State of California

FI$Cal Sub-Project Management Plan

Version 8.0

Final

February 2014

Revision History

Date	Revision	Last Updated By	Status / Comments	Approved By
03/26/2012	0. 1	Aslam Ahmed		
03/28/2012	0. 2	Lisa Dezzani	Updated headings.	
04/03/2012	0. 3	Aslam Ahmed	Updates to the document.	
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Signature Page

FI$Cal Project Approval of the FI$Cal Sub-Project Management Plan

Approved on behalf of the FI$Cal Project by the Project Director:

Signature: _____ Date: 2/7/14

Tamara Armstrong
Project Director
FI$Cal Project

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1 Introduction

1.1 Scope

The scope of the Sub-Project Management Plan (SPMP) is to provide standard methods and guidelines to ensure that FI$Cal sub-projects are conducted in a disciplined, well-managed, and consistent manner. The SPMP is a Scalable Sub-Project Framework that provides guidance and suggestions regarding the level of project management practices to be applied on Primary, Enterprise, and Internal sub-projects. The Framework is scalable in that it provides a pragmatic set of project management practices that should be applied based on the Sub-Project size and complexity. Definitions of the different types of Sub-Projects are described in section 2.0.

The FI$Cal Master Project Management Plan (MPMP) is the controlling document to the SPMP and all of the other management plans. The MPMP ensures the orderly and integrated capability to control progress and performance across all plans during the Design, Development, and Implementation (DD&I) phase.

Sub-projects are initiated to support the primary FI$Cal project goals and objectives. Details regarding the processes are described in knowledge areas 6 through 13 relating to key project management areas. These knowledge areas cover project management processes for all project life cycle phases: Initiation, Planning, Monitoring/Controlling, Execution and Closure. The Framework promotes the delivery of quality products that meet the customer needs and result in sub-projects that are completed on time and within budget.

1.2 Purpose and Objectives

The SPMP describes how project management activities will be carried out throughout the life cycle of FI$Cal sub-projects. It serves as a guide to Sub-Project Teams to ensure they complete their scope with the appropriate quality and within the planned cost and schedule as they plan and execute work. This plan describes the activities and the artifacts that need to be created in the following project management areas as documented in the sub-project management knowledge areas:

- Communication Management
- Configuration Management and Change Control
- Cost and Financial Management
- Procurement and Contract Management
- Risk and Issue Management
- Schedule Management
- Staff Management
- Quality Management

1.3 Strategy

The strategy and the objectives of the Scalable Sub-Project Framework are as follows:

- Provide standard methods and guidelines to ensure that sub-projects are conducted in a disciplined, well managed, and consistent manner.
- Promote quality deliverables that meet customer needs and result in sub-projects that are completed on time and within budget.

- Accommodate the management and facilitate adjustment in scale for sub-projects of different categories (Primary, Enterprise, and Internal) as described in Section 2.
- Standardize communication related to the sub-projects.

1.4 Document Review Cycle

The SPMP will be reviewed annually, upon milestones established within the FI$Cal Master Project Management schedule; review may also be initiated by any of the following:

- Change in Primary FI$Cal Project sponsorship
- Addition or loss of key Primary FI$Cal Project stakeholders
- Change in the Primary FI$Cal Project goals or objectives

This document contains a revision history log that precedes the Table of Contents. When changes occur, the version number will be updated to the next increment. The date, owner making the change, and the change description will also be recorded in the revision history log.

The SPMP will be considered a baseline document after the initial plan is approved by the FI$Cal Project Director. Subsequent changes to the SPMP, including periodic updates, require use of the FI$Cal change control process to communicate and obtain approval.

1.5 References

Links to other documents are inserted where appropriate throughout the document.

1.5.1 Internal to FI$Cal

- FI$Cal Master Project Management Plan [FI$Cal Master Project Management Plan, #9258].

1.5.2 External to FI$Cal

- A Guide to the Project Management Body of Knowledge (PMBOK Guide), Fifth Edition, 2013.
- California Project Management Methodology (CA-PMM) http://www.cio.ca.gov/Government/IT_Policy/SIMM_17/

1.6 Project Document Repository

The electronic version of the SPMP, as well as all associated templates, are available to the Sub-Project Team and sub-project stakeholders on an ongoing basis through iManage.

1.7 Definitions and Acronyms

Table 1 – Definitions and Acronyms

Term	Description
Action Item	Action Items are activities that were not part of the original plan, but need to be taken to rectify any situation. For example, mitigation actions help to reduce risk, resolution actions handle issues, and corrective actions are for quality improvement. Action items can be closed only when the assigned individual satisfies the governance authority identifying the action.
Assumption	A condition that is presumed to be correct to allow for planning in situations where ambiguity exists. There is a risk that each assumption is wrong; therefore, each assumption should be validated and actual conditions planned for, as soon as possible.
Change	Project changes are determined and measured against approved baselines. Changes are inevitable on projects because there are no situations for unique requirements where there is no ambiguity. Changes need to be analyzed for impact and decisions made to accept the impact if the change is approved.
Change Control	For the FI$Cal Project, Change Control is the set of methods used to detect, analyze, decide upon, and verify implementation of changes to baselined approved configured items. Examples of approved configured items include approved FI$Cal Plan documentation, Deliverables, Software or Configurations of Hardware.
Change Management	For the FI$Cal Project, Change Management is equivalent to Organizational Change Management.
Decision	Decisions are the key to directing progress in the face of alternatives. Not all decisions can be made at the top of organizations, so distributed authority is important. Visibility into decisions made is also important to avoid cases where authority may be inadvertently exceeded.
Departments	The departments that are part of FI$Cal are listed in SPR 5 dated January 8, 2014.
Issue	An issue is a situation which has occurred or will definitely occur, as opposed to a risk which is a potential event. The issue can be the result of a risk being realized or unforeseen problems that arise on the project. Left unresolved, an issue will impede or prohibit project-related progress or development by affecting scope, budget, schedule, resources, and/or quality.
Lessons Learned	Lessons Learned are important to help influence the performance of future activity in ways that would be more likely to be successful. Lessons should be drawn from facts and NOT opinions. Collect information on activity that works and that which does not work, so that changes can be made. Apply lessons to methodologies, procedures, or other means to ensure they are applied for future events.
Organizational Change Management	Organizational Change Management is a framework for managing the effect of new business processes, changes in organizational structure, or cultural changes within an enterprise.

Term	Description
Partner Agencies	The four control agencies that sponsor the FI$Cal Project: the Department of Finance (DOF), the State Controller's Office, the State Treasurer's Office, and the Department of General Services.
Procedure	The definition of tasks or steps below the process activity level. Procedures have defined content requirements. Workflow is a comparable level of detail without a specific format.
Plan	A complete document explaining how management intends to control performance in a defined scope. Plans have defined content requirements.
Process	A list of activities that is necessary to perform repeatable actions to achieve consistent output products or outcome results.
Project Schedule	A formal representation of the tasks required to complete a project that incorporates resources, dependencies, durations, and effort to help participants understand and track to a baseline of activity required to produce the project results.
Quality	Quality is fitness for purpose or compliance with specifications. Quality is the responsibility of every team member. The cost of quality will be much higher if quality is not built into each interim product that leads to end results.
Risk	Risks are probable events (positive or negative). Most projects are undertaken at a cost that is worth the positive event of completion. During development, most risks have potential negative impact that needs to be handled (accepted, mitigated, transferred, or avoided). Probability multiplied by impact equals exposure (probability x impact = exposure). Because risks can be numerous, there needs to be criteria and standards to handle risks according to established priorities or thresholds. Most actions related to risks are mitigation actions to reduce either probability or impact.

Acronyms	Meaning
CCB	Change Control Board
CI	Configuration Item
DD&I	Design, Development, and Implementation (a phase of the FI$Cal Project)
DED	Deliverable Expectations Document
DOF	Department of Finance
ITAP	IT Acquisition Plan
MPMP	Master Project Management Plan
PBE	Partner Business Executive
PMBOK	Project Management Body of Knowledge
PMO	Project Management Office
QA	Quality Assurance
RACI	Responsible, Accountable, Consult, Inform
SPMP	Sub-Project Management Plan
WBS	Work Breakdown Structure

1.8 Constraints

None

1.9 Integration with Other Plans

The SPMP has specific scope, purpose, and objectives assigned from the FI$Cal Master Project Management Plan. The Sub-Project Management Plan supports and is supported by other Project Management Plans as described below, to provide an integrated methodology for managing FI$Cal sub-projects.

- The Communication Management Plan addresses the Project internal communication needs.

- The FI$Cal Project Configuration Management and Change Control Plans are the definitive authorities for performing Configuration Management and Change Control activities.

- The Schedule Management Plan details the scheduling methodologies, policies, roles and responsibilities, and training during each project life cycle phase. [FI$Cal Schedule Management Plan, #72].

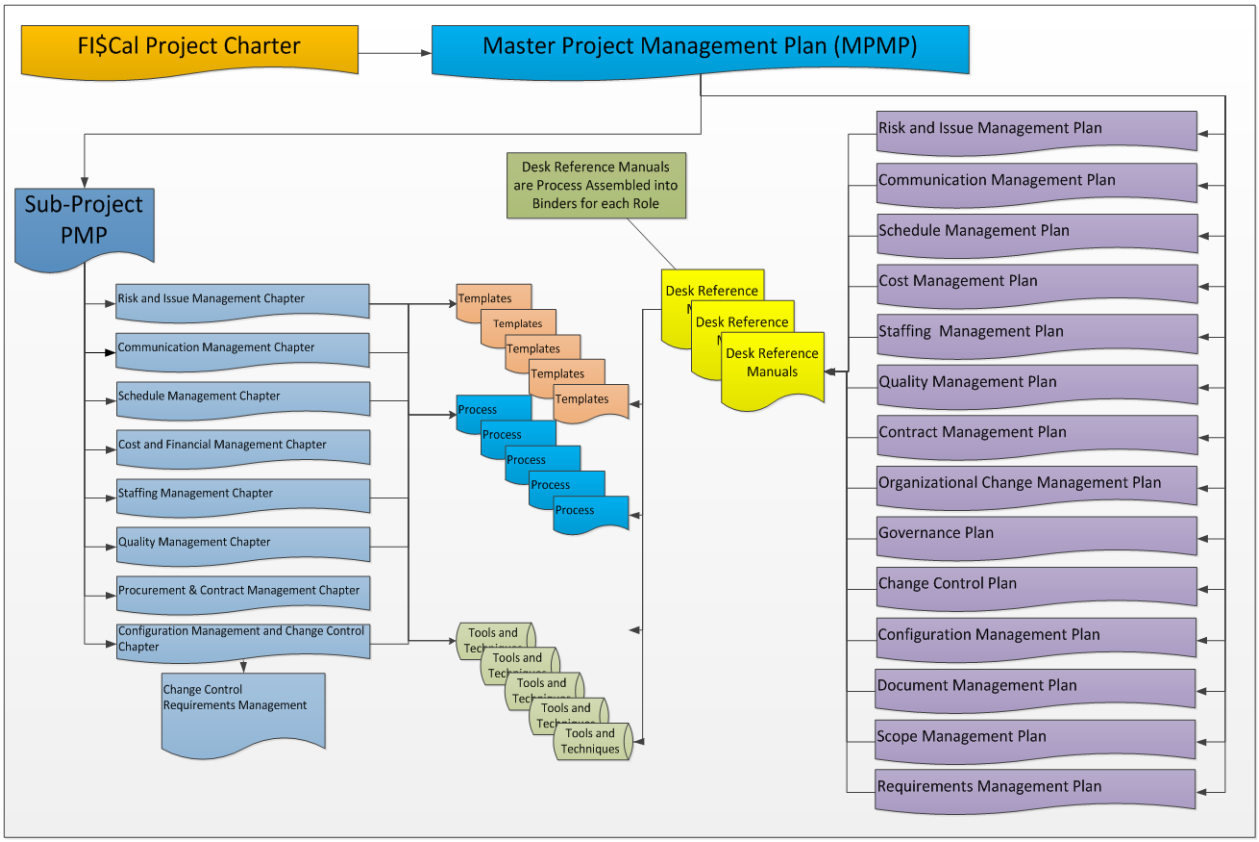
- When a risk cannot be mitigated or there is no contingency plan, the Sub-Project Manager documents the risk in the enterprise Risk Log to bring it to the attention of the Risk and Issue Workgroup. The risk is then considered an enterprise risk and is managed according to the Risk and Issue Management Plan.

- When an issue cannot be resolved at the sub-project level, the Sub-Project Manager escalates it to the Risk and Issue Workgroup to be managed according to the Risk and Issue Management Plan.

2 Scalable Sub-Project Framework

The concept of this framework and how it fits in the overall FI$Cal Project Management methodology, is depicted below.

Figure 1 – Sub-Project Framework



The MPMP is the overarching plan that governs all FI$Cal Project Management plans including the Sub-Project Management Plan. The SPMP is subordinate to the MPMP and governs the sub-project management knowledge areas. The sub-project management knowledge areas describe the project management processes which define the activities to be undertaken to manage the sub-project. Each process, as described in the sub-project management knowledge area, details the inputs, tools and techniques, and the resulting outputs when a particular process is executed during a particular project life cycle phase. Templates are also provided to record the data outputs when executing the processes and, in some instances, to be used as tools and techniques.

The Scalable Sub-Project Framework was developed for managing the following categories of sub-projects:

- **Primary** –These are the primary projects to do with the planning of the main FI$Cal Project and managing the Special Project Report (SPR) Milestone schedule. Examples of the primary sub-projects are: SI Procurement and SPR 5/Legislative Report for the Procurement Phase. Wave schedules will be the primary schedules for the DD&I Phase (that is, Pre-Wave, Wave 1, etc.).

- **Enterprise** – These are high-criticality sub-projects which may require external agency/department support. These projects may also include cross-team support within FI$Cal, even if they do not need external departments' involvement. These sub-projects have their own unique plans and schedules to contribute to the FI$Cal Project objectives. These are typically interdependent with the Primary schedules. Examples of sub-project schedules include Legacy Systems Inventory, Legacy Data Systems Analysis, and Interfaces.
- **Internal** - These are sub-projects internal to the FI$Cal Project and are typically related to infrastructure, support, and planning efforts. These types of projects do not require cross-team collaboration. These are not interdependent with the Primary schedules. These projects generally support the existence of the FI$Cal Project.

2.1 Scalable Sub-Project Framework Usage – Guidelines

The following guidelines will help the Sub-Project Manager determine what sub-project templates and other attributes are recommended for use on what particular type of project. These are suggested guidelines, and the circumstances of an individual project may dictate the use of additional Framework elements.

i. As the methodology is "template driven", the Sub-Project Manager should first determine which of the various scalable sub-project templates are applicable for their sub-projects type using the sub-project section checklist [Sub-Project Section Checklist For PM's, #10391]. It is expected that the Sub-Project Manager will work closely with the Sub-Project Sponsor in making this determination and come to a common agreement.

ii. The degree of documentation required for each phase, process, and template may be different from one sub-project to another. The objective is to use the templates to collect and document meaningful data, not just accumulate volumes of information. The ultimate goal is to help complete the sub-project deliverables successfully.

iii. The guiding principles in using the templates should include, at a minimum:
   - Keep the documentation as simple and streamlined as possible, without compromising the ability to properly manage the project.
   - Provide continued input for improvement and usage of the templates.
   - Ensure the implementation of best project management practices.

3 Roles and Responsibilities by Project Phase

This section details the responsibilities of each key role in the sub-project community by project life cycle phase. Key stakeholders include:

- Leadership Team
- Sub-Project Sponsor
- Sub-Project Manager
- Sub-Project Team
- Quality Assurance Team

Leadership Team: The Leadership Team consists of the Project Executive, Project Director, Deputy Directors, the Partner Business Executives (PBEs), Legal Counsel, and the Public Information Officer or their designees. The Leadership Team acts as the principal decision-making authority regarding the strategic direction of the sub-projects. The Leadership Team also provides executive project oversight and exercises decision-making authority regarding critical sub-project issues as they pertain to sub-project scope, schedule, and resources.

Table 2 – Leadership Team Responsibility by Phase

Project Phase	Leadership Team Responsibilities
Initiation	1. Review and approve Sub-Project Concept 2. Ensure sub-project staff availability
Planning	1. Review and approve Sub-Project Charter 2. Review and approve sub-project schedule
Execution	1. Assist in the resolution of issues 2. Review risk mitigation plans and act on Sub-Project Manager/project sponsor recommendations
Closure	1. Review and support lesson learned recommendations

Sub-Project Sponsor: The Sub-Project Sponsor is typically the Deputy Director of the FI$Cal team where the sub-project originated or who has responsibility over the functional area. The Sub-Project Sponsor has the authority to define project objectives, secure resources, and resolve organizational and priority conflicts. An engaged Sub-Project Sponsor is a prerequisite for the success of the sub-project. The Sponsor also has to make business arguments for the sub-project's existence and obtain buy-in from the Leadership Team.

Table 3 – Sub-Project Sponsor Responsibility by Phase

Project Phase	Sub-Project Sponsor Responsibilities
Initiation	1. Review and approve Sub-Project Concept 2. Ensure project staff availability
Planning	1. Review and approve Sub-Project Charter 2. Review and approve project schedule 3. Agree on checklists and artifacts

Project Phase	Sub-Project Sponsor Responsibilities
Execution	1. Assist in the resolution of issues 2. Review risk mitigation plans and act on Sub-Project Manager recommendations
Closure	1. Review and support lesson learned recommendations

Sub-Project Manager: The Sub-Project Manager has full responsibility for the overall sub-project and its successful completion. To succeed in this responsibility, the Sub-Project Manager must work closely with the Project Sponsor to ensure that adequate resources are applied. The Sub-Project Manager also has responsibility for planning and ensuring that the project is successfully completed on time and at an acceptable level of quality. The Sub-Project Manager is assigned at the project initiation phase, ensuring ownership of the sub-project planning and execution efforts.

Table 4 – Sub-Project Manager Responsibility by Phase

Project Phase	Sub-Project Manager Responsibilities
Initiation	1. Develop the Sub-Project Concept 2. Present the completed Sub-Project Concept to the Leadership Team for review and approval
Planning	1. Develop the Sub-Project Charter 2. Present the completed Sub-Project Charter to the Leadership Team for approval 3. Provide assistance to the Project Management Office (PMO) Schedule Team in the development of the Sub-Project Schedule 4. Ensure that all stakeholders agree to the sub-project commitments 5. Ensure that the Sub-Project Schedule is approved and baselined
Execution	1. Manage day-to-day tasks and provide direction to the team members performing work on the sub-project 2. Regularly review the sub-project schedule, comparing the baseline to actual work completed 3. Ensure that the sub-project schedule is updated to reflect the most current status 4. Identify new risks and issues 5. Update the sub-project Risk and Issue Log with the latest mitigation and resolution status on the risks and issues identified 6. Monitor Sub-Project Team performance 7. Communicate with and engage stakeholders
Monitor and Control	1. Make changes to the sub-project schedule and make recommendations as needed 2. Review the results of quality assurance reviews and correct any deviations 3. Participate in Change Control Board (CCB) meetings, review sub-project risks and issues, and establish risk mitigation and issue resolution strategies

Project Phase	Sub-Project Manager Responsibilities
Closure	1. Obtain Sub-Project Sponsor and Leadership Team approval on the completed deliverable/work product 2. Close out any open action items 3. Conduct lessons learned session 4. Write the Post Implementation Evaluation Report (PIER) 5. Archive all sub-project data 6. Assist as needed with any post-project delivery audits 7. Assist the Vendor Management Office and Business Services Office in contract closeout 8. Celebrate success with stakeholders and the Sub-Project Team

Sub-Project Team: The Sub-Project Team members, as necessary, assist the Sub-Project Manager in the planning process, promote the sub-project plan, and are responsible for performing the sub-project work assignments given to them by the Sub-Project Manager within the established schedule. Team members may be drawn from within FI$Cal, from any of the partner agencies, and from outside vendors.

Table 5 – Sub-Project Team Responsibility by Phase

Project Phase	Sub-Project Team Responsibilities
Initiation	1. Provide estimates for developing the deliverables
Planning	1. Develop the technical approach 2. Assist in the development of the work breakdown structure, work effort estimates, and sub-project schedules 3. Identify risks and issues
Execution	1. Execute assigned project tasks 2. Produce deliverables 3. Assist in the identification of risks and issues
Monitor and Control	1. Coordinate with the Quality Assurance Team to review quality assurance (QA) results and correct any deviations 2. Assist in the mitigation of risks and resolution of issues 3. Participate in CCB review meetings
Closure	1. Participate in the lessons learned process 2. Turn over all sub-project-related documentation to the Sub-Project Manager for archiving 3. Assist in the sub-project closure activities

Quality Assurance Team: The Quality Assurance Team members are involved on a regular basis in evaluating overall sub-project performance in order to provide confidence that the sub-project will satisfy the relevant quality standards. The Quality Assurance Team is involved in reviewing and verifying that the QA activities are being followed.

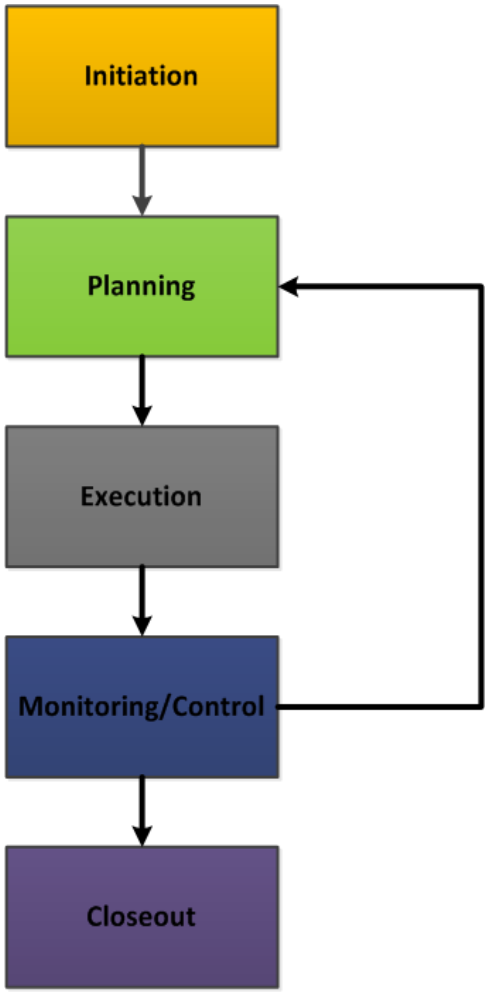
Table 6 –Quality Assurance Team Responsibility by Phase

Sub-project Phase	Quality Assurance Team Responsibilities
Execution	1. Review and analyze sub-project metric data 2. Verify deliverable(s) for conformance to standards
Monitor and Control	1. Coordinate formal reviews and audits 2. Participate in informal reviews 3. Verify that the Sub-Project Team is following QA sub-project policies
Closure	1. Archive sub-project metric data 2. Participate in the lessons learned process 3. Identify ways to improve sub-project processes

4 Project Life Cycle

Due to the unique nature of each sub-project, each will take on various forms and degrees of uncertainty. Reducing this uncertainty requires consistent application of project management best practices across all sub-projects. Consistency is accomplished by dividing the management of sub-projects into phases during which common project management processes, as detailed in the sub-project management knowledge areas, can be executed. The phases, as listed below in Figure 2 – FI$Cal Sub-Project Life Cycle Phases, allow the Sub-Project Team to provide better management and control in order to provide efficient and productive efforts throughout the life cycle of the project.

Figure 2 – FI$Cal Sub-Project Life Cycle Phases



4.1 Initiation

The Initiation phase is the first project phase and is the predecessor to the Planning phase. The purpose of the Initiation phase and the resulting deliverable, the Sub-Project Concept, is to obtain approval from the Leadership Team to proceed with the work effort for the sub-project. Refer to the Concept Template [Concept Template, #7543] and Sub-Project Concept Guideline

document [Sub-Project Concept Process Guide, #7544] for creating and documenting the Sub-Project Concept. The Sub-Project Concept serves the following purposes:

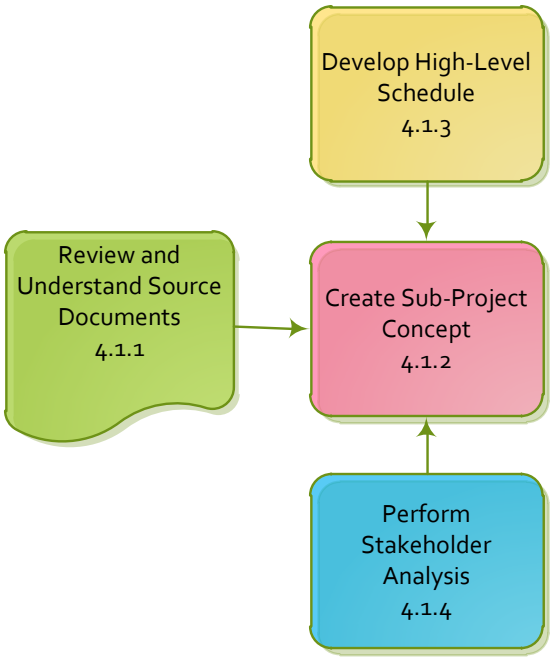
- Business Case justification to proceed with the work effort
- Alignment of Sub-Project objectives with FI$Cal objectives
- Communication mechanism for cross team awareness

The inputs and the activities for developing the Sub-Project Concept are detailed in Figure 3 – Project Initiation Process Flow. The processes necessary to accomplish the activities are indicated in Table 7 – Initiation Phase Activities.

Table 7 – Initiation Phase Activities

Section	Life Cycle Phase	Process	Deliverable or Artifact
SPMP	Initiation	Create Sub-Project Concept	Concept Document
Communication	Initiation	Identify Stakeholders	Stakeholder Register
Schedule	Initiation	Initiate Sub-Project Schedule Template	High-Level Schedule

Figure 3 – Project Initiation Process Flow



4.1.1 Review and Understand Source Documents

The Sub-Project Manager attempts to gather, review, and understand all the relevant background source documents related to the sub-project to be undertaken. The source documents are used as inputs for creating the Sub-Project Concept. When reviewing the source documentation, the focus is on understanding FI$Cal's business strategy and strategic

objectives and in determining whether the sub-project's outcome will result in achieving these objectives. Lessons Learned documents from other similar sub-projects should also be reviewed.

4.1.2 Create Sub-Project Concept

The Sub-Project Concept provides a basis for communication, understanding, and agreement among the Leadership Team regarding the proposed sub-projects. The Sub-Project Concept is critical for obtaining buy-in on the sub-project. The Sub-Project Manager developing the Concept should strive to develop a project proposal that is robust, informative, and realistic, because the decision-makers utilize this information to determine whether or not to proceed with the sub-project. As a formal deliverable, the Sub-Project Concept defines the business problem, high-level approach and other top-level planning information.

The Sub-Project Concept describes the business problem/business need to be addressed by, and the benefits to be realized from, the sub-project. The Sub-Project Manager identifies the proposed sub-project deliverables and the approximate completion delivery date. Any high-level assumptions and constraints relating to the sub-project are identified, together with a list of dependencies with other sub-projects that might impact the success of the sub-project. The Sub-Project Manager documents alternative solutions and the consequences for the FI$Cal Project and its partner agencies if the need or opportunity is not addressed.

The Sub-Project Concept Guide [Sub-Project Concept Process Guide, #7544] provides a detailed description of the Sub-Project Concept and the associated approval process flow. The template for the Sub-Project Concept can be located using the following link: [Concept Template, 7543]. While sub-projects will vary in terms of size and complexity, all the sub-projects must have a Concept. It is recommended that not more than 3-4 hours be spent to document a Concept.

