, including training and shadowing DDI vendor staff

The Knowledge Transfer Plan will provide the most detail for the formal knowledge transfer activities, including technical training, documentation, checklists, and other materials.>

4.8 Training and Onsite Support Plan

<The Training and Onsite Support Plan documents the objectives and the scope of Primary and Secondary user training and onsite implementation support, as well as the resources, schedule, and constraints related to the execution of those activities.>

4.9 Application Design and Development Plan

<The Application Design and Development Plan (ADDP) includes all activities required to translate validated requirements into efficient, repeatable patterns for development of final application code for INvest. The Development process includes the steps required to code the components as determined in the Design process.

The ADDP includes, but is not limited to:

- Design
 - Iterative software design process and standards – frameworks, future growth, User Interface design standards, interface standards
 - User considerations
 - Design tradeoffs
 - Handle of critical requirements
 - Safety and security assurance
 - Detailed design
 - Reusable software products
 - Risk management
- Development
 - Iterative software development process
 - Establishing software development environments
 - Application development coding standards
 - Unit Testing approach
- Application integration>

4.10 Architecture Plan

<The Architecture Plan addresses the business and technology strategies and standards for INvest development, as well as the overall components of the solution.

The Architecture Plan includes:

- Architecture approach for business, data, application, and technology
- Architecture views and view descriptions
- Resource management – architecture roles and responsibilities throughout the project including implementation
- Requirements management – architecture teams approach to understanding CSB requirements and development of architecture requirements, constraints, assumptions, and gaps
- Replication architecture – plan for replicating data
- Batch architecture – batch processes and concurrency with online processes
- Interface architecture – plan to bring all external data interfaces into INvest
- Architecture diagnostics and metrics – approach to QA
- Architectural change management – how architecture changes are managed
- Architecture repository – capability to link architectural assets to components>

4.11 Service Oriented Architecture Governance Plan

<The Service Oriented Architecture (SOA) Governance Plan documents how the practices to manage services through policies, processes, metrics, and resources will be structured and executed.

The SOA Governance Plan includes, but is not limited to:

- Service Portfolio Management – practice to manage services
- Services Technical Architecture – infrastructure reference model
- Services Design and Development – process for design and development of services
- Configuration and Release Management – process to prepare services for implementation
- Service Monitoring and Control – how services will be monitored, tracked, and reported
- Incident Management – process for escalation
- Change Management – process for service changes>

4.12 Business Continuity/Disaster Recovery Plan

<The Business Continuity / Disaster Recovery Plan addresses actions required to maintain operations from both technology and overall business perspectives in the event of a disaster or other disruption to normal operations.

The Business Continuity / Disaster Recovery Plan address the following:

- Business Continuity
 - Defines how organizations will recover and restore partially or completely interrupted critical (urgent) functions within a predetermined time after a disaster or extended disruption
 - Schedules maintenance reviews of Business Continuity and Disaster Recovery Plans to identify potential sources of change such as new compliance requirements, changes to critical Recovery Time Objectives (RTO), and Recovery Point Objectives (RPO) levels
 - Includes Risk assessment methodology, threat identification and analysis, potential damage the events could cause, and impact scenarios
- Disaster Recovery
 - Maintenance schedules
 - Contingency plan testing
 - Business Continuity and Disaster Recovery drills
 - Communications plan during a system disaster and recovery
 - Identify measures and controls, establishing business and technical recovery requirements
 - Backup and failover processes for all IT assets based on RTO and RPO as determined and mutually agreed upon by the vendor and State during Disaster Recovery planning>

4.13 Maintenance and Operations Plan

<The Maintenance and Operations Plan defines activities needed to support ongoing operation of INvest, as well as the identification, prioritization, and execution of changes to the INvest production environment.

The Maintenance and Operations Plan addresses, but is not limited to the following:

- Maintenance and operations
 - Approach
 - Objectives
 - Resources
 - Security
- Maintenance policy, procedures, and checklists
- Third party software upgrade schedules
- Maintenance and operations transition plan to CSB including third party software and hardware procured by the DDI vendor>

4.14 Hardware and Software Plan

<The Hardware and Software Plan documents all of the hardware and software anticipated to make up the multiple technical environments for INvest.

The Hardware and Software Plan addresses the following activities and processes:

- Hardware, Network, and Software requirements;
- Capacity planning and analysis;
- Environments to support the development life cycle;
- Tools used; and
- Hardware and software set up for complete solution including, but not limited to:
 - Installation
 - Configuration
 - Troubleshooting
 - Database installation, configuring, and monitoring.>



Lessons Learned Register Instructions

The Lessons Learned Register captures organizational experience gained through the INvest Project. The register is updated throughout the project as new lessons learned are identified. The Lessons Learned Register is an input to other processes associated with the INvest Project, and helps to avoid the repetition of errors or issues, as well as promoting the repetition of positive outcomes, that have already been encountered. Lessons learned are a valuable organizational asset, and can be used to drive improvement in future projects as well as later portions of the INvest Project. Copies of this Lessons Learned template may be used in the collection and review of proposed Lessons Learned as well as the maintenance of an overall repository of confirmed Lessons Learned for the INvest Project.

Lessons Learned Register Field Descriptions:

ID #	A unique, sequential identifier for the item
Category	A notation of the Project Management Plan section associated with the Lesson Learned
Type	Either "Lesson Learned" (typically as a result of a problem) or "Best Practice" (typically as a result of a success)
Title	A short (35 characters or less), unique title summarizing the item
Description	A description of the lesson learned in generic form
Impact	A statement of what could occur if the Lesson Learned is ignored (often a generalized version of the impact observed in a specific situation)
Recommendation	A description of any action(s) to be taken to implement the lesson learned (which could be for later INvest activities or future projects)
Assigned To	(Optional) The individual responsible for implementing the recommendation
Comments	(Optional) Background and context information regarding the lesson learned, which may include information on the specific situation that led to the Lesson Learned, any root cause analysis that may have been conducted, and the results of any corrective action taken to date
Date Confirmed	The date of the Lessons Learned review meeting at which with Lesson Learned and associated Recommendation were finalized for addition to the overall Lessons Learned Register
Date Recommendation Implemented	The date the recommended action was completed by the assigned individual

[illegible]

Use the Influence and Involvement chart to identify key stakeholders and define approach to each.

The INvest PMO and OR should each create a separate Involvement and Influence Grid for internal and external stakeholders. However, the information gathered in each grid are included in the Stakeholder Register.

Focus is on the role being analyzed.

Header	Description	Rubric
INvest Stakeholder Role	Enter the stakeholder or stakeholder group in this field.	
Influence over Project	Select from the list the Influence each stakeholder or stakeholder group has with the INvest Project based on the Rubric information in the next column.	High (5 points): Responsible for key decisions; able to change budget, policy, or procedures; executive management and higher Medium (3 points): Input to key decisions; able to identify requirements, suggest policy and procedure changes; middle management Low (1 point): No decision-making responsibility and no impact on budget, policy, or procedures
Involvement in Project	Select from the list the Involvement level each stakeholder or stakeholder group has in the INvest Project based on the Rubric information in the next column.	High (5 points): 75% or more of time spent on project Medium (3 points): 25 to 74% of time spent on project Low (1 point): 24% or lower of time spent on project
Required Action Level	This field automatically populates based on the Rubric provide on Required Action Rubric worksheet. This column uses the responses in columns B (Influence) and C (Involvement) to select the appropriate action. There are four Required Action Levels (listed in order of priority): Critical, Keep Satisfied, Keep Informed, and Minimal Effort. Critical stakeholders have the most potential impact on project success, and engagement (communication and potentially involvement in decisions affecting their areas of influence) is important to keep the INvest Project moving forward. The remaining Required Action Levels (Keep Satisfied, Keep Informed, and Minimal Effort, in declining order of priority) recognize the need to match the investment of effort with the potential impact on the project.	
Change Agent	Optional: Each stakeholder or stakeholder group offers greater potential than others to positively influence other stakeholder perceptions regarding the INvest project. Change agents may have any combination of the following attributes and should be positively engaged in the project outcome: --Trusted and opinion valued by other stakeholders --Knowledgeable and willing to share that knowledge with others (process, organizational, or technical knowledge) --Open, asks questions, and expresses thoughts and concerns freely --Patient and flexible --Persistent in pursuing optimal decisions and outcomes Note: While this can be merged with the stakeholder register, we recommend keeping them separate. The stakeholder register can be shared with others for communication purposes and we consider the information on this Influence and Involvement Chart as proprietary.	
Notes	Enter any pertinent information about the stakeholder or stakeholder group that further defines their involvement or influence score.	

[illegible]

INvest Project			
INFLUENCE	INVOLVEMENT		
	1 (Low)	3 (Medium)	5 (High)
	5 (High) Keep Satisfied: Monitor perceptions Communicate regularly Seek feedback Resolve any concerns quickly	Keep Satisfied: Monitor perceptions often Communicate often Seek feedback Resolve problems immediately	Critical: Monitor perceptions often Communicate often Seek feedback often Resolve problems immediately
	3 (Medium) Keep Informed: Monitor perceptions Communicate regularly Resolve problems timely	Keep Informed: Monitor perceptions often Communicate often Resolve problems timely	Keep Satisfied: Monitor perceptions often Communicate often Seek feedback Resolve problems immediately
1 (Low)	Minimal Effort	Keep Informed: Monitor perceptions Communicate regularly Resolve problems promptly	Keep Informed: Monitor perceptions Communicate often Resolve problems promptly

INVEST PROJECT				
INFLUENCE	INVOLVEMENT			
	1 (Low)	3 (Medium)	5 (High)	
	5 (High)			
	3 (Medium)			
1 (Low)				



Stakeholder Register Instructions

The Stakeholder Register identifies all stakeholders, internal and external, that affect or affected by the INvest Project. The register is updated throughout the project as new information is identified, and in the event stakeholders were omitted in the initial assessment. The Stakeholder Register is an input to other processes associated with the INvest Project. The register assists in ensuring stakeholders are engaged at the right time, receive reports and other documentation at the appropriate phase of the project, and communicated with the preferred method.

Stakeholder Register Field Descriptions:

Stakeholder Name (Group or Individual)	Enter the name of the individual stakeholder or stakeholder group
Primary Point of Contact	Enter the name of the primary contact for the stakeholder group
Project Role	Enter the role the stakeholder plays in the INvest project
Organization	Enter the organizational name the stakeholder belongs (Select option)
Internal / External	Identify if the stakeholder is internal or external to the project (Select option)
Description	A detailed description of the stakeholder, including their interests or needs
Required Action Level	Information from the Stakeholder Analysis Worksheet (Select option)
Preferred Method of Communication	Identify the best way to communicate with the stakeholder (Select option)
Telephone #	Contact number to either call or text appropriate information
E-mail address	Contact e-mail address for communication
Required Documentation	Project plans, deliverables, reports, that the stakeholder is responsible for, informed, or consulted
Required Participation	Project key phases stakeholder should participate (kick-off meeting, user testing, requirements definition, etc.)
Notes / Comments	Key information about the stakeholder (past experience, influence over other stakeholders, etc.)
Date Last Updated	Enter the date when stakeholder information was updated.

INvest Project - Stakeholder Register													
Stakeholder Name (Individual or Group)	Primary Point of Contact	Project Role	Organization	Internal / External	Description	Required Action Level	Preferred Method of Communication	Telephone #	E-mail address	Required Documentation	Required Participation	Notes / Comments	Date Last Updated

Communications Matrix

Column Instructions / Description

General Directions	The INvest PMO Manager owns the communications matrix and integrates Organizational Readiness and vendor communications matrices into the master communications matrix. The INvest PMO Manager holds meetings to collaborate on all aspects of the communications matrix development and ongoing updates.
Column Header	Instructions / Description
Project Phase	Insert the project phase relevant to the communication delivery.
Order	Order outlines the sequence in which communications during a certain phase are delivered.
Topic	Identify the topic of the communication.
Channels	Channels provide how the message is communicated. There may be one or more channels.
Stakeholders	Stakeholders are groups or individuals who have an interest in the project. The interest can be topic or phase specific, or ongoing. The stakeholders identified as having an interest in the INvest Project are listed on the stakeholder register. Insert appropriate stakeholder groups to receive the message.
Goal	Goal is a statement providing the intended outcome of the communication.
Frequency	Frequency provides how often the communication is delivered.
Publish Date	Publish Date is the date or timeframe for release of the communication.
Developer	Developer is an individual or group responsible for creating the communication.
Communication Type	Communication type provides the form for communication development.
Reviewer	Reviewer is the individual who reviews the communication for content, grammar, and whether the communication achieves its intended goals.
Approver	Approver is the individual who has final approval of the communication.
Feedback Mechanisms	Feedback mechanisms are incorporated into the communication or feedback is solicited after the release.
Effectiveness Measure	Effectiveness is used to measure how successful the message was at achieving its intended goal.

Messages by Stage

The Messages by Stage tab provides guidance for recommended messages based on the stage of the development cycle.

Communications Matrix

Project Stage	Order	Communication Topic (WHAT)	Channels (HOW)	Stakeholders (WHO) <i>Draw from Stakeholder Matrix</i>	Goal (WHY)	Frequency (WHEN)	Publish Date	Developer	Communication Type	Reviewer	Approver	Feedback Mechanisms	Effectiveness

Communications Matrix

Project Stage	Order	Communication Topic (WHAT)	Channels (HOW)	Stakeholders (WHO) <i>Draw from Stakeholder Matrix</i>	Goal (WHY)	Frequency (WHEN)	Publish Date	Developer	Communication Type	Reviewer	Approver	Feedback Mechanisms	Effectiveness

Communications Matrix

Project Stage	Order	Communication Topic (WHAT)	Channels (HOW)	Stakeholders (WHO) <i>Draw from Stakeholder Matrix</i>	Goal (WHY)	Frequency (WHEN)	Publish Date	Developer	Communication Type	Reviewer	Approver	Feedback Mechanisms	Effectiveness

Recommended Messages by Stage

Project Stages	Categories of Communication to Consider	Distribution Timing*
Initiation	"We are doing it" "What it is" "Why we are doing it"	
Planning	Participation expectation / impact Timeframe	
Requirements	Who will participate What they will be required to do (e.g., Champion, Manage, Support, Train, etc.)	
Design	What the new system, process, program, operation, etc. will look like What will stop or start being done as a result	
Development (Testing)	Who will do testing Define testing Timing and training details	
Implementation / Rollout	Rollout schedule / implementation plan Educational / training opportunities Pilots	
Close-out	Communicate benefits Lessons learned	

****Distribution Timing is based upon DDI Project Management Plan***

These are used to populate the dropdown lists on the communications matrix.

To add to the list, insert the new value into the appropriate place on the list below.

Note: These are provided as examples and will be updated as we clarify contents for cells.

Communication Path / Channels (HOW)	Frequency (WHEN)
Face-to-Face	Weekly
E-mail	Monthly
Webmail	Bi-Monthly
Webinar	Quarterly
Document Handout	Ad-Hoc
Website	TBD
FAQ Sheet	Once
Newsletter	January
Mailed Letter	February
Briefing Document	March
Public Service Announcement	April
Conference Call	May
Conference Event	June
Multiple	July
Surveys	August
	September
	October
	November
	December



Indiana Department of Child Services

Child Support Bureau

<Instructions for completing this form are provided in green and between brackets (e.g., "< instructions >"). Please delete all instructions, including this one, prior to finalizing the document.>

Risk and Issue Response Plan

Document Information

Document Title	Attachment RIM-01 Risk and Issue Response Plan Template
Version	<v1.0>
Author	<Author>
Owner (if different from Author)	<Owner>

The controlled master of this document is available in the Project Library. Hard copies of this document are for information only and are not subject to document control.

Document History

Version	Date	Prepared / revised by	Change description (additions / modifications)
<v0.1>	<MM/DD/YYYY>	<Author>	<Initial draft>
<v0.2>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>
<v1.0>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>

RISK AND ISSUE RESPONSE PLAN

Summary			
Risk / Issue ID	<ID from the Matrix>	Risk or Issue?	<Risk or Issue>
Risk / Issue Short Name	<Insert the issue / risk by a short name from the Matrix.>		
Description	<Provide a brief description of the issue or risk, including if it is external or internal to the project.>		
Work Product or Deliverable Affected	<Identify the work product or deliverable impacted by the issue / risk.>	Owner	<List the name of the individual assigned to own this risk or issue. Owners are responsible for monitoring their respective risks / issues and may also be assigned responsibility for the associated plan.>
Date of Last Review	<Indicate the last date the risk / issue was reviewed, either as part of a Risk and Issue Response Plan review or weekly status team meeting.>	Date of Last Update	<Indicate the last date the risk / issue was updated, resulting from either a change in status or from additional information gained regarding the risk / issue.>

Response Approach
<p>Summary of approach to respond to risk or issue:</p> <p><Provide details regarding the strategy proposed to respond to the risk or issue. Be as specific as possible, describing the specific steps involved in the response.></p>

Key Activities in Response Plan					
#	Key Activity	Assigned To	Target Completion Date	Actual Completion Date	On Track?
	<Insert major activities in this column. Add or delete rows as needed.>	<Insert the person assigned to each activity.>	<Insert the targeted completion date for each activity.>	<Insert the actual completion date when completed.>	<Indicate if the activity is on track to meet the target completion date.>

Budget and Dates

Budget (if applicable)	Implementation Date	Closed Date
<If available, include a summary of costs associated with implementing this plan.>	<Indicate the date that the plan was executed.>	<Indicate the date that the plan was closed.>

Communication Activities

#	Communication	Type or Method	Stakeholder Group Targeted	Related Risk or Issue	Assigned To
	<Insert the subject, major points, and desired outcome of the communication.>	<Insert the communication type or method to be used (e.g. email, meetings, etc.)>	<Insert the stakeholder group being targeted with the communication.>	<Insert the related risk or issue being addressed.>	<Insert the person assigned to each activity.>

Actual Results

Actual outcome of implementing the Risk and Issue Response Plan:

<After the Risk and Issue Response Plan has been implemented, detail the actual outcomes. Be as specific as possible.>



Indiana Department of Child Services

Child Support Bureau

<Instructions for completing this form are provided in green and between brackets (e.g., "< instructions >"). Please delete all instructions, including this one, prior to finalizing the document.>

INvest Business Process Model Template

Document Information

Document Title	Attachment RQM-02 Business Process Model Template
Version	<v1.0>
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<v1.0>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>

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1.0 <BPM ID AND NAME>

<Update the section name above. Describe the Business Process Model, which is a collection of related, structured activities or tasks that produce a specific service or product below.>

Figure 1 provides the Business Process Diagram.

<Insert BPM Diagram in the line below and update the caption to reflect the BPM ID and Name.>

Figure 1: <BPM ID and Name> Business Process Diagram

2.0 FEATURES

Table 1 provides a list of Features required by this BPM.

<Update the table below, replacing the descriptive fields in the second row.>

Table 1: Features

ID	Type	Description	Use Case / Service ID	Source	Citation
<ID>	<Business or Technology >	<Major / high-level requirements of the tool or the significant functions that it performs or lets the user perform>	<Associated Use Case and / or Service ID(s)>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

3.0 ASSOCIATED USE CASES

Table 2 provides a list of Use Cases (or human tasks) associated with this BPM.

