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وزارة الأشغال
Ministry of Works

Kingdom of Bahrain
Ministry of Works

Project Management System –
Guidelines
Construction Projects

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15-Dec-09	0		Georges B. Abrial (PMO)	Initial release
18-Mar-10	1	-1. Origination Phase	Saliha Ismail (PMO) Hammad Khaliq	-Pg#5 Added Origination Phase and Text -Replaced <i>Tender & Award (Consultation)</i> to <i>Consultant Selection</i> -Replaced <i>Construction Implementation</i> to <i>Implementation</i> -Replaced <i>Tender & Award (Procurement Implementation)</i> to <i>Tender & Award</i>

Reviewed by	Role	Date
Terry Gostling, Hammad Khaliq Abdul Khaliq, Ahmad Yasni Yahya	PMO	April, 2010

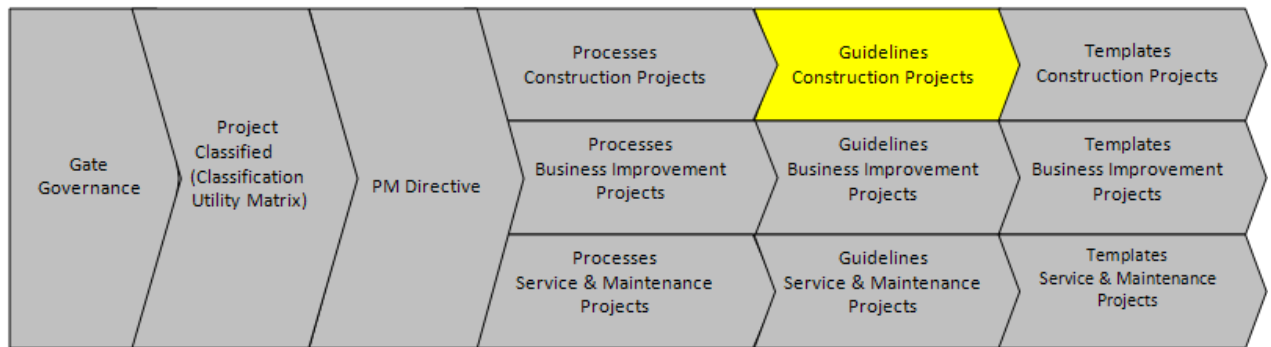
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0. Introduction

This document defines the project management activities required for each phase of the Construction Project Life Cycle as outlined and discussed in documents:

- PMS Generic Life Cycles
- PMS Gate Governance
- PMS Project Classification
- PMS PM Directive
- PMS Methodology - Procedures: Construction.

Each section provides an overview of the project life cycle phase, the associated inputs / outputs and process activities.

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1. Origination Phase

Overview

The Origination Phase formally recognizes the existence of an initiative that may result in the development of a project. The initiative should be linked to the strategic business objectives of the Ministry. A MoW project begins with the identification of a need, problem or opportunity to be addressed by the Ministry, its departments or branches. Included in the Origination phase are the development of a high-level business case; identification of a Sponsor and a Business Developer; identification of key stakeholders; project classification, the application for funding the project; submission for financial or technical to the appropriate authorities. It concludes with a documented decision to proceed to the Initiation phase.

The development of a Business Case should include but not be limited to the following:

- Rationale/background for the project
- Identification of the strategic fit to MoW overall strategy/objectives
- High level assumptions, constraints and risks
- Preliminary budget estimate
- Schedule
- Dependencies
- Master Plan
- Key project stakeholders and project organization (governance) structure
- Project strategy or approach, which determines which phases, will be performed by MoW staff and which will be outsourced.

Inputs

Inputs

- Approved PPM List of Works from Initiative List
- Historical information and supporting documents, etc

Outputs

Outputs

- Business Case
- Approved Project List with Budget figures
- Project Sponsor identified
- Application to MoF for budget

Process Activity

The following table describes the activities and processes to be used by the Project Team to complete the Initiation Phase

Activity	Description
C.1.1 Create idea	MoW Directorate (s) identify initiatives for future development.
C.1.2 Set-up EDMS idea folder (DIM)	EDMS folder is then set-up in respective directorate as a repository for the initiative information
C1.3 Input to PPM (Strategic Alignment)	Directorate (s) to enter strategic information to PPM with assistance of SPS.
C.1.4 Identify Business Case Team	Director (s) forms Business Case Team to develop a Business Case for the initiative.
C. 1.5 Develop Business Case	The Business Case Team will then develop the Business Case, addressing the needs, risks and opportunity that may affect the development.
C.1.6 Potential Project	Director (s) will assess whether the Business Case should be managed using PMS. PMO will assist.
C.1.7 Input to PPM Project Data	Justification to accept a Business Case to the budget application will be addressed using the following criteria: <ul style="list-style-type: none"> ▪ Schedule ▪ Budget ▪ Risks ▪ Reactivation