4.1.3 Develop High-Level Schedule

The objective of this activity is for the Sub-Project Manager to derive the high-level schedule information which needs to be documented in the Sub-Project Concept. This is accomplished by executing the Initiate Sub-Project Schedule Template process as listed in the Schedule Management Knowledge Area to create a high-level sub-project schedule.

4.1.4 Perform Stakeholder Analysis

Performing a stakeholder analysis allows the Sub-Project Manager and Sub-Project Sponsor to identify stakeholders early in the sub-project, determine their needs and expectations, and manage and influence those expectations over the course of the sub-project. Stakeholders are individuals who have a vested interest in the success of the sub-project. The identification and input of stakeholders will help to define, clarify, drive, change, and contribute to the scope and, ultimately, the success of the project. The Sub-Project Manager compiles an initial stakeholder register by executing the Identify Stakeholders process as detailed in the Communication Management Knowledge Area.

4.2 Planning

The Planning phase is the most important phase in sub-project management. During the sub-project planning phase, the Sub-Project Manager together with the Sub-Project Team, will

define the sub-project activities and describe how they will be accomplished. Without adequate planning, it will be difficult, if not impossible, for the sub-project to succeed. The primary activities carried out during the Planning phase include the development of the Sub-Project Charter and the sub-project schedule. The Planning phase will not be deemed complete until the Leadership Team approves the Sub-Project Charter.

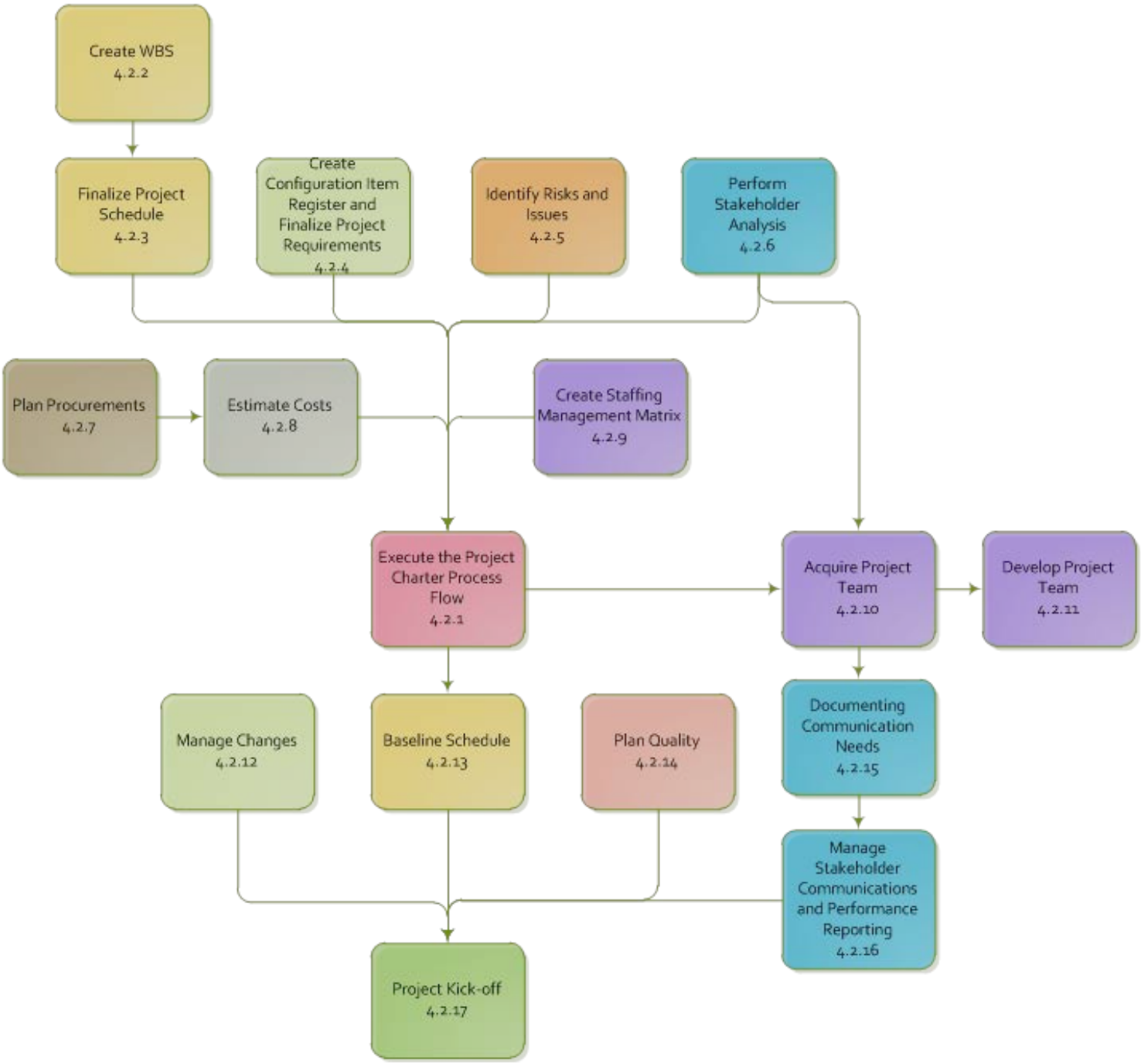
The activities needed to be completed for developing the Sub-Project Charter are detailed in Figure 4 – Project Planning Process Flow. The processes needed to be executed to accomplish the activities are indicated in Table 8 – Planning Phase Deliverable/Artifacts Generated. For "Internal" sub-projects, most of the processes to be executed may be marked as optional. Refer to the relevant process area section to determine whether the processes are mandatory or optional.

Table 8 – Planning Phase Deliverable/Artifacts Generated

Section	Life Cycle Phase	Process	Deliverable or Artifact
SPMP	Planning	Create Sub-Project Charter	Sub-Project Charter Template
Communication	Planning	Stakeholder Analysis	Power / Interest Grid
Communication	Planning	Plan Communications	Project Communication Matrix
Communication	Planning	Distribute Information	Information Distribution Record
Communication	Planning	Manage Stakeholder Communications and Performance Reporting	Action Item Log
Communication	Planning	Manage Stakeholder Communications and Performance Reporting	Decisions Log
Communication	Planning	Manage Stakeholder Communications and Performance Reporting	Lessons Learned
Configuration / Change Control	Planning	Configuration Identification	Configurations Items Register
Configuration / Change Control	Planning	Configuration Identification	Requirements and Traceability Log
Configuration / Change Control	Planning	Configuration Change Control	Change Requests Log
Configuration / Change Control	Planning	Configuration Change Control	Project Artifacts – Updated
Cost	Planning	Estimate Costs	Sub-Project Charter Document Updated
Staff	Planning	Develop Staff Management Matrix	Responsibility Assignment Matrix (RACI)

Section	Life Cycle Phase	Process	Deliverable or Artifact
Staff	Planning	Develop Staff Management Matrix Acquire Project Team	Staff Management Matrix
Staff	Planning	Acquire Project Team	Project Kickoff Meeting
Staff	Planning	Develop Project Team	Transition Plan
Procurement / Contract	Planning	Procurement Planning	Update Sub-Project Charter Document
Quality	Planning	Plan Quality	Deliverable Expectations Document (DED)
Risks and Issues	Planning	All Stages	Risks Log
Risks and Issues	Planning	All Stages	Issues Log
Schedule	Planning	Conduct WBS Session	Work Breakdown Structure
Schedule	Planning	Create Activity List Information	Activity List Task Estimation
Schedule	Planning	Develop Draft Schedule	Draft Project Schedule
Schedule	Planning	Create Task Estimation	Activity List Task Estimation
Schedule	Planning	Develop Schedule	Published Project Schedule
Schedule	Planning	Baseline Schedule	Baseline Schedule

Figure 4 – Project Planning Process Flow



4.2.1 Execute the Project Charter Process Flow

The Planning phase begins after the Sub-Project Concept has been approved. The Sub-Project Charter is created at the beginning of the planning phase for all sub-projects. All sub-project types (Primary, Enterprise, and Internal) are required to produce a Sub-Project Charter. The purpose of the Sub-Project Charter is to set expectations for the sub-project and reduce the chance of scope creep. Refer to the Sub-Project Charter Template [Sub-Project Charter

Template, #8684] and Sub-Project Charter Guideline document [Sub-Project Charter Document Guide, #8687] for developing the Sub-Project Charter. Input for developing the Sub-Project Charter document is the finalized Sub-Project Concept. The Sub-Project Charter will contain much of the same information from the Sub-Project Concept as well as additional information on the sub-project objectives, risks, issues, constraints, assumptions, resource requirements, and procurement needs. The activities detailed below need to be executed to finalize the Sub-Project Charter.

4.2.2 Create WBS

The objective of this activity is for the Sub-Project Manager to work in conjunction with the Sub-Project Team and the PMO Scheduler to develop a Work Breakdown Structure (WBS) for the sub-project. This activity is accomplished by executing the Conduct Work Breakdown Session process as detailed in the Schedule Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.3 Finalize Project Schedule

The objective of this activity is for the Sub-Project Manager to finalize the sub-project schedule. This activity is accomplished by executing the following processes as detailed in the Schedule Management knowledge area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated:

- Create Activity List Information
- Develop Draft Schedule
- Create Task Estimation
- Develop Schedule

4.2.4 Create Configuration Item Register and Finalize Project Requirements

The objective of this activity is for the Sub-Project Manager to finalize the sub-project requirements if applicable and update the Configuration Item Register. This activity is accomplished by executing the Configuration Identification process as detailed in the Configuration Management and Change Control Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.5 Identify Risks and Issues

The objective of this activity is for the Sub-Project Manager, working with the Sub-Project Team members and the Sub-Project Sponsor, to identify the risks and issues pertaining to the sub-project. This activity is accomplished by executing the following processes as detailed in the Risk and Issues Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated:

- Identify Risks
- Identify Issues

4.2.6 Perform Stakeholder Analysis

The objective of this activity is for the Sub-Project Manager to perform further analysis with respect to the sub-project stakeholders. The identification and input of stakeholders will help to define, clarify, drive, change, and contribute to the scope and, ultimately, the success of the project. The Sub-Project Manager will update the Stakeholder Register by executing the Identify Stakeholders process as detailed in the Communication Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.7 Plan Procurements

The objective of this activity is for the Sub-Project Manager to identify the goods or services that need to be procured from outside of FI$Cal. This activity is accomplished by executing the Procurement Planning process as detailed in the Procurement and Contract Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.8 Estimate Costs

The objective of this activity is for the Sub-Project Manager to determine the total cost estimate for any contract services that need to be procured for the sub-project. This activity is accomplished by executing the Estimate Contract Costs process as detailed in the Cost and Financial Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.9 Create Staff Management Matrix

The objective of this activity is for the Sub-Project Manager to create a Staff Management Matrix. The Staff Management Matrix describes information about the resources required to complete the sub-project. This activity is accomplished by executing the Develop Staff Management Matrix as detailed in the Staff Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.10 Acquire Project Team

The objective of this activity is for the Sub-Project Manager to acquire the human resources needed to execute the project. This activity is accomplished by executing the Acquire Project Team process as detailed in the Staff Management knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.11 Develop Project Team

The objective of this activity is for the Sub-Project Manager to enhance the performance of each individual member of the project team as well as the performance of the team as a whole. This activity is accomplished by executing the Develop Project Team process as detailed in the Staff Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.12 Manage Changes

The objective of this activity is for the Sub-Project Manager to ensure that changes to the sub-project (such as to the scope, deliverables, timescales, or resources) are formally defined, evaluated, and approved prior to the actual implementation of the changes. The activity entails completing a variety of control procedures to ensure that, if implemented, the change will cause minimal impact to the objectives of the sub-project. This activity is accomplished by executing the Configuration Change Control process as detailed in the Configuration Management and Change Control Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.13 Baseline Schedule

The objective of this activity is for the Sub-Project Manager working in conjunction with the PMO Scheduler to obtain approval and document agreement from the Leadership Team for baselining the sub-project schedule. This activity is accomplished by executing the Baseline Schedule process as detailed in the Schedule Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.14 Plan Quality

The objective of this activity is for the Sub-Project Manager to identify quality standards relevant to the sub-project deliverables and work products and determine how to satisfy these standards. This activity is accomplished by executing the Perform Quality Planning process as detailed in the Quality Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.2.15 Documenting Communication Needs

The objective of this activity is for the Sub-Project Manager to define the information needs of the project stakeholders and Sub-Project Team by documenting what, when, and how the information will be distributed. This activity is accomplished by executing the following processes as detailed in the Communication Management Knowledge and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated:

- Plan Communications
- Information Distribution **(optional)**

4.2.16 Manage Stakeholder Communications and Performance Reporting

The objective of this activity is for the Sub-Project Manager to provide the Sub-Project Team members, the Sub-Project Sponsor, the Leadership Team, and all the sub-project stakeholders with relevant and timely project information. The Sub-Project Manager collects information on all the work accomplished on the sub-project and documents it on the weekly FI$Cal Project Status Report for the Leadership Team. This activity is accomplished by executing the following processes as detailed in the Communication Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated:

- Manage Stakeholder Communications
- Performance Reporting

4.2.17 Project Kickoff

The objective of this activity is for the Sub-Project Manager to schedule a sub-project kickoff meeting to formally recognize the start of the sub-project. During the meeting, the Sub-Project Manager reviews the approved sub-project charter, reviews the sub-project major milestone dates, articulates any risks to the sub-project, and dispels any doubts that the sub-project team members may have about their respective roles and responsibilities. The Sub-Project Manager should execute the Acquire Project Team process as detailed in the Staff Management Knowledge Area and listed above in Table 8 – Planning Phase Deliverable/Artifacts Generated.

4.3 Execution/Monitor and Control

The sub-project moves into the Execution phase once the Planning phase is complete and the Sub-Project Charter and sub-project schedule have been approved and baselined. The Sub-Project Manager and Sub-Project Team now focus on performing, observing, and analyzing the sub-project tasks. During the sub-project Execution phase, the Sub-Project Manager's role is to ensure that the Sub-Project Team carries out planned project activities effectively and efficiently while ensuring that measurements against the planned project activities and the original sub-project concept continue to be collected, analyzed, and acted upon throughout the sub-project life cycle.

The purpose of the Control and Monitor phase is to compare the actual sub-project performance with the planned performance, and taking corrective action to yield the desired outcome when significant differences exist. The Sub-Project Manager has to ensure that the activities shown in Figure 5 – Execution / Monitoring and Control Process Flow, and the processes necessary to accomplish the activities as shown in Table 9 – Execution/Monitor and Control Deliverable Artifacts Generated, are coordinated for effective integration management of the sub-project.

Figure 5 – Execution / Monitoring and Control Process Flow

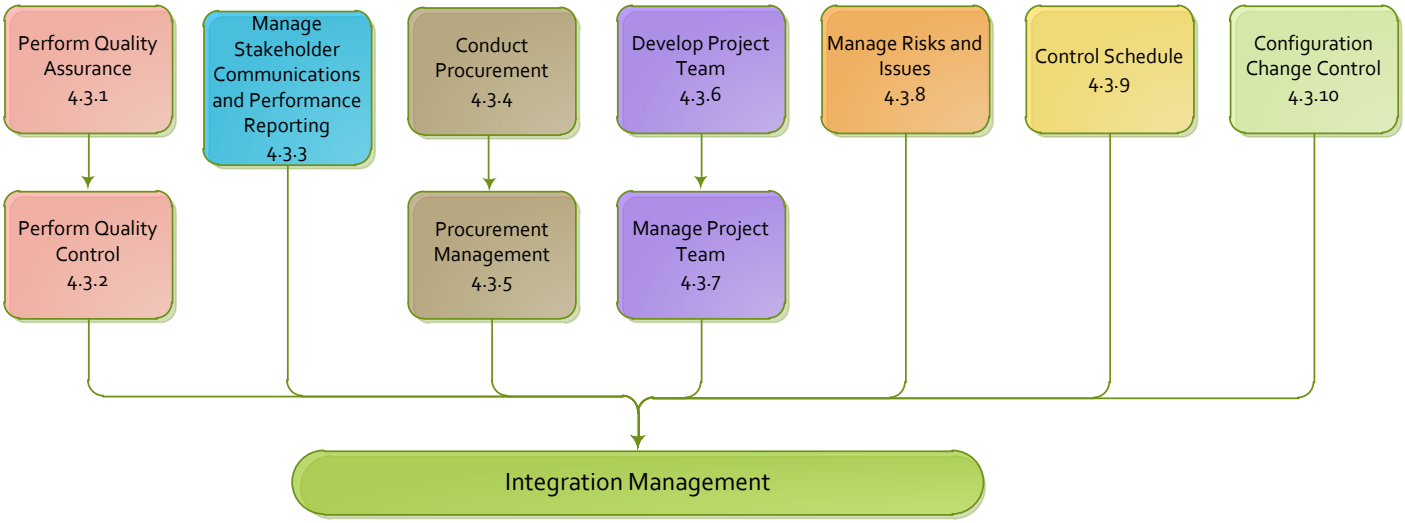


Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated

Section	Life Cycle Phase	Section Stage	Deliverable or Artifact
Communication	Execution / Monitor and Control	Manage Stakeholder Communications and Performance Reporting	Decisions Log
Communication	Execution / Monitor and Control	Manage Stakeholder Communications and Performance Reporting	Change Requests Log Updated
Communication	Execution / Monitor and Control	Manage Stakeholder Communications and Performance Reporting	Project Communication Matrix Updated
Communication	Execution / Monitor and Control	Manage Stakeholder Communications and Performance Reporting	Stakeholder Register Updated
Communication	Execution / Monitor and Control	Manage Stakeholder Communications and Performance Reporting	Risks Log Updated
Communication	Execution / Monitor and Control	Manage Stakeholder Communications and Performance Reporting	Issues Log Updated
Communication	Execution / Monitor and Control	Manage Stakeholder Communications and Performance Reporting	Action Item Log Updated

Section	Life Cycle Phase	Section Stage	Deliverable or Artifact
Communication	Execution / Monitor and Control	Manage Stakeholder Communications and Performance Reporting	Decisions Log Updated
Communication	Execution / Monitor and Control	Distribute Information	Updated Information Distribution Record
Communication	Execution / Monitor and Control	Manage Stakeholder Communications and Performance Reporting	Lessons Learned
Configuration / Change Control	Execution / Monitor and Control	Configuration Change Control	Change Requests Log Updated
Configuration / Change Control	Execution / Monitor and Control	Configuration Change Control	Project Artifacts Updated
Configuration / Change Control	Execution / Monitor and Control	Configuration Change Control	Requirements and Traceability Log Updated
Configuration / Change Control	Execution / Monitor and Control	Configuration Change Control	Configuration Items Register Updated
Staff	Execution / Monitor and Control	Develop Project Team Manage Project Team	Project Team Performance
Staff	Execution / Monitor and Control	Manage Project Team	Staff Management Matrix Updated
Staff	Execution / Monitor and Control	Manage Project Team	Transition Plan
Procurement / Contract	Execution / Monitor and Control	Procurement Management	FI$Cal Procurement Procedures
Procurement / Contract	Execution / Monitor and Control	Procurement Management	Storeroom Supply Request
Procurement / Contract	Execution / Monitor and Control	Procurement Management	Purchase Request DOF 61C Form
Procurement / Contract	Execution / Monitor and Control	Procurement Management	FI$Cal IT Service Request Form

Section	Life Cycle Phase	Section Stage	Deliverable or Artifact
Procurement / Contract	Execution / Monitor and Control	Procurement Management	DOF Contract Request Form
Procurement / Contract	Execution / Monitor and Control	Procurement Management	ITAP Request Procedures
Procurement / Contract	Execution / Monitor and Control	Procurement Management	Procurement Request Form
Procurement / Contract	Execution / Monitor and Control	Procurement Management	RFO Procurement Worksheet
Procurement / Contract	Execution / Monitor and Control	Procurement Management	Justification for Personal Services Contracts
Quality	Execution / Monitor and Control	Perform Quality Control	Configuration Items Register Updated
Quality	Execution / Monitor and Control	Perform Quality Assurance	Decisions Log Updated
Quality	Execution / Monitor and Control	Perform Quality Assurance	Action Items Log Updated
Quality	Execution / Monitor and Control	Perform Quality Planning	Deliverable Expectations Document (DED)
Risks and Issues	Execution / Monitor and Control	All Stages	Risks Log Updated
Risks and Issues	Execution / Monitor and Control	All Stages	Issues Log Updated
Schedule	Execution / Monitor and Control	Control Schedule	Schedule Updates
Schedule	Execution / Monitor and Control	Control Schedule	Change Requests Log Updated

4.3.1 Perform Quality Assurance

The objective for this activity is for the PMO Quality Assurance Team to monitor and audit the effectiveness of the sub-project processes and determine if the Sub-Project Team members are correctly implementing the sub-project processes as documented. The PMO Quality Assurance

Team makes quality recommendations that are implemented by the Sub-Project Manager and the Sub-Project Team members. The PMO Quality Assurance Team executes the Perform Quality Assurance process as detailed in the Quality Management Knowledge Area and listed above in Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated to accomplish this activity.

4.3.2 Perform Quality Control

The objective of this activity is for the Sub-Project Team to review the sub-project work products and/or deliverables to determine whether they comply with relevant quality standards and requirements. An additional objective for this activity is to identify ways to eliminate causes of unsatisfactory results. The Sub-Project Team should execute the Perform Quality Control process, as detailed in the Quality Management Knowledge Area and listed above in Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated, to accomplish this activity.

4.3.3 Manage Stakeholder Communications and Performance Reporting

The objective of this activity is for the Sub-Project Manager to manage the expectations of the Sub-Project Sponsor, Leadership Team, and other stakeholders for the sub-project. Based on interactions with the sub-project, the Sub-Project Manager may be required to update the Stakeholder Register, Communication Matrix, Change Log, Risk and Issue Log, Decision Log, Action Log, and Information Distribution Record if applicable. This activity is accomplished by executing the following processes as detailed in the Communication Management Knowledge Area and listed above in Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated:

- Manage Stakeholder Communications
- Performance Reporting
- Distribute Information

4.3.4 Conduct Procurement

The objective of this activity is for the Sub-Project Manager to execute the plan for procuring goods or IT services from outside of FI$Cal. This activity is accomplished by executing the Conduct Procurement process as detailed in the Procurement and Contract Management Knowledge Area and listed above in Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated.

4.3.5 Procurement Management

The objective for this activity is for the functional manager for the sub-project to ensure that the vendor's performance meets contractual requirements. This activity is accomplished by executing the Procurement Management process as detailed in the Procurement and Contract Management Knowledge Area and listed above in Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated.

4.3.6 Develop Project Team

The objective of this activity is for the Sub-Project Manager to improve the competency and interaction of the team members to enhance sub-project performance. This includes improving the skillsets of team members in order to increase their ability to complete sub-project activities, and improving trust and cohesiveness among team members in order to raise productivity through teamwork. Team development efforts have the greatest benefit when conducted early, but team development should also take place throughout the sub-project. This activity is accomplished by executing the Develop Project Team process as detailed in the Staff

Management Knowledge Area and listed above in Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated above.

4.3.7 Manage Project Team

The objective of this activity is for the Sub-Project Manager to ensure that the Sub-Project Team members accomplish their tasks as documented in the sub-project schedule. This activity is accomplished by executing the Manage Project Team process as detailed in the Staff Management Knowledge Area and listed above in Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated.

4.3.8 Manage Risks and Issues

The objective of this activity is for the Sub-Project Manager and the Sub-Project Team to manage and resolve risks and issues pertaining to the sub-project. This activity is accomplished by executing the following process as detailed in the Risk and Issue Management Knowledge Area and listed above in Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated:

- Identify Risks
- Perform Qualitative Risk Analysis
- Perform Quantitative Risk Analysis
- Perform Risk Response Planning
- Perform Risk Monitoring and Control
- Identify Issues
- Perform Issue Resolution

4.3.9 Control Schedule

The objective of this activity is for the Sub-Project Manager to manage the sub-project schedule. The project schedule can be affected by any number of factors. The Sub-Project Manager controls the schedule by determining whether the schedule needs to change and managing the actual changes when they occur. This activity is accomplished by executing the Control Schedule process as detailed in the Schedule Management Knowledge Area and listed above in Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated.

4.3.10 Configuration Change Control

The objective of this activity is for the Sub-Project Manager to formally define and evaluate changes to the sub-project (such as to the scope, deliverables, timescales, or resources) prior to the changes being implemented. The activity entails completing a variety of control procedures to ensure that changes will cause minimal impact to the objectives of the sub-project. This activity is accomplished by executing the Configuration Change Control process as detailed in the Configuration Management and Change Control Knowledge Area and listed above in Table 9 – Execution / Monitor and Control Deliverable Artifacts Generated.

4.4 Closure

The last phase of the sub-project's life cycle is Closure of the sub-project. Project closure is performed once the Sub-Project Team has finished all sub-project tasks, all milestones have been completed, and the Project Sponsor and Leadership Team have accepted all the sub-project deliverables and/or work products. The activities involved in the Closure phase are listed below in Figure 6 – Closure Process Flow diagram, and Table 10 – Closure Deliverable Artifacts Generated:

Figure 6 – Closure Process Flow

Table 10 – Closure Deliverable Artifacts Generated

Section	Life Cycle Phase	Process	Deliverable or Artifact
Communication	Closure	Manage Stakeholder Communications and Performance Reporting	Lessons Learned
Communication	Closure	Manage Stakeholder Communications and Performance Reporting	Post Implementation Evaluation Report (PIER)
Staff	Closure	Demobilize Team	Transition Plan

4.4.1 Document Lessons Learned

The objective of this activity is for the Sub-Project Manager, in conjunction with the Sub-Project Team, and the Sponsor, to document the lessons learned. This activity is accomplished by executing the following process as detailed in the Communication Management knowledge area and listed above in Table 10 – Closure Deliverable Artifacts Generated:

- Manage Stakeholder Communications
- Performance Reporting

4.4.2 Create PIER Report

The objective of this activity is for the Sub-Project Manager to generate a Post Implementation Evaluation Report (PIER) [PIER Template, #8310] and to document the successes of, and challenges to, the sub-project. The report should contain recommendations for future sub-projects of similar size and scope.

4.4.3 Archive Project Records

The objective for this activity is for the Sub-Project Manager to archive the sub-project information. Historical project data is an important source of information to help improve future FI$Cal sub-projects. Typically, the Sub-Project Manager should archive the following project data:

- Sub-Project Concept and Sub-Project Charter
- Change control log, with supporting documents
- Issues log, with supporting documents
- Correspondence
- Status reports
- Contract file

4.4.4 Release Team

The objective for this activity is for the Sub-Project Manager to release the Sub-Project Team from their project responsibilities. By demobilizing, the Sub-Project Team resources may be assigned to other projects within FI$Cal. This activity is accomplished by executing the Demobilize Team process as detailed in the Staff Management Knowledge Area and listed in Table 10 – Closure Deliverable Artifacts Generated.

5 Knowledge Areas

Processes, templates, and techniques required are summarized for each of the following knowledge areas:

- Communication Management
- Configuration Management and Change Control
- Cost and Financial Management
- Procurement Management
- Risk Management
- Issue Management
- Quality Management
- Schedule Management
- Staff Management

Sub-Project Managers use these knowledge areas as a guide to managing their sub-project in a consistent and quality fashion.

Each process, as described in the sub-project management knowledge areas, details the inputs, tools and techniques, and the resulting outputs when a particular process is executed during a particular project life cycle phase. Templates are also provided to record the data outputs when executing the processes and, in some instances, to be used as tools and techniques.