<Update the table below, replacing the descriptive fields in the second row.>

Table 2: Use Cases

ID	Name	Description
<ID>	<Short descriptive name of the Use Case>	<Describes (at a high level) the scope of the Use Case>

4.0 SERVICES

4.1 <Service Name and ID>

4.1.1 Service Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 3: <Service ID and Name> Service Specification

Service Specification Summary	
Service ID:	<ID>
Service Name:	<Describes (at a high level) the scope of a Service>
Service Capabilities:	<Indicates the business or technical operations that can be performed by the Service>

4.1.2 Service Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 4: <Service ID and Name> Service Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

4.1.3 Service Storyboards

4.1.3.1 <Service Storyboard ID and Name>

Storyboard Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 5: <Service Storyboard ID and Name> Storyboard Specification

Storyboard Specification Summary	
Storyboard ID:	<ID>
Storyboard Name:	<Describes (at a high level) the scope of a Storyboard requirement>
Mode:	<Input or Output>
Payload:	<The content / business data of the Service document>

Storyboard Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 6: <Service Storyboard ID and Name> Storyboard Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

4.1.3.2 <Service Storyboard ID and Name>

Storyboard Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 7: <Service Storyboard ID and Name> Storyboard Specification

Storyboard Specification Summary	
Storyboard ID:	<ID>
Storyboard Name:	<Describes (at a high level) the scope of a Storyboard requirement>
Mode:	<Input or Output>
Payload:	<The content / business data of the Service document>

Storyboard Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 8: <Service Storyboard ID and Name> Storyboard Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

4.2 <Service Name and ID>

4.2.1 Service Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 9: <Service ID and Name> Service Specification

Service Specification Summary	
Service ID:	<ID>
Service Name:	<Describes (at a high level) the scope of a Service>
Service Capabilities:	<Indicates the business or technical operations that can be performed by the Service>

4.2.2 Service Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 10: <Service ID and Name> Service Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

4.2.3 Service Storyboards

4.2.3.1 <Service Storyboard ID and Name>

Storyboard Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 11: <Service Storyboard ID and Name> Storyboard Specification

Storyboard Specification Summary	
Storyboard ID:	<ID>
Storyboard Name:	<Describes (at a high level) the scope of a Storyboard requirement>
Mode:	<Input or Output>
Payload:	<The content / business data of the Service document>

Storyboard Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 12: <Service Storyboard ID and Name> Storyboard Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

4.2.3.2 <Service Storyboard ID and Name>

Storyboard Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 13: <Service Storyboard ID and Name> Storyboard Specification

Storyboard Specification Summary	
Storyboard ID:	<ID>
Storyboard Name:	<Describes (at a high level) the scope of a Storyboard requirement>
Mode:	<Input or Output>
Payload:	<The content / business data of the Service document>

Storyboard Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 14: <Service Storyboard ID and Name> Storyboard Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

<Repeat section for each Service associated with the BPM.>



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INvest Use Case Template

<Use Case ID and Name>

(Associated with **<BPM ID and Name>**)

Document Information

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1.0 BUSINESS PROCESS MODEL

This Use Case is associated with the following Business Process Models (BPMs):

<List the associated PBMs and their IDs below.>

- <BPM ID>: <BPM Name>

Refer to the Business Process Model document for the BPM Diagram and description.

<Or, if UC is not associated with a BPM, replace this section with “Use Case is not associated with a Business Process Model.”>

2.0 <USE CASE ID AND NAME>

2.1 Use Case Diagram

<Insert UC Diagram and update the caption.>

Figure 1: <UC ID and Name> Use Case Diagram

2.2 Use Case Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 1: <UC ID and Name> Specification

Use Case Specification Summary	
Use Case ID:	<ID>
Use Case Name:	<Short descriptive name of the Use Case>
Description:	<Describes (at a high level) the scope of the Use Case>
Primary Actor:	<The role involved in the Use Case>
Secondary Actors:	<Other role(s) involved in the Use Case>
Pre-conditions:	<A condition or predicate that must always be true before a process can continue>
Trigger:	<The event that starts the Use Case>
Post-conditions:	<A condition that must always be true just after a process has executed>

2.3 Use Case Activity Diagram

<Insert the UC Activity Diagram and update the caption.>

Figure 2: <UC ID and Name> Use Case Activity Diagram

3.0 USER EXPERIENCE STORYBOARDS

3.1 <Storyboard Name and ID>

3.1.1 Storyboard Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 2: <Storyboard ID and Name> Storyboard Specification

Storyboard Specification Summary	
Storyboard ID:	<ID>
Storyboard Name:	<Describes (at a high level) the scope of a Storyboard requirement>
Description:	<Details the Storyboard requirement, providing an overview of the process involved in the interaction>
Language:	<English and / or Spanish>
View:	<Defines the information that should be displayed to the user>
Edit:	<Defines the information that the user can modify>
Options:	<Defines the actions the user should be able to take>
User Experience Type:	<Screen, Report, or Notice>

3.1.2 Storyboard Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 3: <Storyboard ID and Name> Storyboard Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

3.2 <Storyboard Name and ID>

3.2.1 Storyboard Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 4: <Storyboard ID and Name> Storyboard Specification

Storyboard Specification Summary	
Storyboard ID:	<ID>
Storyboard Name:	<Describes (at a high level) the scope of a Storyboard requirement>
Description:	<Details the Storyboard requirement, providing an overview of the process involved in the interaction>
Language:	<English and / or Spanish>
View:	<Defines the information that should be displayed to the user>
Edit:	<Defines the information that the user can modify>
Options:	<Defines the actions the user should be able to take>
User Experience Type:	<Screen, Report, or Notice>

3.2.2 Storyboard Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 5: <Storyboard ID and Name> Storyboard Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

<Repeat section for each User Experience Storyboard associated with the UC.>

4.0 SERVICES

4.1 <Service Name and ID>

4.1.1 Service Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 6: <Service ID and Name> Service Specification

Service Specification Summary	
Service ID:	<ID>
Service Name:	<Describes (at a high level) the scope of a Service>
Service Capabilities:	<Indicates the business or technical operations that can be performed by the Service>

4.1.2 Service Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 7: <Service ID and Name> Service Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

4.1.3 Service Storyboards

4.1.3.1 <Service Storyboard ID and Name>

Storyboard Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 8: <Service Storyboard ID and Name> Storyboard Specification

Storyboard Specification Summary	
Storyboard ID:	<ID>
Storyboard Name:	<Describes (at a high level) the scope of a Storyboard requirement>
Mode:	<Input or Output>
Payload:	<The content / business data of the Service document>

Storyboard Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 9: <Service Storyboard ID and Name> Storyboard Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

4.1.3.2 <Service Storyboard ID and Name>

Storyboard Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 10: <Service Storyboard ID and Name> Storyboard Specification

Storyboard Specification Summary	
Storyboard ID:	<ID>
Storyboard Name:	<Describes (at a high level) the scope of a Storyboard requirement>
Mode:	<Input or Output>
Payload:	<The content / business data of the Service document>

Storyboard Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 11: <Service Storyboard ID and Name> Storyboard Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

4.2 <Service Name and ID>

4.2.1 Service Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 12: <Service ID and Name> Service Specification

Service Specification Summary	
Service ID:	<ID>
Service Name:	<Describes (at a high level) the scope of a Service>
Service Capabilities:	<Indicates the business or technical operations that can be performed by the Service>

4.2.2 Service Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 13: <Service ID and Name> Service Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

4.2.3 Service Storyboards

4.2.3.1 <Service Storyboard ID and Name>

Storyboard Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 14: <Service Storyboard ID and Name> Storyboard Specification

Storyboard Specification Summary	
Storyboard ID:	<ID>
Storyboard Name:	<Describes (at a high level) the scope of a Storyboard requirement>
Mode:	<Input or Output>
Payload:	<The content / business data of the Service document>

Storyboard Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 15: <Service Storyboard ID and Name> Storyboard Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

4.2.3.2 <Service Storyboard ID and Name>

Storyboard Specification

<Update the table below, replacing the descriptive fields in the second column.>

Table 16: <Service Storyboard ID and Name> Storyboard Specification

Storyboard Specification Summary	
Storyboard ID:	<ID>
Storyboard Name:	<Describes (at a high level) the scope of a Storyboard requirement>
Mode:	<Input or Output>
Payload:	<The content / business data of the Service document>

Storyboard Rules

<Update the table below, replacing the descriptive fields in the second row.>

Table 17: <Service Storyboard ID and Name> Storyboard Rules

ID	Rule Type	Condition	Result	Source	Citation
<ID>	<Presentation, Flow, Filter, Validation, Calculation, or Situation>	<Describes the condition / situation for the rule to apply >	<Describes the action that the system must take when the condition occurs>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>

<Repeat section for each Service associated with the UC.>



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INvest Supplementary Specifications Template

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1.0 GLOBAL RULES

Table 1: Global Rules

ID	Scope	Constraints	Description	Source	Citation	Classification
<ID>	<Global or Constrained>	<Any restriction that will affect the Scope of the requirement in relation to the project or the project activities>	<Non-functional requirement that is applicable across multiple projects>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>	<Organizational, Usability, User and App Documentation, Training, Security, Transition, Data Migration, Performance, Reliability, Availability, Flexibility, System Capacity and Scalability, Standards Compliance, Efficiency, Interpretability, Robustness, Maintainability, Portability, or Safety>

2.0 STYLE GUIDE

Table 2: Style Guide

ID	Scope	Constraints	Description	Source	Classification
<ID>	<Global or Constrained>	<Any restriction that will affect the Scope of the requirement in relation to the project or the project activities>	<Non-functional requirement that is related to the presentation to / interface with the user>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Organizational, Usability, User and App Documentation, Training, Security, Transition, Data Migration, Performance, Reliability, Availability, Flexibility, System Capacity and Scalability, Standards Compliance, Efficiency, Interpretability, Robustness, Maintainability, Portability, or Safety>

3.0 KEY PERFORMANCE INDICATORS

Table 3: Key Performance Indicators (KPIs)

ID	Type	Metric	Units	Frequency	Measure	Report	Threshold	Consequences	Source	Citation	Classification
<ID>	<Business or Technology>	<A standard unit of measure that is used to quantitatively assess a requirement (e.g., average response time, calls per hour)>	<The division of quantity referenced in the metric for a requirement (e.g., dollars, hours, etc.)>	<The periodicity with which a requirement is measured>	<The means by which a requirement is measured (e.g., recording number of calls received)>	<The means by which the metric for a requirement is communicated (e.g., paper, electronic, etc.)>	<A fixed value (typically an upper bound or lower bound) that distinguishes normal values from abnormal metric values; used to detect process anomalies>	<The potential result from failing to satisfy the Threshold objective>	<Federal, State, Policy, Business Operations, or Technology Operations>	<Mandatory citation to Federal Requirement if Source is "Federal" or other optional citation as needed>	<Organizational, Usability, User and App Documentation, Training, Security, Transition, Data Migration, Performance, Reliability, Availability, Flexibility, System Capacity and Scalability, Standards Compliance, Efficiency, Interpretability, Robustness, Maintainability, Portability, or Safety>



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Requirements Types and Attributes Standards and Guidelines Template

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1.0 INTRODUCTION

This document describes the various types of requirements captured during the Requirements Elicitation sessions of the INvest Project, characteristics of a good requirement, guidelines used when validating and eliciting requirements, and the naming convention used in updating or creating Business Requirements Specifications. This document also shows the traceability links from and to all Requirements Types.

2.0 STANDARDS

2.1 Requirements Types and Attributes

Table 2 defines all of the requirement types and attributes captured during the Requirements Elicitation process¹. Please use the following key to read the Requirement Types table:

Table 1: Requirements Types and Attributes Key

Table Key	
M-DEFINE	Mandatory
O	Optional

Populate mandatory attributes (e.g., M-DEFINE). No requirement to populate optional attributes, only when appropriate².

The global Source attribute is not collected for the following: BPM, Actor, Use Case, Service, or Storyboard since the source is captured at the associated rule level for those requirements.

Table 2: Requirements Types and Attributes

Attribute	Required?	Default	Attribute Value
Requirement Type: Global			
ID #	M-DEFINE	Auto	<ul style="list-style-type: none"> Assigned by RequisitePro
Project	M-DEFINE	-	<ul style="list-style-type: none"> Admin Claiming CI Doc Gen Financials Establishment Enforcement
Source	M-DEFINE	-	<ul style="list-style-type: none"> Federal State Policy Business Operations Technology Operations Other
Citation	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured

¹ Note that not all of the attributes are captured during the Requirements Elicitation process but should be filled in after the requirement is entered into the Requirements Management tool.

² Note that the Mandatory designation is by process / procedure only and will not be enforced in the requirements management tool.

Attribute	Required?	Default	Attribute Value
Status	M-DEFINE	-	<ul style="list-style-type: none"> Active Inactive
Status Notes	O	-	<ul style="list-style-type: none"> Unstructured
Change Control ID	O	-	<ul style="list-style-type: none"> Change Control Document ID
Requirements Elicitation ID	O	-	<ul style="list-style-type: none"> Requirements Elicitation <Unique #> <Abbreviated Business Item Name> <Project Change Request ID>
Priority	M-DEFINE	-	<ul style="list-style-type: none"> High Low
Design Specification	O	-	<ul style="list-style-type: none"> <SDD Section Number / Name>
Technical Module	O	-	<ul style="list-style-type: none"> <Technical Module Number / Name>
Test Case Reference	O	-	<ul style="list-style-type: none"> <Test Case Number / Name>
Requirement Type: Feature			
Description	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Use Case / Service ID	M-DEFINE	-	<ul style="list-style-type: none"> <Use Case ID / Service ID>
Total Priority Score	O	-	<ul style="list-style-type: none"> Unstructured
Requirement Type: Supplementary Specification (General)			
Classification	M-DEFINE	-	<ul style="list-style-type: none"> Organizational Usability User and App Documentation Training Security Transition Data Migration Performance Reliability Availability Flexibility System Capacity and Scalability Standards Compliance Efficiency Interpretability Robustness Maintainability Portability Safety
Total Priority Score	O	-	<ul style="list-style-type: none"> Unstructured

Attribute	Required?	Default	Attribute Value
Requirement Type: Supplementary Specification - Design Constraints			
Description	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Scope	M-DEFINE	-	<ul style="list-style-type: none"> Global Constrained
Constraints (N/A if scope is global)	O	-	<ul style="list-style-type: none"> Unstructured
Requirement Type: Supplementary Specification - Global Rules			
Description	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Scope	M-DEFINE	-	<ul style="list-style-type: none"> Global Constrained
Constraints (N/A if scope is global)	O	-	<ul style="list-style-type: none"> Unstructured
Requirement Type: Supplementary Specification - Key Performance Indicators			
Metric	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Units	O	-	<ul style="list-style-type: none"> Unstructured
Frequency	O	-	<ul style="list-style-type: none"> Unstructured
Measure	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Report	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Threshold	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Consequences	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Requirement Type: Supplementary Specification - Style Guide			
Description	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Scope	M-DEFINE	-	<ul style="list-style-type: none"> Global Constrained
Constraints (N/A if scope is global)	O	-	<ul style="list-style-type: none"> Unstructured
Requirement Type: Storyboard (General)			
Storyboard Name	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Description	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Requirement Type: File Storyboard			
Mode	M-DEFINE	-	<ul style="list-style-type: none"> Input Output
Payload	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Requirement Type: User Experience Storyboard			
Language	M-DEFINE	English	<ul style="list-style-type: none"> English Spanish

Attribute	Required?	Default	Attribute Value
View	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Edit	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Options	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
User Experience Type	M-DEFINE	-	<ul style="list-style-type: none"> Screen Report Notice
Requirement Type: Rule			
Rule Name	M-DEFINE	-	<ul style="list-style-type: none"> <Rule ID> <Project Change Request ID>
Condition	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Result	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Rule Type	M-DEFINE	-	<ul style="list-style-type: none"> Presentation Flow Filter Validation Calculation Situation
Total Priority Score	O	-	<ul style="list-style-type: none"> Unstructured
Requirement Type: BPM			
BPM Name	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
BPM Description	O	-	<ul style="list-style-type: none"> Unstructured
Requirement Type: Use Case			
Use Case Name	M-DEFINE	-	<ul style="list-style-type: none"> <Verb> <Noun>
Description	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Primary Actor	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Secondary Actor	O	-	<ul style="list-style-type: none"> Unstructured
Pre-conditions	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Trigger	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Post-conditions	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Requirement Type: Actor			
Actor Name	M-DEFINE	-	<ul style="list-style-type: none"> Unstructured
Actor Type	M-DEFINE	Human	<ul style="list-style-type: none"> Human System
Actor Description	M-DEFINE	-	<ul style="list-style-type: none"> State County

Attribute	Required?	Default	Attribute Value
			• Other
Requirement Type: Service Specification			
Service Name	M-DEFINE	-	• Unstructured
Service Capabilities	M-DEFINE	-	• Unstructured
Requirement Type: Glossary			
Glossary Term	M-DEFINE	-	• Unstructured
Term Description	O	-	• Unstructured

3.0 GUIDELINES

3.1 Requirements Characteristics

Characteristics of a good requirement include the following:

- Complete – contains all necessary information including acceptance criteria
- Clear – concisely stated, unambiguous, and expressing objective facts
- Cohesive – addresses one requirement
- Correct – meets the business needs of the stakeholders
- Consistent – does not conflict with other requirements, and includes detail
- Current – is not / will not be obsolete when completed
- Feasible – can be technically and legally accomplished within project constraints
- Verifiable – physically and functionally testable (some requirements can also be verified through inspection, analysis, or demonstration via prototypes)
- Modular – can be changed without impacting the overall system
- Traceable – each requirement is uniquely identified and bi-directionally traceable

3.2 Guideline List

The following guidelines should be followed when validating and eliciting requirements.

Table 3: Requirements Guidelines List

#	Guideline	Example
1	Requirements are developed iteratively and incrementally.	Requirements are captured, reviewed, and updated as necessary.
2	Rules are requirements that are specific enough to test autonomously.	The SSN should be composed of exactly nine numeric characters.
3	Features are broad descriptive qualities of a system.	The system will allow access to be managed centrally.
4	Check to see if there are existing requirements that are similar or exact duplicates.	N/A
5	Check to see if there are any spelling or grammar errors (e.g., periods, bullet formatting, etc.).	N/A
6	If necessary, start requirements with the phrase 'System must...' rather than 'System will...'	N/A
7	Do not use bulleted lists or tabs when entering requirements into RequisitePro.	N/A
8	Ensure all necessary attributes such as Source, etc. are populated for requirements.	N/A
9	Do not create new Actor requirements without reviewing existing Actors.	N/A

#	Guideline	Example
10	If a Rule is written more like a Feature, consider changing the Rule to a Feature or rewording the Rule. All Rules should be documented with conditions and results.	CONDITION: There is more than one NCP. RESULT: Signature lines should be inserted as needed.
11	Screen Storyboard attributes should list the field names and not written in a Feature-like description of the field.	N/A

3.3 Title Naming Conventions

Table 4 provides the naming convention to be used in developing the Business Requirements Specifications. The naming convention consists of the requirement type and an auto-generated number from the requirements tool. “X”s denote numbers and “A”s denote letters.

Note the following naming conventions:

- The requirement type name cannot be longer than 50 characters. The 50-character limit does not include the auto-generated number appended to the end of the name.
- The requirement type name must be written using CamelCase notation in which the initial letter of a word is capitalized and no spaces between two consecutive words. This practice aims to maintain soft traceability between requirements across tools / platforms.
- The tool generated ID will not contain leading zeroes.
- The tool generated ID will not exceed six numbers.