	<ul style="list-style-type: none"> ▪ Dependencies ▪ Master Plan <p>An approved List of projects with budget figures will then be generated with the assistance of PMO.</p>
C.1.8 Identify Prioritised Project List	An approved project list will then be generated through a PPM Tool where projects are identified complete with budget required allocated for projects.
C.1.9 Apply for Budget	Each prioritised project will then be added to the Budget application. The Director (s) will formally submit the required budget to FRD. FRD will coordinate all budgets and make the formal application to MoF.
C.1.10 Identify Sponsor and Project Manager	Project Sponsor and Project Manager will be identified by the respective Director according to the nature of the project i.e. Business Improvements, Construction or Service & Maintenance Projects.
C.1.11 Prepare Activation Form	Respective Directorates will then prepare the Activation Form according to the need for the project to be initiated.
C.1.12 Activate Project	Activation Form is submitted to PMO which will be given a Project ID and a project folder will be created in EDMS (Projects).
C.1.13 EDMS Project (Copy DIM to Origination Folder)	The respective folder that contains the historical information along with the approved Business Case will be transferred to the Projects Section of the EDMS.

2. Initiation Phase

Overview

The Initiation Process formally commits the performing organization to activate the project. The Initiation Phase defines the project objectives and produces the Project Charter, Preliminary Scope Statement and an updated Business Case.

The inputs to the initiation process include elements of general management processes such as the initial product description, the respective business case, the performing

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organization's strategic plan, historical information regarding previous projects, previous project plans, actual results and preliminary constraints and assumptions.

This process ends when the Gate Review Committee approves the project charter, preliminary scope, release of resources (project team) and project funding to begin the next phase - Tender & Award (Consulting) or Planning as required.

Inputs

- Project Sponsor Appointed
- Approved Project Requirements/initial Business Case
- Other Supporting Documents and historical information etc.
- Overall Project Funding Identified

Outputs:

- Project Steering Committee Appointed
- Project Manager Assigned
- An updated Business Case
- Financial & Technical Approvals , as required
- Confirm Project Classification
- Approved Project Charter
- Approved Preliminary Scope Statement
- Approved Funding for the next Phase

Process Activities

The following table describes the activities and processes to be used by the Project Team to complete the Initiation Phase

Activity	Description
C.1.1 Activate the Project and Assign Project Sponsor	The MoW Directorate(s) initiate / activate the project. MoW Executive Management is responsible for selecting a Project Sponsor who has the ultimate accountability and responsibility for the project.
C.1.2 Appointing Project Steering Committee	The Project Sponsor is responsible for appointing the Project Steering Committee.
C.1.3 Assigning a Project Manager	The Project Sponsor is responsible for identifying potential candidates for the Project Manager role and making the final selection.

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	<p>The Project Sponsor maps the project expectations and requirements with the skills, experience and behavioural characteristics of the possible candidates. The Project Sponsor then interviews candidates and makes a selection decision.</p> <p>The decision should be based on a combination of the technical requirements of the project's expected outcome and the project and performing organization's work environment. If technical expertise will form part of the project support team, then the Project Manager can assume a more managerial role. If, however, the project is smaller in scope, the project manager may be called upon to provide technical, in addition to management skills.</p> <p>In either case, the selected candidate should possess the personal and behavioural characteristics that best meet the performing organization's environment.</p> <p>It is beneficial to any project to assign the Project Manager as soon as possible during this process in order to capitalize on synergy and align expectations between the Project Sponsor and the Project Manager</p>
<p>C.1.4 Updating Business Case</p>	<p>The Project Manager is responsible for updating the Business Case. The Project Manager reviews it with the Project Sponsor and a decision is made to jointly take the Business Case to the Gate Review Committee for final approval. The Business Case template provides detailed instructions for completion.</p>
<p>C.1.5 Confirm Project Classification</p>	<p>The Project Manager is responsible for confirming the project classification as described in PMS Project Classification and reviewing the results with the Project Sponsor.</p>
<p>C.1.6 Developing Project Charter</p>	<p>The Project Manager is responsible for developing the Project Charter. The Project Charter is a document that formally kicks off the project and includes the business need (objective) for the project and description of the project product.</p> <p>The Project Manager and Project Sponsor should work together to identify the Project Stakeholders and the Project Team for the project, develop the project objectives, negotiate variances around the</p>