As stated earlier in this document:

i. Because the methodology is “template-driven,” the Sub-Project Manager should first determine which of the various scalable sub-project templates apply to their sub-project type using the sub-project section checklist [Sub-Project Section Checklist For PM's, #10391]. The Sub-Project Manager will work closely with the Sub-Project Sponsor in making this determination and come to a common agreement.

ii. The degree of documentation required for each phase, process, and template may be different from one sub-project to another. The objective is to use the templates to collect and document meaningful data, not just accumulate volumes of information. The ultimate goal is to help complete the sub-project deliverables successfully.

iii. The guiding principles in using the templates should include, at a minimum:
    - Keep the documentation as simple and streamlined as possible, without compromising the ability to properly manage the project.
    - Provide continued input for improvement and usage of the templates.
    - Ensure the implementation of best project management practices.

6 Communication Management Knowledge Area

Select the category of project:

Category	Yes
Primary	
Enterprise	
Internal	

Select the mandatory communication practices to be used on the project:

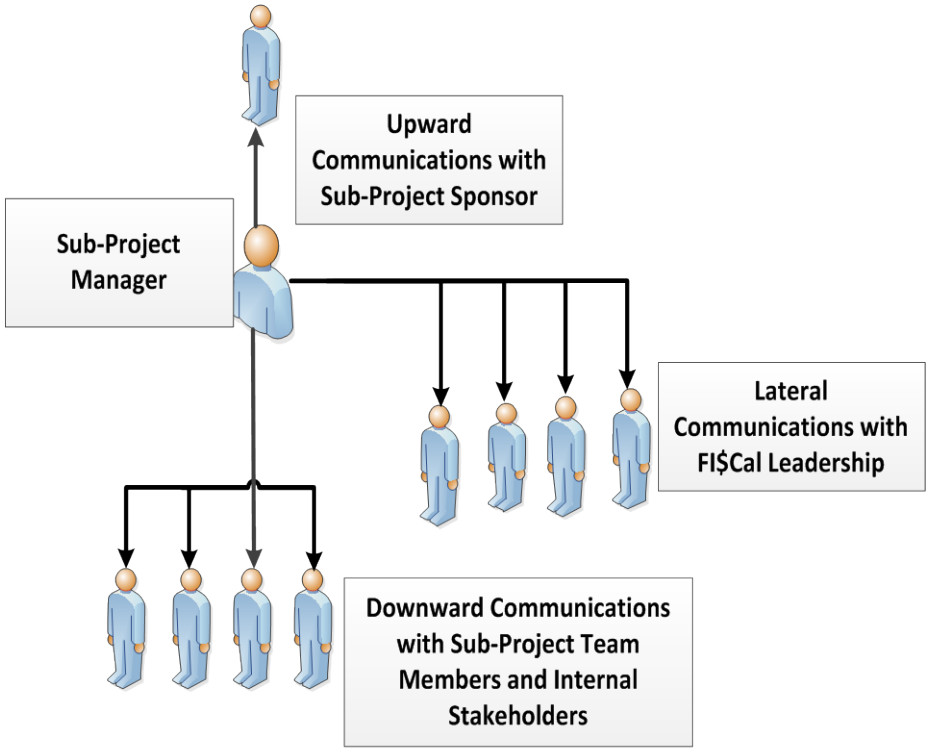
Stage	Deliverable or Artifact	Primary	Enterprise	Internal
Identify Stakeholders	Stakeholder Register [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
Plan Communications	Project Communication Matrix [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional
Distribute Information	Information Distribution Record [Information Distribution Record Template]	Optional	Optional	Optional
Manage Stakeholder Communications and Performance Reporting	Change Request Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional
	Project Communication Matrix Updated [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional
	Stakeholder Register Updated [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
	Risk and/or Issue Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional
	Action Item Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
	Change Request Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
	Lessons Learned [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional
	Decision Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional

6.1 Introduction

The purpose of the Communication Management knowledge area is to address the information and communication needs of the Sub-Project Team and internal sub-project stakeholders. Project communication management includes the processes for Identifying Stakeholders, Plan Communications, Distribute Information, Manage Stakeholder Expectations, and Performance Reporting. This knowledge area does not address the information communication needs of the Sub-Project Team with external stakeholders such as FI$Cal partner agencies and departments. Refer to the Communication Management Plan, which addresses the external FI$Cal enterprise communication needs with the FI$Cal partner agencies and departments. Sharing information ensures that all the internal sub-project stakeholders receive accurate information about the sub-project. Benefits of standardized communication include:

- Reinforcement the commitment of the FI$Cal Leadership to the sub-project
- A well informed Sub-Project Team
- Educated and informed stakeholders about the sub-project and its progress
- Fosters involvement in the sub-project by all the sub-project stakeholders

Figure 7 – Typical Project Manager Communications



6.2 Scope

The scope of this knowledge area will be limited to performing Communication Management activities for the three categories of FI$Cal sub-projects as identified in Section 2.

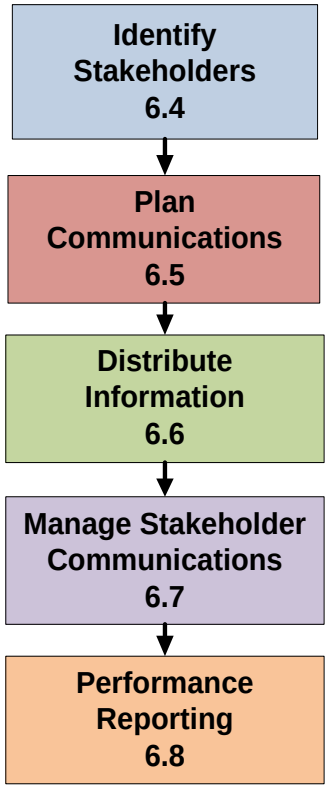
6.3 Communication Management Processes Overview

The processes outlined below, and illustrated in Figure 8 – Communication Management Processes below, can be tailored to fit the needs of each sub-project in order to effectively meet the sub-project communication needs. The processes include:

- **Identify Stakeholders** – identifying all the stakeholders impacted by the sub-project, and documenting their sub-project needs and opinions about sub-project success.
- **Plan Communications** – based on the sub-project stakeholder needs, define the communication methods, timing, and format for the sub-project.
- **Distribute Information** – making relevant information available to the sub-project stakeholders as planned or as needed.
- **Manage Stakeholder Communications** - communicating and working with stakeholders to meet their needs and address issues as they occur.
- **Performance Reporting –** collecting and distributing information on project lessons learned, change requests, risks, issues, actions items, and decision logs.

Communication Management Processes

Figure 8 – Communication Management Processes



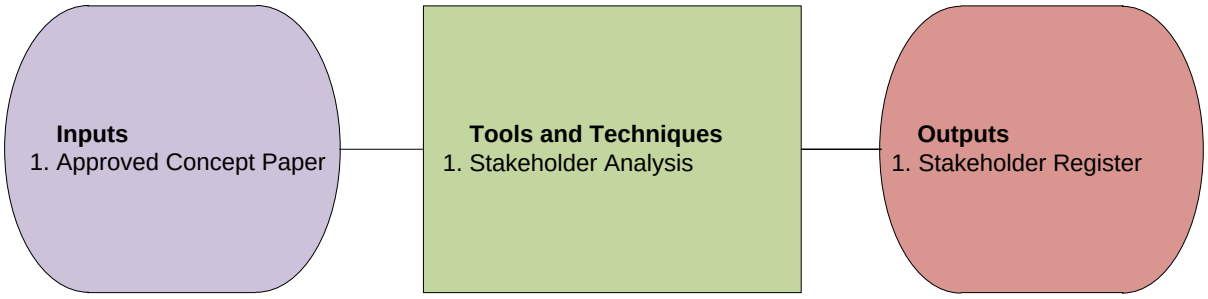
6.4 Identify Stakeholders

Purpose: To identify all people or organizations impacted by the sub-project, and document relevant information regarding their interests, involvement, and impact on sub-project success.

Project Stakeholders can be strong advocates or strong opponents to a sub-project. Therefore, it will be vital for the Sub-Project Manager to gain an understanding of the needs and desires of the internal and external customers. The guiding principles which the Sub-Project Manager should exhibit for positive communication include the following:

- Understand the communication needs of the Stakeholder, to select the most effective communication mechanism to communicate the message.
- Provide timely, understandable, and accurate communications.

Figure 9 – Identify Stakeholders Inputs, Tools and Techniques, and Outputs



6.4.1 Inputs

1. The approved Sub-Project Concept Paper includes important information to help identify stakeholders.

6.4.2 Tools and Techniques for the Identify Stakeholders Process

1. The purpose of stakeholder analysis is to systematically gather and analyze information regarding people impacted by the sub-project. Additionally, stakeholder analysis helps the Sub-Project Manager to classify and manage stakeholders according to their interests. This will identify the interests, expectations, and influence of the stakeholders and relate them to the purpose of the sub-project. Analysis will also help identify stakeholders whose influence could be leveraged to build coalitions and potential partnerships to enhance the Sub-Project's chance of success. Project champions increase the chances of project success.

The following three steps as listed below are executed sequentially to conduct stakeholder analysis:

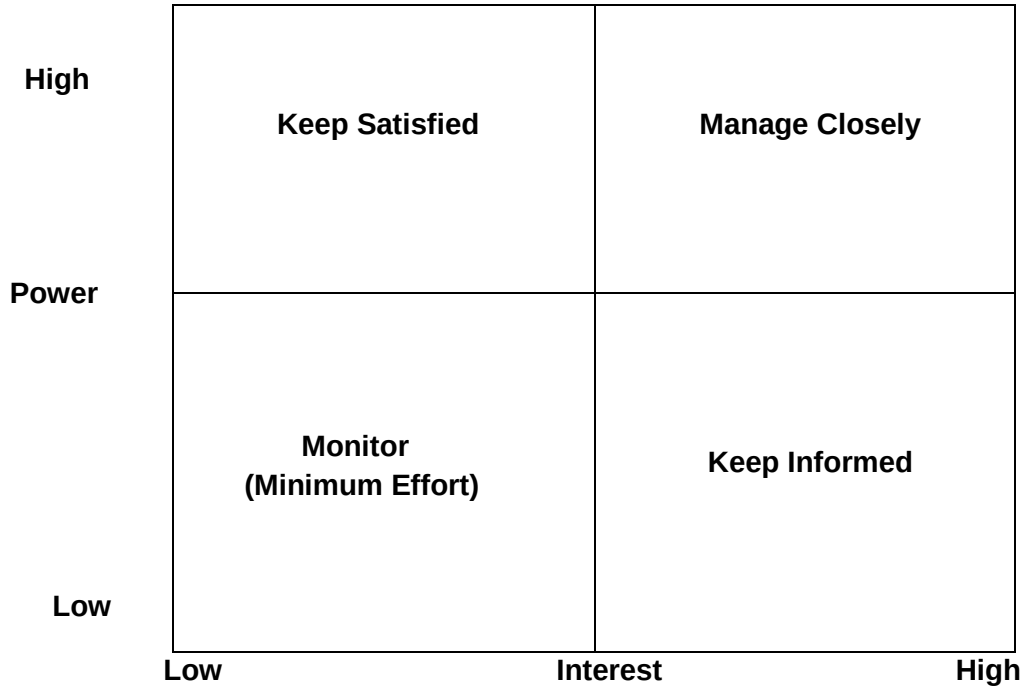
Step 1: Identify the Stakeholders

The first step in the analysis will be to determine the various stakeholders who will be affected by the outcome of the sub-project. These are people who can wield influence or power over the sub-project, or have an interest in the completion of the sub-project. The stakeholder information such as their name, position, role, and contact information will be captured.

Step 2: Classify the Stakeholders

The stakeholders identified should then be mapped on a Power/Interest Grid as shown in Prioritization Classification below and classified by their power over the sub-project and by their level of interest in the sub-project. For example, a Sub-Project Sponsor is likely to have high power and high influence over the sub-project. A Sub-Project Team member may have influence but is unlikely to have power over the sub-project.

Figure 10 – Power Interest Grid for Stakeholder Prioritization



Step 3: Understand Key Stakeholders

The Sub-Project Manager performs key stakeholder analysis to determine how they feel about and react to the sub-project. The Sub-Project Manager must make an informed decision about how best to engage key stakeholders in the sub-project, and determine the best way to communicate with them. The Sub-Project Manager should interview key stakeholders to understand their interests and opinions. People are often quite open about their views, and asking people's opinions is often the first step in building a successful relationship with them.

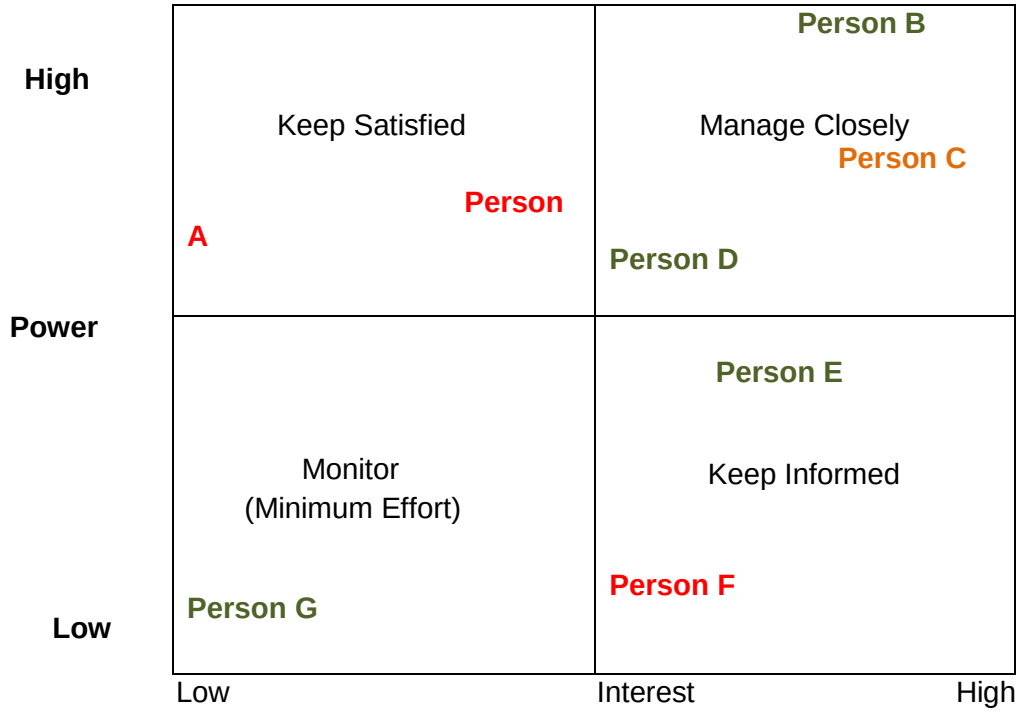
Questions that can help the Sub-Project Manager understand the Stakeholder needs:

- What financial or emotional interest does the stakeholder have in the outcome of the sub-project? Is it positive or negative?
- What motivates the stakeholder most?
- What information does the stakeholder want from the Sub-Project Manager?
- How does the stakeholder want to receive information from the Sub-Project Manager?
- What is the best way of communicating Sub-Project Manager's message to the stakeholder?

- What is the stakeholder's current opinion of the sub-project? Is it based on good information?
- Who influences the stakeholder's opinions generally, and who influences their opinion of the Sub-Project Manager? Do some of these influencers therefore become important stakeholders in their own right?
- If the stakeholder is not likely to be positive, what will gain the stakeholder's support for the sub-project?
- If it does not appear that the stakeholder can be won over, how will the Sub-Project Manager manage their opposition?
- Who else might be influenced by the stakeholder's opinions? Do these people become stakeholders in their own right?

Next, the Sub-Project Manager summarizes the information learned about the stakeholder on a stakeholder map shows which stakeholders are expected to be blockers or critics, and which stakeholders are likely to be advocates and supporters of the sub-project. Color coding helps the Sub-Project Manager to visualize stakeholder groups: advocate and supporter names may be shown in green, blockers and critics in red, and others who are neutral in orange. Figure 11 – Stakeholder Map shows an example of this. In this example, effort needs to be focused on persuading stakeholders A and C. Conversely, stakeholders B and D need to be managed as powerful supporters; stakeholders G and E should be monitored. The Stakeholder Map illustrates an approach to increase support and minimize negative impacts of stakeholders throughout the entire sub-project life cycle.

Figure 11 – Stakeholder Map



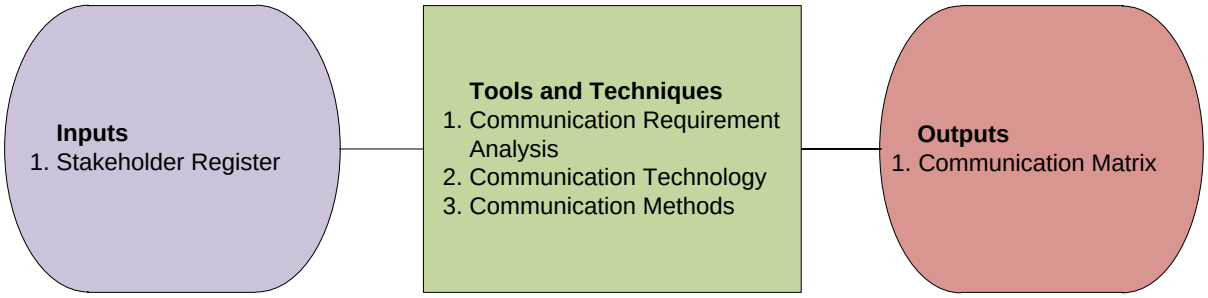
6.4.3 Outputs

1. **Stakeholder Register**: Refer to the [Sub-Project PM Template Checklist, #9418] to document the stakeholder information. [**Mandatory: Primary, Enterprise, and Internal**]

6.5 Plan Communications

Purpose: To determine the sub-project stakeholder information needs and to define a communication approach. The stakeholder needs, once identified, are used by the sub-project to plan for the information and communications needs of the stakeholders. This includes making a determination regarding who needs what information, when they will need it, how it will be given to them, and by whom. The results of the communication planning are captured and maintained in the Communications Matrix.

Figure 12 – Plan Communications Inputs, Tools and Techniques, and Outputs



6.5.1 Inputs

1. **Stakeholder Register**: Stakeholder register as described in Section 4.1: [Sub-Project PM Template Checklist, #9418].

6.5.2 Tools and Techniques for the Plan Communications Process

1. **Communication Requirement Analysis**: Establish the primary communication objectives by performing the following activities:
    - Determine and document communication needs for the sub-project stakeholders and team members.
    - Identify the means by which sub-project information will be gathered and disseminated.
    - Determine the frequency with which the communication information will need to be disseminated.
    - Perform analysis of technology and methods used to communicate.
2. **Communication Technology**: Determine the appropriate tools for sharing information throughout the life cycle of the sub-project.
3. **Communication Methods**: Determine the communication channels and audience for propagating sub-project information to the appropriate audience. The following communication channels should be considered when propagating sub-project information to the appropriate audience.
    i. Email Distribution

    Purpose: As one of the most common methods for distribution of sub-project information, email will be used to:

    1. Send and receive messages at any time of day or night

2. Communicate directly with an individual or group of individuals
3. Avoid miscommunication opportunities, such as voice mail and "telephone tag"
4. Document sub-project decisions, in writing, to impacted team members and/or stakeholders

ii. Meetings

Purpose: Two basic types of communications meetings or events will occur during the course of the sub-project: formal and informal. Both forms of meetings will involve critical and time-sensitive transfer of sub-project information and direction. All forms of guidance and direction must be shared with key members of the Sub-Project Team as soon as possible. This will ensure an effective team while minimizing wasted effort and rework. The primary purpose for each type of communication meeting is delineated below:

1. **Formal Project Communications Meetings** – periodic meetings are established and conducted to share sub-project status, direction, performance, and other sub-project related management information. For example:
   - Weekly Sub-Project Team meetings
   - Bi-weekly work group meetings
   - Project status update meetings

   To maximize the effectiveness of the meetings, it is beneficial if the team members submit their individual status reports to their respective Sub-Project Manager prior to the meeting. This avoids team members having to verbalize their individual status reports during the meeting and instead allows them to focus on discussing their individual sub-project issues and concerns with other team members.
2. **Informal Project Communications Meetings** – ad hoc meetings occurring, often without prior notification, to share sub-project status, issues, decisions, and other sub-project related management information.

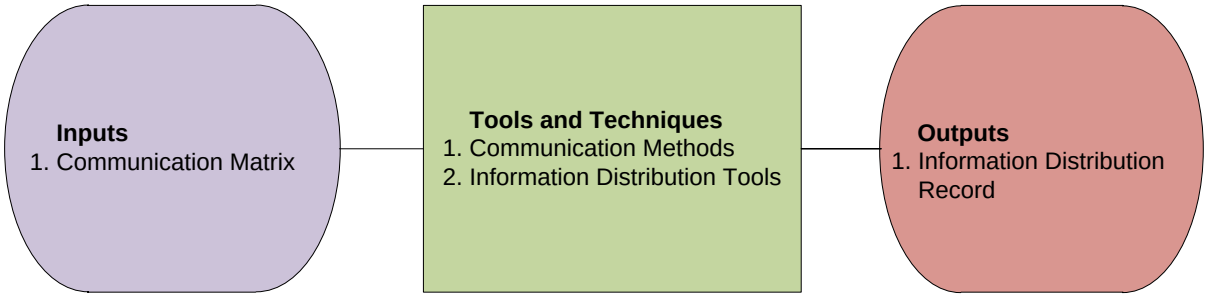
6.5.3 Output

1. **Sub-Project Communication Matrix**: Refer to [Sub-Project PM Template Checklist, #9418]. [**Mandatory: Primary and Enterprise; Optional: Internal]**

6.6 Distribute Information

Purpose: Information distribution focuses on the need to provide the appropriate information to the stakeholders in a timely manner. Written and oral communication, listening and speaking, presentations, memos, formal meetings, and informal meetings may be utilized to distribute information. How the key information is to be periodically collected and distributed depends greatly on the life cycle phase of the sub-project, the involvement of the stakeholder, the criticality of the data, and the rate of change of the data.

Figure 13 – Distribute Information Inputs, Tools and Techniques, and Outputs



6.6.1 Inputs

1. **Communication Matrix**: Refer to the communications knowledge area in the Sub-Project Management Plan.

6.6.2 Tools and Techniques for the Information Distribution Process

1. **Communication Methods**: Individual and group meetings, video and audio conferences, computer chats, and other remote communication methods are used to distribute information.
2. **Information Distribution Tools**: Project information can be distributed using a variety of tools, including electronic communication and conferencing tools, such as email, fax, voice mail, telephone, and video and web conferencing.

6.6.3 Outputs

1. **Information Distribution Record**: Sub-project presentations, records, and reports sent through sub-project channels as appropriate. Refer to [Sub-Project PM Template Checklist, #9418]. [**Optional: Primary, Enterprise, and Internal]**

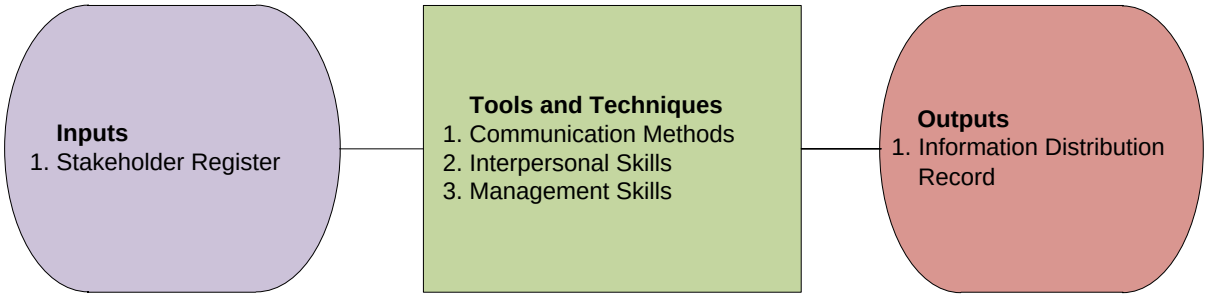
6.7 Manage Stakeholder Communications

Purpose: The Sub-Project Manager is responsible for managing the Stakeholder Communications. To manage the sub-project stakeholders' communications, the Sub-Project Manager must answer questions, get the stakeholders involved in the sub-project, resolve sub-project issues, and communicate the sub-project's status. Stakeholder management is vital to a sub-project's success for several reasons:

- Preventing issues from misunderstanding of expectations
- Resolving stakeholder issues
- Promoting synergy on the sub-project
- Limiting disruptions during the sub-project
- Promoting sub-project buy-in
- Keeping the sub-project on track

Sub-project performance reporting provides additional information on the schedule, budget, quality assurance, risks, and issues which will keep the stakeholders informed.

Figure 14 – Manage Stakeholder Communications Inputs, Tools and Techniques, and Outputs



6.7.1 Manage Stakeholder Inputs

1. **Stakeholder Register**: [Sub-Project PM Template Checklist, #9418].

6.7.2 Tools and Techniques for the Manage Stakeholder Communications Process

1. **Communication Methods**: The communication matrix will define the goals and expectations of the stakeholders which, in turn, will guide conversations between the Sub-Project Manager and the sub-project stakeholders. Decisions made with the stakeholders should be documented in a decision log. These documents will help the Sub-Project Manager communicate the right information to the right people at the right time. The Sub-Project Manager will also rely on the stakeholder register to ensure communication needs of the stakeholder are not overlooked. Ignoring stakeholders can shift a positive stakeholder to a negative stakeholder.

   Based on a stakeholder's position on the Power/Interest Grid, Figure 10 – Power Interest Grid for Stakeholder Prioritization, appropriate actions that should be taken by the Sub-Project Manager with the stakeholder include:

   - High power, interested people: the Sub-Project Manager must fully engage this group and make the greatest efforts to satisfy them.
   - High power, less interested people: the Sub-Project Manager work with this group enough to keep them satisfied.
   - Low power, interested people: the Sub-Project Manager keeps this group adequately informed and talks to them to ensure that no major issues are arising. This group can often be very helpful with the details of the sub-project.
   - Low power, less interested people: the Sub-Project Manager should monitor these people, but not present them with excessive communication.
2. **Interpersonal Skills**: The Sub-Project Manager is expected to apply the following interpersonal skills to manage stakeholder communications:
   - Building trust
   - Resolving conflict
   - Active listening
   - Overcoming resistance to change
3. **Management Skills**: The Sub-Project Manager is expected to apply the following management skills to manage stakeholder communications:
   - Presentation skills

- Negotiation
- Writing skills
- Public speaking

6.7.3 Outputs

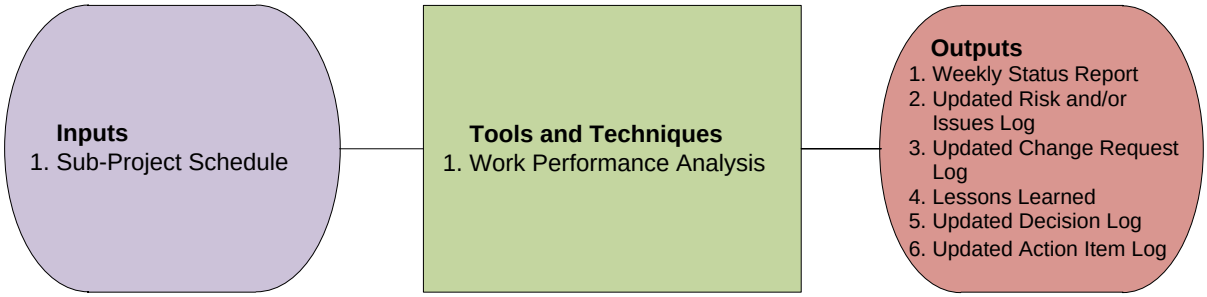
1. **Updated Communication Matrix:** [Sub-Project PM Template Checklist, #9418]. The Sub-Project Manager will have to update the Communication Plan when new or change communication requirements are identified. **[Mandatory: Primary and Enterprise; Optional: Internal]**
2. **Updated Stakeholder Register:** [Sub-Project PM Template Checklist, #9418]. The Sub-Project Manager will have to update the document to add new stakeholders identified or remove existing stakeholders no longer involved in the sub-project or other updates needed for stakeholder management. **[Mandatory: Primary, Enterprise, Internal]**
3. **Updated Change Request Log:** [Sub-Project PM Template Checklist, #9418]. The Sub-Project Manager will have to update the Change Request Log based on the sub-project change request information received**. [Mandatory: Primary and Enterprise; Optional: Internal]**
4. **Updated Action Item Log:** [Sub-Project PM Template Checklist, #9418]. The respective logs are updated for the resolution of the existing Action Items. **[Mandatory: Primary, Enterprise; Optional: Internal]**
5. **Updated Risk and/or Issue Log:** [Sub-Project PM Template Checklist, #9418]. The respective logs are updated for the resolution of the existing Risks/Issues or additions of new Risks/Issues**. [Mandatory: Primary, Enterprise; Optional: Internal]**
6. **Updated Decision Log:** [Sub-Project PM Template Checklist, #9418]. Decisions agreed upon by the various stakeholders. **[Mandatory: Primary, Enterprise; Optional: Internal]**
7. **Lessons Learned:** [Sub-Project PM Template Checklist, #9418]. Documentation of the lessons learned by the project team. **[Mandatory: Primary, Enterprise; Optional: Internal]**

6.8 Performance Reporting

Purpose: Performance reporting is the process of collecting the sub-project performance information, putting it into the distribution format, and distributing it. Performance reporting, for brevity, is also called reporting and is focused on the following components:

- Project status - The current state of the sub-project.
- Project progress - The progress made with some previous state as a reference.
- Forecast - The prediction of progress in the future based on progress in the past.