Table 4: Requirements Type Naming Conventions

Requirement Type	Naming Convention	Examples
Feature	FEAT<XXXX>	FEAT1243
Business Process Model	BPM<AAA>XXXX	BPMAC0001 / BPMCI0001
Actor	ACTR<XXXX>	ACTR1234
Use Case	UCXXXX	UC3233
Service	SRVXXXX	SRV0002
Rule	RULXXXX	RUL0002
User Experience Storyboard	SB<XXXX>	SB123
File Storyboard	SBFILE<XXXX>	SBFILE9876
Service Storyboard	SRVSB<XXXX>	SRVSB2386
Global Rule	GR<XXXX>	GR4246
Style Guide	SG<XXXX>	SG2275
Design Constraints	DC<XXXX>	DC6843
Key Performance Indicators (KPI)	KPI<XXXX>	KPI2332
Glossary	TERM<XXXX>	TERM1234

3.4 Traceability Link Relationships

Table 5 describes the traceability between the requirements types.

Table 5: Requirements Traceability Link Relationships

Requirement Type	Forward Links To	Backward Links To
BPM	<ul style="list-style-type: none"> Feature Use Case Service 	<ul style="list-style-type: none"> N/A
Feature	<ul style="list-style-type: none"> Use Case Service 	<ul style="list-style-type: none"> BPM
Use Case	<ul style="list-style-type: none"> Rule Actor User Experience Storyboard Service 	<ul style="list-style-type: none"> BPM Feature
Actor	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Use Case
Service	<ul style="list-style-type: none"> Rule Storyboard Service File Storyboard 	<ul style="list-style-type: none"> BPM Feature Use Case
Rule	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Service Use Case Storyboard
Storyboard	<ul style="list-style-type: none"> Rule 	<ul style="list-style-type: none"> Service Use Case

**Requirements Management Plan
Column Instructions / Description**

Column Header	Instructions / Description
Requirements Validation Session #	Determine the number of Requirements Validation Sessions required for the project. A "Requirements Validation Session" typically refers to a series of meetings held in one week focusing on one or more business processes. Each Requirements Validation Session will have its own row in this Plan. Enter the Requirements Validation Session number in this column. Add or remove rows as needed.
Requirements Validation Session Dates	Once the number of Requirements Validation Sessions established, schedule each Requirements Validation Session. List the scheduled dates of the Requirements Validation Session in this column.
Sub-Processes to be Covered in the Requirements Validation Session	Determine which sub-processes will be covered in which Requirements Validation Session. List each sub-process to be covered in this Requirements Validation Session in this column.
Targeted State Participants	List the State participants to be invited to this Requirements Validation Session in this column.
Targeted Other Participants	List the additional participants to be invited to this Requirements Validation session in this column.



Requirements Management Plan

Project:

Requirements Validation

Kick-Off:

Requirements Validation Session #	Requirements Validation Session Dates	Sub-Processes to be Covered in the Session	Targeted State Participants	Targeted Other Participants
1				
2				
3				
4				



Indiana Department of Child Services Child Support Bureau

<Instructions for completing this form are provided in green and between brackets (e.g., "< instructions >"). Please delete all instructions, including this one, prior to finalizing the document.>

<Replace <Phase/Module Name> below with the appropriate Phase/Module Name>

<Phase/Module Name>

Solution Architecture Design (SAD)

Document Information

Document Title	Attachment DES-01 Solution Architecture Design
Version	<v1.0>
Author	<Author>
Owner (if different from Author)	<Owner>

The controlled master of this document is available in the Project Library. Hard copies of this document are for information only and are not subject to document control.

Document History

Version	Date	Prepared / revised by	Change description (additions / modifications)
<v0.1>	<MM/DD/YYYY>	<Author>	<Initial draft>
<v0.2>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>
<v1.0>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>

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1.0 GLOSSARY OF TERMS

<Insert Phase/Module specific terms as needed. If no Phase/Module specific terms are identified, Replace the entire section with text stating "N / A".>

Table 1: Glossary of Terms

Term	Explanation and Definition

2.0 INTRODUCTION

2.1 Purpose of Solution Architecture Documentation

<Describe the fundamental purpose of this Phase/Module solution architecture documentation (e.g., define the over-arching reason for the solution need [i.e., system replacement, upgrade, etc.], convey the significant architectural decisions which have been made, explain if this document is an evolving artifact, provided if reasons against specific alternative architectures are covered, explain coverage of views and primary audience/stakeholders) >

2.2 Document Information

<Update the table below, filling the descriptive fields with relevant information.>

Table 2: Document Information – Example

Project/Module ID	
Date	
Project/Module Name	
Project/Module Description	
Related Documents	
Scope	<Insert the scope details for the specific Phase/Module (e.g. ECase Initiation, Financials) Define what is in-scope is and what is not-in scope for this SAD.>
Project Manager	
Application Architect	
System Architect	
Data Architect	

2.3 Architectural Goals and Objectives

<Insert a general description of specific architectural goals and objectives for this INvest project phase or module.

The key architectural goals and objectives of this project phase or module include:

<Insert the architectural goals and objectives that are relevant to this project in a bulleted list below. Examples may include:

- Increase of child support collections and the current collection percentage Performance Measure
- Increase of automated support by incorporating Web-based application
- Enhancement of enforcement remedies to pursue current support when unable to obtain income withholding
- Compliance with Federal and State statutes
- Compliance with Federal System Certification standards>

2.4 Architectural Constraints, Assumptions, and Risks

<Insert a description of specific architectural constraints (e.g., design and implementation strategy, development tools, team structure), assumptions and identified risks based on the technical and functional landscape specific to this INvest project phase or module.>

The key architectural constraints of this project phase or module include:

<Insert the architectural constraints that are relevant to this project in a bulleted list below. Examples may include:

- Users will be required to have state Active Directory account
- County desktops are outside the control of the state and are not subject to state standard
- The level of technology and resources available due to automating electronic interfaces
- Incomplete information in INvest for prior county administrative and judicial license suspension actions>

The key architectural assumptions of this project phase or module include:

<Insert the architectural assumptions that are relevant to this project in a bulleted list below. Examples may include:

- Authentication will be done using LDAP ID's configured in Web Sphere Application Server
- Authorization will be done using Lombardi Groups>

The key architectural risks of this project/module include:

<Insert the architectural risks that are relevant to this project in a bulleted list below.>

2.5 Architectural Representation

<These sections should be completed in the remaining sections of this document. Views that are "N / A" can be deleted from the remaining sections of the document.

Table 3 shows the views comprised in the project's architecture.>

Table 3: Architectural Representation Views – Example

Architectural Discipline	View Type	Audience	Area
Security	<Example: IAAM Component Diagram>	<Example: All stakeholders that log into the system>	<Example: Describes the security of the system>
Business	<Example: Business Process Model>	<Example: All stakeholders of the system and Business Team	<Example: Describes the functionality of the system from the business perspective; all other views are primarily based on this view>
Application			
Data			
Infrastructure			
INvest System			

3.0 USE CASE VIEW

<The Use Case View illustrates the system from a key stakeholder’s point-of-view. The Use Cases describe sequences of interactions between users, systems, and processes in order to accomplish a business objective. They are used to identify architectural elements and to illustrate and validate the architecture design. They also serve as a starting point for tests of an architecture prototype.>

3.1 Architecturally Significant Use Cases

<Architecturally significant use cases are:

Business Critical. The use case has a high usage level or is particularly important to users or other stakeholders when compared to other features, or it implies high risk.

High Impact. The use case intersects with both functionality and quality attributes, or represents a crosscutting concern that has an end-to-end impact across the layer and tiers of your application.>

Table 4: Use Case View Description – Example

Use Case	Description
<Example: Login>	<Example: This use case describes how a user logs into the License Suspension Application. User will be logged in to the LS Application using their active directory credentials.>

4.0 SECURITY ARCHITECTURE – SECURITY VIEW

4.1 Application Security

Authentication/User Access

<Insert details about the authentication solution architecture.>

Authorization

Application Authorization:

Table 5: Application Authorization – Example

Application Function	Role	User Attribute
<Example: Prepare Warning Letter>	<Example: Child Support Case Workers>	<Example: OWNERID>

Configuration Management

Data Base Access, Web Service Access, Data Redaction/Masking

<Example breakdown below:

Data Base Access:

Application and IBM System Databases will be accessed using WebSphere Application Server JDBC Data Source Connection. Data Source Connection uses System Account for Authorization.

Web Service Access:

Web Service will utilize secure transfer protocol (HTTPS).

Other Security Methods:

HTTP Basic Access Authentication

HTTP Digest Access Authentication

Policy Set

Data Redaction/Masking:

Show only last 4 digits of SSN.>

4.2 Data Security

Data protection at Rest, in Use, in Motion

<Example breakdown below:

Data at Rest:

Firewalls

Anti-virus

Encryption - FIPS 140-2 Compatibility

Data in Use:

User/Group Level Access.

Establishes or restricts access privileges at the file/table, record/row, and field/attribute to specific users and/or groups of users with common access rights as specified by CSB

Data in Motion/Transit:

Encryption - FIPS 140-2 Compatibility

Firewalls

Sample Encryption Algorithms:

Advanced Encryption Standard: AES-256>

4.3 Infrastructure Security

Network Security

<Example breakdown below:

Router:

Firewall:

This Application will use IOT provided firewall to allow only authorized traffic.

Port Blocking

Proxy Server:

This Application will use Proxy Server to direct authorized users to access the website.

Hiding the IP address, host names

Switch:>

Hardware Security

<Example breakdown below:

Windows: Network Authentication>

Middleware Security

<Example breakdown below:

Accounts:

Access Application Servers or Database Servers with dedicated system accounts.

Files and Directories:

Files and directories should be secured with restricted NTFS permissions that allow access only to the necessary user accounts.

Ports:

Define non default ports for required services or applications to run on servers.>

Software Security

<Example breakdown below:

Development Tools: Network Authentication

Monitoring Tools: Network Authentication>

4.4 Legal, Regulatory, and Standards

<Example:

IRS Federal Tax Information needs to be secured

SSA - Personally Identifiable Information (PII) needs to be secured

OCSE-provided data

(Including FPLS and child support program information)>

5.0 BUSINESS ARCHITECTURE – PROCESS/FUNCTIONAL VIEW

<Example: The Process View describes the concurrent processes within the system, encompassing some supplementary specifications such as performance and availability. Business Process Models are used to represent the Process View.

Example Process & Diagrams:>

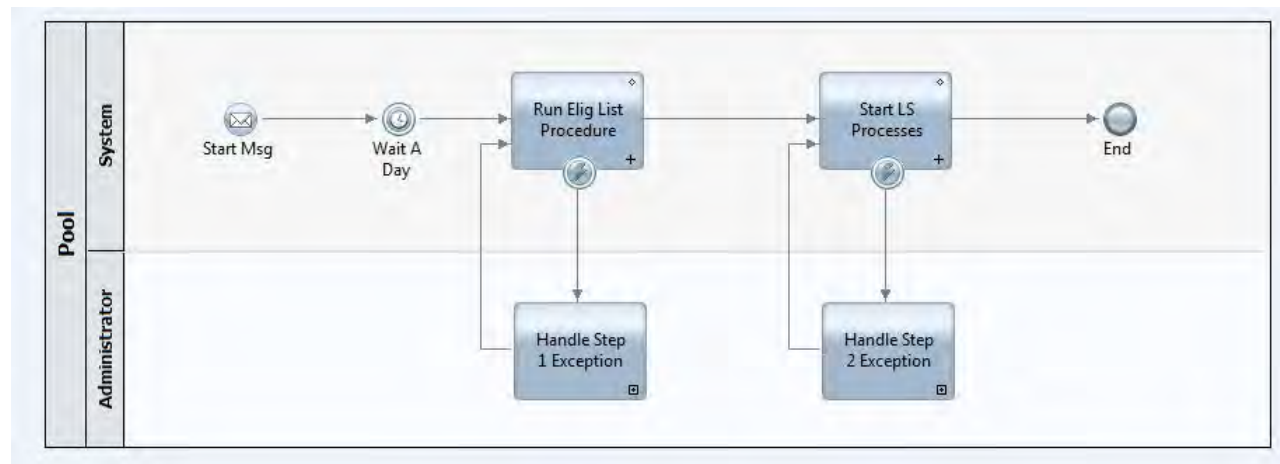


Figure 1: Monthly License Suspension Business Process – Example

<The Functional View illustrates the functionality that the system provides to end users. Class and Sequence Diagrams are used to represent the Functional View.

The Class Diagram describes the structure of a system by showing the classes of a system, the attributes and operations that belong to each class, and the relationships between the classes. The Class Diagram is provided in Figure 2.

As applicable, develop Class and Sequence Diagrams for the system. Examples of each are provided below. The final diagrams for your project may differ greatly from this example. Replace the examples below with your graphics. If a diagram is too large to be inserted within this section, attach it to this document and provide a reference here.>

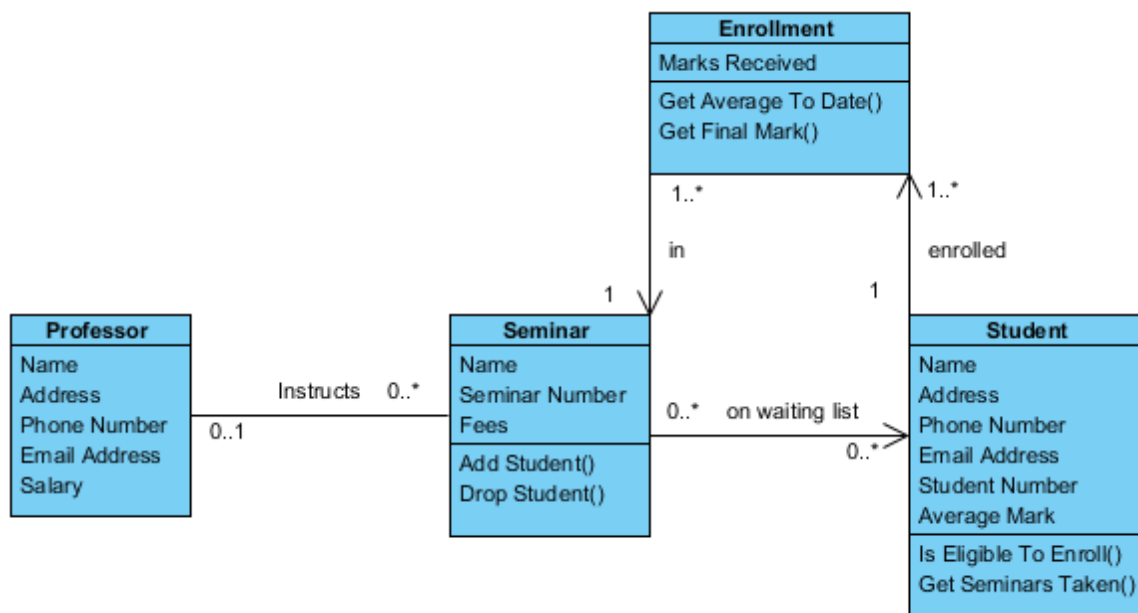


Figure 2: Class Diagram – Example

<The Sequence Diagram describes the collaboration of objects based on a time sequence, displaying how the objects interact with others in a particular storyboard of a Use Case. The Sequence Diagram is provided in Figure 3.>

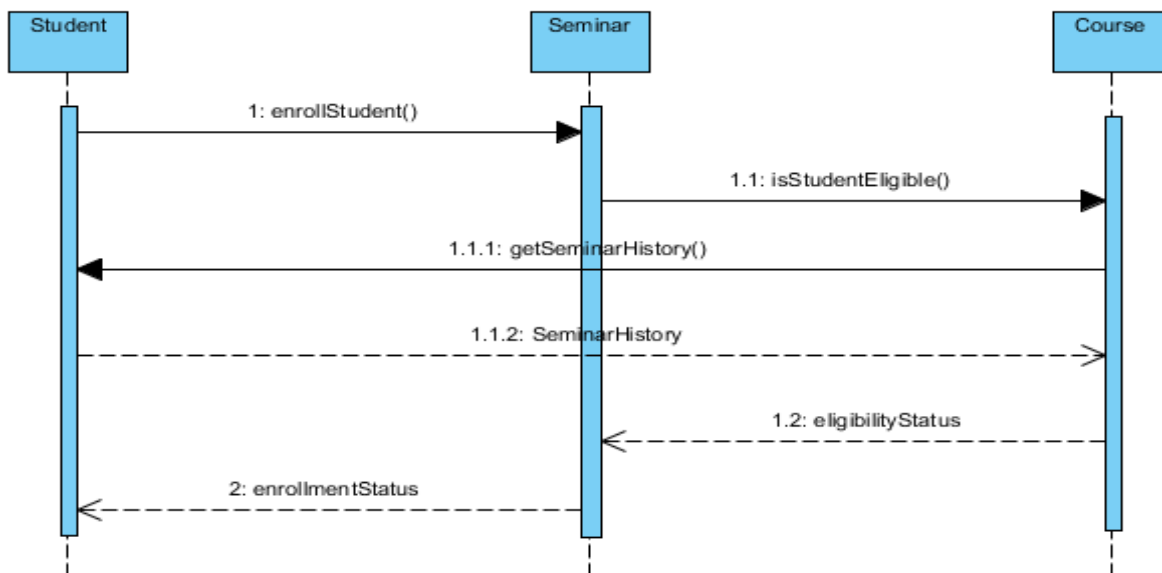


Figure 3: Sequence Diagram – Example

6.0 APPLICATION ARCHITECTURE - LOGICAL VIEW

<Describe how the system is structured in terms of units of implementation. The elements are packages, classes, and interfaces. The relationship between elements shows dependencies, interface realizations, part-whole relationships.>

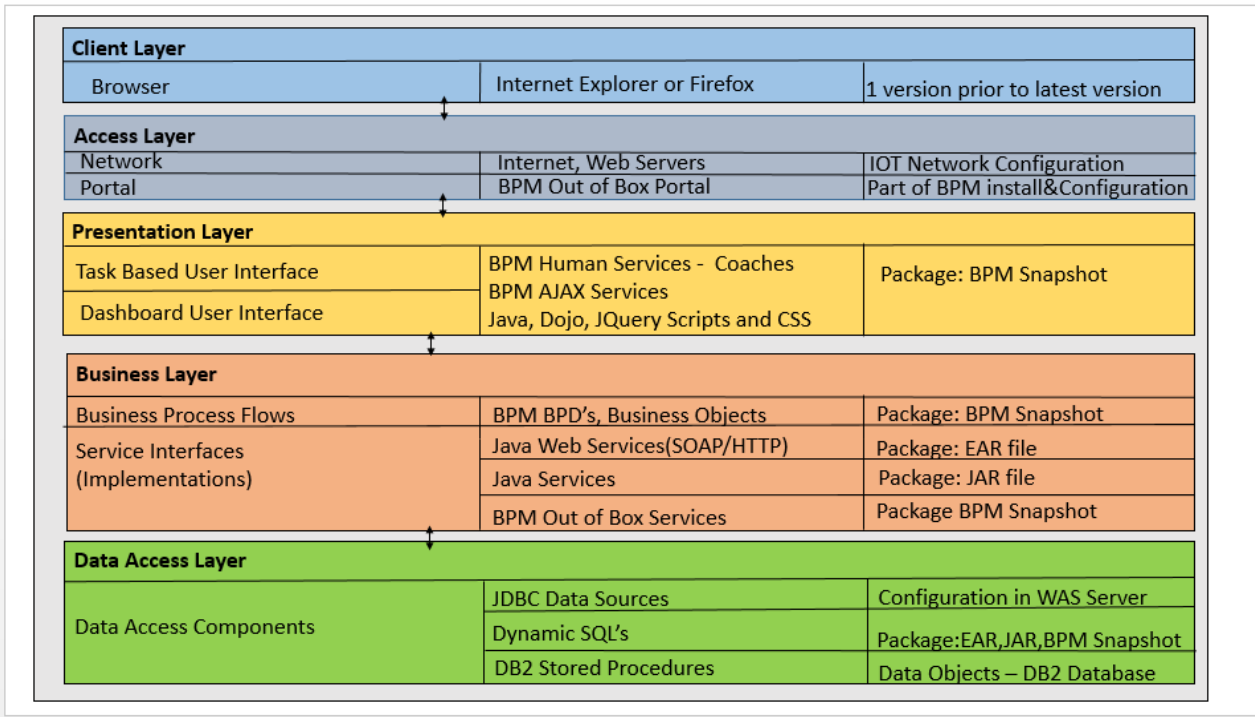


Figure 4: Logical View – Example

6.1 Application Type

6.2 Application Architecture Style

<Example: This application will utilize Layered and Service Oriented Architecture styles>

6.3 Application Architecture Design Patterns

<Example: This application will utilize Business Process Flow and MVC (Model View Control) Design Patterns>

6.4 Service Implementation Architecture Styles

<Example: This Application will utilize Service Integrations and Coarse-Grained Services>

6.5 Service Interface Styles and Structures

<Examples:

Resource-Oriented – RESTful Web API

Method-Oriented – WebServices Framework – WS-* - LS Application Uses this.