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	<p>deliverables, and form an agreement as to project expectations.</p> <p>Specific steps in this process include:</p> <ol style="list-style-type: none"> 1. Review all available documentation and historical information that exist around the project. 2. Consult with the Project Sponsor to analyze the project concept, expectations and constraints. 3. Identify and consult with all stakeholders for enhanced understanding of the project concept, expectations and constraints. 4. Document the business need for the project as defined by the performing organization (Project Sponsor and other stakeholders). 5. Document, with as detailed description as possible, the product or service resulting from the project. <p>Compare the expected results with expectations of the stakeholders.</p> <p>Perform a gap analysis of the expectations and products. If no gap exists, finalize a draft project charter to be submitted to the Project Sponsor for review. If gaps exist, negotiate changes with the Project Sponsor until such time as alignment is achieved, revising the Project Charter, as required.</p>
<p>C.1.7 Developing Preliminary Scope Statement</p>	<p>The Project Manager is responsible for developing the Preliminary Scope Statement which should be developed only to the extent that it facilitates the proper completion of the Project Charter. The Project Charter is a very formal and almost 'legal' document aligning the project to the organizations strategic objectives and commits resources to it; the Scope Statement is a 'living document' that will be further refined and elaborated in the Planning phase when all Project Team members can provide input.</p> <p>Specific steps in this process include:</p> <ol style="list-style-type: none"> 1. Review the project expectations as documented in the Project Charter. 2. Consult with the Project Sponsor and other key stakeholders to analyze the project concept, expectations, risks, assumptions and constraints. 3. Document the major deliverables for the project

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	<p>as defined by the performing organization (Project Sponsor and other stakeholders), clearly specifying exclusions ('what's out of scope') as well as the inclusions ('what's in scope').</p> <ol style="list-style-type: none"> 4. Include the risks, assumptions and constraints from the Project Charter and elaborate on them as appropriate. 5. Determine the completion criteria for the project. 6. Determine the success criteria for the project. 7. Identify and negotiate as required the involvement of the Project Team for the next phase. <p>The Preliminary Scope Statement is completed by conducting workshops / interviews with the Project Sponsor and Client Representatives to determine, refine and confirm the following:</p> <ul style="list-style-type: none"> ▪ Business / Project Objectives ▪ High Level Requirements ▪ Critical Success Factors ▪ Constraints / Assumptions ▪ Issues ▪ Risks and ▪ Related / Dependent Projects
<p>Obtaining Sponsor Approval of the Project Charter, Preliminary Scope Statement and Business Case to take to Gate Review Meeting</p>	<p>The Project Sponsor reviews and approves the Project Charter, Preliminary Scope Statement and Business Case to be taken to the Gate Review Committee for final approval.</p> <p>The procedure to obtain final approval is as follows:</p> <ol style="list-style-type: none"> 1. The Project Manager and Project Sponsor establish variance thresholds concerning the documented business need(s), resultant products and services and expected outcomes of the project. 2. The Project Sponsor approves, approves conditionally or rejects the Project Charter listing detailed reasons and follow-up steps. 3. The Project Manager reworks the Project Charter (and/or Preliminary Scope Statement) as

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	necessary and initiates another iteration of the approval process until the Project Charter is approved by the Project Sponsor to be taken jointly to the Gate Review Committee.
C.1.8 Appointing Project Team	The Project Manager in consultation with the Project Sponsor is responsible for appointing the Project Team. The Project Team is responsible for working with the Project Manager to execute the project and is required to remain together for the duration of the project.
C.1.11 Issue Service Consultation (as required)	The Project Manager is responsible to ensure the service consultation is issued as required in accordance with MoW procedures.
C.1.9 & C.1.10 Obtain Financial & Technical Approvals (as required)	The Project Manager is responsible for obtaining the appropriate Financial and Technical approvals as required by MoW.
Gate Review	A Gate Review is conducted upon completion of the above activities. Reference PMS Gate Governance for process and information to be presented.

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3. Planning Phase

Overview

The Planning Phase produces a comprehensive Project Execution Plan (PEP) which identifies the tasks necessary to produce required products / services. It provides plans for managing all aspects of the project including scope, time, cost, quality, resources, communication, risk and procurement. The planning phase acknowledges that requirements and conditions may change as the project proceeds and includes development of project change control procedures to manage the changes as well as development of issue management procedures to manage the issues.