Figure 15 – Performance Reporting Inputs, Tools and Techniques, and Outputs



6.8.1 Inputs

1. **Sub-Project Schedule:** The Sub-Project Manager should use the information from the sub-project schedule to evaluate actual progress compared to planned progress.

6.8.2 Tools and Techniques for the Performance Reporting Process

1. **Work Performance Analysis**: The Sub-Project Manager should perform work performance analyses on the following items related to the sub-project:
    - Sub-Project Schedule
    - Change Requests
    - Risk and Issues Log
    - Action Items
    - Lessons Learned

6.8.3 Outputs

1. **Weekly Status Report**: A standard requirement for all Sub-Project Managers is to provide weekly status reports. The Sub-Project Manager is responsible for documenting the sub-project's status on a weekly basis. Refer to the Weekly Status Report template [Weekly Status Report Template, #7997] for documenting the status report. **[Mandatory Primary, Enterprise; Optional Internal]**
2. **Updated Risk and/or Issue Log**: [Sub-Project PM Template Checklist, #9418]. The respective logs updated for the resolution of the existing Risks/Issues or additions of new Risks/Issues. **[Mandatory**: **Primary, Enterprise; Optional: Internal]**
3. **Updated Change Request Log**: [Sub-Project PM Template Checklist, #9418]. Documentation of the Change Requests logged by the sub-project team. **[Mandatory: Primary, Enterprise; Optional**: **Internal]**
4. **Lessons Learned**: [Sub-Project PM Template Checklist, #9418]. Documentation of the lessons learned by the sub-project team. **[Mandatory: Primary, Enterprise; Optional: Internal**
5. **Updated Decision Log**: [Sub-Project PM Template Checklist, #9418]. Decisions agreed upon by the various stakeholders. **[Mandatory: Primary, Enterprise; Optional: Internal]**
6. **Updated Action Item Log**: [Sub-Project PM Template Checklist, #9418]. The respective logs updated for the resolution of the existing Action Items. **[Mandatory: Primary, Enterprise; Optional: Internal]**

6.9 Generation of the Outputs by Project Life Cycle Phase

Table 11 – Communication Management Outputs Generated by Phase depicts Communication Management outputs generated by the project life cycle phases:

Table 11 – Communication Management Outputs Generated by Phase

Initiation	Planning	Execution and Monitoring/Control	Project Closeout
Stakeholder Register	Communication Matrix	Updated Action Item Log	Lessons Learned
	Information Distribution Record	Updated Risk Log	
	Lessons Learned	Updated Issue Log	
	Updated Decision Log	Change Request Log	
	Updated Action Item Log	Stakeholder Register	
		Information Distribution Record	
		Communication Matrix	
		Updated Decision Log	
		Lessons Learned	

7 Configuration Management and Change Control Knowledge Area

Select the category of project:

Category	Yes
Primary	
Enterprise	
Internal	

Select the mandatory Configuration Management and Change Control practices to be used on the project:

Stage	Deliverable or Artifact	Primary	Enterprise	Internal
Configuration Identification	Configuration Item Register [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional
	Requirements and Traceability Log [Sub-Project PM Template Checklist, #9418]	Optional	Optional	Optional
Configuration Change Control	Updated Change Request Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional
	Project artifact updates	Mandatory	Mandatory	Mandatory
	Updated Requirements and Traceability Log [Sub-Project PM Template Checklist, #9418]	Optional	Optional	Optional
Configuration Status Accounting	Updated Configuration Item Register [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional

7.1 Introduction

This knowledge area provides the basis for performing Configuration Management and Change Control activities. For the overall FI$Cal Project, the Configuration Management and Change Control Plans are the definitive sources of authority for performing Configuration Management and Change Control activities. The purpose for this knowledge area is to provide the Sub-Project Manager with a less vigorous approach to Configuration Management compared to the approach specified at the plan level. This includes the approach for maintaining configuration control of project artifacts (plans, documents, software, deliverables) throughout the project life cycle.

The following types of Configuration Management activities are described in the knowledge area:

- Identifying and defining the configuration items
- Controlling the release and change of the configuration items throughout the sub-project life cycle
- Reporting the status of configuration items and change requests

Configuration Management is practiced as part of any project where several individuals have to coordinate their activities. Configuration and Change Control management allow the project leaders to make informed business decisions that provide the greatest customer and business value, while controlling the sub-project's life cycle costs. Change Control management also allows the project team to track the status of all proposed changes, and the practice helps ensure that suggested changes are not lost or overlooked.

7.2 Scope

The scope of this knowledge area is limited to performing Configuration Management activities for three categories of FI$Cal sub-projects as identified in Section 2.

7.3 Configuration Management and Change Control Processes Overview

Configuration Management and Change Control contain the following three processes:

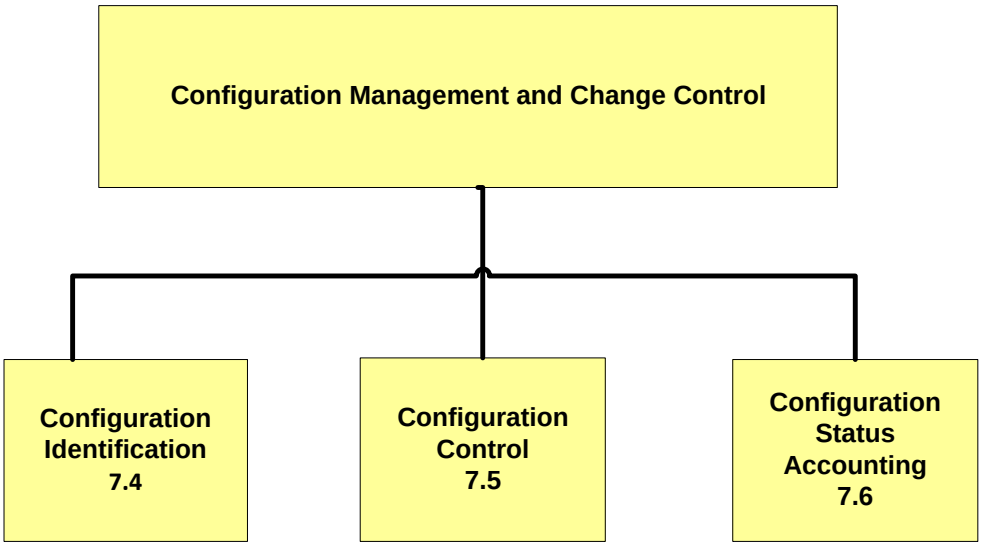
- Configuration Identification
- Configuration Control (Change Control)
- Configuration Status Accounting

The following Configuration and Change Management processes are not covered in this knowledge area but are defined in the Configuration Management Plan:

- Interface Control (defined in the Configuration Management Plan)
- Sub-contractor Control (defined in the Configuration Management Plan)
- Release Management and Delivery (defined in the Configuration Management Plan)
- Configuration Evaluation and Reviews (Quality Assurance Process)

Configuration Management and Change Control Processes

Figure 16 – Configuration Management and Change Control Processes



7.4 Configuration Identification

Purpose: To identify and select the configuration items (CI) and record their functional and physical characteristics. A CI is a project artifact which will be placed under configuration control. For the purposes of managing the sub-projects, documents and other artifacts that are created to help manage the sub-project and provide communications to the Sub-Project Team, sub-project stakeholders, Sub-Project Sponsors, deputy directors, and executives are identified as configuration items. The following project artifacts are to be treated as optional configuration items unless marked as mandatory for Configuration and Change Control purposes:

1. Sub-Project Concept
2. Sub-Project Charter **[Mandatory]**
3. Requirements and Traceability Log **[Mandatory]**
4. Project Policy Documents
5. Design Documents **[Mandatory]**
6. Software Code **[Mandatory]**
7. Test Plans **[Mandatory]**
8. Project Schedule **[Mandatory]**
9. Work Breakdown Structure **[Mandatory]**
10. Project QA Metrics Documentation
11. Project Deliverables **[Mandatory]**

The preceding list should not be construed as a required list for every sub-project. The actual list could vary for each sub-project and, in all likelihood, will include only a few of these items or additional items specific to a particular project.

Figure 17 – Configuration Identification Inputs, Tools and Techniques, and Outputs

7.4.1 Inputs

1. **Project artifact(s)** list for managing the sub-project.

7.4.2 Tools and Techniques for the Configuration Identification Process

1. **Item Identification**

   Configuration identification is a methodology describing the composition of artifacts within a project. These artifacts are termed CI's. Standard baseline descriptions of the CI's will be established to maintain control of changes occurring to existing items and new items, or deliverables resulting from the project. The following details will be recorded in the Configuration Item Register for uniquely identifying a baseline project artifact to be listed as a CI. Refer to the Configuration Items Register Template within the Sub-Project PM Template Checklist [Sub-Project PM Template Checklist, #9418].

   i. Project Name: List the sub-project name
   ii. Configuration Item: Title of the CI
   iii. Description: Brief description of the CI
   iv. Version Number: Current baseline iManage version number or storage tool derived version of the CI
   v. Date: Date when the most current baseline approved version of the document was published
   vi. Author: Name of the person who authored the document
   vii. Approved By: Names of the individuals who approved the document with their titles
   viii. Project Manager: Name of the Sub-Project Manager
   ix. Storage Repository: Name of the repository where the document is stored

2. **Requirements Identification**

   Requirements Identification will apply only to Software related projects and not to Business Improvement projects. Requirements related to the FI$Cal Project are handled at the enterprise level and are not covered as part of this Sub-Project Management Plan knowledge area. A prerequisite for requirements management is that every requirement must have some kind of unique identification. Also, every version of the requirements document must be uniquely identified.

Every sub-project team member must be able to access the current version of the requirements, and changes must be clearly documented and communicated to everyone affected.

Each requirement must also have several supporting pieces of information or attributes associated with it. These attributes establish a context and background for the requirement that goes well beyond the description of the intended functionality. The attribute values of the requirements can be stored in a spreadsheet, a database or, most effectively, a requirements management tool.

The following is the list of attributes that will be captured for the sub-project requirements. Refer to the Requirements and Traceability Log within the Sub-Project Project PM Template Checklist [Sub-Project PM Template Checklist, #9418]:

i. Requirement Description: A condition or capability that must be met or possessed by a system, product, service, result, or component to satisfy a contract, standard, specification, or other formally imposed document
ii. Type of Requirement: Business, Functional, or Technical
iii. Owner: The name of the stakeholder who submitted the requirement or who would benefit from its delivery
iv. Date the requirement was logged: Date the requirement was identified
v. Requirement current version number: Versioning to start at 1. 0 and to be incremented by +1
vi. Difficulty of implementing the requirement: Scale of 1 – 5, where 5 is low and 1 is high
vii. Requirement status: Tracking the status of each requirement throughout the project life cycle will provide an accurate gauge of project progress. The requirements should be assigned the following requirement statuses as listed in the matrix below:

Status	Definition
Proposed	The requirement has been requested by an authorized source.
Approved	The requirement has been analyzed, its impact on the project has been estimated, and it has been allocated to the baseline.
Implemented	The requirement has been implemented in the deliverable.
Verified	The correct implementation has been confirmed in the final deliverable.
Deleted	An approved requirement has been removed from the baseline.
Rejected	The requirement was proposed but is no longer mandated.

viii. Implementation priority: Priority to be categorized as High, Low, or Medium based on the definitions described below:
- High – Failure to implement the requirement means that the system or end product will not meet its customer needs.
- Medium – Lack of including the requirement may affect customer or user satisfaction or even revenue but the required business functionality provided by the system or product will not be affected.
- Low – Lack of including the requirement will not affect customer or user satisfaction; a sufficient work around exists for the user to be provided with required functionality from the system or product.

ix. General Comments: General comments about the requirement.

3. **Requirements Traceability**

   Note: Requirements Tracing will only be applicable to software-related projects and will not apply to Business Improvement projects.

   Traceability: The objective is to track the relationship between each unique functional requirement to the work product deliverable to which the requirement is allocated. For example, a single work deliverable requirement will trace to any one of the following entities: detailed design code, test, and final deliverable. Good traceability will allow for bi-directional traceability, meaning that the traceability chains can be traced in both the forward and backward directions.

   Forward Traceability: The objective is to ensure that each requirement is implemented in the product or system and that each requirement is thoroughly tested.

   Backward Traceability: The objective is ensuring to trace from the product or system back to its associated requirement.

   A traceability matrix will be created by associating the requirements to the various entities which satisfy these requirements. Refer to the Requirements and Traceability Log within the Sub-Project Performance Report Template [Sub-Project PM Template Checklist, #9418]. The following is the list of attributes that will be captured for the sub-project requirements. Refer to the Requirements and Traceability Log:

   i. Deliverable Id
   ii. Deliverable Description

7.4.3 Outputs

1. **Configuration Item Register**: [Sub-Project PM Template Checklist, #9418]. **[Mandatory: Primary, Enterprise; Optional: Internal]**
2. **Requirements and Traceability Log**: [Sub-Project PM Template Checklist, #9418]. **[Mandatory: Primary, Enterprise, Internal]**

7.5 Configuration Control

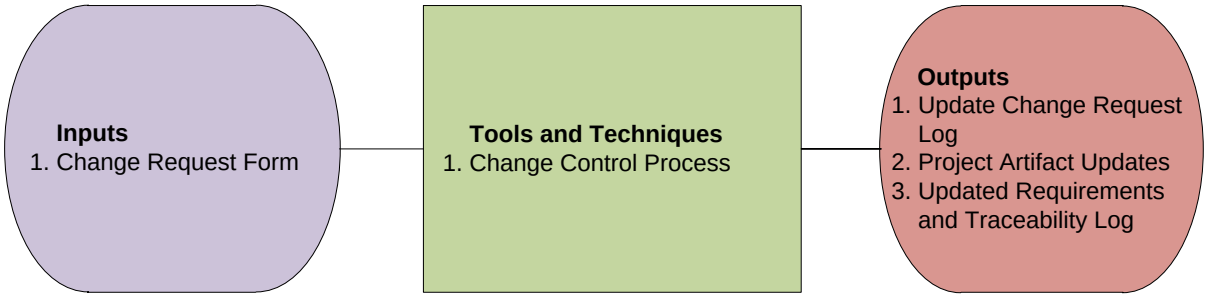
Purpose: The primary function of configuration control is to provide the administrative mechanism for initiating, preparing, evaluating, and approving or disapproving all change proposals throughout the project life cycle. Configuration control will also ensure that changes to configuration items are controlled and that consistency between component parts of a system is maintained. It will also reduce the possibility of making changes that may later adversely affect the final deliverable functionality. After the Sub-Project Concept has been approved by the Leadership Team, it will not be modified again and there will be no need for it to undergo the change control process.

- Changes to the Project Schedule or Sub-Project Charter document will be allowed, without having to undergo the Change Control process, if the changes do not affect the scope of the project**.**
- The Project Schedule or Sub-Project Charter document will have to undergo the Change Control process if the changes affect the scope of the project.

Configuration Control will ensure a number of benefits, including:

1. The correct version of the configuration item is in use by the project team
2. Changes to configuration items are made only by authorized individuals
3. Stakeholders are notified in a planned manner regarding approved configuration item changes
4. Record of configuration item changes is kept to support auditing and project closure activities

Figure 18 – Configuration Control Inputs, Tools and Techniques, and Outputs



7.5.1 Inputs

1. **Change Request Form**: [Change Request Template, #1113].

7.5.2 Tools and Techniques for the Configuration Control Process

Change Control Process, as described in the Change Control Plan, will be followed to manage sub-project change requests. [FI$Cal Change Control Plan, #58].

The configuration control process involves the following three elements:

1. Procedures for controlling changes to a configuration item.
2. Roles and responsibilities for submitting, evaluating, approving, implementing, and verifying the proposed changes to the configuration item.
3. Documentation, such as administrative forms and supporting technical and administrative material, for formally initiating and implementing the proposed changes to the configured item.

7.5.3 Outputs

1. **Updated Change Request Log**: [Sub-Project PM Template Checklist, #9418]. **[Mandatory: Primary, Enterprise; Optional: Internal]**
2. **Project Artifact Updates**: **[Mandatory: Primary, Enterprise, Internal]**
3. **Updated Requirements and Traceability Log**: [Sub-Project PM Template Checklist, #9418]. **[Optional: Primary, Enterprise, Internal]**

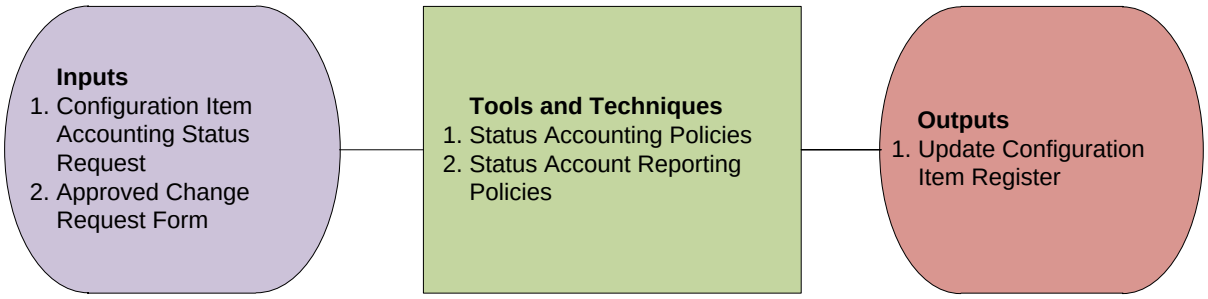
7.6 Configuration Status Accounting

Purpose: The ability, at any point in the project life cycle, to provide the current status of a given configuration item. Configuration Status Accounting involves the recording and reporting of the information relating to the configuration item:

- Listing of the approved configuration identification request
- Status of the proposed changes to the configuration
- Implementation status of the approved changes

The Sub-Project Manager will be responsible for providing a Configuration Status Account Report whenever a formal request is made.

Figure 19 – Configuration Status Accounting Inputs, Tools and Techniques, and Outputs



7.6.1 Inputs

1. **Configuration Item Accounting Status Request** - received from the CCB, Project Sponsor, Quality Assurance Team member, or Leadership Team
2. **Approved Change Request**

7.6.2 Tools and Techniques for the Configuration Status and Accounting Process

1. Status Accounting Policies**:**

   The following information regarding the change request to the configured item will always be recorded in the Configuration Item Register:

   i. Date: Date when the CI item was modified
   ii. Modifier: Name of the person who carried out the change
   iii. Evaluator: Name of the person who verified the change
   iv. Current Version: Current version of the document
   v. Status: Approved baseline version of the CI
   vi. Remarks: General remarks about the CI

7.6.3 Status Accounting Reporting Policies

i. Status Accounting Reports shall be produced whenever requested.
ii. Status Accounting Reports shall always be produced whenever changes are made to the CI's.

iii. Status Accounting Reports shall contain the latest information about the CIs and the status of all approved changes against those CIs.

iv. Status Accounting Reports will be disseminated to all core members of the CCB and any project stakeholder requesting one.

7.6.4 Outputs

1. **Updated Configuration Item Register**: [Sub-Project PM Template Checklist, #9418]. [**Mandatory: Primary, Enterprise; Optional: Internal**]

7.7 Generation of the Outputs by Project Life Cycle Phase

Table 12 – Configuration Management and Change Control Outputs by Phase below depicts Configuration Management and Change Control outputs generated by the project life cycle phases:

Table 12 – Configuration Management and Change Control Outputs by Phase

Initiation	Planning	Execution and Monitoring/Control	Project Closeout
	Change Request Updates	Updated Requirements and Traceability Log	
	Project Artifact Updates	Updated Change Request Log	
	Configuration Item Register	Project Artifact Updates	
	Updated Configuration Item Register	Updated Configuration Item Register	
	Requirements and Traceability Log		

8 Cost and Financial Management Knowledge Area

Select the category of project:

Category	Yes
Primary	
Enterprise	
Internal	

Select the mandatory Cost and Financial Management practices to be used on the project:

Stage	Deliverable or Artifact	Primary	Enterprise	Internal
Estimate Contract Costs	Updated Sub-Project Charter Document	Optional	Optional	Optional

8.1 Introduction

The goal for this knowledge area is to provide information to the Sub-Project Manager to develop a cost estimate for the contract services to be procured for the sub-project. This involves developing an approximation of the cost of the contract resources needed to complete the scheduled activities. Cost estimates are a prediction that is based on the information known at a given point in time.

8.2 Scope

The scope of this knowledge area is limited to performing the Cost and Financial Management activities for the three categories of FI$Cal Sub-Projects identified in Section 2.

8.3 Cost and Financial Management Process Overview

Cost and Financial Management consists of executing the Estimate Contract Costs Process.

8.4 Estimate Contract Costs

Purpose: To develop a cost estimate for any contract services procured for the sub-project. Cost budgets and variances are not maintained at the sub-project level, since all resources are maintained at a standard rate of $1 per hour. However, any contract services costs associated with the sub-project need to be estimated and then monitored by the Sub-Project Manager or the functional manager. The actual cost expended for the sub-project is controlled by monitoring schedule variances and resource utilization. Refer to the process Control Schedule in the Sub-Project Section on Schedule Management [Sub-Project Section Schedule Management, #10155] for more information.

Figure 20 – Estimate Contract Costs Inputs, Tools and Techniques, and Outputs

8.4.1 Inputs

1. **Concept Documentation**: Provides information about the key deliverables, project boundaries, assumptions, and constraints about the project.
2. **Project Schedule**: Provides information regarding the type and number of resources and the amount of time which those resources are assigned to complete the work of the project.
3. **Risk Register**: Provides information regarding the costs associated with mitigating risks, particularly those with negative impacts to the project when developing an estimate for contract cost.
4. **Sub-Project Charter**: Contains much of the same information as the Sub-Project Concept, as well as additional information on the sub-project objectives, risks, issues, constraints, assumptions, and resource requirements.

8.4.2 Tools and Techniques for the Estimate Contract Costs Process

1. **Estimate Procurement Costs**: The total cost for procuring the contract services is estimated.
2. **Estimate Costs Associated with Risk Mitigation Activities**: The information from the Risk Log is reviewed to derive the estimated costs for the sub-project Risk Mitigation activities.

8.4.3 Outputs

1. **Updated Sub-Project Charter**: The Sub-Project Charter document is updated with the total cost for procuring the contract services **[Mandatory: Primary, Enterprise; Optional Internal]**

8.5 Generation of the Outputs by Project Life Cycle Phase

Table 13 – Cost and Financial Management Outputs Generated by Phase below depicts Cost and Financial Management outputs generated by the project life cycle phases:

Table 13 – Cost and Financial Management Outputs Generated by Phase

Initiation	Planning	Execution and Monitoring/Control	Project Closeout
	Updated Sub-Project Charter		

9 Procurement and Contract Management Knowledge Area

Select the category of project:

Category	Yes
Primary	
Enterprise	
Internal	

Select the mandatory Procurement and Contract Management practices to be used on the project:

Stage	Deliverable or Artifact or Outcome	Primary	Enterprise	Internal
Procurement Planning	Updated Sub-Project Charter	Mandatory	Mandatory	Mandatory
Procurement of Non-IT Goods and Services or IT Goods	Non-IT Goods and Services procured from the vendor	Optional	Optional	Optional
	Non-IT Goods and Services invoice or IT Goods invoice	Optional	Optional	Optional
Procurement of IT Services	IT Services procured from the vendor	Optional	Optional	Optional
	IT Services invoice	Optional	Optional	Optional
Manage Procurement	Monitor Contractor Performance	Optional	Optional	Optional

9.1 Introduction

This knowledge area provides a brief summary of the Procurement Management activities involved for managing FI$Cal sub-projects. Procurement Management includes the processes required to coordinate the procurement of Non-Information Technology (Non-IT) Goods and Services and Information Technology (IT) Goods and Services. Also included in the knowledge area are references to the procurement processes which need to be executed and forms which need to be completed. While most sub-projects will not need to procure goods or services, links to the forms are provided to assist the Sub-Project Manager in procurement activities.

If the procurement of goods or services is required for a sub-project, the Sub-Project Manager is responsible for completing the procurement forms only; the purchase order and contract documentation are completed by the Vendor Management Office or Business Services Office. Detailed information regarding the respective Procurement Management processes have been documented in the FI$Cal Procurement Procedures [FI$Cal Procurement Procedures, #5844] and Procurement Governance Process [Procurement Governance Process, #9361].

9.2 Scope

The scope of this knowledge area is limited to performing the procurement and contract activities related to the three categories of FI$Cal sub-projects identified in Section 2.