Document-Oriented – Send/Receive Model – Exchanging Messages that contain documents

Data Formats (XML/JSON), Protocols (HTTP/SOAP), Message exchange patterns (Sync/Async)>

6.6 Common Services

6.7 Service Interface Definitions

Java WebService Interface Example:

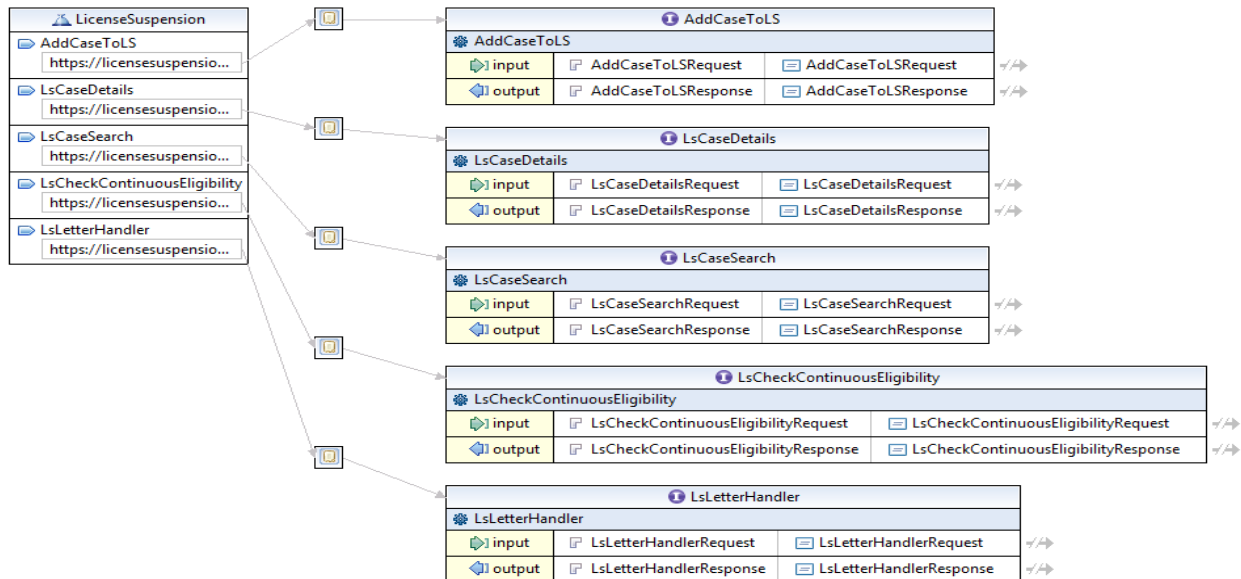


Figure 5: Service Interface Definition – Example

6.8 Data Access

<Example: This application will utilize dynamic SQL's and DB2/LUW Stored Procedures.>

6.9 Transient/Messaging Data

<The Transient Data View describes the storage and flow of transient data throughout the system.

This sub-section is optional if there is little or no transient data.>

6.10 Exception Handling

<Example:

Design a centralized exception management mechanism that catches and manages unexpected exceptions (exceptions that cannot be recovered locally) in a consistent way. Pay particular attention to exceptions that propagate across layer or tier boundaries, as well as exceptions that cross trust boundaries.

Consider the following guidelines when designing exception management:

Provide user friendly error messages to notify users of errors in the application, but ensure that you avoid exposing sensitive data in error pages, error messages, log files, and audit files. Attempt to leave the application in a consistent state if possible, or consider terminating it if this is not possible.

Differentiate between system exceptions and business errors. In the case of business errors, display a user friendly error message and allow the user to retry the operation.

In the case of system exceptions, check to see if an issue such as a service or database failure caused the exception, display a user friendly error message, and log the error message to assist in troubleshooting.

Only catch exceptions that can be handled, and avoid the use of custom exceptions when not necessary.

Frameworks

This Application will utilize BPM out of Box Exception handling and Java Exception Handling and Log4J and SLF4J for Logging.>

6.11 Cache Mechanisms

<Caching is one of the best mechanisms that can be used to improve application performance and User Interface responsiveness. Data caching can be done in the presentation layer to optimize data lookups and avoid network round trips, and to store the results of expensive or repetitive processes to avoid unnecessary duplicated processing.

Consider the following guidelines when designing your cache mechanisms:

Consider caching static data that will be reused regularly within the business layer, but avoid caching volatile data. Consider caching data that cannot be retrieved from the database quickly and efficiently, but avoid caching very large volumes of data that can slow down processing. Cache only the minimum required.

Avoid caching sensitive data if possible, or design a mechanism to protect sensitive data in the cache.

This application will utilize Java and BPM Cache mechanisms. Web Sphere Application Server Supports Dyna Cache

In-Memory or Disk Based (File/Database)

Content Delivery Network (CDN) for caching frequently accessed data>

6.12 Frameworks

<This application will utilize Java Spring Frame Work.>

6.13 Integrations

<Example: This application will utilize below Integrations:

LDAP Integration – Configuration in WebSphere Application Server

SMTP Integration – Configuration in WebSphere Application Server

ISETS/Mainframe integration – Access ISETS data whenever needed>

6.14 Application Data Synchronization

<Example: BPM Users vs Active Directory>

6.15 File Share

<Example: File Server – BPM File Server to store temporary PDF files and PDF Templates and One of the App Server will be utilized as Batch file sever>

6.16 Batch+

<Example: This Application will utilize BPM's timer based Under Cover Agents for Scheduling Batch Business Processes.>

7.0 DATA ARCHITECTURE - DATA VIEW

<The Data View illustrates the system from a database administrator's point-of-view and is concerned with the storage, retrieval, processing, archiving, and security of data. The Data View is comprised of the Logical Data Model which is used to develop the Physical Data Model during Detailed Design.>

7.1 Logical Data Model

<Provide context to describe the LDM diagram.

Attach Logical Data Model file or paste screen capture here.>

7.2 Data/Database Guidance

<Provide information pertaining to storage, migration, synchronization, partitioning, archiving, and purging needs and processes.>

7.3 Data Backup

8.0 INFRASTRUCTURE ARCHITECTURE - DEPLOYMENT VIEW

<The Deployment View illustrates the system from a system architect's point-of-view. It describes a high level system configuration on which the new application is deployed and run. The Deployment Diagram is used to represent the Deployment View.

The Deployment Diagram describes the physical aspect of the target system, including the run-time configuration and the distribution of components. The Deployment Diagram is provided in Figure 6.

<Develop a Deployment Diagram for the system. An example is provided below. The final diagram for your project may differ greatly from this example. Replace the example below with your graphic. If the diagram is too large to be inserted within this section, attach it to this document and provide a reference here.>

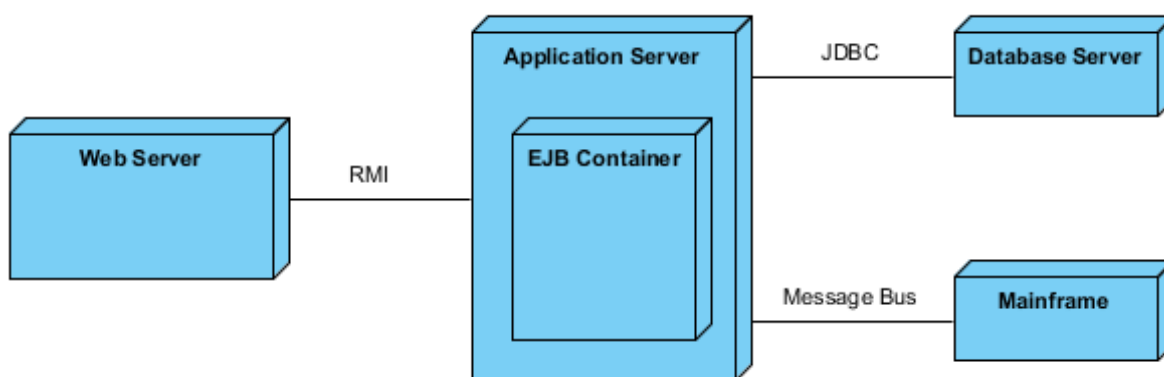


Figure 6: Deployment Diagram – Example

8.1 Major Decisions

<Provide a listing of major decisions that impacted the solution architecture. This may include analysis and decisions such as purchasing hardware vs. cloud SAAS.>

8.2 Technologies Used

Table 6: Technologies Used – Example

Supplier	Product	Version	Type	Environment
<Example: IBM>	<Example: BPM Process Designer>	<8.5.5>	<Design & Development>	<Development>

8.3 Capacity Planning

<Size and capacity estimations examples:

Size:

Useful for performance testing

Volumes:

Estimated Users: Around XXX users might access application, Peak usage is after Monthly Eligibility runs.

Estimated Cases Eligible for License Suspension Process: Around X,XXX new cases might come to system every month.

Capacity Estimation:

Hardware, Software Sizing, Capacity details needs to be explained.

CPU, RAM, Disk Space:

CPU Utilization Threshold – XX%

Disk Utilization Threshold – XX%

Memory Utilization Threshold – XX%?

8.4 Development Process Center

<Provide logical technical architecture deployment diagrams for different environments (e.g., development, system testing)>

9.0 ARCHITECTURE QUALITY ATTRIBUTES

<Provide specific requirements, design specifications, and measures associated to the defined architecture qualities.>

Table 7: Architecture Quality Attributes – Example

Category	Architecture Quality	Requirement	Design	Measure
Run-Time	Performance			
	Availability			
	Reliability			
	Scalability			
	Recoverability			
User	Usability			
System	Serviceability			
	Supportability			
	Testability			
Design	Conceptual Integrity			
	Maintainability			
	Reusability			
	Modifiability			
	Portability			
	Interoperability			

10.0 ATTACHMENT A1: SYSTEM INTERFACE DOCUMENT (SID)

<The System Interface Document (SID) lists and tracks the necessary information required to effectively document and define the system's internal interfaces and external interfaces to external systems as well as any rules for communicating with the interfaces in order to give the development team guidance on architecture of the system to be developed. The purpose of the SID is to clearly communicate all possible inputs and outputs from the system for all potential actions. The intended audience of the SID is the Project Manager, project team, development team, and stakeholders impacted by external interfaces to the system. This is a living document and will require updates throughout the Design process with design-to and build-to detailed information. Details regarding the SID will be defined once the DDI vendor is engaged >

The System Interface Document is attached to this document as an attachment.

<Attach the SID file and reference it here.>



Nvest

in Indiana's children

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<Instructions for completing this form are provided in green and between brackets (e.g., "< instructions >"). Please delete all instructions, including this one, prior to finalizing the document.>

<Replace <Phase/Module Name> below with the appropriate Phase/Module Name>

<Phase/Module Name>

High Level Design (HLD)

Document Information

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1.0 GLOSSARY OF TERMS

<Insert Phase/Module specific terms as needed. If no Phase/Module specific terms are identified, Replace the entire section with text stating “N / A”.>

Table 1: Glossary of Terms

Term	Explanation and Definition

2.0 INTRODUCTION

<Insert general information as to how this design content relates to INvest.>

2.1 Purpose of Design Specifications

<Insert fundamental purpose of this Phase/Module design specifications (e.g., create a brand new system, replace an existing system, or significantly alter an existing system).>

2.2 Purpose of Project/Module or Project/Module Background

<Insert Phase/Module specific background information that will be useful in establishing the context, document reference or list, reference documents with specific business needs. Other documents used to prepare this HLD (e.g., data dictionary, entity report, data map).>

2.3 Primary User Groups

<Insert details about different user groups using this functionality including the total number of users. (e.g., Clerk's Office, Prosecutors Office, 2300 total users, 300 concurrent users).>

2.4 Scope of the Project/Module

<Insert the scope details for the specific Child Support Module (e.g., Case Initiation, Financials) Define what is in scope is and what is not-in scope.>

2.5 Audience for High Level Design Document

<Insert all the internal and external teams involved in this creating, developing and reviewing the document (e.g., vendor IT, CSB IT, CSB business/users, other vendors, external agencies).>

2.6 Assumptions

<Insert specific assumptions that have been identified or that should be considered while creating this Phase/Module design. If no Phase/Module specific assumptions are identified, replace the entire section with text stating "N / A".>

2.7 Risks

<Insert specific risks that have been identified or that should be considered while creating this Phase/Module design. If no Phase/Module specific risks are identified, replace the entire section with text stating "N / A".>

3.0 SECURITY AND PRIVACY ARCHITECTURE

<Insert details about the anticipated security and privacy architecture. The purpose of this discussion is to identify the general approach to security, to ensure that proper controls will be implemented into the system. This is not intended to be a detailed security design.>

3.1 Authentication

<Insert details about the basic user authentication approach to verify user identity before allowing access to the system. For example, will the system use the IAAM single-sign-on solution?>

3.2 Authorization

<Insert details about the anticipated approach for authorizing users to perform functional activities once logged into the system.>

3.3 Encryption

<Insert details about any anticipated needs to encrypt the data that may be identified based on the business risks and the nature of the information. If no Phase/Module specific encryption needs are identified, replace the entire section with text stating "N / A".>

4.0 CONCEPTUAL DESIGN

<Insert and describe Phase/Module specific functionality that tells the users/audience what the module/system will do. (e.g., Business Process Models (BPMs), Features, Services, Use Cases, Rules) See the following sub-sections for more details.>

4.1 BPM/Business Rules/Features/Services

<Insert Phase/Module specific in-scope BPMs, Features, Services, Use Cases, rules, etc.>

4.2 Conceptual Data Model

<Insert the conceptual schema with concise descriptions of data requirements from users, including detailed descriptions of the entity types, relationships, and constraints based on the information collected and analyzed as the designers created the conceptual schema. This does not include implementation details. These descriptions should be easy for users to understand so they can be used as communications tools. The conceptual schema is used to confirm all user requirements are met without conflicts.>

5.0 HIGH LEVEL TECHNICAL DESIGN

<Insert details about how the system will be built to meet the requirements, functional design, conceptual design, and other deliverables. This contains the information and terminology that is needed by developers. Depending on the specific circumstances it this may include screen layouts, database table and column names, or a list of program names, methods/functions used in the program. WSDL or communication protocols and file formats, and server and operating system versions and dependencies, may also be includes. The information contained in this section should be detailed enough to enable coding, unit testing, configuration, and technical design to begin.>

Table 2: Design Specifications – Example

Design ID	Design Specification	Business Requirement ID

5.1 Non-Functional Technical Design

<Insert non-functional requirements (e.g., the technical aspects that Phase/Module must fulfill, including requirements related to performance, reliability, availability, etc.) that will influence the technical design. The topics in this sections should be discussed at a high level. The Solution Detailed Design (SDD) and other deliverables will address these topics in more detail. Add subsections as needed to describe any additional non-functional requirements.>

6.0 LOGICAL ARCHITECTURE

<Insert details about logical data flows that to reveal process steps for the in-scope Phase/Module. These logical data flows should be detailed enough to be actionable, while being easily understandable by business users, (i.e., non-technical people). The details documented in this section serve as a tool for collaborating and communicating about desired information and functionality, without concern for the “how”. The flows serve as a bridge from business needs to technical design requirements. The process of mapping out the current logical flow will help everyone involved gain a deeper understanding and may reveal mistaken assumptions, misunderstandings or shortcomings. Doing logical models reduces the risk of missing business requirements that otherwise would arise late in the process, causing delays and rework.>

7.0 PHYSICAL ARCHITECTURE

<A physical architecture model is built from systems, system elements, and all necessary physical interfaces between these elements, as well as from external elements (neighboring or enabling systems and/or system elements) that this specific Phase/Module interacts with. Insert documentation of the arrangement of physical elements, (system elements and physical interfaces) which provides the solution for this Phase/Module. The result must be implementable through technological system elements. System requirements are allocated to both the logical and physical architectures. Once the overall physical architecture is completed it becomes the basis for system realization.>

7.1 Components Specifications

<Insert a detailed description of each component here.>

8.0 EXTERNAL DESIGN

<Insert a Phase/Module specific high level description of what end users will see. If no Phase/Module specific external users are identified, replace the entire section with text stating “N / A”.>

8.1 Screens

<Insert Project/Module specific terms/details including screens, menus, etc.>

8.2 Data Model

<Insert the conceptual data model for the in-scope Phase/Module. This is developed based on the data requirements for the specific Phase/Module in the context of an activity model. The data model will show entity types, attributes, relationships, integrity rules, and the definitions of those objects, and is used as the starting point for interface or database design. Insert Phase/Module specific terms as needed.>

8.3 Entity Name

<Insert conceptual/logical entity categories based on the data requirements and tables for in-scope Phase/Module tables.>

8.4 External Views

<Insert external data views for the in-scope Phase/Module. If no Phase/Module specific views are identified, replace the entire section with text stating “N / A”.>

8.5 Internal Views

<Insert internal data views for the in-scope Phase/Module.>

9.0 INTERNAL DESIGN

<Insert details about specific interfaces this Phase/Module will use and/or interact with, as well as interaction between this module and other modules, including software modules/components. If no Phase/Module specific terms are identified, replace the entire section with text stating “N / A”.>

10.0 APPENDIX A-1: SCENARIO ANALYSIS

<Insert descriptions of the general functionality of the system from the users' perspectives, and provide an execution or operational flow of the system via operational scenarios that provide step-by-step descriptions of how the proposed system/module will operate and interact with its users and its external interfaces under specific circumstances. The scenarios ties all parts of the system, the users, and other entities together by describing how they interact, and may also be used to describe what the system should not do. The scenarios can be presented in several different ways: 1) for each major processing function of the proposed system, 2) thread-based, where each scenario follows one type of transaction type through the proposed system, or 3) following the information flow through the system for each user capability, following the control flows, or focusing on the objects and events in the system. The number of scenarios and level of detail specified is proportional to the perceived risk.>

11.0 APPENDIX A-2: REQUIREMENTS TRACEABILITY

<Insert details about the location of the requirements and associated traceability to the high level design elements documented under high level design.>

12.0 APPENDIX A-3: OTHER PLANS, REFERENCES, AND LINKS

<Insert all other plans and reference documents used to prepare this document, including links to important information. If there are no other plans, references, or links associated to this Project/Module, replace the entire section with text stating "N / A".>



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Solution Detailed Design (SDD)

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1.0 INTRODUCTION

1.1 Purpose of Solution Detailed Design Specifications

<Insert fundamental purpose of this project/Module design specifications (e.g., create a brand new system, replace an existing system, or significantly alter an existing system).>

1.2 Purpose of Project / Module or Project / Module Background

<Insert Project/Module specific background information that will be useful in establishing the context, document reference or list, reference documents with specific business needs. Other documents used to prepare this SDD (e.g., HLD, BPDs, and Rules etc.).>