This phase ends when the Gate Review Committee approves the Project Execution Plan and project funding to begin the next phase - Tender & Award (Consulting).

The Project Manager and the Project Team are responsible for finalizing the Project Scope Statement and developing the Project Execution Plan.

While there is a logical sequence for completing various components of the PEP, it must be understood that the entire process is iterative. The completion of the PEP starts with finalizing the scope, dealing with all the resourcing and time based variables, then cost and finally the monitoring processes. As more information becomes available, it may be necessary to revisit and update the scope, schedule etc.

Responsibility for various aspects of the project plan content development is assigned at the kick-off, however, the Project Manager is ultimately responsible for developing the document and identifying and involving all project stakeholders requiring input to the process.

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Inputs

- Project Steering Committee Appointed
- Project Manager Assigned
- Approved Business Case
- Financial & Technical Approvals as required
- Project Classified
- Approved Project Charter
- Approved Preliminary Scope Statement

Outputs

- Approved Project Budgeting and Funding
- Defined Project Organization
- Agreed upon Roles & Responsibilities
- Confirmed Project Staffing
- Confirmed Project Classification
- Completed Technical Surveys
- Completed Utilities Planning
- Defined Project Audit Plan
- Approved Project Execution Plan
- Approved Funding for the next Phase

Process Activities

The following table describes the activities and to be used by the Project Team to complete the Planning Phase.

Activity	Description
Conduct Project Kick-off Meeting	A kick-off meeting is held with the Project Team to review the Project Charter, Preliminary Scope Statement and other related documents (i.e. the Business Case) to develop a better understanding of the project and its deliverables. Key planning deliverables will be assigned as appropriate.
C.2.1 Finalize Project Scope Statement	The Project Manager with the Project Team is responsible to finalize the Project Scope Statement with as detailed a description as possible of the product(s) and/or service(s) to be delivered and all the steps required. The Project Manager with the Project Team is

Activity	Description
	responsible for developing the high-level Work Breakdown Structure (WBS) to be attached with the final Project Scope Statement.
<p>C.2.2 Confirm the Project Classification</p>	<p>The Project Manager is responsible for reviewing and confirming the project classification as determined in Phase 1 - Initiation, and deciding the degree of rigour to be applied to the project as specified in the applicable MoW policies.</p>
<p>C.2.3 and C.2.4 Determine Resource Requirements</p>	<p>The Project Manager with the Project Team is responsible for breaking the high-level Work Breakdown Structure (WBS) into small and more manageable sub activities.</p> <p>This step includes identifying the skill sets required to produce detail task deliverables, identifying the resources who own those skills, assigning the resources to the tasks, and estimating the individual resource effort and the task duration required to produce the task deliverable. It requires the Project Manager and Project Team to clarify roles and responsibilities for each team member, and other stakeholders as required.</p> <p>In addition to the WBS, the Organizational Breakdown Structure (OBS) is developed. The OBS depicts the project organization relating the work packages of the WBS to the performing organizational units.</p>
<p>C.2.5 Develop Procurement Management Plan</p>	<p>The Project Manager is responsible for documenting the Procurement Management Plan which shall comply with the Tender Board/MoW requirements, as applicable.</p> <p>The Procurement Management Plan defines in specific terms what items will be procured and under what conditions and the appropriate documentation required.</p>
<p>C.2.6 Develop Project Schedule</p>	<p>The Project Schedule is developed by associating resources and time with the activities.</p> <p>Quality Assurance reviews are incorporated into the Project Schedule. Associated risks are documented.</p> <p>Project Scheduling and Resource Planning are closely integrated.</p>

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Activity	Description
	Appropriate time should be included for all administrative-related activities, meetings, etc.
<p>C.2.7 Develop Monitor & Control Plan</p>	<p>The Project Manager is responsible for defining the activities the project team will take to monitor and control the performance of the project.</p> <p>These activities include but are not limited to the following:</p> <ul style="list-style-type: none"> ▪ Change Control Process ▪ Issue Management ▪ Status Reports <p>The purpose of the Change Control Process is to recognize, manage, control and track project changes throughout the life of the project. This includes changes that may impact budget, schedule, scope or quality.</p> <p>Issue Management defines the process to be used on the project to manage and resolve project issues.</p>
<p>C.2.8 Establish Lessons Learnt Process</p>	<p>The Project Manager is responsible for documenting lessons learnt. A process should be established to identify, collect and document lessons learnt throughout the phases of the project.</p> <p>It is recommended that review sessions be held at the completion of each phase of the project to gather and document lessons learnt.</p>
<p>C.2.9 Prepare Human Resource Management Plan</p>	<p>The Project Manager is responsible for documenting the Human Resource Management Plan. The Human Resource Management Plan identifies the resources and the respective skills required for the project team.</p>
<p>C.2.10 Prepare Risk Management Plan</p>	<p>The Project Manager is responsible for documenting the Risk Management Plan.</p> <p>The Risk Management Plan identifies how to approach and plan the risk management activities for the project. It involves the identification, analysis, quantification, documentation of all risks and the subsequent development of risk response plans and the Risk Management Plan.</p>