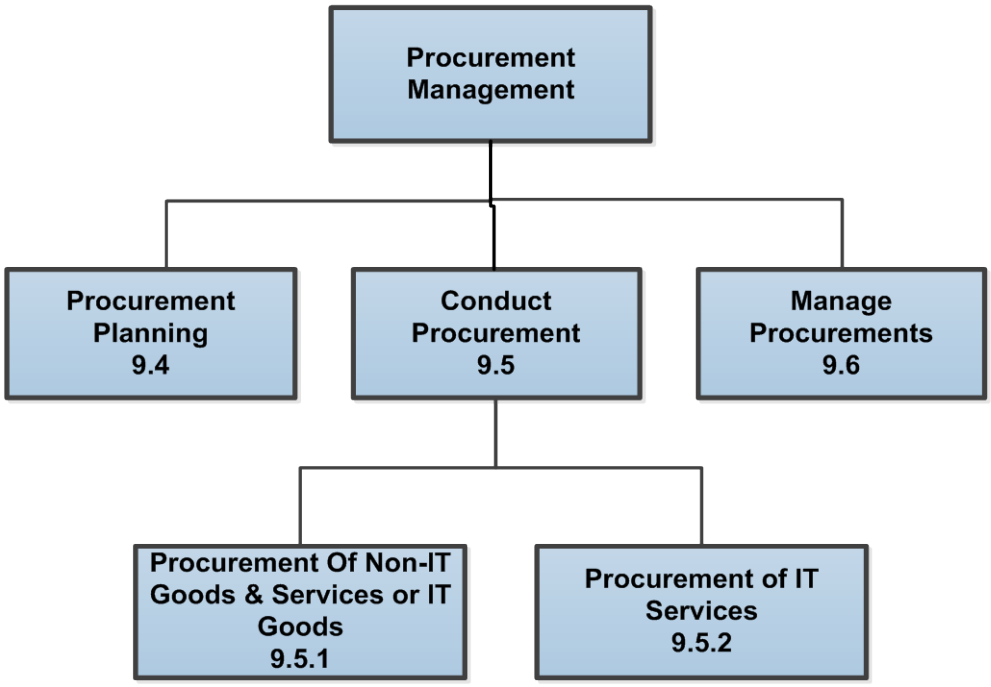
9.3 Procurement Management Processes Overview

Procurement Management consists of executing the following three processes:

- Plan Procurement
- Conduct Procurement which is composed of the following two sub-processes
    - Procurement of Non-IT Goods and Services or IT Goods
    - Procurement of IT Consulting Services
- Manage Procurements

Procurement Management Processes

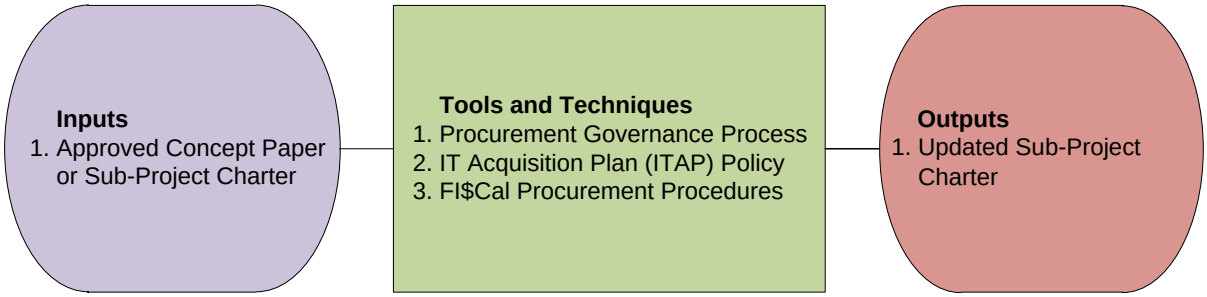
Figure 21 – Procurement Management Process



9.4 Procurement Planning

Purpose: To identify the procurement needs of the sub-project that can be met by purchasing goods or services from outside FI$Cal.

Figure 22 – Procurement Planning Inputs, Tools and Techniques, and Outputs



9.4.1 Inputs

1. **Approved Sub-Project Concept or Sub-Project Charter**

9.4.2 Tools and Techniques for the Procurement Planning Process

1. **Procurement Governance Process**: The detailed procedures relating to the procurement of IT Services have been documented in the Procurement Governance Process [Procurement Governance Process, #9361].
2. **IT Acquisition Plan (ITAP) Policy**: Refer to the ITAP Request Procedures for the procurement of IT Goods and Services [ITAP Request Procedures, #7542].
3. The detailed procedures relating to the procurement of Non-IT Goods and Services or IT Goods have been documented in the **FI$Cal Procurement Procedures** [FI$Cal Procurement Procedures, #5844].

9.4.3 Outputs

1. **Updated Sub-Project Charter**

9.5 Conduct Procurement

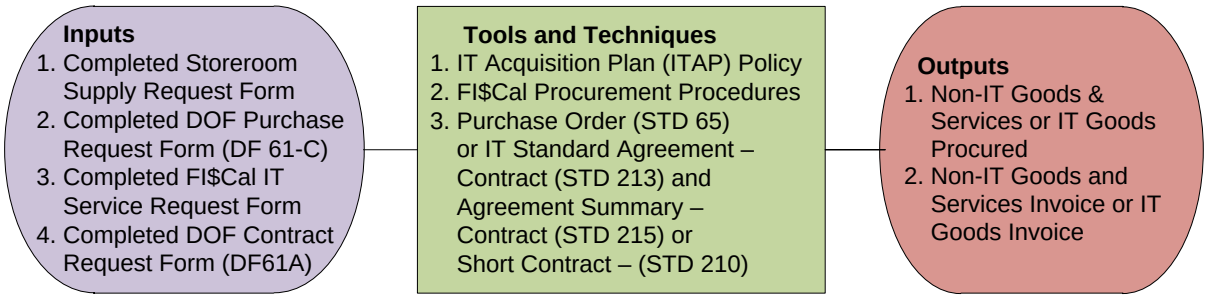
Consists of the following two sub-processes:

1. Procurement of Non-IT Goods and Services or IT Goods
2. Procurement of IT Services

9.5.1 Procurement of Non-IT Goods and Services or IT Goods

Purpose: Procuring Non-IT Goods and Services or IT Goods.

Figure 23 – Procurement of Non-IT Goods and Services or IT Goods Inputs, Tools and Techniques, and Outputs



9.5.1.1 Inputs

1. **Completed Storeroom Supply Request Form** [Storeroom Supply Request Form, #4015] for procuring office supplies and forms.
2. **Completed Department of Finance (DOF) Purchase Request Form (DF 61-C)** [Purchase Request DOF 61C Form, #8943] for procuring Non-IT Goods which are not office supplies.
3. **Completed FI$Cal IT Service Request Form** [FI$Cal IT Service Request Form, #5010].
4. **Completed DOF Contract Request Form (DF61A)** [DOF Contract Request Form, #2977].

9.5.1.2 Tools and Techniques for the Procurement of Non-IT Goods and Services or IT Goods Process

1. **IT Acquisition Plan (ITAP) Policy**
2. The detailed procedures relating to the procurement of Non-IT Goods and Services and IT Goods have been documented in the **FI$Cal Procurement Procedures** [FI$Cal Procurement Procedures Copy, #5844]. The procedures provide detailed instructions, guidelines, criteria, and authorized signatures required for the requestor to procure goods and services. The procedures also document the instructions and guidelines that the Business Service Office follows to log, approve, and generate a STD 65, STD 213, or STD 210.
3. **Purchase Order (STD. 65) or IT Standard Agreement Contract (STD 213)** and **Agreement Summary Contract (STD 215) or Short Contract (STD. 210)**

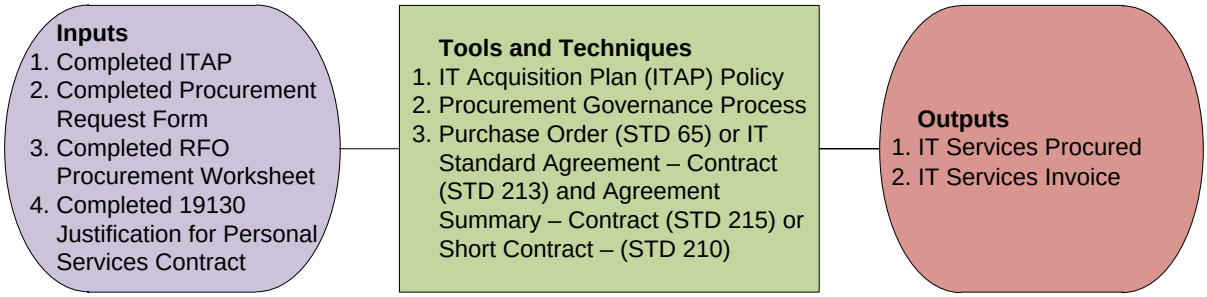
9.5.1.3 Outputs

1. **Non-IT Goods and Services or IT Goods procured from the vendor.**
2. **Non-IT Goods and Services invoice or IT Goods invoice received from the vendor.**

9.5.2 Procurement of IT Services

Purpose: Procuring IT consulting Services

Figure 24 – Procurement of IT Services Inputs, Tools and Techniques, and Outputs



9.5.2.1 Inputs

1. **Completed ITAP (if necessary).**
2. **Completed Procurement Request Form** [Procurement Request Form, #5659].
3. **Completed RFO Procurement Worksheet** [RFO Procurement Worksheet Template] [RFO Procurement Worksheet, #2348].
4. **Completed 19130 Justification for Personal Services Contracts** [RFO Justification for Personal Services Contract, #8572].

9.5.2.2 Tools and Techniques for the Procurement of IT Services Process

1. **IT Acquisition Plan (ITAP) Policy**
2. **Procurement Governance Process:** The detailed procedures relating to the procurement of IT Services have been documented in the Procurement Governance Process [Procurement Governance Process, #9361]. The procedures provide detailed instructions and guidelines required for the requestor to procure an IT consulting Services contract. The Procurement Governance process is separate from the IT Acquisition Plan (ITAP) process, but the Procurement Governance process assumes that the acquisition of IT consulting Services was previously approved by the Leadership Team through the ITAP process prior to the submittal of the Procurement Request Form.
3. **Purchase Order [STD 65] or IT Standard Agreement Contract (STD 213) and Agreement Summary Contract (STD 215) or Short Contract (STD 210)**

9.5.2.3 Outputs

1. **IT Services procured from the vendo**r.
2. **IT Services invoice received from the vendor**.

9.6 Manage Procurements

FI$Cal functional managers are responsible for managing the services provided by the contractor. If the Sub-Project Manager is the functional manager, then he/she is required to monitor contractor performance, hours expended, review acceptance criteria for the deliverables, and approve deliverables for payment. In such scenario, the Sub-Project Manager

should reference the following contract management documentation for managing IT Services contracts:

- Contract Management Plan [Contract Management Plan, #60].
- Contract Management Desk Reference Manual [Contract Management Desk Reference Manual, #3007].

9.7 Generation of the Outputs by Project Life Cycle Phase

Table 14 – Procurement and Contract Management Outputs Generated by Phase below depicts Procurement and Contract Management outputs generated by the project life cycle phases.

Table 14 – Procurement and Contract Management Outputs Generated by Phase

Initiation	Planning	Execution and Monitoring/Control	Project Closeout
	Updated Sub-Project Charter	Non-IT Goods and Services or IT Goods procured from the vendor	
		IT Services procured from the vendor	
		Non-IT Goods and Services invoice or IT Goods invoice received from the vendor	
		IT Services invoice received from the vendor	

10 Risk and Issue Management Knowledge Area

Select the category of project:

Category	Yes
Primary	
Enterprise	
Internal	

Select the mandatory Risk and Issue Management practices to be used on the project:

Stage	Deliverable or Artifact	Primary	Enterprise	Internal
Identify Risks	Sub-project [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
Perform Qualitative Risk Analysis	Updated Sub-project Risks Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
Perform Quantitative Risk Analysis	Updated Sub-project Risks Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
Perform Risk Response Planning	Updated Sub-project Risks Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
Perform Risk Monitoring and Control	Updated Sub-project Risks Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
Identify Issues	Updated Sub-project Issues Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
Perform Issue Resolution	Updated Sub-project Issues Log [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory

10.1 Introduction

This knowledge area describes the processes that Sub-Project Managers use to identify, analyze, respond to, monitor, and control risks and issues encountered when managing sub-projects. The FI$Cal Risk and Issues Management Plan provides a framework for managing risks and issues for the primary FI$Cal Project. The Risk and Issue Management knowledge area highlights the approaches and processes used to identify and manage risks and issues. The purpose of this knowledge area is to minimize the impact of unplanned events on the sub-projects before negative consequences occur. This knowledge also establishes a process to document the necessary actions stemming from Risk Management and Issue Management activities.

Common Definitions:

Risk: The Project Management Book of Knowledge (PMBOK) states “Project risk is an uncertain event or condition that, if it occurs, has a positive or a negative effect on at least one project objective, such as time, cost, scope, or quality,” (that is, where the project time objective is to deliver in accordance with the agreed-upon schedule; where the project cost objective is to deliver within the agreed-upon cost; etc.). A risk may have one or more causes and, if it occurs, one or more impacts. Risk conditions could include aspects of the project or organization’s environment that may contribute to project risk, such as poor project management practices, lack of integrated management systems, concurrent multiple projects, or dependency on external participants.

Issue: An issue is a situation which has occurred or will definitely occur, as opposed to a risk which is a potential event. The issue can be the result of a risk being realized or unforeseen problems that arise on the project. Left unresolved, an issue will impede or prohibit project-related progress or development by affecting scope, budget, schedule, resources, and/or quality.

Constraint: Constraints are conditions that cannot be changed. Teams must plan to work around constraints to achieve project results. Constraints should be identified and planned for as early as possible in the project life cycle.

Risk Trigger Date: Date at which we can predict that a risk may become an issue. Triggers are identified for contingency plans, but must be executed before the risk is realized or the impact has started and the strategy for mitigation or contingency was not worth the investment. The risk owner should always be collaborating with the Sub-Project Manager regarding the current status of the risk and whether the mitigation strategy adopted is effective at lowering the level of the risk or whether the mitigation strategy adopted is not effective and the risk could become an issue.

Risk Owner: The Sub-Project Manager assigns the responsibility for developing risk mitigation/contingency measurements, and mitigation/contingency action plans to Sub-Project Team member (Risk Owner). The Risk Owner is also responsible for implementing and tracking mitigation/contingency action plans.

10.2 Scope

The scope of the plan is limited to performing the Risk and Issues Management activities related to the three categories of FI$Cal sub-projects identified in Section 2.

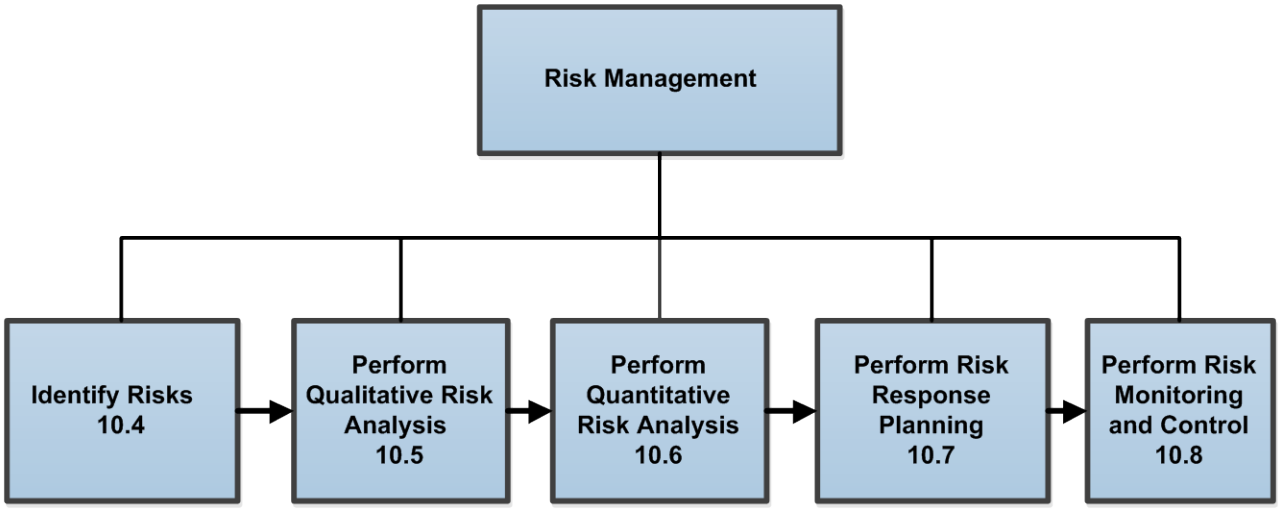
10.3 Risk Management Processes Overview

Risk Management consists of executing the following five processes:

- Identify Risks
- Perform Qualitative Risk Analysis
- Perform Quantitative Risk Analysis
- Perform Risk Response Planning
- Perform Risk Monitoring and Control

Risk Management Processes

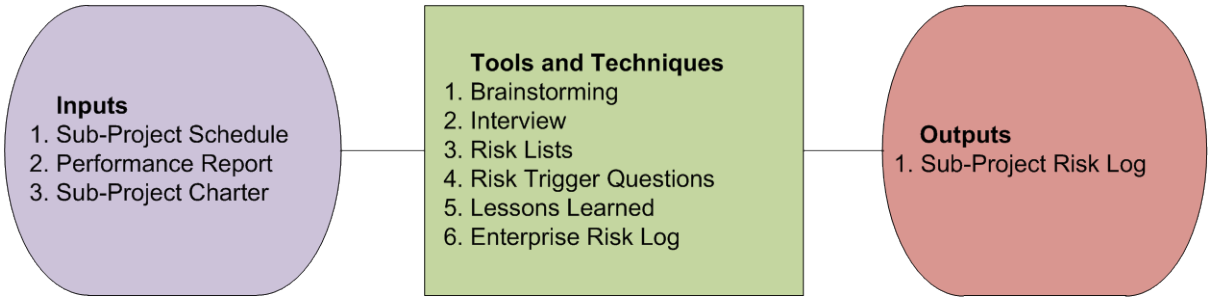
Figure 25 – Risk Management Processes



10.4 Identify Risks

Purpose: To identify risks that might affect the project and document the characteristics of each such risk. Any project resource can identify a risk, including project managers, project team leads, and project team members. After a risk has been identified, it is escalated to the Sub-Project Manager. Sub-Project Managers should proactively identify risks to their sub-projects during all phases of the project life cycle.

Figure 26 – Identify Risks Inputs, Tools and Techniques, and Outputs



10.4.1 Inputs

1. **Sub-Project Schedule**
2. **Performance Report**
3. **Sub-Project Charter**

10.4.2 Tools and Techniques for the Identify Risks Process

The Sub-Project Manager should conduct an initial risk identification session with the Sub-Project Team during the planning phase. The Sub-Project Manager should also include a standing agenda item for discussions on risks during the weekly sub-project meetings. There are various methods and tools for capturing statements of risks. The following techniques may be used alone or in combination, depending on the approach that is best for the team:

- Brainstorming
- Interviews
- Risk Lists
- Risk Trigger Questions
- Lessons Learned
- Enterprise Risk Log

1. **Brainstorming**: A technique that is best accomplished when the approach is unrestrained or unstructured (the facilitator accepts random inputs from the group). Group members verbally identify risks which provide the opportunity to build on each other's ideas. To achieve the desired outcome, it is essential to select participants that are familiar with the topics discussed, provide relevant documentation and have a facilitator who knows the risk process. A note-taker should be appointed to capture the ideas that are being discussed. A structured brainstorming session, where each group member presents an idea in turn, may be used where not all group members are participating. Structured brainstorming ensures participation by all group members. Brainstorming can also be used during planning to generate a list of mitigation strategies, possible causes for the risk, or other areas of impact; however, it is not intended for in-depth risk analysis. Diagrammatic tools, such as fishbone diagrams, are useful in brainstorming sessions.
2. **Interviews**: An effective way to determine risk areas. The Sub-Project Manager should schedule Group Interviews or interview the Sub-Project Sponsors to assist in identifying risks on a sub-project. The interview process is inherently a questioning process. The interview can be conducted before or after a brainstorming session.
3. **Risk Lists**: Lists of risks that have been found on other projects and/or in similar situations. Caution must be used when using this type of information, to ensure it is relevant and applicable to the current sub-project or situation. It is important to understand any caveats that may accompany the documented information.
4. **Risk Trigger Questions**: Lists of situations or events in a particular area of a sub-project that can lead to the risk. These trigger questions may be grouped by areas such as performance, cost, schedule, software and programmatic. Below are samples of Risk Trigger Questions that may be raised with the Sub-Project Team members:
    - Requirements: Are the sub-project requirements unclear or in need of interpretation?
    - Design: Will the design and/or implementation be difficult to achieve?
    - Testability: Is the software going to be easy to test?
    - Planning: Was adequate planning performed on the sub-project?
    - Sub-Project Organization: Do the Sub-Project Team members understand their own and other's roles in the sub-project?
    - Quality Assurance: Does the sub-project have defined mechanisms for assuring quality?
    - Communication: Is there poor awareness of the sub-project objectives and poor communication of technical information among the Sub-Project Team members?

5. **Lessons Learned**: Compiled knowledge that may be relevant to the present sub-project or to other sub-projects within the organization. This source of information may guide the Sub-Project Manager in finding risks in the sub-project. Caution should be exercised when using this type of information to ensure that it is relevant and applicable to the current program or situation. Documented lessons learned can be found in iManage by typing the following words in the search criteria “Lessons Learned”.
6. **Enterprise Risk Log**: The Sub-Project Manager should review the enterprise risk logs in SharePoint for any enterprise risks that may have an effect on the sub-project. Enterprise risks are being addressed by the Risk and Issue Workgroup, so they do not need to be addressed by the sub-project.

10.4.3 Outputs

Sub-Project Risks Log: [Sub-Project PM Template Checklist, #9418]. **[Mandatory: Primary, Enterprise, Internal]**

The primary output from Identify Risks process is the initial entry of the risks into the Sub-Project Risk and Issues Log. This Log will contain all information related to risk management activities. It will also have to be updated as risk management activities are conducted to reflect the status, progress, and nature of the project risks. The following information will be initially recorded in the Sub-Project Risk and Issues Log:

1. Risk Id: Sequential number to identify the risk
2. Risk Level: Categorized as High, Medium or Low
3. Risk Title: Brief description of risk and its associated impact
4. Risk Description: A brief risk statement entered by the Risk Originator that describes the risks
5. Latest Risk Status: The status is defined as follows:
    i. Accept - sub-project accepts the risk
    ii. Execute Contingency- the defined contingency is being executed
    iii. Mitigate - the project is executing the mitigation plan
    iv. Research - research is being conducted on the risk
    v. Watch - the risk is being watched and monitored by the management team
    vi. Retire - the risk has been closed
6. Risk Owner: Sub-Project Team member who has been assigned by the Sub-Project Manager to manage the mitigation strategy for the risk
7. Originator: The Sub-Project Team member who identified the risk
8. Origination Date: Date when the risk was identified and reported
9. Risk Category: Selected from one of the following: Technical, External, Organizational, Project Management, or Other
10. Risk Response: One of the following risk response options is selected:
    i. Risk Mitigation – Action(s) have been identified for minimizing the effects of the risk event.
    ii. Risk Watch – The risk is being watched and monitored by the Sub-Project Team.
    iii. Risk Avoidance – The Sub-Project has adopted a strategy to eliminate the risk or condition.

iv. Risk Acceptance – The Sub-Project Team has decided to accept the risk, because the predicted probability and impact are considered acceptable when compared to the cost of the risk response alternatives.

10.5 Perform Qualitative Risk Analysis

Purpose: Qualitative Risk Analysis includes methods for prioritizing the identified risks for further action. The Sub-Project Manager assigns the risk probability and risk impact values to calculate the Risk Exposure. Risk Exposure is calculated to provide the Sub-Project Manager a means to focus on the risks relative to their risk level (High, Medium, or Low). Each of these values is used collectively to assess the overall impact a risk poses to the sub-project objectives.

Figure 27 – Qualitative Risk Analysis

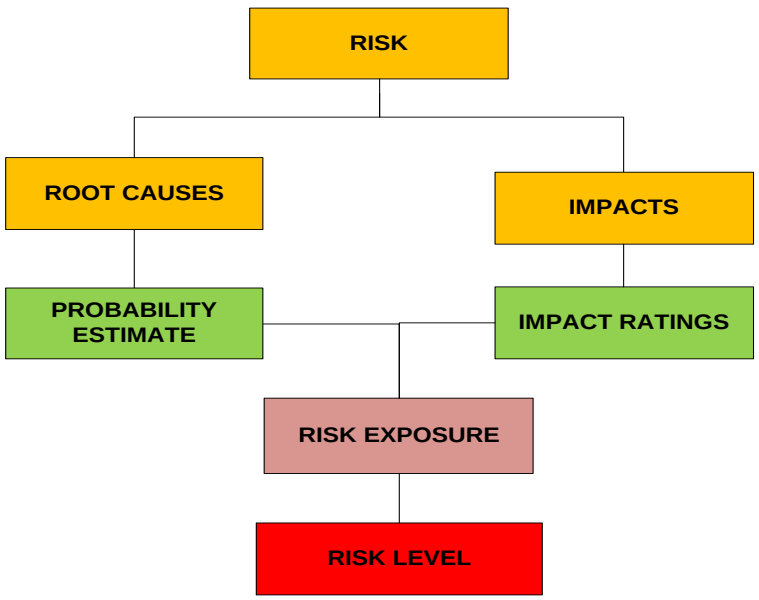
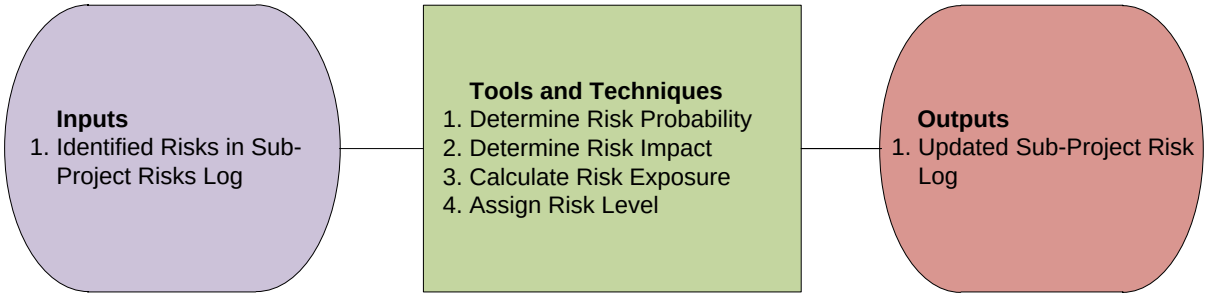


Figure 28 – Perform Qualitative Risk Analysis Inputs, Tools and Techniques, and Outputs



10.5.1 Inputs

1. **Identified Risk(s) in the Sub-Project Risks Log**

10.5.2 Tools and Techniques for the Perform Qualitative Risk Analysis Process

1. **Determine Risk Probability**

   The Risk Owner should assign a risk probability, which is an assessment of the likelihood that the risk will occur. Table 15 – Risk Probability Category lists the five probability assessments defined for the sub-projects.

Table 15 – Risk Probability Category

	Value	Statement of Probability
1	< . 20	Unlikely or highly unlikely
2	. 20 - . 40	Somewhat doubtful
3	. 41 - . 60	Better than even chance
4	. 61 - . 80	Likely or probable
5	> . 80	Highly likely or almost certain

2. **Determine Risk Impact Rating**

Risks will be analyzed by the Sub-Project Team to assess the impact and the severity of the effect if the risk is realized. The Risk Owner will determine a value for each performance area that impacts the Sub-Project objectives. Many risks will have more than one risk impact across the performance areas. Table 16 – Risk Impact Categories defines the guidelines for determining the Risk Impact values.

Table 16 – Risk Impact Categories

Risk Impact Categories					
Project Objectives	**Risk Impact Rating**				
	1	**2**	**3**	**4**	**5**
Cost	Insignificant cost increase	< 10% cost increase	10-20% cost increase	20-40% cost increase	> 40% cost increase
Schedule	Insignificant schedule increase	< 5% schedule increase	5-10% schedule increase	10-20% schedule increase	> 20% schedule increase
Scope	Scope decrease barely noticeable	Minor areas of scope affected	Major areas of scope affected	Scope reduction unacceptable to sponsor	Project end item is effectively useless
Quality	Quality degradation barely noticeable	Only very demanding applications are affected	Quality reduction requires sponsor approval	Quality reduction unacceptable to sponsor	Project end item is effectively useless

3. Calculate Risk Exposure

Risk Exposure is a calculated value based on multiplying the assigned Risk Probability value with the highest Risk impact value derived for Cost, Schedule, Quality and Scope. For example, Table 17 – Risk Exposure Calculation represents a Risk with a probability value of 90 percent and impact values of 3, 5, 3 and 2 for Cost, Schedule, Quality, and Scope, respectively. Impact value of 5 for Schedule is used for the calculation since it is the highest. This Risk will result in a Risk Exposure (calculated) value of 0. 9 X 5 = 4. 5

Table 17 – Risk Exposure Calculation

Probability	Risk Impact				Risk Exposure
90%	Cost	Schedule	Quality	Scope	4. 5
	3	5	3	2	

4. Assign Risk Level

In order to determine the overall risk level, a risk level rating is assigned based on the risk exposure value calculated as listed in Table 18 – Risk Rating below. For example, a Risk with a Risk Exposure value of 4. 5 would be assigned a rating of “High”.