1.3 Scope of the Project / Module

<Insert the scope details for the specific Child Support Module (e.g., Case Initiation, Financials etc.) Define what's in-scope is and what's not-in scope for this is. If no Project/Module specific terms/details are identified, replace the entire section with text stating N/A.>

AUDIENCE FOR SOLUTION DETAILED DESIGN DOCUMENT

<Insert all the internal and external teams involved in this creating, developing and reviewing the document (e.g., Vendor IT, CSB IT, CSB Business/users, other Vendors, external agencies etc.) If no Project/Module specific terms/details are identified, replace the entire section with text stating "N/A".>

ASSUMPTIONS

<Insert specific assumptions (e.g., related software or hardware, Operating systems, End-user characteristics, Possible and/or probable changes in functionality etc.) that have been identified or that should be considered while creating this Project/module. If no Project/Module specific terms/details are identified, replace the entire section with text stating "N/A".>

1.4 Risks

<Insert specific risks that have been identified or that should be considered while creating this Project/Module. If no Project/Module specific terms/details are identified, replace the entire section with text stating "N/A".>

2.0 SECURITY AND PRIVACY ARCHITECTURE

<Insert details about anticipated security and privacy architecture. The purpose of this discussion is to identify the general approach to security to ensure that proper controls will be implemented into the system. This is not intended to be a detailed security design. If no Project/Module specific terms/details are identified, replace the entire section with text stating "N/A.">

AUTHENTICATION

<Insert details about the basic user authentication approach to verify user identity before allowing access to the system. For example, will the system use the IAAM single-sign-on solution? If no Project/Module specific terms are identified, replace the entire section with text stating N/A.>

AUTHORIZATION

<Insert details about the anticipated approach for authorizing users to perform functional activity once logged into the system. If no Project/Module specific terms are identified, replace the entire section with text stating N/A.>

ENCRYPTION

<Insert details about any anticipated needs to encrypt the data identified based on the business risks and the nature of the information. If no Project/Module specific terms are identified, replace the entire section with text stating N/A.>

3.0 SOLUTION CONSTRAINTS

<Insert/Describe any global limitations or constraints that have a significant impact on the detail design of the system's software (and describe the associated impact). Such constraints may be imposed by any of these factors (e.g., hardware or software environment, end-user environment, availability or volatility of resources, standards compliance, interoperability requirements, security requirements, network communications, verification and validation requirements (testing), etc.). If no Project/Module specific terms/details are identified, replace the entire section with text stating "N/A.">

Sr. No.	Assumptions

4.0 DESIGN LAYOUT SPECIFICATIONS

<Insert details about how the system will be accessed, including URLs for identified environments (e.g., <http://abc.def.ghi/INvest>, details (e.g., server names, operating system, software used including version details, etc.) about different system environments (e.g., Dev, Test, UAT, Training, etc.). The information contained in this section should be detailed enough to enable code, unit tests, configurations, and Detailed Design work to begin coding.>

4.1 Security Requirements/Compliance and Features

<Insert any applicable security requirements details, compliance guidelines required to complete this document. Document details of all security design features and processes used for this Module. If no Project/Module specific terms are identified, replace the entire section with text stating “N/A”.>

5.0 DETAIL DESIGN SPECIFICATIONS

<Insert detail about the architecture necessary to achieve the solution detailed design for this Project/Module. This will usually consist of both hardware and software specification/architecture. Additionally, the description should include a list and summary of each component and, depending on the complexity of the design, it may be beneficial to include diagrams showing the relationship/connectivity between these components. This section should document information needed for a system development team to actually build and integrate the hardware components, code and integrate the software modules. If no Project/Module specific terms are identified, replace the entire section with text stating "N/A".>

5.1 Component List

<Insert detailed information about individual component requirements to correctly build and/or configure all the hardware for the system (or integrate COTS items). If there are many components or if the component documentation is extensive, place it in an appendix or reference a separate document. Add additional diagrams and information, if necessary, to describe each component and its functions, adequately. Industry-standard component specification practices should be followed. For COTS procurements, if a specific vendor has been identified, include appropriate item names. Include information such as memory and/or storage space requirements, processor requirements, monitor requirements, etc. If no Project/Module specific terms are identified, replace the entire section with text stating "N/A".>

5.2 Runtime Considerations

<Insert details about runtime considerations for this Project/Module. Consider efficient use of shared threads and minimizing the amount of time code retains locks. Continue to measure its performance as factors such as the number of users, usage patterns, and data volumes change over time. New modules/components may start to compete for shared resources. Document performance objectives that includes response times, throughput, resource utilization, and workload. For example, how long should a particular request take? How many users does project/module/application need to support? What is the peak load the application must handle? How many transactions per second must it support? Include resource utilization thresholds. For example, how much CPU, memory, network I/O, and disk I/O is it acceptable for project/module/application to consume? If no Project/Module specific terms are identified, replace the entire section with text stating "N/A".>

5.3 Environment Configuration Files

<Insert details about environment configuration files required for this Project/Module. Include all the details. For example, list of environment file names, file location/path details, description/purpose of the environment file and details about file content. If no Project/Module specific terms are identified, replace the entire section with text stating "N/A".>

5.4 Data Conversion Specifications

<Insert details about data conversion rules, conversion scripts in-use, mapping of source data elements to target data elements, and methods and tools identified. Document data conversion methods by utilization of data mapping documents represented in the Data Conversion Plan. If no Project/Module specific terms are identified, replace the entire section with text stating “N/A”>

5.5 System Development and Testing Environment

<Insert details about system development and testing environments (e.g., server, software and hardware details, etc.). Document environment topology describing physical environment structure, including capacity, availability, and scalability. Environment topology detail/pattern specifies the constraints and requirements of the components and resources involved in any deployment/runtime environment. If no Project/Module specific terms are identified, replace the entire section with text stating “N/A”.>

6.0 DESIGN ELEMENTS

<Insert/describe the detailed design elements. The detail design elements should address requirements and expand upon elements from the High Level Design (HLD). The detailed design should provide the flow of application specific logical and business functions by identifying all functions within the project/module. Detailed design element identifiers should be used to assist in demonstrating traceability to requirements (e.g., SDD-xxx). Ensure these design elements are traced back to the HLD and business requirements using Rational CLM tool. Complete the sub-sections and add any additional items needed to ensure this section is complete. If a section is 'N/A' be sure to provide an explanation on why the section does not apply.>

SDD Req. ID	Design Component	Trace-To HLD

6.1 User Functional Screen / Batch / Report Interface Design Overview

<Insert detail description about user interface components in terms of functions, where each function represents one or more screens, reports, or batch processes that encapsulates the function to be performed by the user. Provide a high-level description of the user interface design (user/report and or batch) for this system. Describe any systems requirements (e.g., performance or usability) associated with all of the user interfaces. Label each subsection appropriately and title each subsection descriptively to indicate the interface being documented. Describe the interface design, including technology, the protocol, any specific message formats, error conditions, handshakes, initiation and closure, and other features that define the design of the interface. If no Project/Module specific terms/details are identified, replace the entire section with text stating "N/A".>

6.2 Physical Data Model

<Insert detail description about overall physical data model that will be used to develop this project/module. For example, document details about table and record formats, index format, data distribution methods, designing physical files, data replication methods/process, etc. If no project/module specific terms are identified, replace the entire section with text stating "N/A".>

6.3 Database Schema

<Insert details about physical database model that shows all table structures, including column name, column data type, column constraints, primary key, foreign key, and relationships between tables for project/module. If no project/module specific terms are identified, replace the entire section with text stating "N/A".>

6.3.1 Record Volume

<Insert details about data volume and usage estimation for the physical data model. If no project/module specific terms/details are identified, replace the entire section with text stating "N/A".>

6.3.2 Data Access Rules

<Insert details about data access policies for accessing and protecting the data. Document any applicable general access rules, technical access rules, data protection steps etc. If no Project/Module specific terms/details are identified, replace the entire section with text stating “N/A”.>

6.4 User Interface Design

<Insert all the internal and external teams involved in this creating, developing, and reviewing the document (e.g., vendor IT, CSB IT, CSB Business/users, other vendors, external agencies, etc.) If no project/module specific terms/details are identified, replace the entire section with text stating “N/A”.>

6.5 Data Communication Interface Model

<Insert details about different data communication and networking standards, protocols (e.g., HTML, HTTP, IP, IMAP, MPEG, and TCP etc.), and methods used for this project/module. Defined each layer (e.g., application layer, transport layer, network layer, data link layer, physical layer, etc.) If no project/module specific terms/details are identified, replace the entire section with text stating “N/A”.>

6.5.1 Interface File / Table Format

<Insert details about all the internal and external interface file exchange formats, including internal and external database views, how these files will be sent and received, how database views will be viewed, what protocols will be used, and include applicable cross reference details with external interface and/or views, etc. If no Project/Module specific terms/details are identified, replace the entire section with text stating “N/A”.>

APPENDIX A-1: OTHER PLANS, REFERENCES, AND LINKS

<Insert all the other plans and reference documents used to prepare this document, including important links. If no project/module specific terms/details are identified, replace the entire section with text stating "N/A".>

APPENDIX A-2: REQUIREMENT TRACEABILITY MATRIX

<Insert details about the location of the Requirements Traceability Matrix that indicates: traceability from the requirements documented in the requirements specifications to the high level design elements documented under high level design to the solution detailed design documented under solution detailed design requirements. If no Project/Module specific terms/details are identified, replace the entire section with text stating “N/A”.>

Requirement Traceability Location	



Indiana Department of Child Services Child Support Bureau

<Instructions for completing this form are provided in green and between brackets (e.g., "< instructions >"). Please delete all instructions, including this one, prior to finalizing the document.>

<Project Name>

Application Development Review Checklist

Document Information

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1.0 PURPOSE

This Application Development Review Checklist is initially used to verify that the components for a module are aligned to project standards. After which the checklist is used to ensure development standards are adhered to and to determine if the code is clean and error free.

1.1 Application Development Review Checklist

Table 1 shows the checklist for the Component and Module Development Review Criteria (Section I) and low-level Code Review Criteria (Section II).

Table 1: Application Development Review Checklist

Application Development Review Checklist			
Section I: Component and Module Development Review Criteria			
(Check All That Apply)	#	Item	Comments
	1	Components and modules conform to the High Level Design (HLD) Development Views.	
	2	Component and module definitions are documented holistically in the Solution Design Documentation (SDD).	
	3	Dependencies between components and modules exist and links appropriately identified.	
	4	Components and modules utilize CSB supported development platforms.	
	5	Anticipated source code and artifacts are aligned to the naming convention and styles consistent with the project language specification and published coding standards.	
	6	Pseudo code is draft documented in a style consistent with the project language specification.	
	7	Industry-standard application development and runtime frameworks have been utilized where applicable.	
	8	Any anticipated runtime frameworks, libraries, and interpreters are aligned to current licenses.	
	9	Any draft source code and artifacts are version controlled in the IBM Rational CLM configuration management system.	
	10	Components provide service interfaces that represent essential concepts and hide private behavior and information.	
	11	Identified shared components are easily compatible with other services.	
	12	Component services will adhere to policies throughout the services life cycle.	

Application Development Review Checklist			
Section II: Code Review Criteria			
(Check Boxes That Apply)	#	Item / Description	Comments
General Code Review			
	1	The program follows coding standards. Check if the appropriate code standards are used for consistency.	
	2	The detailed design properly translates to code. Check if the detailed design or pseudo code is implemented.	
	3	The Developer has validated the code. Check if the Developer has validated the code before sending it for review.	
Comments and Coding Conventions			
	4	The code follows the project coding naming conventions. Check that the project coding naming conventions have been followed. Variable naming, indentation, and other semantic considerations should be reviewed.	
	5	Source files begin with an appropriate header and any copyright information. Each source file should start with an appropriate header and any copyright information. All source files should have a comment block describing the functionality provided by the file.	
	6	Variable declarations are properly commented. Comments are required for aspects of variables that the name does not describe. Each global variable should indicate its purpose and why it needs to be global.	
	7	Units of numeric data are clearly stated. Comment should describe the units of numeric data. For example, if a number represents length, indicate if it is in feet or meters.	
	8	Functions, methods, classes, and packages are documented. Describe each routine, method, and class in one or two sentences at the top of its definition. If you cannot describe it in a short sentence or two, you may need to reassess its purpose. It might indicate that the design needs to be improved.	

Application Development Review Checklist			
	9	Function parameters used for input or output are clearly identified as such. Make it clear which parameters are used for input and output.	
	10	Complex algorithms and code optimizations are adequately commented. Complex areas, algorithms, and code optimizations should be sufficiently commented, so other developers can understand the code and walk through it.	
	11	Code that has been commented out has an explanation. There should be an explanation for any code that is commented out. "Dead or redundant Code" should be removed.	
	12	Comments are used to identify missing functionality or unresolved issues in the code. A comment is required for all code not completely implemented. The comment should describe what is left to do or is missing.	
Error Handling			
	13	Errors are properly handled each time a function returns. Assertions make it easier to identify potential problems. For example, test if pointers or references are valid.	
	14	All known exceptions are handled properly. An error should be detected and handled if it affects the execution of the rest of a routine. Store the error description appropriately in log files for trouble shooting. Don't log sensitive data.	
	15	Use complete exception descriptions. Check to see if only return codes are used.	
	16	Exception descriptions void of sensitive information. Check to see if file paths, server names, host names, etc. are included in exception content.	
	17	Presence of JUnit and Unit automated test cases to setup error handling testing. Check the test coverage and quality of the unit tests with proper mock objects to be able to easily maintain and run independently / repeatedly.	
Control Structures			
	18	Loop ending conditions are accurate. Check all loops to make sure they iterate the right number of times. Check the condition that ends the loop; validate it will end out after the expected number of iterations.	

Application Development Review Checklist			
	19	The code is free of infinite loops. Check for code paths that can cause infinite loops. Validate end loop conditions will be met unless otherwise documented.	
	20	Presence of hard coded configuration values as opposed to external configuration data in a .properties file. Check for sensitive information like password being encrypted.	
Performance			
	21	The code does not have an adverse impact on size, speed, or memory use. Check if the code can be optimized. For instance, if data structures with a large number of occurrences are used, consider reducing the size of the structure.	
	22	The code uses synchronization mechanisms or timer events in lieu of busy waits. Doing busy waits takes up CPU time. It is a better practice to use synchronization mechanisms.	
	23	The code is not over optimized. Optimizations often make code harder to read and more likely to contain bugs. Such optimizations should be avoided unless a need has been identified. Has the code been profiled?	
Functions			
	24	Function parameters are explicitly verified in the code. This check is encouraged for functions where you do not control the whole range of values that are sent to the function. This is not the case for helper functions, for instance. Each function should check its parameter for minimum and maximum possible values. Each pointer or reference should be checked to see if it is null. An error or an exception should occur if a parameter is invalid.	
	25	Variables are initialized before they are used. Validate there are no code paths where variables are used prior to being initialized. If an object is used by more than one thread, validate that the object is not in use by another thread when you destroy it. If an object is created by doing a function call, validate the object was created before using it.	
	26	The code does not re-write functionality that could be achieved by using an existing application programming interface (API). New code should use existing functionality as much as possible.	

Application Development Review Checklist			
Bug Fixes			
	27	Fixes made to a function does not change the behavior of caller functions. Sometimes code expects a function to behave incorrectly. Fixing the function can, in some cases, break the caller. If this happens, either fix the code that depends on the function, or add a comment explaining why the code cannot be changed.	
	28	The bug fix corrects all of the occurrences of the bug, consistently across the entire code.	
SOA and Design Patterns			
	29	Service specifications and service level agreements are complete.	
	30	Services are extensible and have the design and implementation ability to support enhancements.	
	31	Shared services have the ability to service and support multiple users.	
	32	The services follow a specified design pattern that allows them to be deployed, modified, and maintained independently from each other and solution that use them.	

2.0 APPLICATION DEVELOPMENT REVIEW RESULTS

Table 2 shows how to display the summary results for the both the Component and Module Development Review Criteria (Section I) and low-level Code Review Criteria (Section II) portions of the checklist.

<Fill out the Recommendation Rationale and Key Comments fields in the table below. Fill out the bottom row on the printed document.>

Table 2: Application Development Review Results

Check Box	Recommendation	Recommendation Rationale	
	Component, Module, and Code Development Review Passed	<Provide rationale on why Code and Component and Module Development Review has or has not been validated.>	
	Component, Module, and Code Development Review Failed		
Key Comments	<Provide additional comments as needed to explain the Recommendation.>		
Application Supervisor (Printed)		Application Supervisor (Signature)	Date



*Protecting our children,
families and future*

Indiana Department of Child Services (DCS) Child Support Bureau (CSB)

Unit Test Plan and Report Template

Unit Test Plan and Report

Insert an additional Test Case worksheet per Test Case to this workbook as needed.

An individual Unit Test Case consists of a series of steps to be performed in sequence during Unit Testing. The Unit Test Case verifies or validates that approved business, functional, non-functional, service or interface requirements have been met in the system(s) being tested.

1. Use the template to develop each of the required Unit Test Cases.
2. Review, approve, and baseline each Unit Test Case.
3. Conduct unit testing by executing the Unit Test Case during each test cycle for which it is planned to be tested.
4. Record defects identified during testing using the INvest defined non-production defect tracking mechanism.
5. Retest failed Unit Test Cases to verify the resolution of defects.
6. Log the Unit Test Case into the Test Case Summary.

Test Case Column Name	Description
Inputs	Describes the inputs and actions performed in the test step
Test Data Used	Identifies and describes the data used in the test step
Expected Output / Results	Describes the expected results of the test step
Dependencies on Other Test Cases	If applicable, identifies and describes any dependencies between the current test step and other Test Cases
Actual Result	Upon testing, briefly describes the actual result obtained when performing the test step
Result (Pass / Fail)	Upon testing, indicates whether the test step was successful or not

<Insert Iteration Number/Name>

[illegible]

Unit Test Case Name: <Insert Case Name>
Unit Test Case ID: <Insert Case ID>
Test Cycle: <Insert Cycle Number>
Module: <Insert Module Name>
Iteration: <Insert Iteration Number/Name>

Total Number of Steps	0
Number of Steps Passed	0
Number of Steps Failed	0
Number of Steps Executed	0
Number of Steps Not Executed	0
Overall Result (Pass / Fail)	

Step #	Inputs	Test Data Used	Expected Output / Results	Dependencies on Other Test Cases	Actual Result	Result (Pass / Fail)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
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28						



Indiana Department of Child Services Child Support Bureau

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INvest DDI Master Test Plan

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1.0 PURPOSE

<The purpose of the Design, Development, and Implementation (DDI) Master Test Plan is to document the DDI vendor's overall test strategy and to outline all the test activities performed in the testing process. The DDI Master Test Plan describes what to test, how to test, when to test, and who performs the tests. The DDI vendor will also support the Child Support Bureau's (CSB's) User Testing and User Acceptance Testing (UAT) efforts. The DDI vendor will ensure the successful completion of UAT in order to move to Pilot and Implementation for both project phases. This includes at a minimum:

- Conduct system training to CSB and County Partners participating in UAT;
- Deploy relevant project phase software in the UAT environment;
- Provide assistance in developing test data and test scenarios;
- Provide and support the UAT participants user IDs and passwords; and
- Assist in populating the data in the UAT environment.>

2.0 TEST METHODOLOGY AND APPROACH

<This section of the DDI Master Test Plan defines the strategies needed to plan, manage, and execute testing activities for the INvest Project. The methodology and approach includes detailed information about how the DDI vendor performs test management activities for a project the size of INvest. One critical aspect of this information is the strategy for conducting testing for a project that is developed in phases, with multiple modules per project phase, and a potential for multiple iterations within each module.