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Activity	Description
	<p>It includes identifying and documenting risks which might affect the project; assessing each risk priority and its likelihood of occurrence and potential impact to the project; and developing options and determining actions to reduce / eliminate the risks to the project.</p> <p>The Risk Management Plan identifies how the risks will be monitored throughout the project and how the contingency plans will be invoked if required.</p> <p>This is done in collaboration from the Project Team, Project Sponsor and other key stakeholders.</p>
<p>C.2.11 Determine O&M Manual Requirements</p>	<p>The Project Manager in collaboration with the contractor is responsible for determining the O&M Manual Requirements as required by the MoW Directorates.</p>
<p>C.2.12 Develop Project Cost Estimate and Cost Management Plan</p>	<p>The Project Manager is responsible for developing the project cost estimate and documenting the Cost Management Plan.</p> <p>A Cost Estimate of the work effort needed to complete the project activities must be developed and documented.</p> <p>Cost Estimates are developed based on the Project Schedule and allocated among individual work packages.</p> <p>The Business Case must be reviewed for alignment with the Cost Estimate. Cost assumptions must be documented.</p>
<p>C.2 .13 Develop Communication Management Plan</p>	<p>The Project Manager is responsible for documenting the Communication Management Plan. The Communication Management Plan identifies the information and communication needs of the stakeholders.</p> <p>The information includes the following:</p> <ul style="list-style-type: none"> ▪ Who needs what ▪ When will they need it ▪ How will it be given and ▪ By whom

Activity	Description
	The Communication Management Plan includes project performance reporting requirements such as time, team and status reports.
C.2 .14 Develop Quality Management Plan	The Project Manager is responsible for documenting the Quality Management Plan. The Quality Management Plan includes quality planning, quality control and quality assurance for the product as well as the project. The purpose of the Quality Management Plan is to provide clear direction about the activities for quality planning.
C.2.17 Conduct Technical Surveys	The Consultant / Contractor Representative (CCR) is responsible for ensuring the Technical Surveys are completed as required by the MoW Directorates.
C.2.15 Define Project Audit Plan	The Project Manager is responsible for defining the Project Audit Plan, which is then approved by the Sponsor in accordance with the statutory requirements.
C.2.18 Conduct Utilities Planning	The Project Manager is responsible for ensuring the Utilities Planning is completed in accordance with MoW procedures.
C.2.19 Select Site /Route from Alternatives	The Project Manager is responsible for ensuring the site selection / route from alternatives provided in accordance with MoW procedures.
C.2.16 Develop Project Execution Plan	The final planning step is to finalize all the various monitoring plans and processes (for scope, cost, schedule, communications, etc.) and then pull everything together into a formal "Project Execution Plan" that can be approved and published. The sponsor reviews and approves the Project Execution Plan in preparation for the Gate Review.
Gate Review	A Gate Review is conducted upon completion of the above activities. Reference PMS Gate Governance for process and information to be presented.

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4. Consultant Selection Phase

Overview

The Consultant Selection Phase performs the processes related to the execution of the MoW tendering procedures.

The tendering of a MoW contract is clearly articulated in the standard MoW Tendering procedure, which is governed by the Tender Law and is driven by the Tender Board policy, to which all government agencies must comply.

One of the key interim outputs during this phase is the Request for Proposal (RFP). This is a critical document in that it captures the technical, commercial, and legal aspects of the project. This document would form the basis for the final agreement between the Ministry and the Vendor, which is the main output of this phase.

All projects must meet the requirements of this procedure in order for the tender to proceed. The project requires the approval of the Tender Board for the tender process to be executed and the tender awarded.

This phase ends when the Gate Review Committee approves the awarding of the contract and project funding to begin the next phase - Design & Analysis.

NOTE: For some projects, this phase may occur after the Planning Phase, i.e. completion of the Project Execution Plan is necessary before the appointment of an external consultant; or in cases where the project will be managed in-house, this phase may not be required at all.