Table 18 – Risk Rating

Risk Exposure	Rating
< 2. 0	Low
2 – 3	Medium
> 3. 5	High

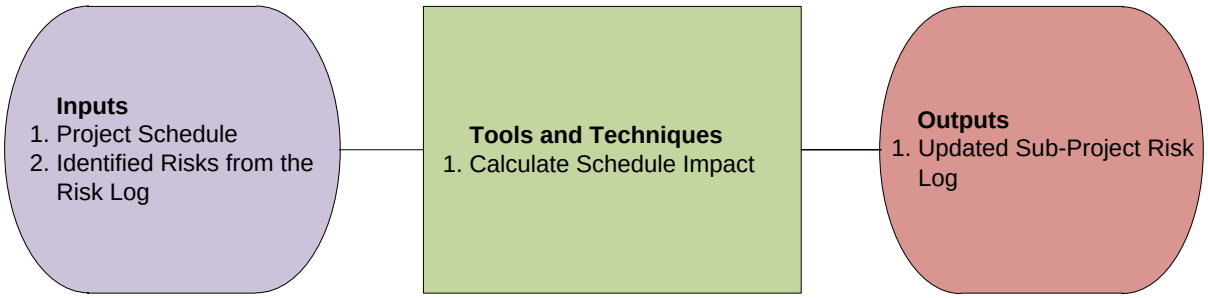
10.5.3 Outputs

1. **Updated Sub-Project Risks Log**: [Sub-Project PM Template Checklist, #9418]. The Risk Level derived from the probability and impact is entered in the log. High-level risks are reported on the Weekly Status report. **[Mandatory: Primary, Enterprise, Internal]**

10.6 Perform Quantitative Risk Analysis

Purpose: Quantitative Analysis assesses the value of cost and schedule impacts associated with risks. If the Sub-Project Manager decides that Quantitative Risk Analysis is necessary, he/she will assess the schedule impacts associated with the risk. This may include working with the Sub-Project Team to determine a collective view of the overall schedule and cost impact to the Project. The estimate must include all costs such as additional staff time and contractor staff time.

Figure 29 – Perform Quantitative Risk Analysis Inputs, Tools and Techniques, and Outputs



10.6.1 Inputs

1. **Project Schedule**
2. **Identified Risks from Sub-Project Risks Log**

10.6.2 Tools and Techniques for the Process Perform Quantitative Risk Analysis

1. Calculate Schedule Impact Days
   The factored schedule impact should be assessed to determine the number of days the risk will affect the Project Schedule.

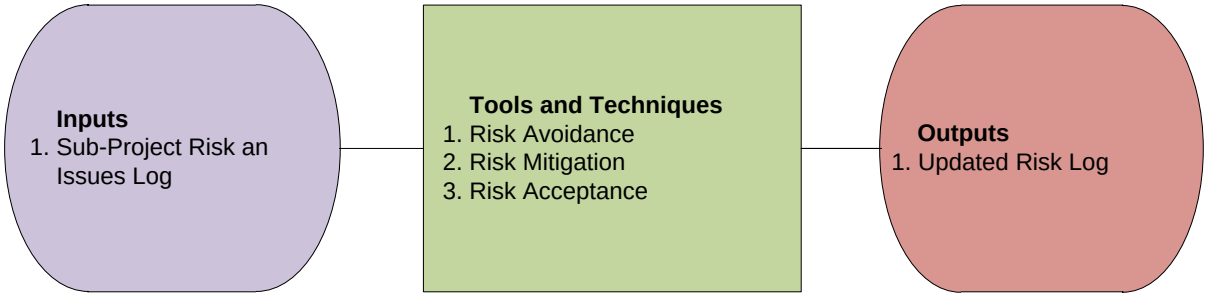
10.6.3 Outputs

1. **Update Sub-Project Risks Log**: [Sub-Project PM Template Checklist, #9418]. The Log is updated with the calculated Factored Schedule Impact. **[Mandatory: Primary, Enterprise, Internal]**

10.7 Perform Risk Response Planning

Purpose: Develop risk response plan for each risk and develop a mitigation and/or contingency plan as appropriate. During Risk Response Planning, the Sub-Project Manager should consult with the Project Team members to gain a comprehensive view of the risks and obtain valuable input.

Figure 30 – Perform Risk Response Planning Inputs, Tools and Techniques, and Outputs



10.7.1 Inputs

1. **Sub-Project Risks**: [Sub-Project PM Template Checklist, #9418].

10.7.2 Tools and Techniques for the Perform Risk Response Planning Process

Distinguishing between Mitigation and Contingency Plans

Just as risks and issues are managed independently, Mitigation Plans and Contingency Plans are equally distinguishable and require the Sub-Project Team to follow different guidelines and procedures. Mitigation Plans address the causes of risks while Contingency Plans address the Impacts to the Sub-Project objectives. Risk Owners should always create a Mitigation Plan; however, when mitigation steps fail to reduce the Risk Level, it will necessitate the creation of a Risk Contingency Plan.

1. **Risk Mitigation**

A Risk Mitigation Plan consists of a mitigation description, mitigation options, and mitigation steps. The Risk Owner creates the Mitigation Plan. Each mitigation step may have distinct owners separate from the Risk Owner; may include one or more actionable items by various resources across the organizations or Sub-Project Team members; and should produce a result that reduces the Risk Probability, the Risk Impact, or both.

2. **Risk Acceptance**

The Sub-Project Team will accept the risk. The Risk Owner will develop the Contingency Plan by assessing multiple options to determine the optimal and recommended solution. Once this solution has been determined, the Risk Owner will develop the Contingency Plan steps necessary to reduce the impact if the risk is realized. When Contingency Plans are in place, issue resolution is streamlined because the responses have already been pre-planned and approved.

3. **Risk Avoidance**

The Sub-Project Team essentially eradicates the risk from the sub-project by eliminating its cause, thus ensuring that the risk never materializes. One risk avoidance strategy involves adjusting the project team structure and adjusting the Sub-Project Schedule work assignments or work activity duration dates. Another risk avoidance strategy involves negotiating with the sponsor to reduce the scope of the sub-project by the removal of any perceived risk-bearing requirements.

10.7.3 Outputs

1. **Update Sub-project Risks**: [Sub-Project PM Template Checklist, #9418]. The following Mitigation Plan steps and/or Contingency Plan details are entered on the log **[Mandatory: Primary, Enterprise, Internal]**
   i. Risk Mitigation Approach and Steps - The defined mitigation plan including the specific mitigation steps to resolve the risk.
   ii. Risk Trigger Description – The description of an event that will cause the risk to materialize into an issue.
   iii. Risk Trigger Date – The date when the risk trigger event becomes imminent, which will cause the risk to materialize into an issue.
   iv. Contingency Plan - The defined contingency plan for the risk.

10.8 Perform Risk Monitoring and Control

Purpose: Risk Monitoring and Control is the process of tracking and re-analyzing existing risks, monitoring trigger conditions, monitoring residual risks, and reviewing the execution and effectiveness of Risk Mitigation steps and/or Contingency Plans. The project team should be reviewing High-Level risks on a weekly basis; Medium-Level and Low-Level risks can be reviewed periodically on a rolling cycle. Risk Monitoring and Control is an ongoing process over the lifespan of the project.

Figure 31 – Perform Risk Monitoring and Control Inputs, Tools and Techniques, and Outputs

10.8.1 Inputs

1. **Sub-Project Risks Log**: [Sub-Project PM Template Checklist, #9418].

10.8.2 Tools and Techniques for the Perform Risk Monitoring and Control Process

1. **Proactive Risk Management and Oversight** Risk Monitoring and Control will involve re-evaluating strategies, authorizing the execution of Contingency Plans, and taking corrective actions where necessary. Throughout the Risk Management process, the Risk Owners will be responsible for keeping the Sub-Project Manager aware of a risk's status. In turn, the Sub-Project Manager will advise Risk Owners and other Sub-Project Team Members on the appropriate steps for managing risks. Proactive risk management and oversight will provide the appropriate attention to risks, thereby improving the project's ability to succeed and meet its objectives.
2. **Risk Retirement**
   Once the Risk Mitigation steps have been completed and Risk Exposure has been sufficiently lowered, the risk can be retired. Retired risks are considered "closed" but may be reactivated, if appropriate. Risk Retirement is a step in the Risk Management process that is managed by the Risk Owner, and any decision to retire a Risk, will come from the Sub-Project Manager.
3. **Risk Escalation Process**
   If a risk cannot be mitigated or the cause of the risk cannot be eliminated at the Sub-Project Team level, the Sub-Project Manager has to document the risk on the Enterprise Risk Log and bring it to the attention of the Risk and Issue Workgroup. The risk is then considered an enterprise risk and has to be managed by the Risk and Issue Workgroup.

10.8.3 Outputs

1. **Update Sub-Project Risks** [Sub-Project PM Template Checklist, #9418]: The Log is updated with the latest status on the Mitigation Plan steps, Contingency Plan and the overall status of the risk. **[Mandatory: Primary, Enterprise, Internal]**
   i. Latest Risk Status
   ii. Updates on the Risk Mitigation Approach and Steps
   iii. Updates on the Risk Contingency Plan

10.9 Issue Management Processes Overview

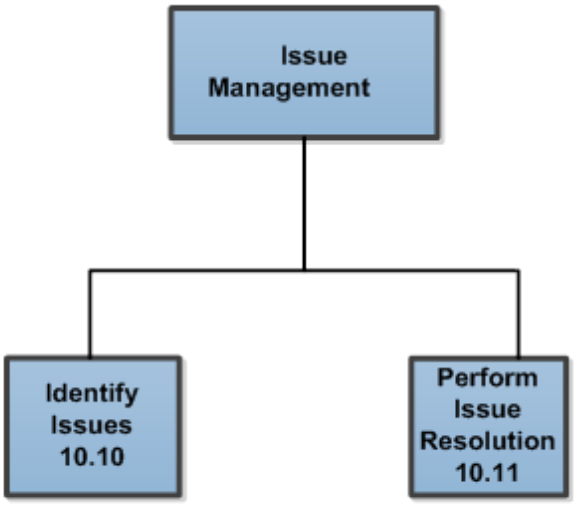
An issue is a situation which has occurred or will definitely occur, as opposed to a risk which is a potential event. The issue can be the result of a risk being realized or unforeseen problems that arise on the project. Left unresolved, an issue will impede or prohibit project-related progress or development by affecting scope, budget, schedule, resources, and/or quality. All the Sub-Project Team members are responsible for identifying issues related to the Sub-Project and bringing them to the attention of the Sub-Project Manager. The Sub-Project Manager is responsible for assigning an Issue Owner who then has the responsibility for managing the resolution of the issue.

Issue Management consists of executing the following two processes:

- Identify Issues
- Perform Issue Resolution

Issue Management Processes

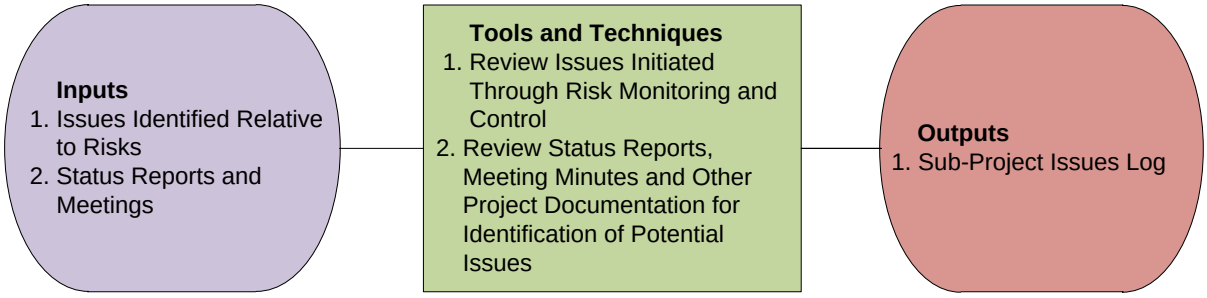
Figure 32 – Issue Management Processes



10.10 Identify Issues

Purpose: To identify the issues through the Risk Management Process or informally by a Sub-Project Team member encountering an unforeseen problem and bringing the issue to the attention of the Sub-Project Team and the Sub-Project Manager.

Figure 33 – Identify Issues Inputs, Tools and Techniques, and Outputs



10.10.1 Inputs

1. **Issues Identified Relative to Risks**
2. **Status Reports and Meetings**

10.10.2 Tools and Techniques for the Identify Issues Process

1. **Review issues initiated through Risk Monitoring and Control processes.** Assess the identified potential problem and open issue as appropriate. Develop issue detail including source, impact and owner.
2. **Review status reports, meeting minutes, and other project documentation for identification of potential issues**.

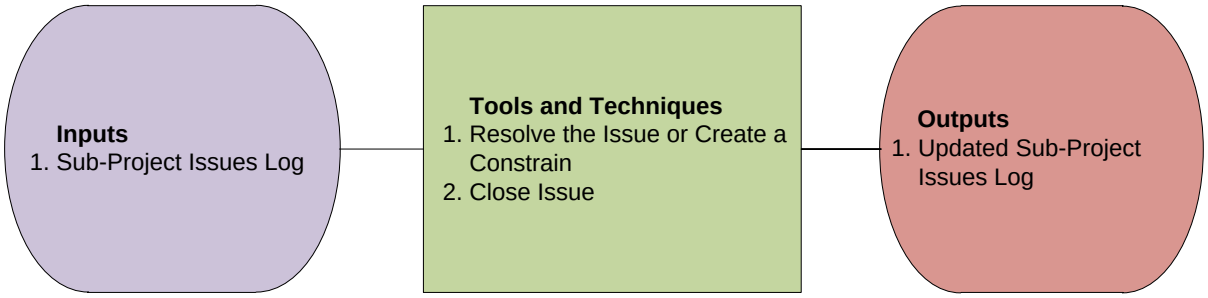
10.10.3 Outputs

1. **Sub-Project Issues Log**: [Sub-Project PM Template Checklist, #9418].The following information is recorded on the Issue log. **[Mandatory: Primary, Enterprise, Internal]**
   - i. Issue Id: Sequential number to identify the Issue.
   - ii. Issue Title: Brief description of Issue and its associated impact.
   - iii. Issue Description: A brief Issue statement entered by the Issue Originator that describes the Issues.
   - iv. Latest Issue Status: Status of the issue.
   - v. Resource Assigned: The person that has been assigned to own and work the Issue. Entered by the Issue Manager after the Issue Owner has been assigned by Sub-Project Manager.
   - vi. Issue Originator: The person that identified the Issue.
   - vii. Issue Origination Date: Date when the Issue was identified.
   - viii. Issue Category: The Category under which the Issue belongs.
   - ix. Closure Criteria: Closure criteria description for the issue.

10.11 Perform Issue Resolution

Purpose: To identify the level of authority that is required to resolve the issue and to get that individual engaged as soon as possible to take the resolution action.

Figure 34 – Perform Issue Resolution Inputs, Tools and Techniques, and Outputs



10.11.1 Inputs

1. **Sub-Project Issues Log**

10.11.2 Tools and Techniques for the Perform Issue Resolution Process

1. **Resolve the Issue or create a constraint.**
   The issue is forwarded to the person identified with the level of authority to resolve the issue. An issue Resolution Plan, consisting of actionable steps to resolve the issue, should be created and managed by the issue Owner. Each issue Resolution step may include one or more action items to be resolved by the various Sub-Project Team members. If the issue cannot be resolved at the sub-project level, then the issue is escalated by the Sub-Project Manager to the Risk and Issue Workgroup. The Risk and Issue Workgroup then has the responsibility for managing and resolving the issue by documenting the issue details in the Issues Log [Sub-Project PM Template Checklist, #9418].

   During issue resolution, the Sub-Project Manager may decide that the issue is actually a constraint and plan around the constraint. The impact of re-planning may be significant, but it is real since the project cannot achieve its cost, schedule, or quality of scope with the issue impacting it. Constraints are conditions that cannot be changed. In this situation, the constraint should be documented in the Sub-Project Charter document. If necessary, the Sub-Project Charter should be re-approved by the Leadership Team. Refer to the process guide document for the Sub-Project Charter document.

2. **Close Issue**
   The Issue Owner performs issue resolution by managing and executing the Issue Resolution Plan, consisting of actionable steps to resolve the issue. Each Issue Resolution step may include one or more action items to be resolved by various Sub-Project Team members. Once all the issue actionable steps have been resolved, the

Issue Owner makes a recommendation to the Sub-Project Manager to close the issue. The Sub-Project Manager then makes a decision on whether to close the issue.

10.11.3 Outputs

1. **Updated Sub-project Issues Log**: [Sub-Project PM Template Checklist, #9418]. The Issue Log is updated with the following information: **[Mandatory: Primary, Enterprise, Internal]**
   i. Latest Issue Status
   ii. Resolution Actions
   iii. Escalated To
   iv. Resolution Completion Date

10.12 Generation of the Outputs by Project Life Cycle Phase

Table 19 – Risk and Issue Management Outputs Generated by Phase below depicts Risk and Issue Management outputs generated by the project life cycle phases:

Table 19 – Risk and Issue Management Outputs Generated by Phase

Initiation	Planning	Execution and Monitoring/Control	Project Closeout
Sub-Project Risks Log	Updated Sub-Project Risks Log	Updated Sub-Project Risks Log	Updated Sub-Project Risks Log
Sub-Project Issues Log	Updated Sub-Project Issues Log	Updated Sub-Project Issues Log	Updated Sub-Project Issues Log

11 Quality Management Knowledge Area

Select the category of project:

Category	Yes
Primary	
Enterprise	
Internal	

Select the mandatory Quality Management practices to be used on the project:

Stage	Deliverable or Artifact	Primary	Enterprise	Internal
Plan Quality	Sub-Project Deliverable Expectations Document [FI$Cal Sub-Project DED Template, #10633]	Mandatory	Mandatory	Optional
	Documented Test Cases	Optional	Optional	Optional
Perform Quality Assurance	Distribute Quality Reports	Mandatory	Mandatory	Optional
	Process Recommendations	Mandatory	Mandatory	Optional
	Document Decisions and Action Items [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional
	Track Actions to Completions	Mandatory	Mandatory	Optional
Perform Quality Control	Updated Configuration Items Register [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Mandatory
	Test Results	Optional	Optional	Optional

11.1 Introduction

This knowledge area identifies the quality management methodology that is used for the sub-projects being executed within the FI$Cal Project. Refer to the enterprise FI$Cal Quality Management Plan [FI$Cal Quality Management Plan, #68] for the quality management methodology which applies to the FI$Cal Project.

Quality Management encompasses all of the work that is required to deliver the sub-project's deliverables at the customer's required level of quality. This knowledge area identifies the quality management processes which need to be executed in order to ensure that the sub-project will satisfy the needs for which it was undertaken.

Quality Management consists of three core elements:

- Planning for quality

- Assuring that the quality is implemented as planned
- Controlling the quality by examining the deliverables generated by the sub-project

All Sub-Project Managers should refer to this knowledge area to manage quality within the sub-project deliverables and work products.

11.2 Scope

The scope of this knowledge area is limited to performing the Quality Management activities related to the three different categories of FI$Cal sub-projects identified in Section 2.

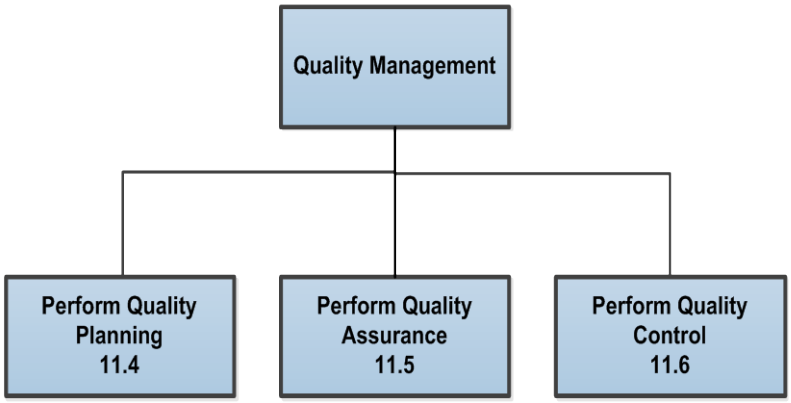
11.3 Quality Management Processes Overview

Quality Management consists of executing the following three processes:

- Perform Quality Planning
- Perform Quality Assurance
- Perform Quality Control

Quality Management Processes

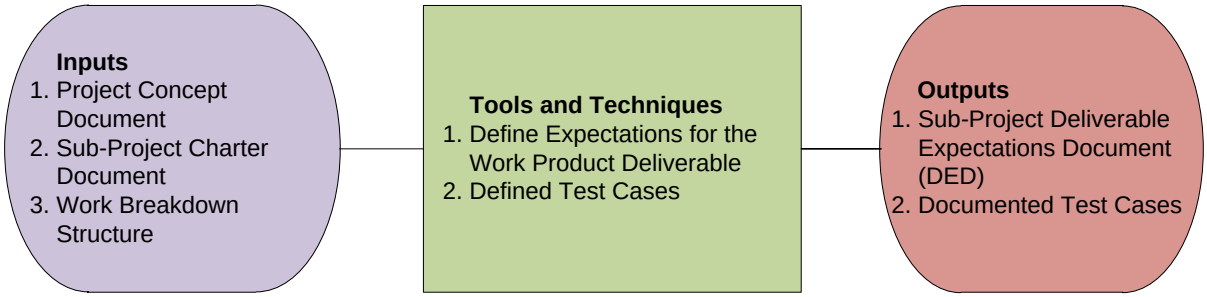
Figure 35 – Quality Management Processes



11.4 Perform Quality Planning

Purpose: To identify which quality standards are relevant to the project deliverables and work products and to document how the project will demonstrate compliance. Quality Planning should be performed in parallel with other project planning processes.

Figure 36 – Perform Quality Planning Inputs, Tools and Techniques, and Outputs



11.4.1 Inputs

2. **Project Concept Document**: To obtain an overview of the tangible deliverables and work products that will need to be developed during the project.
3. **Sub-Project Charter Document**: To obtain a description of the measureable success criteria from the customer's perspective.
4. **Work Breakdown Structure**: Deliverable-oriented hierarchical structure that decomposes the deliverables into the work that will be executed by the project team.

11.4.2 Tools and Techniques for the Perform Quality Planning Process

1. **Define the expectations for the work product/deliverable**: **P**rior to any work commencing, expectations should be discussed between the person who assigns the work product and the person responsible for developing the work product. If appropriate, other project stakeholders (such as, Project Executive, Project Director, Deputy Directors, Sponsor, Partner Business Executives and PMO) may be included in this discussion. For certain work products, such as SPRs, the general content and format are pre-defined, but specific content expectations should also be discussed. The Sub-Project Manager is required to develop a sub-project Deliverable Expectations Document (DED) for each sub-project deliverable. The sub-project deliverable and work product definitions and the applicable standards and templates needed to develop them will be documented in the sub-project DED.
2. **Defined Test Cases**: Describe an input, action, or event and an expected response, to determine if a feature of an application is working correctly. A test case should contain particulars such as test case identifier, test case name, objective, test conditions/setup, input data requirements, steps, and expected results.

11.4.3 Outputs

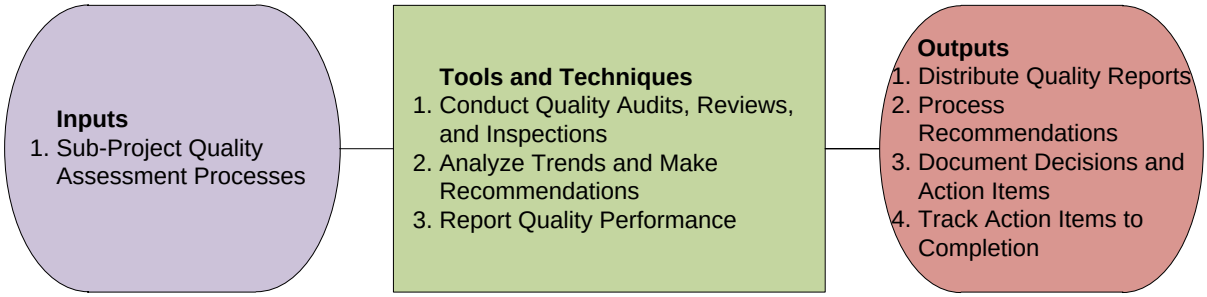
1. **Sub-Project Deliverable Expectations Document (DED)**: [FI$Cal Sub-Project DED, #10633].The following information will be detailed in the sub-project DED document: deliverable description, deliverable entrance criteria, deliverable format, deliverable acceptance criteria, and the deliverables approvals. **[Mandatory: Primary, Enterprise; Optional: Internal]**
2. **Documented Test Cases**: Document test cases for deliverables that are required to be tested. The test cases contain particulars such as test case identifiers, test case name,

objective, test conditions/setup, input data requirements, steps, and expected results. **[Optional: Primary, Enterprise; Internal]**

11.5 Perform Quality Assurance

Purpose: Perform a set of support activities needed to provide adequate confidence that the project management processes established are continuously improved, to ensure the sub-project deliverables meet the required specifications and are fit for use. Quality assurance is a function that will be performed only by the PMO Quality Assurance Team for managing quality on the sub-projects. The FI$Cal PMO Quality Assurance Team will be executing the Sub-Project Quality Assessment processes to perform the quality assurance activities. The Sub-Project Manager and the Sub-Project Team members will only be responsible for documenting the decisions and action items based on the quality improvement recommendations made by the PMO Quality Assurance Team after executing the Sub-Project Quality Assessment Processes.

Figure 37 – Perform Quality Assurance Inputs, Tools and Techniques, and Outputs



11.5.1 Inputs

1. **Sub-Project Quality Assessment Processes**

11.5.2 Tools and Techniques for the Perform Quality Assurance Process

1. **Process: Conduct Quality Audits, Reviews, and Inspections Procedure**: [Manage Quality Audits, Reviews, and Inspections, #10626].
2. **Process: Analyze Trends and Make Recommendations Procedure**: [Manage Quality Analysis and Improvement, #10627].
3. **Process: Report Quality Performance Procedure**: [Manage Quality Reporting, #10711].