The DDI Master Test Plan links to other subordinate test plans for Integration Testing, System Testing, Performance Testing, and Federal Certification Testing. Each of these subordinate plans contains sections describing the testing approach and methodology, what is within scope and out of scope, and entry and exit criteria for each testing activity. System Testing occurs at the module level after development of all iterations for a module is complete and includes security testing, web services testing, localization testing, browser compatibility testing, personal computer configuration / operating system testing, mobile testing, and interface testing.>

2.1 Integration Testing

2.1.1 Test Strategy

2.1.2 Entry Criteria

2.1.3 Exit Criteria

2.1.4 Subordinate Test Plans

2.2 Module System Testing

2.2.1 Test Strategy

2.2.2 Entry Criteria

2.2.3 Exit Criteria

2.2.4 Subordinate Test Plans

2.3 Phase System Testing

2.3.1 Test Strategy

2.3.2 Entry Criteria

2.3.3 Exit Criteria

2.3.4 Subordinate Test Plans

2.4 Performance Testing

2.4.1 Test Strategy

2.4.2 Entry Criteria

2.4.3 Exit Criteria

2.4.4 Subordinate Test Plans

2.5 Federal Certification Testing

2.5.1 Test Strategy

2.5.2 Entry Criteria

2.5.3 Exit Criteria

2.5.4 Subordinate Test Plans

3.0 RELATIONSHIP TO OTHER PLANS

<The DDI Master Test Plan describes the strategy the DDI vendor will use for the INvest Project. Understanding how the DDI Master Test Plan relates to other INvest Project plans ensures consistency of communicating testing activities and progress.

The DDI Test Lead and DDI Project Manager consider relationships with other plans developed by the INvest Project Management Office (PMO) and the DDI vendor throughout the course of the INvest Project. Expected relationships include:

- **INvest Master Project Management Plan (PMP)** – The DDI Master Test Plan relies on key components of the INvest Master PMP to manage key testing activities. These include:
 - **Requirements Management** – The requirements management section of the INvest Master PMP provides information about all requirements included in INvest. The traceability of requirements through the System Development Life Cycle provides assurance that all baselined requirements are included in the solution, and that testing validates INvest performs in accordance with each requirement.
 - **Project Change Control** – The DDI Master Test Plan explains how testing handles project changes that affect INvest functional and non-functional requirements.
 - **Risk and Issue Management** – The risk and issue management section of the INvest Master PMP provides information about how to manage risks and issues, which includes risks and issues associated with testing activities.
 - **Communication Management** – The testing-specific communication needs captured in the communications matrix provide a guide for updating key project stakeholders informed of testing activities and progress.>

4.0 ROLES AND RESPONSIBILITIES

<The DDI Master Test Plan references, at a minimum, the roles and responsibilities included in the Test section of the INvest Governance Manual. The DDI Master Test Plan may identify other roles and responsibilities, as necessary.>

Table 1: Roles and Responsibilities

Roles	Responsibilities

5.0 ASSUMPTIONS, CONSTRAINTS, AND DEPENDENCIES

<The DDI Master Test Plan includes initial assumptions, constraints, and dependencies related to the effort required to test INvest successfully. Dependencies are activities that affect either entry into a test phase or exit from a test phase.>

5.1 Assumptions

5.2 Constraints

5.3 Dependencies

6.0 RISKS AND MITIGATION STRATEGIES

<The DDI Master Test Plan includes initial risks related to the effort required to test INvest successfully, as well as strategies to mitigate the potential impact of the risks.>

Table 2: Risks and Mitigation Strategies

Risk Title	Risk Description	Mitigation Strategy

7.0 TOOLS AND TEST EQUIPMENT

<The DDI Master Test Plan provides details on the use of tools and test equipment during the INvest Project. CSB uses IBM Rational CLM, including Rational Quality Management (QM), Rational Functional Tester (FT), and Rational Performance Tester (PT), to support Functional and Performance Testing. The DDI Master Test Plan provides details about any additional hardware or software used during the INvest Project.>

7.1 Tools

Table 3: Tools

Tool Name	Description

7.2 Test Equipment

8.0 TEST ENVIRONMENT(S) MANAGEMENT

<The DDI Master Test Plan defines the environments where testing occurs and how the environments are managed in context of the iterative approach required by the INvest Project.>

9.0 TEST DATA MANAGEMENT AND SECURITY

<The DDI Master Test Plan details procedures regarding maintenance of the integrity of test data and the security of any test data in all testing environments.>

10.0 USER ACCEPTANCE TEST SUPPORT APPROACH

<The DDI Master Test Plan details how the DDI vendor will support UAT activities. At a minimum, this includes:

- Provision of system training to CSB and County Partners participating in UAT;
- Deployment of relevant project phase software in the UAT environment;
- Assistance in developing test data and test scenarios;
- Provision and support for the UAT participants' user IDs and passwords; and
- Assistance in populating the data in the UAT environment.>

11.0 TEST STATUS / METRIC REPORTING

<The DDI Master Test Plan details how the DDI vendor will report testing status and metric reporting. The DDI vendor defines the metrics to report during progress status meetings to CSB and stakeholders.>

12.0 DEFECT MANAGEMENT AND RESOLUTION

<The DDI Master Test Plan details how to record defects in IBM Rational CLM and how to resolve disputes that may arise between CSB, Quality Assurance (QA), and the DDI vendor, including an escalation process.>

13.0 ENVIRONMENT TESTING

<The DDI Master Test Plan details how the DDI vendor ensures that each environment where testing occurs is also tested to ensure data is secure and code is migrated according to strict protocols.>



Indiana Department of Child Services Child Support Bureau

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INvest CSB User Acceptance Testing Master Test Plan

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1.0 PURPOSE

<The purpose of the Child Support Bureau (CSB) User Acceptance Testing (UAT) Master Test Plan is to document the overall test strategy and to outline all the test activities performed in the User Testing and UAT processes. The UAT Master Test Plan describes what to test, how to test, when to test, and who performs the tests.>

2.0 TEST METHODOLOGY AND APPROACH

<The test methodology and approach describes the testing approach used to test the Indiana Verification and Enforcement of Support (INvest) Project by module (User Testing), and project phase (UAT), and includes the testing objective, methods of testing, total time and resources required for the tests, and the testing environment required to execute the tests. The test strategy derives from reviewing the requirements management tool, as well as the High Level Design, and development (Solution Detailed Design) documents.>

2.1 User Testing

2.1.1 Test Strategy

2.1.2 Entry Criteria

2.1.3 Exit Criteria

2.1.4 Subordinate Test Plans

2.2 User Acceptance Testing

2.2.1 Test Strategy

2.2.2 Entry Criteria

2.2.3 Exit Criteria

2.2.4 Subordinate Test Plans

3.0 ROLES AND RESPONSIBILITIES

<The CSB UAT Master Test Plan includes, at a minimum, the roles and responsibilities included in the Test Section of the INvest Governance Manual. The CSB UAT Master Test Plan may identify other roles and responsibilities, as necessary.>

Table 1: Roles and Responsibilities

Roles	Responsibilities

4.0 ASSUMPTIONS, CONSTRAINTS, AND DEPENDENCIES

<The CSB UAT Master Test Plan includes initial assumptions, constraints, and dependencies related to the effort to test INvest successfully. Dependencies are activities that affect either entry into UAT or exit from UAT.>

4.1 Assumptions

4.2 Constraints

4.3 Dependencies

5.0 RISKS AND MITIGATION STRATEGIES

<The DDI Master Test Plan includes initial risks related to the effort required to test INvest successfully, as well as strategies to mitigate the potential impact of the risks. >

Table 2: Risks and Mitigation Strategies

Risk Title	Risk Description	Mitigation Strategy

6.0 TOOLS AND TESTS EQUIPMENT

<The CSB UAT Master Test Plan provides details on the use of tools and test equipment during the INvest Project. CSB uses IBM Rational CLM, including Rational Quality Management (QM), Rational Functional Tester (FT), and Rational Performance Tester (PT), to support Functional and Performance Testing. The CSB UAT Master Test Plan provides details about any additional hardware or software used during the INvest Project.>

6.1 Tools

Table 3: Tools

Tool Name	Description

6.2 Test Equipment

7.0 TEST DATA MANAGEMENT AND SECURITY

<The CSB UAT Master Test Plan details procedures regarding maintenance of the integrity of test data and the security of any test data in all testing environments.>

8.0 TEST STATUS / METRIC REPORTING

<The CSB UAT Master Test Plan details how CSB will report testing status and metrics. CSB defines the metrics reported during progress status meetings.>

9.0 DEFECT MANAGEMENT AND RESOLUTION

<The CSB UAT Master Test Plan details how to record defects in IBM Rational CLM and how to resolve disputes that arise between CSB, the QA vendor, and the DDI vendor, including an escalation process.>



Indiana Department of Child Services

Child Support Bureau

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INvest Final Test Report

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1.0 PURPOSE

This Final Test Report summarizes the results of the tests performed as outlined within this document, which include Integration, System, Performance, Federal Certification, and User Acceptance Testing (UAT).

2.0 INVEST TEST SUMMARY

<This section provides a summary of all Design, Development, and Implementation (DDI) test activities by testing phase. The information derives from IBM Rational CLM.>

2.1 Integration Testing

Table 1: Integration Testing Summary

Iteration	Module	# of Defects	Defects by Severity

2.2 System Testing

2.2.1 Module

Table 2: System Testing Summary – Module

Module	Test Case ID	# of Defects	Defects by Severity

2.2.2 Phase

Table 3: System Testing Summary – Phase

Module	Use Case / Service	# of Defects	Defects by Severity

2.3 Performance Testing

Table 4: Performance Testing Summary

Module	Use Case / Service	# of Defects	Defects by Severity

2.4 Federal Certification Testing

Table 5: Federal Certification Testing Summary

Module	Use Case / Service	# of Defects	Defects by Severity

3.0 TEST ASSESSMENT

3.1 Integration Testing

Table 6: Integration Testing Test Assessment

Test Analyst	Test Date	Test Results	Additional Comments

3.2 System Testing

3.2.1 Module

Table 7: Module System Testing Test Assessment

Test Analyst	Test Date	Test Results	Additional Comments

3.2.2 Phase

Table 8: Phase System Testing Test Assessment

Test Analyst	Test Date	Test Results	Additional Comments

3.3 Performance Testing

Table 9: Performance Testing Test Assessment

Test Analyst	Test Date	Test Results	Additional Comments

3.4 Federal Certification Testing

Table 10: Federal Certification Testing Test Assessment

Test Analyst	Test Date	Test Results	Additional Comments

3.5 User Acceptance Testing

Table 11: User Acceptance Testing Test Assessment

Test Analyst	Test Date	Test Results	Additional Comments

4.0 TEST RESULTS

4.1 Integration Testing

4.2 System Testing

4.2.1 Module

4.2.2 Phase

4.3 Performance Testing

4.4 Federal Certification Testing

4.5 User Acceptance Testing

4.5.1 Module (User Testing)

4.5.2 Phase (UAT)



**Indiana Department of Child Services
Child Support Bureau**

**INvest Training and Onsite Support Plan
Template**

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1.0 TRAINING AND ONSITE SUPPORT SCOPE AND OBJECTIVES STATEMENT

The Training and Onsite Support Plan documents the objective and the scope of the training, as well as the resources, schedule, and constraints related to the training phase of the project.

2.0 TRAINING AND ONSITE SUPPORT STAFF RESOURCES

2.1 Organizational Chart

2.2 Roles and Responsibility Table

Table 1: Roles and Responsibilities

Training Role	Name	Responsibilities
Training Lead		
Training Facilitator		
Training Material Developer		

3.0 TRAINING TOOLS, ENVIRONMENTS, FACILITIES, AND EQUIPMENT

3.1 Training Tools

3.2 Environments

3.3 Facilities

3.4 Equipment

4.0 TRAINING AND ONSITE SUPPORT PROGRAM APPROACH AND METHODOLOGY

4.1 Courses

4.2 Methods

4.3 Materials

4.4 Evaluations

4.5 Remediation

5.0 KNOWLEDGE TRANSFER

6.0 TRAINING AND ONSITE SUPPORT SCHEDULE



Indiana Department of Child Services Child Support Bureau

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INvest Production Readiness Review Checklist

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1.0 PURPOSE

The Child Support Bureau (CSB) and the Design, Development, and Implementation (DDI) vendor use this Production Readiness Review Checklist to validate the completion of all necessary actions in the Implementation Plan, and to confirm that the Indiana Verification and Enforcement of Support (INvest) is ready to move into the production environment.

2.0 INVEST HELP DESK READINESS

To ensure the INvest Help Desk has the information they need to support the product launch, fill out the information in Table 1.

Table 1: Help Desk Readiness

Item to Validate	Comment
End User Information	
Who Requests IDs?	
Will form to request ID be needed?	
Will form need to include area for assigned roll for user?	
Where will request form be placed?	
Will IDs be front loaded in tool?	
Who requests Roles?	
Who assigned roles in tool?	
Will roles be front loaded in tool?	
Who will receive the request form?	
Did you deliver the helpdesk a database showing IDs/roles?	
Support Training	
Basic User Training	
Tool Specific Training	
Daily/Monthly Process Training	
Troubleshooting Tips	
Access Issues	
ID Problem	
Tool Problem	
System Problem	
Report Issue to?	
PC Issues	
Error Messages	
Software Issues	
Print Issues	
Contact for Issues	
Daily/Monthly Process	
Timeframe Needing to be Met	

Item to Validate	Comment
When Program is ran	
Contact for issue	
Will Help Desk have access to the tool to assist with troubleshooting?	
End User Software/Hardware	
Software Supported	
Windows Version	
MS Word Version	
MS Excel Version	
Adobe	
Java	
Browsers Supported	
IE Version	
Mozilla Firefox version	
Chrome Version	
Other?	
Rollout Triage Process	
Rollout Process	
Pilot	
Rollout	
Rollout Triage Process	
Pilot	
Rollout	
Defect Ticket Flow	
Defect Triage Process	
Warranty Period?	

3.0 PRODUCTION READINESS REVIEW

Table 2 provides the checklist of the Production Readiness Review criteria. These criteria aid in the determination of whether the Implementation Manager can recommend that INvest move to the production environment. The number of checked boxes provides a guideline in making the recommendation. CSB and the DDI vendor consider the unique circumstances of INvest in making the final recommendation.

Table 2: Review Criteria

(Check All Boxes That Apply)	Production Readiness Review Criteria
	User environment and support environments assessed and ready to support INvest
	Possible issues, conflicts, and risks associated with Implementation documented, reviewed, and considered
	Data migration successfully completed
	Security reviews completed
	Technical Migration Plan completed and INvest is ready for migration
	Release Plan developed
	System documentation developed and available to all stakeholders
	Training Plan developed that addresses delivering the appropriate training to all stakeholders
	User documentation developed and available to all stakeholders
	Special considerations addressed and documented
	User Acceptance Testing completed and all blocker, critical, and high defects addressed
	Final Test Report approved
	Master Application Artifacts Updated (Solution Architecture Document [SAD], High Level Design [HLD], Solution Detailed Design [SDD])

4.0 RECOMMENDATION

Table 3: Recommendation

Check Box	Recommendation	Project Phase 1	Project Phase 2
	Yes. Move to Pilot		
	Yes. Move to Implementation		
Recommendation Rationale			
INvest Project Manager Name		Signature	Date
DDI Project Manager Name		Signature	Date



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families and future*

Indiana Department of Child Services (DCS) Child Support Bureau (CSB)

INvest Technical Migration Plan

INvest Technical Migration Plan

Overview

The Technical Migration Plan provides a detailed schedule of events, persons responsible, and event dependencies required to ensure successful cutover to INvest. The plan includes Pre-Implementation Activities/Tasks, Implementation Day Activities/Tasks, Post-Implementation Activities/Tasks, and Communication Lists. A separate plan created for each Phase pilot and implementation.

Instructions

1. Complete the Technical Migration Plan by providing and updating data in each tab. Leverage input from both CSB and DDI managers.

2. Yellow highlighted rows represent communication status points.

Field	Description
Deployment Plan Field list	
Pre-Deployment	This tab includes all steps performed before the production pilot/implementation begins.
Production Implementation	<p>This tab includes all steps performed during the production pilot/implementation.</p> <p>Operational Parameters should include:</p> <ul style="list-style-type: none"> • Log management, configuration, and rotation • System monitoring at server, application, and component level • Backup and restore procedures including database, application, configuration and third party • Troubleshooting including security, database, and common symptoms of issues and solutions <p>System maintenance and administration processes should include:</p> <ul style="list-style-type: none"> • Levels of support • Communication and reporting processes • Renewal procedures for service licenses and third party software • Security, DB, OLTP and Batch maintenance • Identify System restart procedures including: <ul style="list-style-type: none"> • Component dependencies and restart order • Restart procedures by component and layer • Operational considerations for restarts including anticipated outages <p>Implementation process documents considerations for:</p> <ul style="list-style-type: none"> • System bundling, compilation, and delivery • Security bundling and delivery • Database objects bundling and execution
Rollback Implementation	<p>This tab includes all steps performed during the event of a rollback.</p> <p>Include any procedures that allow rollback of database schema changes and/or data created as part of the implementation.</p>
Contact Sheet	<p>This tab includes the contact information for all personnel involved with the pilot/implementation.</p> <p>Establish a communication procedure for implementation within the production pilot/implementation tab:</p> <ul style="list-style-type: none"> • Contact details of key stakeholders • Schedule of conference bridges • Schedule of periodic email statuses • Escalation procedures and contacts
Implementation Architecture	This tab lists servers utilized for the implementation including software components.