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Inputs

- Approved Project Budgeting and Funding
- Defined Project Organization
- Agreed upon Roles & Responsibilities
- Confirmed Project Staffing
- Confirmed Project Classification
- Completed Technical Surveys
- Completed Utilities Planning
- Defined Project Audit Plan
- Approved Project Execution Plan

Outputs

- Contract awarded to consultant
- Approved Funding for the next Phase

Process Activities

The following table describes the activities and processes to be used by the Project Team to complete the Tender & Award (Consulting) Phase.

Activity	Description
Execute MOW Tender Procedures	The Project Manager is responsible for executing the MoW Tender Procedures and ensuring the award of the contract to the consultant.
Gate Review	A Gate Review is conducted upon completion of the above activities. Reference PMS Gate Governance for process and information to be presented.

5. Analysis & Design Phase

Overview The Analysis & Design Phase utilizes the MoW processes to ensure a cost effective design which satisfies all requirements. In this phase alternate solution strategies are identified and evaluated. An analysis of the strategies is completed to select the best solution approach based on explicit criteria and a recommendation made.

This phase ends when the Gate Review Committee approves design specifications and project funding to begin the next phase - Tender & Award (Procurement / Implementation).

Inputs

- Contract awarded to Consultant

Or

- Outputs from Planning Phase

Outputs

- Bills of Quantities Produced
- Permits / Approvals Received
- Wayleave Obtained
- Approved Design Drawings
- Approved Performance & Specifications
- Approved Funding for the next Phase

Process Activities The following table describes the activities and to be used by the Project Team to complete the Design & Analysis Phase.

Activity	Description
Execute MoW Design & Analysis processes	The Project Manager is responsible for executing the MoW Design & Analysis Processes and ensuring the approval of the design specifications is obtained.
Gate Review	A Gate Review is conducted upon completion of the above activities. Reference PMS Gate Governance for process and information to be presented.

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6. Tender & Award Phase

Overview The Tender & Award Phase performs the processes related to the execution of the MoW tendering procedures.

The tendering of a MoW contract is clearly articulated in the standard MoW Tendering procedure, which is governed by the Tender Law and is driven by the Tender Board policy, to which all government agencies must comply.

All projects must meet the requirements of this procedure in order for the tender to proceed. The project requires the approval of the Tender Board for the tender process to be executed and the tender awarded.

This phase ends when the Gate Review Committee approves the awarding of the contract and project funding to begin the next phase - Construction / Implementation.

Inputs

- Approved Bills of Quantities
- Permits / Approvals Received
- Wayleave Obtained
- Approved Design Drawings
- Approved Performance & Specifications

Outputs

- Contract awarded to contractor
- Implementation Plan Approved
- Approved Funding for the next Phase

Process Activities

The following table describes the activities and processes to be used by the Project Team to complete the Tender & Award (Procurement / Implementation) Phase.

Activity	Description
Execute MoW Tender Procedures	The Project Manager is responsible for executing the MoW Tender Procedures and ensuring the award of the contract to the contractor.
Gate Review	A Gate Review is conducted upon completion of the above activities. Reference PMS Gate Governance for process and information to be presented.

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7. Implementation Phase

Overview

The Implementation Phase carries out the Project Execution Plan. The activities, outlined in the plan for definition, design, development and deployment of the required products/services, as well as to manage the project and provide required project outputs, are performed.

Project status reports are produced and distributed on a regular basis to all stakeholders, including team members, Sponsors, and Project Steering Committee.

This phase ensures the project is progressing as planned. It applies quality assurance techniques to ensure product deliverables meet the specifications outlined in the quality management plan and introduces corrective action to eliminate unsatisfactory performance.

This phase provides effective change management for all aspects of the project including overall change control, scope change control, schedule control, cost control, quality control, and risk response control.

This phase ends when the Gate Review Committee approves the completion of the deliverables and project funding to begin the next phase - Close-out.

Inputs

- Contract awarded to contractor
- Implementation Plan Approved

Outputs

- Completed Cost Statement
- Completed O & M Manual
- Completed As-built Drawings
- Training & Coaching Conducted
- Completed Inspection, Testing & Commissioning
- User Acceptance Certificate Issued
- Completed Project Deliverables / Work Order
- Approved Funding for the next Phase

**Process
Activities**

The following table describes the activities and processes to be used by the Project Team to complete the Construction / Implementation Phase.