11.5.3 Outputs

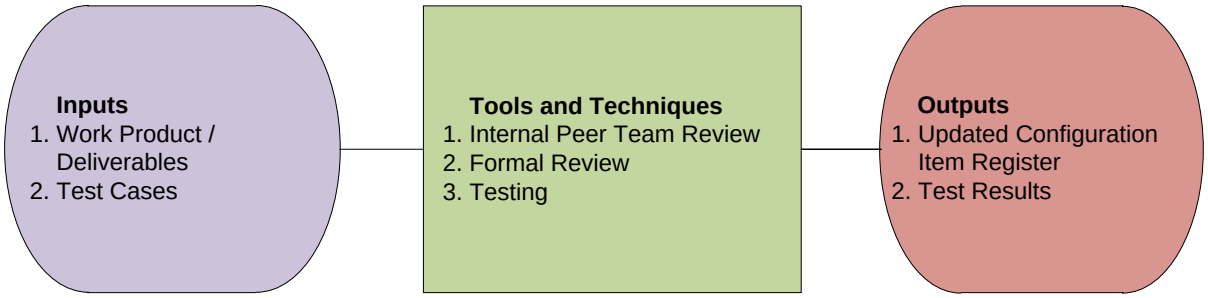
1. **Distribute Quality Reports**: FI$Cal PMO Quality Assurance Team will distribute quality reports including analysis as defined in the Quality Assessment Process. **[Mandatory: Primary, Enterprise; Optional: Internal]**
2. **Process Recommendations**: The FI$Cal PMO Quality Assurance Team will not only report on areas of non-compliance; they will also make recommendations for improving control processes. At times, the corrective or preventative action may need to be handled through the overall change control process. **[Mandatory: Primary, Enterprise; Optional: Internal]**

3. **Document Decision**s and **Action Items**: The Sub-Project Manager and the Sub-Project Team members will document decisions and action items based on quality improvement recommendations made by the FI$Cal PMO Quality Assurance Team **[Primary: Enterprise; Optional: Internal]**
4. **Track Action Items to Completion**: The PMO Quality Assurance Team will track actions to resolution and closure. **[Mandatory: Primary, Enterprise; Optional: Internal]**

11.6 Perform Quality Control

Purpose: To compare the deliverable quality with applicable standards and to remove defects when non-compliance is detected. Quality Control is the responsibility of the Sub-Project Team, which is responsible for producing the work products and deliverables. The process ensures that deliverables are reviewed as they are being developed and that feedback is incorporated to ensure that standards and expectations are met and extensive rework is avoided. The process also provides adequate confidence that the deliverables will satisfy quality requirements and that the sub-project will satisfy relevant quality standards.

Figure 38 – Perform Quality Control Inputs, Tools and Techniques, and Outputs



11.6.1 Inputs

1. **Work Product /Deliverables**
2. **Test Cases**: Documented definition of specific executable tests that examine the functionality of the system, including the data inputs and the expected data output results to be obtained.

11.6.2 Tools and Techniques for the Perform Quality Control Process

1. **Internal Peer Team Review**: Informal review of the deliverable/work product, performed internally with the project team members before the deliverable/work product is disseminated for broader review. For example, if the Business Team was the author of the deliverable, then the review would be conducted with members of the Business Team. The deliverable/work product may go through several informal reviews and updates before being distributed for a formal review.
2. **Formal Review**: During the formal review, the deliverable/work product may be forwarded to the Project team members: Project Executives, Partner Business Executives, Deputy Directors, Independent Project Oversight team members, and Independent Validation and Verification team members. The deliverables should be routed for a formal review as documented in the sub-project DED. During the formal review process, the reviewers validate the deliverable for format, content, and completeness. All the review comments should be logged on the Comment Tracking Log. Refer to the FI$Cal Document Management Plan [Document Management Plan,

#61] and Desk Reference Manual for information on review log procedures. [Document Management Desk Reference Manual, #62]

3. **Testing**: When a sub-project has deliverables that require testing, detailed test scripts should be planned and defined at the level of requirements for product acceptance. When conducting testing, results must be verified, defects must be documented, and corrective actions must be defined. Use of methods defined in the FI$Cal Quality Management Plan may be applicable.

11.6.3 Outputs

1. **Updated Configuration Items Register**: [Sub-Project PM Template Checklist, #9418]. The output is the updated Configuration Items Register with all the changes to the baseline deliverable artifact being recorded. **[Mandatory: Primary, Enterprise, Internal]**
2. **Test Results**: Data output as a result of executing the test scripts as documented in the test cases. The actual results are compared to the expected test results and any differences in the results would be raised as defects. **[Optional: Primary, Enterprise, Internal]**

11.7 Generation of the Outputs by Project Life Cycle Phase

Table 20 – Quality Management Outputs Generated By Phase below depicts Quality Management outputs generated by project life cycle phases:

Table 20 – Quality Management Outputs Generated By Phase

Initiation	Planning	Execution and Monitoring/Control	Project Closeout
	Sub-Project Deliverable Expectations Document	Distribute Quality Reports	
		Process Recommendations	
		Document Decisions and Action Items	
		Track Action Items to Completion	
		Documented Test Cases	
		Updated Configuration Items Register	
		Documented Test Results	

12 Schedule Management Knowledge Area

Select the category of project:

Category	Yes
Primary	
Enterprise	
Internal	

Select the mandatory Schedule Management practices to be used on the project:

Stage	Deliverable or Artifact	Primary	Enterprise	Internal
Initiate Sub-Project Schedule Template	High-Level Schedule	Mandatory	Mandatory	Optional
Conduct WBS Session	Work Breakdown Structure	Mandatory	Mandatory	Optional
Create Activity List Information	Updated Activity List Template	Mandatory	Mandatory	Optional
Develop Draft Schedule	Draft Project Schedule	Mandatory	Mandatory	Optional
Create Task Estimation	Updated Task Estimation Form	Mandatory	Mandatory	Optional
Develop Schedule	Published Project Schedule	Mandatory	Mandatory	Optional
	Critical Path Method	Mandatory	Mandatory	Optional
	Resource Allocation Reports	Mandatory	Mandatory	Optional
	Milestone List	Mandatory	Mandatory	Optional
Baseline Schedule	Baselined Schedule	Mandatory	Mandatory	Optional
Control Schedule	Schedule Updates	Mandatory	Mandatory	Optional
	Change Requests and Recommendations	Mandatory	Mandatory	Optional

12.1 Introduction

The Schedule Management knowledge area provides guidance on how sub-project schedules are developed, baselined, and controlled. Refer to the FI$Cal Schedule Management Plan for details relating to scheduling methodologies, policies, roles and responsibilities, and training during each project life cycle phase: [FI$Cal Schedule Management Plan, #72].

12.2 Scope

The scope of this knowledge area is limited to performing the Schedule Management activities related to the three categories of FI$Cal sub-projects identified in Section 2.

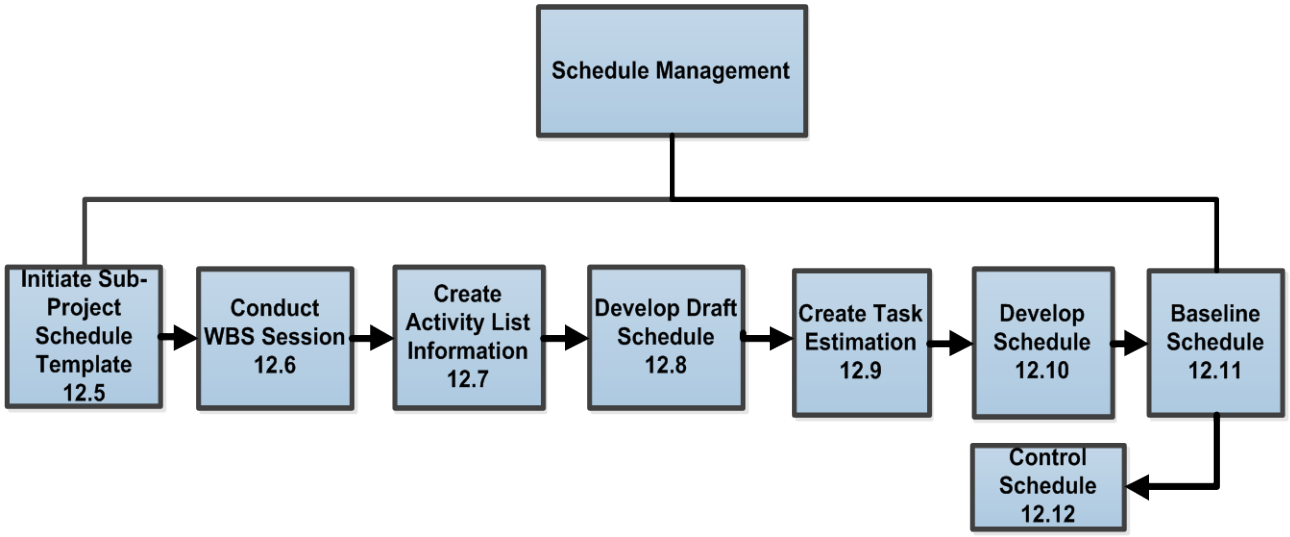
12.3 Schedule Management Processes Overview

Schedule Management consists of executing the following eight processes:

- Initiate Sub-Project Schedule Template
- Conduct Work Breakdown Structure (WBS) session
- Create Activity List Information
- Develop Draft Schedule
- Create Task Estimation Information
- Develop Schedule
- Baseline Schedule
- Control Schedule

Schedule Management Processes

Figure 39 – Schedule Management Processes



12.4 Schedule Management Process Responsibilities

Table 21 – Schedule Management Process Roles and Responsibilities below indicates the team and individual responsibilities for executing the Schedule Management Process activities.

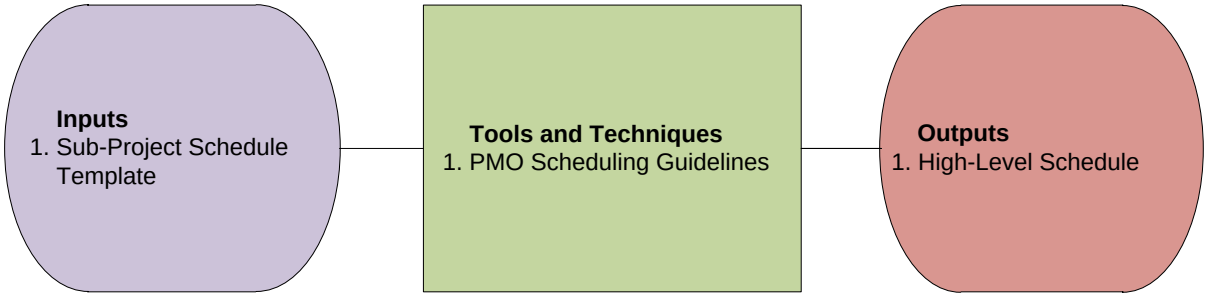
Table 21 – Schedule Management Process Roles and Responsibilities

Process	Teams and Individuals Roles and Responsibilities
Initiate Sub-Project Schedule Template	Sub-Project Manager and PMO Scheduler
Conduct Work Breakdown Structure (WBS) session	Sub-Project Manager, Sub-Project Team and PMO Scheduler
Create Activity List Information	Sub-Project Manager and Sub-Project Team
Develop Draft Schedule	PMO Scheduler
Create Task Estimation	Sub-Project Team and Sub-Project Manager
Develop Schedule	PMO Scheduler
Baseline Schedule	PMO Scheduler
Control Schedule	Sub-Project Manager

12.5 Initiate Sub-Project Schedule Template

Purpose: Develop a high-level schedule to include initiation and planning phase deliverables, milestones, proposed resources, and high-level estimates of durations and/or start and finish dates. The Sub-Project Manager and PMO Scheduling Team work together to create the high-level schedule. The high-level schedule consists of milestones and deliverables that are known at a point in time. Execution and Closeout phase activities will be populated at this point.

Figure 40 – Initiate Sub-Project Schedule Template Inputs, Tools and Techniques, and Outputs



12.5.1 Inputs

1. **Sub-Project Schedule Template** (located in Project Server)

12.5.2 Tools and Techniques for the Initiate Sub-Project Schedule Template Process

1. **PMO Scheduling Guidelines**

12.5.3 Outputs

1. **High-Level Schedule [Mandatory: Primary, Enterprise; Optional: Internal]**

12.6 Conduct Work Breakdown Structure (WBS) Session

Purpose: To break down the sub-project scope into manageable tasks by developing a Work Breakdown Structure (WBS). A WBS is a deliverable-oriented hierarchical structure that decomposes the deliverables into the work that will be executed by the project team. The PMO Scheduler, the Sub-Project Manager, and the Sub-Project Team jointly conduct a WBS session to develop the WBS for the sub-project. The WBS should represent all the in-scope deliverables for the sub-project. Figure 41 – Sample WBS for the Business Expectations Sub-Project below depicts a sample WBS for the Business Process Expectations sub-project.

Figure 41 – Sample WBS for the Business Expectations Sub-Project

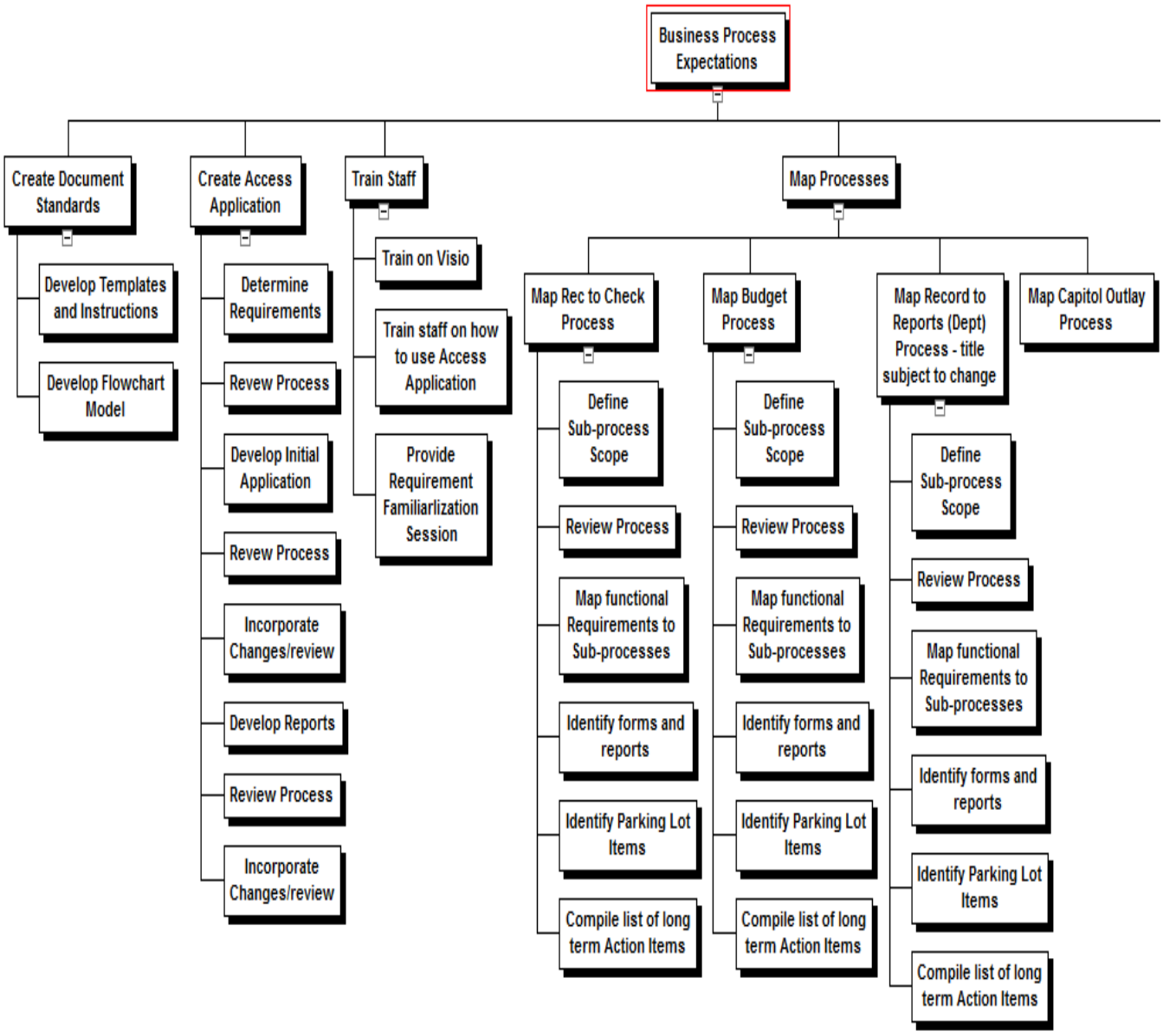
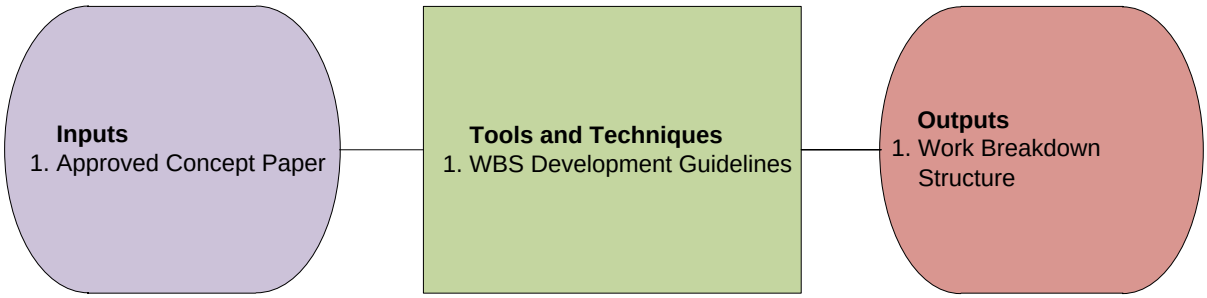


Figure 42 – Conduct Work Breakdown Structure (WBS) Session Inputs, Tools and Techniques, and Outputs



12.6.1 Inputs

1. **Approved Project Concept**: Contains the list of the sub-project deliverables.

12.6.2 Tools and Techniques for the Conduct Work Breakdown Structure (WBS) Session Process

1. **WBS Development Guidelines**
   - i. Identify the deliverables and the work involved by analyzing the project scope from the approved Project Concept Document.
   - ii. Understand the relationships among the deliverables.
   - iii. Use the deliverables as the components of level 1 of the WBS.
   - iv. Decompose level 1 into more detailed components for level 2.
   - v. Keep decomposing to lower levels until necessary and sufficient decomposition has been achieved to identify the work packages. The PMO Scheduling Team will advise when the appropriate work packages have been reached.
   - vi. Work packages should not exceed 10 days in duration.
   - vii. Each work package will only have one component.

Note: The PMO Scheduler will be responsible for facilitating sessions for developing the Work Breakdown Structure.

12.6.3 Outputs

1. **Work Breakdown Structure**: The WBS is a deliverable-oriented hierarchical structure that decomposes the deliverables into the work that will be executed by the project team. **[Mandatory: Primary, Enterprise; Optional: Internal]**

12.7 Create Activity List Information

Purpose: To create the sub-project activity list by further decomposing the work package elements of the WBS; to determine the sequence for executing the activities defined; and to obtain a “three-point” estimate for the activity durations. The activity duration estimates are quantifiable estimates expressed as the number of work periods needed to complete a schedule

activity. Work periods are usually expressed in days. The Sub-Project Manager estimates activity duration by calculating time elapsed from the beginning of the activity to work completion. The activity duration includes working days only. For example, if the Sub-Project Manager estimates that it will take one resource four days (with eight work hours in a day) to complete a task, the activity total is 32 hours. In this example, the work will start on a Friday, and there will be no work on Saturday and Sunday. Therefore, the activity duration estimate is four days (or 32 hours) measured in work periods, and six days measured in calendar units.

Figure 43 – Create Activity List Information Inputs, Tools and Techniques, and Outputs

12.7.1 Inputs

1. **Approved Project Concept Document**
2. **Work Breakdown Structure**
3. **Activity List Template**

12.7.2 Tools and Techniques for the Create Activity List Information Process

1. **Decomposition**: The Sub-Project Manager, with the help of the team members, decomposes the work packages into smaller, more manageable units of work called activities.
2. **Establishing Dependency Relationships**: The Sub-Project Manager, with the help of the team members, identifies and documents the logical relationships between the activities, including precedence among the activities.
3. **Expert Judgment**: The project team members who have prior experience are called upon to assist in helping define the activities.
4. **Three-Point Activity Duration Estimates**: The project team members enter the task duration estimate for each task by entering the following types of estimates: most likely, optimistic and pessimistic.
    - The most likely estimate assumes there are no disasters and the activity can be completed as planned.
    - The optimistic estimate is the fastest time frame in which the resource can complete the activity.
    - The pessimistic estimate assumes the worst happens, and it takes much longer than planned to complete the activity.
    - The Start and Finish dates for each task are also entered.

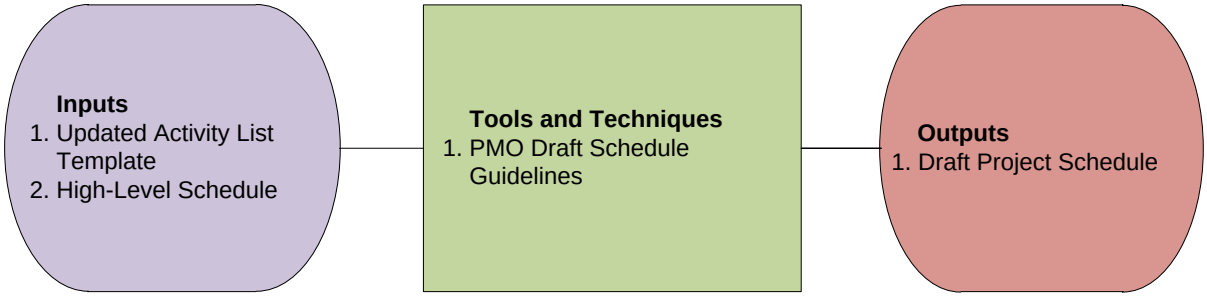
12.7.3 Outputs

1. **Updated Activity List Template**: The Sub-Project Team members populate the Activity List with the following information: Preparer, Task Name, Duration Estimates, Task Dependency, Comments, and Task Description. The Start and Finish dates are entered only if specific dates are entered. Refer to the Activity List – Task Estimation Template [Activity List v3 Point Estimation Template, #8338] for entering the activity and the activity duration work estimate information. **[Mandatory: Primary, Enterprise; Optional: Internal]**

12.8 Develop Draft Schedule

Purpose: For the PMO Scheduler to create a draft schedule based on the Activity List Information compiled by the Sub-Project Team members.

Figure 44 – Develop Draft Schedule Inputs, Tools and Techniques, and Outputs



12.8.1 Inputs

1. **Updated Activity List Template**: The Updated Activity List Template contains the following information: Preparer, Task Name, Duration Estimates, Start Date, Finish Date, Task Dependency, Comments, and Task Description.
2. **High-Level Schedule**: The high-level schedule created during the initiation phase of the project.

12.8.2 Tools and Techniques for the Develop Draft Schedule Process

1. **PMO Draft Scheduling Guidelines**: The PMO Scheduler creates the draft schedule based on the PMO Draft Scheduling Guidelines.

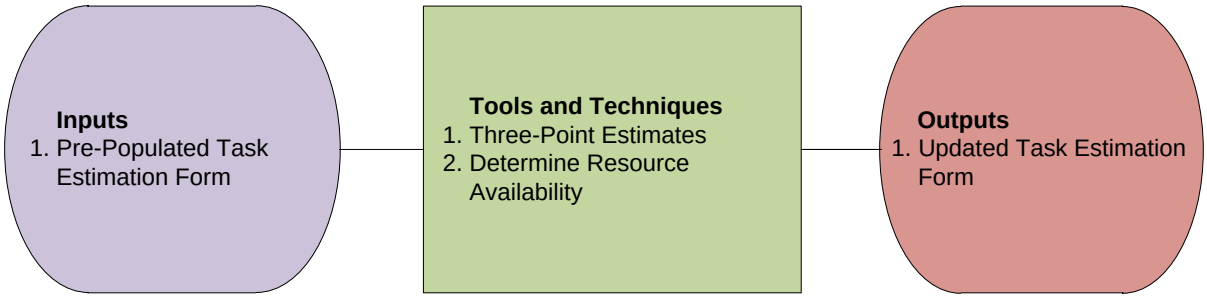
12.8.3 Outputs

1. **Draft Project Schedule**: The draft project schedule populated with activity information, activity dependency relationships, and activity duration information **[Mandatory: Primary, Enterprise; Optional: Internal]**

12.9 Create Task Estimation

Purpose: To determine the work effort estimate and the number of resources to complete each task in the pre-populated task estimation form provided by the PMO Scheduler. Identifying the resources is a critical component of the project planning estimate and ultimately the project budget. This process is executed by the Sub-Project Team members.

Figure 45 – Create Task Estimation Inputs, Tools and Techniques, and Outputs



12.9.1 Inputs

1. **Pre-Populated Task Estimation Form**: The PMO Schedule pre-populates the task estimation form with the task information.

12.9.2 Tools and Techniques for the Create Task Estimation Process

1. **Three-Point Estimates**: Three-point estimates use three estimates that, when averaged, compute a final estimate of the amount of time it will take to complete a task. The three estimates used in this technique are the most likely estimate, an optimistic estimate, and a pessimistic estimate.
    - The most likely estimate assumes that there are no disasters and the activity can be completed as planned.
    - The optimistic estimate is the fastest time frame in which the assigned resource can complete the activity.
    - The pessimistic estimate assumes that the worst happens, and it takes much longer than planned to get the activity completed.

    Refer to the Activity List – Task Estimation Template [Activity List v3 Point Estimation Template, #8338] for entering the work estimate information.
2. **Determining Resource Availability**: The Sub-Project Managers, in conjunction with the Deputy Directors, determine the resources necessary to accomplish the project activities.

12.9.3 Outputs

1. **Updated Task Estimation Form**: [Activity List v3 Point Estimation Template, #8338]. The task estimation form is updated with the number of resources required to accomplish the task, and the Three-Point Estimates to accomplish the task. **[Mandatory: Primary, Enterprise; Optional: Internal]**

12.10 Develop Schedule

Purpose: For the PMO Scheduler to finalize the development of the project schedule once the Sub-Project Manager has verified the updated Task Estimation Form. The project schedule provides a graphical representation of the tasks, milestones, dependencies, resource requirements, task duration, and task estimates. The project schedule should be detailed enough to show each work breakdown structure activity to be performed, the name of the person responsible for completing the activity, the start and end date of each activity, and the expected duration of the activity.

Figure 46 – Develop Schedule Inputs, Tools and Techniques, and Outputs

12.10.1 Inputs

1. **Draft Schedule**
2. **Updated Task Estimation Form**
3. **Resource Calendars**: Resource estimating will require information on the available quantity of resources of different types, such as human, equipment, and material. This information is usually available in the resource calendars, which may also have detailed information about human resources, such as skill level, experience, and geographical location from where the resource will come. Typically, the resource calendar contains the following useful information about the resources:
    - Days and times of day when a resource is available
    - The passive time for the resource—for example, holidays for human resources

12.10.2 Tools and Techniques for the Develop Schedule Process

The Microsoft Project Management tool is utilized to build the actual schedule. The following functionality available within the tool is used to develop the project schedule:

1. **Schedule Development QA Checklist**: [Schedule Development and QA Checklist, #7403]. The PMO Scheduler reviews the checklist to ensure that the schedule was developed based on the prescribed FI$Cal guidelines.