* BOLD indicates required fields

Pre-Implementation Plan

<Insert Phase # and Pilot / Implementation>

Status	Step #	Task	Project	Comments	Dependencies	Date	Expected Duration	Begin Time	End Time	Responsible	Support	Changed
General												
	1	Example: Build Software for Production	Example: XXXXX Case Initiation			MM/DD/YYYY						
Application Setup												
		Example: Create the production config files										
Batch (Scheduling)												
		Example: Submit new/existing Requests										
Security												
		Example: Verify Security role implementation and for new pages										
Third Party Software												
		Example: Verify the creation of folder structure in the respective environment										
Day Zero Data												
		Example: Verify the system reference table data										
<Insert Additional Sections as Necessary>												

Production Implementation Plan

<Insert Phase # and Pilot / Implementation>

Status	Step #	Task	Project	Infrastructure Resource(s)	Comments	Dependencies	Date	Expected Duration	Begin Time	End Time	Responsible	Support	Changed
	1	Example: Manual Systems Reference Table Updates	Example: XXXXX Case Initiation				MM/DD/YYYY						
	2	Example: Status update on day's events (Email notification)											
Production Implementation: Day 2 (MM/DD/YYYY)													
Status	Step #	Task	Project	Infrastructure Resource(s)	Comments	Dependencies	Date	Expected Duration	Begin Time	End Time	Responsible	Support	Changed
	3	Example: Place Applications on Maintenance mode											
	4	Example: Perform Database Backup											
	5	Enterprise release Kick-off call Dial: 888.555.5555 Participant Code:											
	6	Example: Migrate database objects											
	7	Example: Deploy WebSphere Application											
	8	Voicemail Status update Dial:											
	9	Example: Perform validations of XXXXX Process											
	10	Example: Perform Server health checks listed in the document											
	11	Example: Perform data clean up activities 1. Change reference table date and validate 2. Database scripts to be run to clean up after validations											
	12	Enterprise release Go/ No-Go Call Dial: 888.555.5555 Participant Code:											

Rollback Implementation Plan

<Insert Phase # and Pilot / Implementation>

Status	Step #	Rollback Task	Project	Infrastructure Resource(s)	Comments	Dependencies	Date	Expected Duration	Begin Time	End Time	Responsible	Support	Changed
Rollback scenario # 1: "Sub-System" No-Go													
	1	Communication Status Update Dial: 888.555.5555 Participant Code:					MM/DD/YYYY				Chair Person: Decision Input: Decision Authorities: Attendees:	Chair Person: Decision Input: Decision Authorities: Attendees:	
	2	Example: Roll Back Database (from backup)			Example: Notify Web Team when complete								
	3	Example: Perform Application validations (rollback)											
	4	Vmail Status update											
Rollback scenario # 2: "Sub-System" No-Go													
	1	Communication Status Update Dial: 888.555.5555 Participant Code:									Chair Person: Decision Input: Decision Authorities: Attendees:	Chair Person: Decision Input: Decision Authorities: Attendees:	
	2	Example: Roll Back Database (from backup)			Example: Notify Web Team when complete								
	3	Example: Perform Application validations (rollback)											
	4	Vmail Status update											

Contact List
<Insert Phase # and Pilot / Implementation>

Group/Organization	Last Name	First Name	Functional Area	Onsite/ On Call/ Remote	Cell Phone	Home Phone	Other Phone	Email Address
XXXXX								

<Insert Phase # and Pilot / Implementation>

[illegible]

Application	Resource Type		Resource Name



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families and future*

Indiana Department of Child Services (DCS) Child Support Bureau (CSB)

INvest Site Readiness Checklist

version as of 06/21/2017

INvest Site Readiness Checklist

Overview

The Technical Migration Plan provides a detailed schedule of events, persons responsible, and event dependencies required to ensure successful cutover to INvest. The plan includes Pre-Implementation Activities / Tasks, Implementation Day Activities / Tasks, Post-Implementation Activities / Tasks, and Communication Lists. A separate plan created for each Phase Pilot and Implementation.

Instructions

1. Complete the Site Readiness Checklist by providing and updating each task.

<County Name> Enter or select the County

<Insert Phase # and Pilot / Implementation> Enter which project phase and whether this county is in a Pilot or Statewide Implementation

2. Yellow highlighted rows represent communication status points.

Column Name	Description
Duration	This Column provides the number of days for the task
Start Date	This column provides the date the task is planned to start
Finish Date	This column provides the date the task is planned to finish
% Complete	This column provides the completion percentage of the task
Person(s) Responsible	This column provides the individual responsible for completion of the task
Resources	This column provides the group, team, or organization responsible for the task
Link to Plan	This column provides the specific item in the Implementation associated to the task

Site Readiness Checklist							
<County Name>							
<Insert Phase # and Pilot / Implementation>							
Tasks	Duration	Start Date	Finish Date	% Complete	Person(s) Responsible	Resources	Link to Plan
Initial County Meeting							
Monitor Data Readiness							
Data Table Mapping							
Data Preparation							
Data Cleanup							
Kickoff Meeting							
County Management Training							
Infrastructure							
Verify Update Build							
Verify Connectivity							
Staff Training							
Practice Lab							
Data Review							
Review Forms & Print Capabilities							
Verify User Accounts / Access							
ISETS >>INvest Conversion							
Monitor Mock Conversions							
Financials							
On-Site Support							
Execute Start-Up Checklist							
Execute Post Implementation Checklists							
Monitor Post Conversion Data Clean-Up							
Generate Bi-Weekly Status Reports							
Track Help Desk Tickets							
Meet Daily with County Staff							

Site Readiness Checklist

<County Name>

<Insert Phase # and Pilot / Implementation>

Tasks	Duration	Start Date	Finish Date	% Complete	Person(s) Responsible	Resources	Link to Plan
Initial County Meeting							
Monitor Data Readiness							
Data Table Mapping							
Data Preparation							
Data Cleanup							
Kickoff Meeting							
County Management Training							
Infrastructure							
Verify Update Build							
Verify Connectivity							
Staff Training							
Practice Lab							
Data Review							
Review Forms & Print Capabilities							
Verify User Accounts / Access							
ISETS >>INvest Conversion							
Monitor Mock Conversions							
Financials							
On-Site Support							
Execute Start-Up Checklist							
Execute Post Implementation Checklists							
Monitor Post Conversion Data Clean-Up							
Generate Bi-Weekly Status Reports							
Track Help Desk Tickets							
Meet Daily with County Staff							



Indiana Department of Child Services Child Support Bureau

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INvest Post Implementation Readiness Checklist

Document Information

Document Title	Attachment IMP-04 Post Implementation Readiness Checklist
Version	<v1.0>
Author	<Author>
Owner (if different from Author)	<Owner>

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<v0.2>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>
<v1.0>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>

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1.0 PURPOSE

The Child Support Bureau (CSB) and the Design, Development, and Implementation (DDI) vendor use this Post Implementation Readiness Checklist to validate the success of the cutover of each Project Phase 1 or Project Phase 2 pilot or implementation.

2.0 POST IMPLEMENTATION READINESS

Table 1 provides the checklist of Post Implementation Readiness Review criteria. The criteria aid in the determination of whether INvest implemented successfully with CSB or in the County, either Prosecuting Attorney or Clerk.

Table 1: Post Implementation Checklist

<County Name>			
Task	County Clerk	Prosecuting Attorney	CSB
COUNTY OPTION SCREEN SET UPS			
Example: Verify Worker Table information			
SPECIFIC RESPONSIBILITIES			
Example: Reassigning a Case			
CASE PARTICIPANTS AND COURT ORDERS			
Example: Add a Ticker			
INTERSTATE CASE PARTICIPANTS AND COURT ORDERS			
Example: View Interstate History			
CASE INQUIRY AND REVIEW			
Example: View / Print Payment History			



Indiana Department of Child Services

Child Support Bureau

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<INvest PMO Monthly Status Report Template

Document Information

Document Title	Attachment PMR-01 INvest PMO Monthly Status Report Template
Version	<v1.0>
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<v1.0>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>

INVEST PMO MONTHLY STATUS REPORT

The final approved version of the INvest Weekly QA Status Report is stored on the project site [<here>](#).

Report Information					
Project	INvest Child Support System		Report Date	<mm/dd/yyyy>	
Reporting Period	<MM/DD/YYYY-MM/DD/YYYY>		Project Health Rating	<Red, Yellow, or Green>	
Project Manager	<Name>		DDI Health Rating	<Red, Yellow, or Green>	
Project Manager Phone	<XXX-XXX-XXXX>		QA Health Rating	<Red, Yellow, or Green>	
Project Manager Email	<email@domain.com>		OR Health Rating	<Red, Yellow, or Green>	
Staffing					
FTE Planned		FTE Actual		Variance	
Explanation (for any planned but unfilled positions)					
<ul style="list-style-type: none"> 					
Schedule					
Milestones Complete (plan)		Milestones Complete (actual)		Variance	
Explanation (for milestones not completed to plan)					
<ul style="list-style-type: none"> 					
Risks, Issues, & Certification Challenges					
High Risks Description			Status (new, updated or closed)		
<ul style="list-style-type: none"> 			<ul style="list-style-type: none"> 		
High Issues Description			Status (new, updated or closed)		
<ul style="list-style-type: none"> 			<ul style="list-style-type: none"> 		
Certification Challenges					
<ul style="list-style-type: none"> 					

Summary (see specific status reports for details)

	Staffing Variance	Milestone Variance	High/Medium Risks	High/Medium Issues	Certification Challenges
Requirements					
Design/Development					
Data Conversion					
DDI Testing					
Training					
Implementation					
OR					
QA					
UAT					



Indiana Department of Child Services

Child Support Bureau

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INvest Periodic Status Report Template

Document Information

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<v0.2>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>
<v1.0>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>

INVEST PERIODIC STATUS REPORT

Report Information					
Project	INvest Child Support System		Report Date	<MM/DD/YYYY>	
Organization/Vendor	<Organization/Vendor Name>		Health Rating	<Red, Yellow, or Green>	
Reporting Period	<MM/DD/YYYY-MM/DD/YYYY>		Project Manager	<Name>	
PM Phone	<XXX-XXX-XXXX>		PM Email	<email@domain.com>	
Staffing					
FTE Planned		FTE Actual		Variance	
Explanation (for any planned but unfilled positions)					
<ul style="list-style-type: none"> 					
Schedule					
Milestones Complete (plan)		Milestones Complete (actual)		Variance	
Explanation (for milestones not completed to plan)					
<ul style="list-style-type: none"> 					
Risks, Issues, & Certification Challenges					
High Risks Description			Status (new, updated or closed)		
<ul style="list-style-type: none"> 			<ul style="list-style-type: none"> 		
High Issues Description			Status (new, updated or closed)		
<ul style="list-style-type: none"> 			<ul style="list-style-type: none"> 		
Certification Challenges					
<ul style="list-style-type: none"> 					
Explanation (updates or changes to risks, issues or certification challenges since the last period)					
<ul style="list-style-type: none"> 					
Detail (QA and OR only)					
Past Period Activities			Next Period Activities		

Requirements Detail (DDI only)	
Past Period Activities	Next Period Activities
Design and Development Detail (DDI only)	
Past Period Activities	Next Period Activities
Data Conversion Detail (DDI only)	
Past Period Activities	Next Period Activities
Testing Detail (DDI only)	
Past Period Activities	Next Period Activities
Training Detail (DDI only)	
Past Period Activities	Next Period Activities
Implementation Detail (DDI only)	
Past Period Activities	Next Period Activities



Indiana Department of Child Services

Child Support Bureau

<Instructions for completing this form are provided in green and between brackets (e.g., "< instructions >"). Please delete all instructions, including this one, prior to finalizing the document.>

<Replace <CR Short Name> below with the appropriate CR Short Name>

<CR Short Name>

INvest Project Change Request Form

Document Information

Document Title	Attachment PCC-01 Project Change Request Form Template
Version	<v1.0>
Author	<Author>
Owner (if different from Author)	<Owner>

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Document History

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<v0.2>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>
<v1.0>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>

Document Status

<This subsection to be filled in by the assigned INvest PM.>

Change Request ID	
Assigned INvest PM	
Register Post Date	<MM/DD/YYYY>
Register Closed Date	<MM/DD/YYYY>
Status	<Posted, CCRB Queue, On Hold, Extended Impact Analysis, INvest Executive Team Queue, Execution Planning, Closed>

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1.0 REQUEST DETAILS

1.1 General Information

Request Information				
Request Short Name	<CR Short Name>			
Requestor PM Name	<Name>	Request Submission Date	<MM/DD/YYYY>	
Requestor PM Organization	<Organization Name>	Secondary Contact	<Name>	
Requestor PM Title	<Title>	Business Process Owner	<Name>	
Requestor PM Phone	<XXX-XXX-XXXX>	Business Analyst	<Name>	
Requestor PM Email	<email@domain.com>	Technical Analyst	<Name>	
Priority	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High	<input type="checkbox"/> Urgent
Request Cause				
<input type="checkbox"/> Statutory Change	<input type="checkbox"/> Requirements Omission	<input type="checkbox"/> Design Error		
<input type="checkbox"/> Business Need	<input type="checkbox"/> Programming Error	<input type="checkbox"/> Other:_____		
Project Modules				
<input type="checkbox"/> Case Initiation	<input type="checkbox"/> Enforcement	<input type="checkbox"/> Customer Service		
<input type="checkbox"/> Locate	<input type="checkbox"/> Financial Management	<input type="checkbox"/> Enterprise Content Management		
<input type="checkbox"/> Establishment	<input type="checkbox"/> Reporting	<input type="checkbox"/> Portal		
<input type="checkbox"/> Case Management	<input type="checkbox"/> Security and Privacy	<input type="checkbox"/> Other:_____		
Request Description				
<Describe the recommended change in this area including privacy or security concerns identified by the INvest Security Team.>				
Request Justification				
<Describe the business case for this change including what ramifications would be experienced if the change is not approved.>				

1.2 Initial Impact Analysis

Request Information					
Impact Analysis					
Scope	<input type="checkbox"/> Unknown	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High	<input type="checkbox"/> N/A
Associated Requirements	<input type="checkbox"/> Feature <identifier/name>		<input type="checkbox"/> Service <identifier/name>		<input type="checkbox"/> Use Case <identifier/name>
Associated Risks/Issues	<identifier/name>				
WBS Impact Level	<input type="checkbox"/> Task		<input type="checkbox"/> Deliverable		<input type="checkbox"/> Milestone
WBS Associated Name	<identifier/name>				
Schedule	<input type="checkbox"/> Unknown	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High	<input type="checkbox"/> N/A
ROM Effort (hours)	CSB ___###__		Vendor/Contractor ___###__		Subtotal ___###__
Resources	<input type="checkbox"/> Unknown	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High	<input type="checkbox"/> N/A
Cost/Budget	<input type="checkbox"/> Unknown	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High	<input type="checkbox"/> N/A
ROM Effort Costs	CSB ___\$#.##__		Vendor/Contractor ___\$#.##__		Subtotal ___\$#.##__
ROM H/W & S/W Costs	CSB ___\$#.##__		Vendor/Contractor ___\$#.##__		Subtotal ___\$#.##__
ROM Total Costs	CSB ___\$#.##__		Vendor/Contractor ___\$#.##__		Total ___\$#.##__
Privacy & Security	<input type="checkbox"/> Reviewed	<MM/DD/YYYY>	Concerns Cited	No <input type="checkbox"/> Yes <input type="checkbox"/>	
Overall Impact Rating	<input type="checkbox"/> Low		<input type="checkbox"/> Medium		<input type="checkbox"/> High <input type="checkbox"/> N/A

2.0 REVIEW DETAILS

2.1 INvest PM PCR Review

<Provide any updates to the request description from above with pertinent information obtained through meeting with the Requestor PM. Consider the possibility of an alternative or workarounds to resolve or delay the presented change.>

INvest PM Initial Impact Review Summary				
Scope		Schedule		Cost
Federal Certification Checklist Requirement	No <input type="checkbox"/> Yes <input type="checkbox"/>	Tasks on Current Critical Path	No <input type="checkbox"/> Yes <input type="checkbox"/>	Expected Budget Impact Level
Expected Impact Level	Task <input type="checkbox"/> Deliverable <input type="checkbox"/> Milestone <input type="checkbox"/>	Expected Schedule Date Impact	No <input type="checkbox"/> Yes <input type="checkbox"/>	< \$10,000 <input type="checkbox"/> \$10,000 - \$75,000 <input type="checkbox"/> > \$75,000 <input type="checkbox"/>
Privacy & Security Reviewed	No <input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/>			
Expected Decision Maker	INvest PMO Manager <input type="checkbox"/> CCRB <input type="checkbox"/> INvest Executive Team <input type="checkbox"/>			
Initial Impact Analysis Details and Comments				
<p><List additional associated Tasks, Deliverables, and Resources along with pertinent known information.></p>				

2.2 INvest PMO Manager PCR Review

INvest PMO Manager Ruling Information				
Review Date	<MM/DD/YYYY>			
Initial Request	Combine <input type="checkbox"/>	Deny <input type="checkbox"/>	Approve <input type="checkbox"/>	Approve & Escalate <input type="checkbox"/>
Comments/Recommendations				
<p><Provide details regarding the decision logic. If combining this PCR with another or others, provide information as to whether the process is expected to be a merge of PCRs or logically combining for cost total reasons.></p>				

2.3 CCRB Meeting PCR Review

Initial CCRB Ruling Information					
CCRB Meeting Date	<MM/DD/YYYY>				
Initial Request Decision	Defer <input type="checkbox"/> Deny <input type="checkbox"/> Approve <input type="checkbox"/>				
Extended Impact Analysis Requested	No <input type="checkbox"/>	Yes <input type="checkbox"/>	DDI Vendor Quote Requested	No <input type="checkbox"/>	Yes <input type="checkbox"/>
Extended Impact Analysis Start	<MM/DD/YYYY>		BAC Meeting Requested	No <input type="checkbox"/>	Yes <input type="checkbox"/>
Extended Impact Analysis Due	<MM/DD/YYYY>		TAC Meeting Requested	No <input type="checkbox"/>	Yes <input type="checkbox"/>
Comments/Recommendations					
<Describe any conditions associated to the approval or deferral expectations. If denied, provide reasoning.>					

2.4 Extended Impact Analysis

<Use the “Cost Estimate Template” to assist filling in this impact chart.>

Impact Chart				
SDLC Phase	Impact	Scope Impact Description	Hours	Cost
Requirements	Yes <input type="checkbox"/>	<Describe what the impact is pertaining to Tasks, Deliverables, and Resources needs>		
Design	Yes <input type="checkbox"/>			
Develop	Yes <input type="checkbox"/>			
Test	Yes <input type="checkbox"/>			
Implementation	Yes <input type="checkbox"/>			
Training	Yes <input type="checkbox"/>			
Total				
Total % Increase in Cost & Schedule (hours) from Approved Baselines				
Recommended Start Date			Est. Completion Date	

Quote/Estimate Information					
DDI Vendor Quote Received	No <input type="checkbox"/>	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	DDI Vendor Quote Received Date	<MM/DD/YYYY>
Second Quote Received	No <input type="checkbox"/>	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	Second Quote Received Date	<MM/DD/YYYY>
Independent Estimate Created	No <input type="checkbox"/>	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	Independent Estimate Creation Date	<MM/DD/YYYY>
Comments/Recommendations					

<Paste DDI Vendor Quote along with other quotes and estimates for comparison purposes here.>

BAC Recommendation (optional as requested by CCRB)		
<Approved, Modified and Approved, or Denied>		<Rationale for the recommendation based on analysis conducted.>
BAC Representative (Printed)	BAC Representative (Signature)	Date
Comments/Recommendations		
<Provide additional comments as needed to explain the BAC Recommendation.>		

TAC Recommendation (optional as requested by CCRB)		
<Approved, Modified and Approved, or Denied>		<Rationale for the recommendation based on analysis conducted.>
TAC Representative (Printed)	TAC Representative (Signature)	Date
Comments/Recommendations		
<Provide additional comments as needed to explain the TAC Recommendation.>		

2.5 Final Recommendation Description

<Describe the final recommendation based on all the analysis performed. The following are examples for how to fill-in this section:

- Original recommendation description is accurate and complete
- Original recommendation description is accurate, but the following information has been added to provide further context...
- Based on additional information provided (e.g.,...), the revised recommendation is as follows...>

3.0 DECISION RESULTS

Final Decision Result		
Change Request Decision	Date	Event (if applicable)
<Approved, Modified and Approved, or Denied>		

Project Managers		
Project Manager (Printed)	Project Manager (Signature)	Date
Comments/Recommendations		

CCRB		
CCRB Representative (Printed)	CCRB Representative (Signature)	Date
Comments/Recommendations		

INvest Executive Team		
Executive Team Representative (Printed)	Executive Team Representative (Signature)	Date
Comments/Recommendations		

4.0 EXECUTION PLAN

<Fill out the following tables based on the information identified in the Impact Analysis section. This section describes the **how** and **who** for the impacts mentioned in the Impact Analysis section.>

Communication Plan			
<input type="checkbox"/> Project Sponsor	<input type="checkbox"/> External Stakeholders	<input type="checkbox"/> Team Leads	<input type="checkbox"/> Software Architect
<input type="checkbox"/> PMO Manager	<input type="checkbox"/> Budget Analyst	<input type="checkbox"/> Technical Manager	<input type="checkbox"/> Network Architect
<input type="checkbox"/> Project Manager	<input type="checkbox"/> Conversion Specialist	<input type="checkbox"/> Sr. Developer	<input type="checkbox"/> Security Officer
<input type="checkbox"/> Business Process Owner	<input type="checkbox"/> Database Admin	<input type="checkbox"/> Sr. Programmer	<input type="checkbox"/> Training Manager
<input type="checkbox"/> DDI Manager	<input type="checkbox"/> System Architect	<input type="checkbox"/> Testing Manager	<input type="checkbox"/> Other (indicate below)
<Enter a list of individuals needing to be informed of this change.>			
Notification Details			

Deliverable Update Plan		
Phase	Deliverable(s)	Update(s)
Requirements		
Design		
Develop		
Test		
Implementation		
Training		

Activities Plan				
#	Activity	Owner	Start	Finish
1				
2				
3				
#	Update Issue/Risk log (if applicable)	<Assigned PM>		
#	Submit Action Items from the above execution plan activities	<Assigned PM>		

5.0 PCR CLOSE-OUT

<Check close-out items as they are completed and add any final note regarding the PCR Close-Out process if needed.>

PCR Close-Out			
<input type="checkbox"/> Communications	<input type="checkbox"/> Action Items	<input type="checkbox"/> Register	<input type="checkbox"/> Document Status Section
Final Note			



Indiana Department of Child Services (DCS) Child Support Bureau (CSB)

Project Change Control and Estimation - Cost Estimation Template

Indiana Verification and Enforcement of Support (INvest) Project

Template version as of 7/27/2017

Labor Effort and Cost Estimation Instructions

When a project change request requires additional impact analysis, the individual conducting the analysis begins by filling in the information located at the top of each worksheet. This information provides a summary of who is performing the analysis, the owner and appropriate project manager, and descriptive elements of the change request.