Activity	Description
<p>C.6.1 & C.6.2 Track Project Schedule and Project Cost</p>	<p>The Project Manager is responsible for tracking and communicating project performance.</p> <p>The steps taken by the Project Manager and the Project Team are the following:</p> <ol style="list-style-type: none"> 1. Collect the project "actuals" (actual schedule start dates, completion dates, actual costs incurred, etc.). 2. Assess schedule and cost variances against the baseline plan. 3. Highlight unacceptable variances to the plan. Recommend and take corrective action to bring the project back in line with the plan. It may also require the negotiation of objectives with the Project Sponsor and stakeholders if actual progress varies significantly from the plan. <p>It also requires:</p> <ul style="list-style-type: none"> ▪ The Project Manager to communicate status to the stakeholders according to the Communication Management Plan. ▪ It also requires revisions to and continued implementation of the change control process established during the Planning Phase. <p>These processes end when the client accepts and formally signs-off the deliverables.</p>
<p>C.6.3 Review method of statements for doing work</p>	<p>The Project Manager is responsible to ensure a review of method statements for doing work is completed in accordance with MoW procedures.</p>
<p>C.6.4 Manage Contract Administration</p>	<p>The Project Manager is responsible for the contract administration management in accordance with MoW procedures. The Project Manager is responsible for tracking, reviewing and analyzing the performance of contractors on a project.</p>
<p>C.6.5</p>	<p>The Project Manager is responsible to ensure</p>

Manage Organizational Change	Organizational Changes are managed in accordance with MoW procedures.
C.6.6. Quality Assurance & Control Procedures	The Project Manager is responsible to ensure Quality Assurance & Control Procedures are managed in accordance with MoW procedures.
C.6.7 Manage Change Control	<p>The Project Manager is responsible for ensuring changes to the project are managed, controlled and tracked.</p> <p>The following are the activities involved the Change Control Process:</p> <ol style="list-style-type: none"> 1. Identify a change. 2. Log and screen the change request. 3. Analyze potential impacts to the project. 4. Obtain approval for the recommendation. 5. If approval is deferred or denied, document reason for deferral or denial. 6. Modify the project plan to implement the approved recommendation. 7. Monitor progress until change is completed.
C.6.7 Monitor & Control Risks	As identified in the Risk Management Plan, the Project Manager is responsible for identifying and evaluating new risks and re-assessing identified risks based on current data and information. Monitoring, reviewing, assessing and updating project risks and associated contingency measures are ongoing throughout the project life cycle.
C.6.7 Monitor & Control Issues	<p>The Project Manager ensures all issues encountered during the course of the project are properly identified and logged. Each issue is monitored through to resolution. This includes ensuring each issue is assigned an owner and an expected resolution date is established.</p> <p>The Project Manager ensures the Issue Owner has access to the resources he or she needs to bring it to resolution. The Project Manager is responsible for tracking the progress of the issue until closure.</p> <p>Examples of issues include:</p> <ul style="list-style-type: none"> ▪ Changing project objectives or Stakeholder

	<p>concerns</p> <ul style="list-style-type: none"> ▪ Technical problems (inc. testing failures) ▪ Resourcing shortfalls ▪ Risks that have occurred, etc.
C.6.8 Conduct Training & Coaching	The Consultant / Contractor Representative (CCR) is responsible to ensure the training and coaching is completed in accordance with MoW procedures.
C.6.9 Conduct Interim Inspection & Testing	The Project Manager is responsible to ensure the interim inspection and testing is conducted and completed in accordance with MoW procedures.
C.6.10 Conduct Final Testing & Commissioning	The Project Manager is responsible to ensure the final testing and commissioning is conducted and completed in accordance with MoW procedures.
C.6.11 Transition to O&M	The Project Manager is responsible to ensure the transition to O&M is completed in accordance with MoW procedures.
C.6.14 Coordinate with Utilities	The Consultant / Contractor Representative (CCR) is responsible to coordinate with Utilities in accordance with MoW procedures.
C.6.13 Produce / Update O&M Manuals, As Built Drawings & Technical Information	The Consultant / Contractor Representative (CCR) is responsible to produce / update the O&M Manuals, As Built Drawings & Technical Information in accordance with MoW procedures.
C.6.16 Process Interim Payments	The CED / FRD are responsible for processing the Interim Payments in accordance with MoW procedures.
C.6.15 Evaluate Work Executed	The CED / FRD are responsible for evaluating the Work Executed in accordance with MOW procedures
C.6.12 Issue Practical Completion Certificate & Declaration	<p>The Project Manager is responsible to ensure the Practical Completion Certificate and declaration is issued in accordance with MoW procedures.</p> <p>Issuance of Practical Completion Certificate also triggers the Defect Liability Period after the Gate Review.</p>
Gate Review	A Gate Review is conducted upon completion of the above activities. Reference PMS Gate Governance for

	process and information to be presented.
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8. Close-out Phase

Overview The Close-out Phase documents the final outcomes of the project both in terms of product delivery and project management delivery. Products and/or services are delivered, project actual results are reported, project contracts are closed and project lessons learnt are documented.