12.10.3 Outputs

1. **Published Project Schedule**: The project schedule is published in Microsoft Project Server, includes a planned start date and a planned finish date for each schedule activity, together with supporting dates for the following: schedule activities, schedule

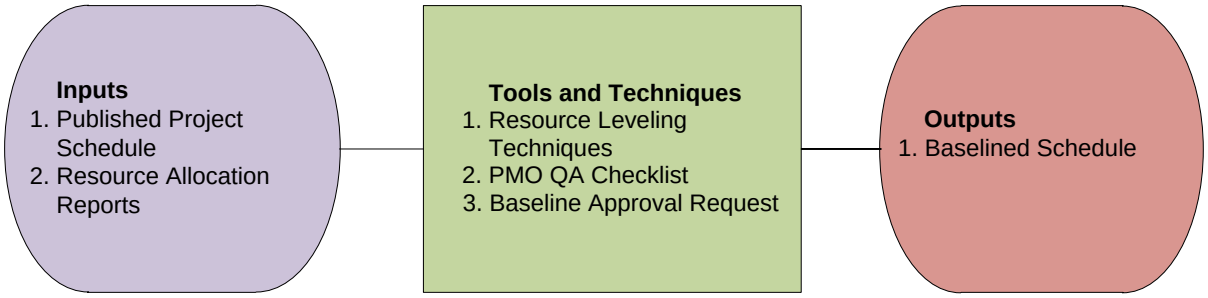
milestones, and activity attributes. The schedule will be considered preliminary until resources have been assigned to perform the activities according to the schedule. **[Mandatory: Primary, Enterprise; Optional: Internal]**

2. **Critical Path Method**: This analytical technique uses the schedule network to identify the schedule flexibility and critical path on the project schedule network diagram. The critical path is the longest sequence of activities in a project schedule network diagram which must be completed on time for the project to complete on the due date. Because it is the longest path, it determines the duration of the project; that is, the finish date of the project given the start date. **[Mandatory: Primary, Enterprise; Optional: Internal]**
3. **Milestone List**: The Milestone Report listing all the milestones for the sub-project [FI$Cal Timeline and Milestones, #8984]. **[Mandatory: Primary, Enterprise; Optional: Internal]**
4. **Resource Allocation Reports**: Resource Availability and Resource Assignment reports are available for use by resource management. **[Mandatory: Primary, Enterprise; Optional: Internal]**

12.11 Baseline Schedule

Purpose: To seek approval and document agreement from the Schedule Baseline Authority to baseline the project schedule. Once the schedule has been reviewed, revised, and agreed to by the Sub-Project Team, the Sub-Project Manager should make a presentation to the appropriate group(s) as listed in the Schedule Baseline Approval Matrix, referenced in the Schedule Management Plan [Schedule Management Plan, #72]. Upon approval by CCB, or higher authority, the PMO Schedule and Resource Management Unit will baseline or re-baseline the schedule in Microsoft Project Server as appropriate. Essentially, the baselined schedule is a complete copy or "snapshot" of the original schedule. This snapshot provides a target against which a project's cost, schedule and performance can be tracked.

Figure 47 – Baseline Schedule Inputs, Tools and Techniques, and Outputs



12.11.1 Inputs

1. **Published Project Schedule**
2. **Resource Allocation Reports**

12.11.2 Tools and Techniques for the Baseline Schedule Process

1. **Resource Leveling Techniques**: The Sub-Project Manager works with the Deputy Director to optimize resource utilization within and across schedules.

- One resource leveling technique is applied to address the resource needs of activities that must be performed to meet specific delivery dates.
- Another resource leveling technique involves taking a part of the resources from one activity and assigning it to another. This may change the activity durations and can also result in a change to the critical path.

2. **PMO QA Checklist**: The PMO Schedule Team will use the Schedule Development and QA Checklist [Schedule Development and QA Checklist, #7403] to make sure the Schedule meets all best practice standards prior to baselining.
3. **Baseline Approval Request**: [Schedule Baseline Presentation Template, #8299] and [Change Request Submission Form, #1113]

12.11.3 Outputs

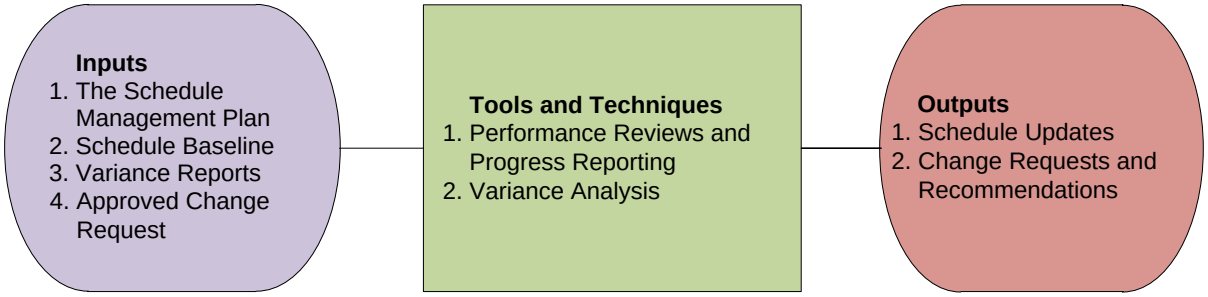
1. **Baselined Schedule [Mandatory: Primary, Enterprise; Optional: Internal]**

12.12 Control Schedule

Purpose: To ensure that the project is progressing on time as planned, and to monitor any changes to its progress. The Sub-Project Manager should perform the following tasks on a regular basis:

- Determine the current status of the project schedule.
- Influence the factors that generate schedule changes.
- Determine whether the project schedule has changed—for example, if some activities are running late.
- Manage the changes as they occur

Figure 48 – Control Schedule Inputs, Tools and Techniques, and Outputs



12.12.1 Inputs

1. **The Schedule Management Plan**: This plan specifies how to monitor and control the project at hand [Schedule Management Plan, #72].
2. **Schedule Baseline**: This is the approved version of the schedule, against which the schedule performance of the project will be measured.
3. **Variance Reports**: These reports provide information on the schedule performance of the project, such as missed and met planned dates. The following variance reports can be generated from the Project Web App tool:
    - Current Tasks Report

- Late and At Risk Tasks Report
- Milestone Variance Report

4. **Approved Change Requests**: These are requests to change the schedule, or other change requests that will affect the schedule. Approved change requests can update the schedule baseline. Change requests are required only when change thresholds are exceeded per the Change Control Plan [FI$Cal Change Control Template, #58].

12.12.2 Tools and Techniques for the Control Schedule Process

1. **Performance Reviews and Progress Reporting**: The Weekly Project Meeting Status Report [Weekly Project Meeting Status Report, #7997] is a key progress report to monitor and control the sub-project schedule. Attention should be focused on the finished activities, the percentage of in-progress activities that have been completed, and remaining durations for unfinished activities.
2. **Variance Analysis**: Performing schedule variance analysis is crucial to schedule monitoring because it reveals the deviation of the actual start and finish dates from the planned start and finish dates of schedule activities. Conducting variance analysis may lead to corrective actions which need to be undertaken to keep the project on track.

Schedule Indicator

The FI$Cal Project team has created a custom field used in all schedules, called the FI$Cal Schedule Indicator. The Schedule Indicator field graphically displays the Finish Variance for each task. FI$Cal uses the following variance criteria:


On Track: Scheduled Finish Date minus Baseline Finish Date ≤ 0


At Risk: Scheduled Finish Date minus Baseline Finish Date > 0 and Total Slack >0


Late: Baseline Finish Date < Current Date and Total Slack ≤ 0

12.12.3 Outputs

1. **Schedule Updates**: Schedule changes can happen at the activity level (the start/end date of an activity has changed) or at the project level (the start/end date of the project has changed). A schedule change at the project level is called a schedule revision. For example, when the schedule scope is expanded, the project end date might have to be changed to allow the extra work. All significant schedule changes must be reported to the project sponsor. Refer to the Change Control Plan for the schedule change thresholds. **[Mandatory: Primary, Enterprise; Optional: Internal]**
2. **Change requests and recommendations**: Refer to the Change Control Plan [FI$Cal Change Control Plan, #58] **[Mandatory: Primary, Enterprise; Optional: Internal]**

The three most important takeaways from this knowledge area are as follows:

1. Various time-management processes are used to produce schedule data, such as required resources and the duration of the activity.
2. Schedule data is used to develop the project schedule, which is an iterative process due to the uncertainties in the schedule data and due to changes during project execution.

Nevertheless, the approved version of the planned schedule is used as a baseline to track the project progress.

3. The schedule needs to be controlled to keep the project on track. The major output items of the schedule control process are performance measurements and change requests resulting, for example, from comparing these measurements to the performance baseline.

12.13 Generation of the Outputs by Project Life Cycle Phase

Table 22 – Schedule Management Outputs Generated by Phase below depicts Schedule Management outputs generated by the project life cycle phases:

Table 22 – Schedule Management Outputs Generated by Phase

Initiation	Planning	Execution and Monitoring/Control	Project Closeout
High-Level Schedule	Work Breakdown Structure	Schedule Updates	
	Sub-project Draft Schedule	Change Requests and Recommendations	
	Updated Task Estimation Form		
	Published Project Schedule		
	Critical Path		
	Resource Allocation Reports		
	Baselined Schedule		
	Updated Activity List Template		
	Milestone list		

13 Staff Management Knowledge Area

Select the category of project:

Category	Yes
Primary	
Enterprise	
Internal	

Select the mandatory Staff Management practices to be used on the project:

Stage	Deliverable or Artifact or Outcome	Primary	Enterprise	Internal
Develop Staff Plan	Staff Management Matrix [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional
Acquire Project Team	Project Kickoff Meeting	Mandatory	Mandatory	Mandatory
	Updated Staff Management Matrix [Sub-Project PM Template Checklist, #9418]	Mandatory	Mandatory	Optional
Develop Project Team	Project Team Performance [Sub-Project PM Template Checklist, #9418]	Mandatory	Optional	Optional
	[Individual Staff Transition Plan] [Transition Plan Template]	Mandatory	Mandatory	Optional
	Request For More Staff	Optional	Optional	Optional
	Additional Training or Disciplinary Actions	Optional	Optional	Optional
	Further Role Clarification	Optional	Optional	Optional
Manage Project Team	Updated Staff Management Matrix [Sub-Project PM Template Checklist, #9418]	Optional	Optional	Optional
	[Individual Staff Transition Plan] [Transition Plan Template]	Mandatory	Mandatory	Optional
Demobilize Team	[Individual Staff Transition Plan] [Transition Plan Template]	Mandatory	Mandatory	Optional

13.1 Introduction

This knowledge area provides the basis for performing Staff Management activities involved in managing FI$Cal sub-projects. Refer to the Staff Management Plan for staffing policies involved in managing the FI$Cal Project.

Staff Management includes the processes required to coordinate human resources on a project. Such processes include those needed to plan, acquire, develop, manage, and release staff over the life cycle of the project. High-level estimation of the resources required is performed during the initiation phase, while the sub-project concept is being drafted. The processes described in this knowledge area further refine those high-level estimates.

The Sub-Project Team is comprised of the people with assigned roles and responsibilities for completing the sub-project. The type and number of Sub-Project Team members can change frequently as the project progresses. The people working on a sub-project are its most valuable resources and the way the people are managed on the sub-project will have a major bearing on the project's success or failure.

13.2 Scope

The scope of this knowledge area is limited to performing the Staff Management activities related to the three categories of FI$Cal sub-projects identified in Section 2.

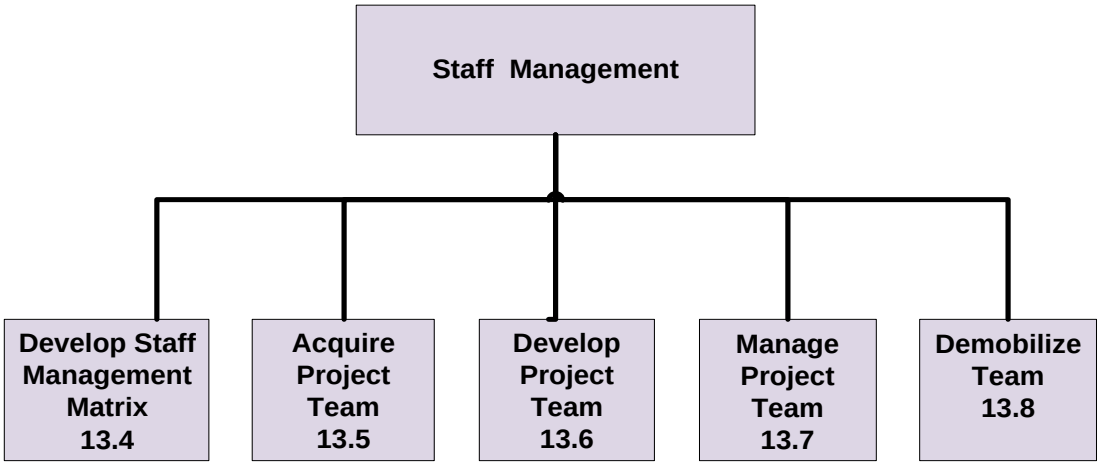
13.3 Staff Management Processes Overview

Staff Management consists of executing the following five processes:

- Develop Staff Management Matrix
- Acquire Project Team
- Develop Project Team
- Manage Project Team
- Demobilize Project Team

Staff Management Processes

Figure 49 – Staff Management Processes



13.4 Develop Staffing Management Matrix

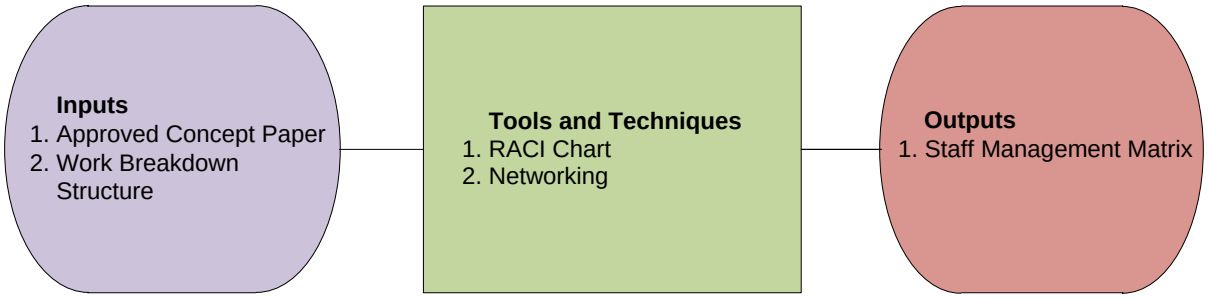
Purpose: To determine the project roles, responsibilities, reporting relationships and to create the Staff Management Matrix.

The Staff Management Matrix will include:

- When the sub-project team members will be acquired
- The criteria for releasing them from the sub-project
- Where the Sub-Project Team members will be located.

Staff planning will also help in determining the Sub-Project Team's current skills and expertise as they relate to the project. This information will be utilized to determine what additional training the Sub-Project Team member's need, and to identify additional skills that will need to be brought in, either as additional or contracted staff.

Figure 50 – Develop Staffing Management Matrix Inputs, Tools and Techniques, and Outputs



13.4.1 Inputs

1. **Approved Sub-Project Concept**
2. **Work Break Down Structure**: Hierarchical depiction of sub-project deliverables, which will help to determine the necessary resources to complete the sub-project.

13.4.2 Tools and Techniques for the Develop Staffing Management Matrix Process

1. **Roles and Responsibility Information (RACI) Chart**: [Sub-Project PM Template Checklist, #9418]. Used to illustrate the connections between work that needs to be done and the Sub-Project Team members that will do the work. The RACI includes the following elements as listed:
    i. Activity
    ii. Role(s) assigned to the activity(ies)
    iii. The following Roles are assigned:
        a. R – Person responsible for implementing the activity
        b. A – Person ultimately accountable for the accuracy and completeness of the activity or decision
        c. C – Person to consult prior to a final decision or action

d. I – Person to inform after a decision or action is taken

2. **Networking**: The practice of developing working relationships with other staff members on the sub-project. A Sub-Project Manager that has developed a good knowledge of the FI$Cal organization environment will be able to identify roles, responsibilities, and reporting relationships for completing the sub-project.

13.4.3 Outputs

1. **Staff Management Matrix**: Documentation to track where people are located, what type of role they will play on the sub-project, the type of staff (state or consultants), when their expertise will be required, and the criteria for releasing the staff from the sub-project. Refer to the [Sub-Project PM Template Checklist, #9418] [**Mandatory: Primary, Enterprise; Optional: Internal]**

13.5 Acquire Project Team

Purpose: Obtain the human resources needed to execute the sub-project. In some cases, the Sub-Project Team members are known in advance. In other cases, resources must be identified and acquired for the sub-project. The Sub-Project Manager will meet with the respective Project Deputy Directors to acquire the named resources for their Sub-Projects. The other purpose of the process is to conduct planning for the Project Kickoff Meeting, which provides an opportunity for the following:

- Introduce the Project sponsor(s) and Sub-Project Manager
- Introduce Key Stakeholders
- Review Project Scope, Definition and Objectives
- Review High-level Timeline and Milestones, Roles, and Budget
- Review Deliverables
- Review Challenges

Figure 51 – Acquire Project Team Inputs, Tools and Techniques, and Outputs

13.5.1 Inputs

1. **Staff Management Matrix**: [Sub-Project PM Template Checklist, #9418]. To acquire the necessary human resources needed to carry out the sub-project.
2. **Procurement and Contract Management Knowledge Area**: To acquire contract staff through acquisition.

13.5.2 Tools and Techniques for the Acquire Project Team Process

1. **Pre-assignment**: The Project Manager will have been assigned some resources by the Deputy Director(s) at the inception of the sub-project.
2. **Recruit Staff Through Negotiation**: The Sub-Project Manager should schedule negotiation meetings with the Deputy Director(s) to acquire additional resources on the sub-project.
3. **Acquire Contract Staff**: When unable to recruit existing FI$Cal internal staff into the sub-project, staff is acquired externally.

13.5.3 Outputs

1. **Project Kickoff Meeting**: The Sub-Project Team members are assembled, oriented and assigned to their roles and responsibilities by the sub-project management. **[Mandatory: Primary, Enterprise, Internal]**
2. **Updated Staff Management Matrix**: Refer to [9418 - Sub-Project PM Template Checklist, #9418]. [**Optional: Primary, Enterprise, Internal]**

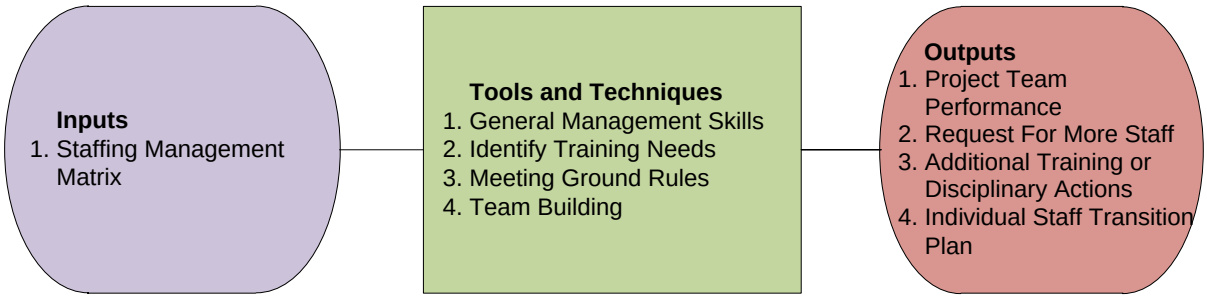
13.6 Develop Project Team

Purpose: To improve the competency and interaction of team members in order to enhance sub-project performance. The objectives include:

- Improving the skills of team members in order to increase their ability to complete sub-project activities.
- Improving trust and cohesiveness among team members in order to raise productivity through teamwork.

Team development efforts have the greatest benefit when conducted early, but should also take place throughout the sub-project.

Figure 52 – Develop Project Team Inputs, Tools and Techniques, and Outputs



13.6.1 Inputs

1. **Staff Management Matrix**: [Sub-Project PM Template Checklist, #9418]. Provides the sub-project staff assignments, listing the people who are on the sub-project. It will also list the times that people are available to participate in the sub-project activities.

13.6.2 Tools and Techniques for the Develop Project Team Process

1. **General Management Skills**: Using empathy, creativity, and group facilitation when working with team members.
2. **Identify Training Needs**: The Sub-Project Manager should identify the skill gaps for the project team members and work with the Deputy Directors to address the skill gaps through further training classes.
3. **Meeting Ground Rules**: The Sub-Project Manager prepares a formal agenda and ground rules for the meeting to share project status, risks, issues, decisions, and other project-related management information.
4. **Team Building**: Listed below are some team building activities designed to help groups develop effective communication and problem solving skills:
    i. **Mine Field**: Objects are scattered in an indoor or outdoor place. In pairs, one person verbally guides his/her partner, a blindfolded person, through the minefield.
    ii. **Survival Scenarios**: "Your plane crashed. . . your group needs to choose the 12 most useful items to survive. . . "
    iii. **Team Building Quotes**: In small groups, set the challenge of creating the most inspirational team building quote in a set amount of time (ten minutes, for example). Each team then reads out their quote, and the teams vote on the best quote. At the end of the activity, hand out some other Team Building Quotes.

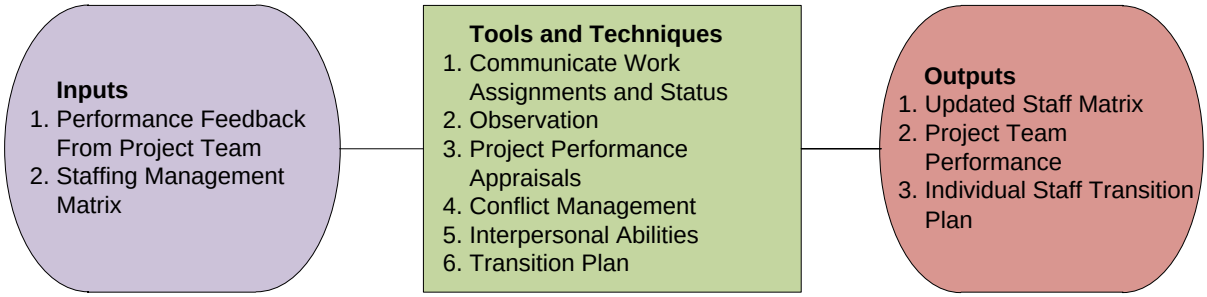
13.6.3 Outputs

1. **Sub-Project Team Performance**: Ongoing evaluation of a team's effectiveness, to determine how much additional development work is needed and in what ways it needs to be modified – Refer to [Sub-Project PM Template Checklist, #9418]. **[Mandatory: Primary, Enterprise; Optional: Internal]**
2. **Request for More Staff**: Based on the team performance, a request may be made by the Sub-Project Manager to receive approval for staffing changes. **[Optional: Primary, Enterprise, Internal]**
3. **Additional Training or Disciplinary Action**: Based on the individual team member performance appraisals, the Sub-Project Manager can recommend additional training or disciplinary action to the Deputy Director. **[Optional: Primary, Enterprise, Internal]**
4. **Individual Staff Transition Plan**: Individual staff transition plan documents staff that need to be transitioned and to whom. Refer to [Transition Plan Template, #9805]. **[Mandatory Primary; Optional Enterprise, Internal]**

13.7 Manage Project Team

Purpose: To track Sub-Project Team performance, provide feedback, resolve issues, and coordinate changes to enhance sub-project performance. The Sub-Project Manager monitors overall performance of the Sub-Project Team. Individual team member performance is also reviewed periodically.

Figure 53 – Manage Project Team Inputs, Tools and Techniques, and Outputs



13.7.1 Inputs

1. **Performance Feedback**: Individual performance appraisal received from each of the team members.
2. **Staff Management Matrix**: [Sub-Project PM Template Checklist, #9418]. Provides the sub-project staff assignments, listing the people who are on the sub-project. It will also list the times when people are available to participate in the sub-project activities.

13.7.2 Tools and Techniques for the Manage Project Team Process

1. **Communicate Work Assignments and Status**: The Sub-Project Manager must review and present the sub-project schedule and the individual work assignments as indicated on the sub-project schedule with each of his/her team members. The Sub-Project Manager works with the team to solicit and secure commitments that the assignments can be completed by the due dates. The Sub-Project Manager may also adjust the due dates for the work assignments after obtaining feedback from the team members.
2. **Observation**: The Sub-Project Manager observes and communicates with stakeholders to determine whether tasks will be completed as planned.
3. **Project Performance Appraisals**: The Sub-Project Manager provides feedback to the team members in order to encourage positive performance, and to reveal questions and concerns. The degree to which this is a structured event depends on variables such as the sub-project's length and complexity, and how much feedback occurs during the normal course of the sub-project.
4. **Conflict Management**: Conflict is managed by allowing differences of opinion to be raised in a safe and respectful manner, thereby minimizing loss of teamwork caused by negative feelings and actions among the team members. Solid project management practices such as communication planning, team building, and role clarification will do a lot to reduce conflict before it arises. Establish ground rules that include a process for addressing conflict among team members.
5. **Interpersonal Abilities**: The Sub-Project Manager should apply leadership skills and influence, and be able to make decisions in a timely manner
6. **Transition Plan**: The individual transition plan template is used to document the activities that need to be transitioned: [Transition Plan Template, #9805].

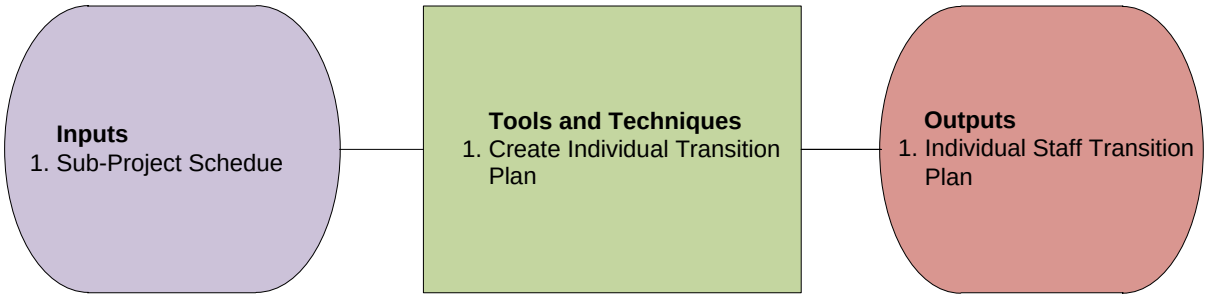
13.7.3 Outputs

1. **Updated Staff Management Matrix**: [Sub-Project PM Template Checklist, #9418]. **[Mandatory: Primary, Enterprise; Optional: Internal]**
2. **Project Team Performance**: Ongoing evaluation of a team's effectiveness to determine how much additional development work is needed, and in what ways the team or the need to be modified. Refer to [Sub-Project PM Template Checklist, #9418]. [**Mandatory: Primary; Optional: Enterprise, Internal]**
3. **Individual Staff Transition Plan**: The individual transition plan document, regarding what activities need to be transitioned and to whom. Refer to [Transition Plan Template, #9805]. **[Mandatory: Primary, Enterprise; Optional: Internal]**

13.8 Demobilize Project Team

Purpose: At the conclusion of the sub-project, the Sub-Project Team members have to be released. At sub-project completion, team members either return to their functional managers or are assigned to a new sub-project. Inform functional managers and other Sub-Project Managers when the sub-project is close to completion. This ensures that the functional manager or other Sub-Project Managers have time to adequately plan for the return of their staff. This process may also be applicable during any phase of the sub-project life cycle, when a Sub-Project Team member makes a choice to leave the sub-project for whatever reason.

Figure 54 – Demobilize Project Team Inputs, Tools and Techniques, and Outputs



13.8.1 Inputs

1. **Sub-Project Schedule**: Used to predict when Sub-Project Team members have completed their work assignments and are ready to roll-off the sub-project.

13.8.2 Tools and Techniques for the Demobilize Project Team Process

1. **Create Individual Transition Plan**: The Sub-Project Manager must work with each resource that is ready to roll-off the sub-project, and identify any knowledge that must be transitioned prior to the exit. The team member being rolled-off must complete a Transition Plan.

13.8.3 Outputs

1. **Individual Staff Transition Plan**: Defines the individual transition plan documents, what needs to be transitioned, and to whom. Refer to [Transition Plan Template, #9805]. **[Mandatory: Primary, Enterprise; Optional: Internal]**

13.9 Generation of the Outputs by Project Life Cycle Phase

Table 23 – Staff Management Outputs Generated by Phase depicts Schedule Management outputs generated by the project life cycle phases:

Table 23 – Staff Management Outputs Generated by Phase

Initiation	Planning	Execution and Monitoring/Control	Project Closeout
Individual Staff Transition Plan	Staff Management Matrix	Project Team Performance	Individual Staff Transition Plan
	Project Kickoff Meeting	Request for more staff	
	Updated Staff Management Matrix	Additional training or disciplinary actions	
	Individual Staff Transition Plan	Individual Staff Transition Plan	
		Updated Staff Management Matrix	