The column labeled "Tasks" currently contains example tasks. The example tasks should be replaced with the actual tasks related to the change request from the master schedule Work Breakdown Structure (WBS) along with the current estimated hours needed to complete a particular task. Having the current task completion hours is important in calculating the net change. Once the tasks and hours are entered into the applicable System Development Life Cycle (SDLC) grouping (Project Planning & Management, Requirements, Design, etc.), the individual conducting the analysis uses the Three-Point Estimation technique to arrive at the net change total. This is completed by inputting hour estimates within the Optimistic, Most Likely, and Pessimistic columns.

After the Three-Point estimates are entered for the related tasks and the net change has been calculated, **the individual conducting the analysis splits the net change total between the "CSB Staff" and "Vendor" columns.** Once the split is complete, the worksheet automatically sums the total hours of the updated tasks that will be used to generate cost data. The ROM Cost Summary Sheet imports the hour totals calculated by the Three-Point Estimation worksheet to automatically provide the total labor costs.

Three-Point Effort Estimation Sheet

Column Element Name	Definition
Tasks	This column contains the tasks as stated from the WBS.
WBS	This column contains both reference number as stated in the WBS and the total amount of hours to complete the task.
3-Point Estimate	This column contains the three estimation categories (Optimistic, Most Likely, and Pessimistic) for the Three-Point Estimation technique, and the Net Change total that is calculated from the Three-Point Estimation technique.
Split	This column is used to indicate the split in hours between CSB staff and the vendor from the total net change as calculated in the 3-Point Estimate columns.
Estimation Technique	The Three-Point Estimating Technique should be used to facilitate the estimated hours (for columns D-H on the Cost Estimation Template). The three-point estimate formula: Estimate = (O + 4M + P) / 6 O = Optimistic estimate, M = Most Likely estimate, P = Pessimistic estimate

Cost Estimation Summary Sheet

Column Element Name	Definition
Estimated Hours	The total work hours required for both CSB and the vendor for each SDLC phase.
Total Hours	This column provides the total estimated work hours across all SDLC phases.
Rate / Hour	The blended rate to be charged for one hour for CSB and the vendor.
Labor Cost	The total of the blended hourly rate multiplied by the total number of work hours.
Hardware / Software / Processing Costs - One-Time	This section provides the estimated costs of other (non-resource) expenses to be expended during project implementation, including technology costs such as hardware, software, or processing as well as other costs such as mailing costs, etc. The columns in this section include: -Quantity: Number of units required of each cost category - The units differ by cost category, but include number of servers, number of licenses, GB of disk space, etc. -Unit Cost: The cost per unit for each cost category
One-Time Hardware / Software Costs	The Total Cost columns for the non-resource costs to calculate the total estimated costs for hardware and software items.
Total One-Time Costs	Sums the Total Hardware (H/W) Costs / Software (S/W) Costs to calculate the total estimated costs to be expended during the project.
Annual Hardware / Software Costs	The Total Cost columns for the non-resource costs to calculate the total estimated costs for hardware and software items annually.
Total Annual Costs	Sums the Total Hardware Annual / Software Annual Costs to calculate the total estimated costs to be expended.

Change Request ID:			ROM #1						ROM #2						ROM #3						Notes / Comments						
ROM Analysis Date:																											
Analysis Conducted By:																											
Request Short Name:																											
Request Owner:																											
Project Manager:																											
WBS Version:																											
Tasks	WBS		3-Point Estimate						Split		3-Point Estimate						Split		3-Point Estimate						Split		
	Reference #	Task Hours	Optimistic	Most Likely	Pessimistic	Calculated Total	Net Change	CSB Staff	Vendor	Optimistic	Most Likely	Pessimistic	Calculated Total	Net Change	CSB Staff	Vendor	Optimistic	Most Likely	Pessimistic	Calculated Total	Net Change	CSB Staff	Vendor				
1. Project Planning & Management		0				0	0	0	0				0	0	0	0				0	0	0	0				
Scope Estimation		0				0	0	0	0				0	0	0	0				0	0	0	0				
Review Project Charter to Determine Scope		0				0	0						0	0						0	0						
Decompose WBS to Work Package Level		0				0	0						0	0						0	0						
Review Decomposed WBS		0				0	0						0	0						0	0						
Schedule Estimation		0				0	0	0	0				0	0	0	0				0	0	0	0				
Enter Decomposed WBS into Scheduling Tool		0				0	0						0	0						0	0						
Review Project Schedule		0				0	0						0	0						0	0						
Project Management Plan Development		0				0	0	0	0				0	0	0	0				0	0	0	0				
Draft Project Management Plan		0				0	0						0	0						0	0						
Approve Project Management Plan		0				0	0						0	0						0	0						
2. Requirements		0				0	0	0	0				0	0	0	0				0	0	0	0				
New Requirement/Policy Identified		0				0	0	0	0				0	0	0	0				0	0	0	0				
Review New Federal Requirement(s)		0				0	0						0	0						0	0						
Update IBM Rational CLM Requirements Listing		0				0	0						0	0						0	0						
3. Design		0				0	0	0	0				0	0	0	0				0	0	0	0				
Solution Architecture Design Document		0				0	0	0	0				0	0	0	0				0	0	0	0				
Analyze Requirements		0				0	0						0	0						0	0						
Complete SID		0				0	0						0	0						0	0						
Perform Proof-of-Concept (POC)		0				0	0						0	0						0	0						
Solution Detailed Design (SAD) Document		0				0	0	0	0				0	0	0	0				0	0	0	0				
Analyze Requirements and SAD		0				0	0						0	0						0	0						
Design JADs		0				0	0						0	0						0	0						
4. Development		0				0	0	0	0				0	0	0	0				0	0	0	0				
Development		0				0	0	0	0				0	0	0	0				0	0	0	0				
Analyze Input Documents		0				0	0						0	0						0	0						
Create Unit Test Report & Test Cases		0				0	0						0	0						0	0						
Unit Testing		0				0	0	0	0				0	0	0	0				0	0	0	0				
Perform Structural / Functional Unit Testing		0				0	0						0	0						0	0						
Update Requirements Traceability Matrix		0				0	0						0	0						0	0						
5. Testing		0				0	0	0	0				0	0	0	0				0	0	0	0				
Test Planning		0				0	0	0	0				0	0	0	0				0	0	0	0				
Review Test Plan		0				0	0						0	0						0	0						
Finalize Test Plan		0				0	0						0	0						0	0						
Integration Testing		0				0	0						0	0						0	0						
Review Integration Test Cases and Create Test Scripts		0				0	0						0	0						0	0						
Execute Test Scripts		0				0	0						0	0						0	0						
Review Test Results		0				0	0						0	0						0	0						
User Acceptance Testing		0				0	0	0	0				0	0	0	0				0	0	0	0				
Create Test Scripts		0				0	0						0	0						0	0						

4/11/2019

	ROM #1	ROM #2	ROM #3	Notes		
Change Request ID:						
ROM Analysis Date:						
Analysis Conducted By:						
Request Short Name:						
Request Owner:						
Project Manager:						
Estimated Hours	CSB	Vendor	CSB	Vendor	CSB	Vendor
Planning & Management	0	0	0	0	0	0
Requirements Tasks	0	0	0	0	0	0
Design Tasks	0	0	0	0	0	0
Development Tasks	0	0	0	0	0	0
Testing Tasks	0	0	0	0	0	0
Infrastructure Tasks	0	0	0	0	0	0
Miscellaneous Tasks	0	0	0	0	0	0
CSB Research Hours	0		0		0	
Total Hours	0	0	0	0	0	0
Rate / Hour	\$ 39.71	\$ 150.00	\$ 39.71	\$ 150.00	\$ 39.71	\$ 150.00
Subtotal Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Labor Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
One-Time Hardware / Software Costs						
Hardware						
Quantity	0		0		0	
Unit Cost	\$ -		\$ -		\$ -	
Total Hardware (H/W) Costs	\$ -		\$ -		\$ -	
Software						
Quantity	0		0		0	
Unit Cost	\$ -		\$ -		\$ -	
Total Software (S/W) Costs	\$ -		\$ -		\$ -	
Total HW/SW Costs	\$ -		\$ -		\$ -	
TOTAL ONE-TIME COSTS	\$ -		\$ -		\$ -	
Annual Hardware / Software Costs						
Hardware						
Maintenance	\$ -		\$ -		\$ -	
other	\$ -		\$ -		\$ -	
Total Hardware Annual Costs	\$ -		\$ -		\$ -	
Software						
Licensing Fees	\$ -		\$ -		\$ -	
other	\$ -		\$ -		\$ -	
Total Software Annual Costs	\$ -		\$ -		\$ -	
TOTAL ANNUAL COSTS	\$ -		\$ -		\$ -	



Indiana Department of Child Services Child Support Bureau

<Instructions for completing this form are provided in green and between brackets (e.g., "< instructions >"). Please delete all instructions, including this one, prior to finalizing the document.>

OCSE Checklist for Local Office Visits

Document Information

Document Title	Attachment FED-02 OCSE Checklist for Local Office Visits
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Author	<Author>
Owner (if different from Author)	<Owner>

The controlled master of this document is available in the Project Library. Hard copies of this document are for information only and are not subject to document control.

Document History

Version	Date	Prepared / revised by	Change description (additions / modifications)
<v0.1>	<MM/DD/YYYY>	<Author>	<Initial draft>
<v0.2>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>
<v1.0>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>

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1.0 OCSE CHECKLIST FOR LOCAL OFFICE VISITS

Table 1 provides the Office of Child Support Enforcement (OCSE) checklist for local office visits.

Table 1: OCSE Checklist for Local Office Visits

Requirements to be Demonstrated at Site Visit		
Requirements	Functionality	Comments
Case Initiation	Establishment of a non-TANF case	
	Processing of a TANF referral	
	Processing of a Foster Care referral	
	Processing of a Medicaid referral	
	Processing of an incoming intergovernmental referral	
	Generation of intergovernmental forms	
	Entry of non-IV-D orders	
	Generation of CSI transaction, when worker initiated	
Locate	Review and acceptance / rejection of information received from the FPLS	
	Review and acceptance / rejection of information received from the FCR	
	Receipt and review of information from various Federal and state locate sources	
	Generation of postal and employer verification notices	
	Recording of verified information on the case record	
	Recording of locate referrals and positive locate hits on the case record	
Case Management	Creation of case history and case notes, and whether such entries can be deleted by a worker	
	Automatic movement of cases from one function to the next based on case actions/statuses	
	Receipt and submission of CSENet incoming and outgoing transactions	
Review and Adjustment	Review and adjustment of support obligations process, including document generation and timeframes	

Requirements to be Demonstrated at Site Visit		
	When caseworker initiated, the generation of notice to each party once modified order is entered on the system.	
Case Closure	Case closure process, including document generation	
Establishment	Establishment of paternity, including document generation	
	Input identifying information regarding voluntary acknowledgement	
	Establishment of a support order, including child support guidelines calculation and document generation	
	Establishment of administrative support orders, including document generation	
	When caseworker initiated, the generation of notices to the CP and NCP related to proceedings that may involve the establishment or modification of support obligations	
Enforcement	Income withholding process, including document generation	
	Imposition of real or personal property liens, including document generation	
	Unemployment compensation intercept process, including any document generation	
	Process for enforcing health insurance coverage, including document generation	
	Process for license suspension, including document generation	
Financial Institution Data Match	Case record information (i.e., financial institution and record address)	
	Process once a match has been made	
	If caseworker initiated, the generation of hard copy report or form such as a subpoena, for use with financial institutions not participating in an automated match	
	Process for generation of documents necessary to attach an asset held by a financial institution, including documents related to State due process requirements	
Financial Management	How misapplied payments are corrected, including document generation	

Requirements to be Demonstrated at Site Visit		
	How unidentified payments are researched and posted	
	How genetic testing costs are maintained and how the system recover such costs, including document generation	
	How bills and billing coupons are generated	
Reporting	How caseworkers can access statistical and performance reports on their assigned cases and statewide	
	How the automated worklist supports the day-to-day case management activities of the caseworker	



Indiana Department of Child Services Child Support Bureau

<Instructions for completing this form are provided in green and between brackets (e.g., "< instructions >"). Please delete all instructions, including this one, prior to finalizing the document.>

INvest Project Close Out Report Template

Document Information

Document Title	Attachment PCL-01 Project Close Out Report Template
Version	<v1.0>
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The controlled master of this document is available in the Project Library. Hard copies of this document are for information only and are not subject to document control.

Document History

Version	Date	Prepared / revised by	Change description (additions / modifications)
<v0.1>	<MM/DD/YYYY>	<Author>	<Initial draft>
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<v1.0>	<MM/DD/YYYY>	<Author>	<Explain changes made since last version>

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1.0 PURPOSE

<Replace the bracketed occurrences of <Project Name> in this section with the actual project name.>

The purpose of the Indiana Verification and Enforcement of Support (INvest) Project Close Out Report is to ensure that project stakeholders are satisfied that the project is complete and there are no residual actions.

This document establishes formal acceptance of all the deliverables for the <Project Name>. The <Project Name> has met all the requirements as defined in the requirements documents and Project Charter. Upon Project Management Office (PMO), Project Sponsor, and Business Process Owner (BPO) approval of this document, the system will be handed over to Production Support and the transfer of knowledge from the Project Team to Production Support Team will be finalized. All training has concluded and the documentation has been assembled and provided to the Production Support Team as indicated in the Deployment process.

The Close Out process included review and documentation of project performance metrics, the documentation of lessons learned, release of the Project Team, close out all vendor procurements (if applicable), and the archive of all relevant project documents.

2.0 DOCUMENT INFORMATION

Table 1: Document Information

Project ID	<##>		
Project Start Date	<##>	Project Completion Date	<##>
Project Name	<Short Name of Project>		
Project Description and Scope	<Insert brief description of the project and its scope.> <Copy or Hyperlink from Project Management Plan document.>		
Agency / Division	<Insert the Agency or Division responsible for the project.>		
Related Documents	<Reference or hyperlink related documents to the Deployment Strategy and Plan (e.g., Migration Plan, Training Plan, etc.)>		
Project Manager	<Insert name of the Project Manager.>		
Project Sponsor	<Insert name of the Project Sponsor.>		

3.0 PROJECT SUMMARY

3.1 Summary

<Provide a summary of the project, including objectives achieved, summary of benefits realized to date, etc.>

3.2 Project Deliverables

<List all formal project deliverables prepared during the life of the project or insert hyperlink to where they are stored.>

Table 2: Project Phase 1 Project Deliverables

Project Artifact Name	CSB Approval Date	Repository Link

Table 3: Project Phase 2 Project Deliverables

Project Artifact Name	CSB Approval Date	Repository Link

3.3 Project Milestones

<List dates of key milestones achieved on the project.>

4.0 VARIANCES (PLANNED VS ACTUAL)

4.1 Cost (Project Budget for Non Resource Costs)

<Detail the actual expenditures compared to budget. Provide a brief explanation of variances.>

Table 4: INvest Costs

Cost Item	Planned Cost	Actual Cost
DDI Vendor		
QA Vendor		
Administrative (CSB)		
County Partners		
Other Stakeholders		

4.2 Resources

<Detail the resources utilized on the project compared to budget, comparing both number of resources and utilization. Provide a brief explanation of variances.>

4.3 Schedule (Time)

<Detail the actual dates achieved compared to the planned (baseline) schedule. Document days behind / ahead of schedule. Provide a brief explanation of variances.>

4.4 Project Change Requests

<List the approved Project Change Request Forms that impacted the project, including their level, type, and scope.>

4.5 Risk and Issue Activities

<Provide an overview of key risks and issues that impacted the project. Insert a hyperlink to the related Risk and Issue Matrix. Document any issues that remain open.>

5.0 PERFORMANCE REVIEW

<Describe the key qualitative and quantitative benefits that the project was expected to achieve.>

<Describe the key qualitative and quantitative benefits that the project has already achieved.>

6.0 TRANSITION TO PRODUCTION SUPPORT

<Provide a description of the key activities that have been completed in order to move the project into the Production environment and to transition it to Production Support. Reference or hyperlink related Deployment Plans and documentation. Also detail ongoing functions related to the implemented solution which should be owned by the business operations.>

7.0 LESSONS LEARNED

Capturing lessons learned is an integral part of every project and serves several purposes. While the finalization of a formal lessons learned list is completed at the end of the project, capturing lessons learned should occur throughout the project life cycle to ensure all information is documented in a timely and accurate manner. Lessons learned serves as a valuable tool for use by other project managers within an organization who are assigned similar projects. This section not only describes what went wrong during a project and suggestions to avoid similar occurrences in the future, but also describes what went well and how similar projects may benefit from this information.

Table 5 lists the lessons learned for this project.

<The lessons learned must be communicated in a consistent manner. In addition to the categorization and description of the lesson, it is important to state what the impact was and provide a recommendation for the PMO to consider on future projects. Replace the given example in the second row and add rows as appropriate for however many lessons were learned.>

Table 5: INvest Project Lessons Learned

PM-SDLC Phase	Document Link
Governance	
Project Management	
Quality Assurance	

<The lessons learned must be communicated in a consistent manner. In addition to the categorization and description of the lesson, it is important to state what the impact was and provide a recommendation for the PMO to consider on future projects. Replace the given example in the second row and add rows as appropriate for however many lessons were learned.>

8.0 PROJECT CLOSURE APPROVAL

<The Project Manager completes the INvest Project Close Out Report and signs off below. The PMO Representative, Project Sponsor, and Business Process Owner review and approve the INvest Project Close Out Report and indicate approval by signing below.>

Project Closure Approval		
Project Manager (Printed)	Project Manager (Signature)	Date of Completion
PMO Representative (Printed)	PMO Representative (Signature)	Date of Approval
Project Sponsor (Printed)	Project Sponsor (Signature)	Date of Approval
Business Process Owner (Printed)	Business Process Owner (Signature)	Date of Approval