- Inputs**
- Completed Cost Statement
 - Completed O & M Manual
 - Completed As-built Drawings
 - Training & Coaching Conducted
 - Completed Inspection, Testing & Commissioning
 - User Acceptance Certificate Issued
 - Completed Project Deliverables / Work Order
 - Completed and Accepted Project Deliverables

- Outputs**
- Project Completion Report Issued
 - Final Completion Certificate Issued
 - Contract Close-out
 - Sponsor and Client Sign-off
 - Lessons Learnt Documented
 - Warranty Administration Role assigned
 - Project Documentation Archived
 - Project Deliverable(s) Transferred to Client

Process Activities The following table describes the activities and processes to be used by the Project Team to complete the Close- out Phase.

Activity	Description
C.7.1 Finalize Training & Coaching	The Project Manager is responsible to ensure training and coaching activities are finalized and completed in accordance with MoW procedures
C.7.2 Complete Snags & Outstanding Items List	The Project Manager is responsible to ensure the snags and outstanding items list is completed and managed in accordance with MoW procedures.

<p>C.7.3 Conduct Joint Inspection</p>	<p>The Project Manager is responsible to ensure the Joint Inspection is conducted in accordance with MoW procedures.</p>
<p>C.7.4 Conduct & Document Lessons Learnt</p>	<p>The Project Manager is responsible for documenting lessons learnt.</p> <p>A process should be established to identify, collect and document lessons learnt throughout the phases of the project.</p> <p>It is recommended that review sessions be held at the completion of each phase of the project to gather and document lessons learnt.</p> <p>At the end of the project, a session should be held to review all the lessons captured throughout the project, identify any additional lessons learnt and create a final document which captures and provides an analysis of all the lessons learnt with recommendations.</p> <p>Lessons learnt should be shared with the project team and with the MoW Directorates for use by future projects.</p>
<p>C.7.10 Handover O&M Manuals, AS Built Drawings, and Technical Information</p>	<p>The Consultant / Contractor Representative (CCR) is responsible to handover O&M Manuals, AS Built Drawings, and Technical Information in accordance with MoW procedures.</p>
<p>C.7.12 Issue Final Certificate</p>	<p>The Project Manager is responsible to ensure the Final Certificate is issued in accordance with MoW procedures.</p>
<p>C.7.13 Settle Contractor Claims</p>	<p>The Project Manager is responsible to ensure the Settlement of Contractor Claims in accordance with MoW procedures.</p>
<p>C.7.5 Prepare Project Completion Report</p>	<p>The Project Manager is responsible to ensure the project evaluation report is completed.</p> <p>The Project Manager, in conjunction with the Project Team, performs an evaluation review of the project addressing, but not limited, to the following questions:</p> <ul style="list-style-type: none"> ▪ Were the goals and objectives of the project

	<p>clear and understood by all relevant participants?</p> <ul style="list-style-type: none"> ▪ Was detailed project documentation such as project charter and project plan developed? ▪ Were the Project Stakeholders fully and regularly informed of project status, progress changes, delays, setbacks, achievements or successes? ▪ What changes or procedures can be recommended for future projects? ▪ How well do the project results relate to the original plan (including scope, schedule, and cost)? What were the major deviations from the original plan?
C.7.14 Prepare Final Account document	The Project Manager is responsible to ensure the Final Account document is completed in accordance with MoW procedures.
C.7.16 Update Project Financials	CED / FRD is responsible for updating the project financials in accordance with MoW procedures.
C.7.15 Close-out Contract	The Project Manager is responsible for the contract close-out in accordance with MoW procedures.
C.7.6 Assign Warranty Administration Role	The Project Manager is responsible for ensuring the Warranty Administration role is assigned.
C.7.7 Archive Project Documentation	The Project Manager is responsible to archive the project documentation in a designated location. The documentation must be accessible to appropriate personnel, not only for any post-project audits, but also for future planning purposes.
C.7.8 Release Resources	The Project Sponsor is responsible for releasing project resources in accordance with MoW procedures.
C.7.9 Complete Project Close-out Checklist	The Project Manager is responsible for completing the project close-out checklist.
Close Project & Transfer to Client	The Project Manager is responsible to ensure the project is closed out and transferred to the client in accordance with MoW procedures.