

هيئة المشاريع والمناقصات
والمحتوى المحلي
Projects, Tenders and Local Content Authority

Project Management Manual

Projects, Tenders and Local
Content Authority

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ISSUE HISTORY

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I. Abbreviation & Defintions

AD	Award Decision
CAPEX	Capital Expenditure
CPM	Critical Path Method
CWBS	Cost Work Breakdown Structure
DG	Decision Gate
DRB	Decision Review Board
EDMS	Electronic Document Management System
EPC	Engineering, Procurement & Construction
EPCM	Engineering, Procurement & Construction Management
GIS	Geographic Information Systems
(PTLC)	Projects, Tenders and Local Content Authority
HSE	Health, Safety and Environment
HSSE	Health, Safety, Security and Environment
NLCO	National Local Content Office
ITB	Invitation To Bid
KPI	Key performance indicators

LCC	Lowest Lifecycle Cost
MOE	Ministry of Economic
MOF	Ministry of Finance
NCR	Non-Conformance Report
OMR	Omani Rial
PEP	Project Execution Plan
PFO	Project Follow-up Office
PIN	Project Initiation Note
PM	Project Manager
PMM	Project Management Manual
PMOC	Project Management of Change
PMS	Project Management System
PQP	Project Quality Plan
PTW	Permit to work
QA	Quality Assurance
QC	Quality Control

QMS	Quality Management System
RACI	Responsible, Accountable, Consulted, Informed
SAP	Systems Applications and Products in Data Processing
SGR	Stage Gate Review
SWOT	Strengths, Weaknesses, Opportunities, and Threats
VE	Value Engineering
VOWD	Value Of Work Done
WBS	Work Breakdown Structure

Government Entity : define as Government organization, which is responsible for the delivery of government, funded infrastructure construction projects.

Government projects: means all government projects and requests for projects from civil service ministries and other government agencies.

Contractor: is an entity to carry out project execution as agreed Scope of Work under Government Entity/ Consultant supervision.

Shall : denotes a requirement that is mandatory.

Should : means something that is recommended but not mandatory.

2. Introduction

The Project Management Manual (PMM) describes the high-level framework intended to be an instruction manual on managing projects by a Government Entity in the Sultanate of Oman through project life cycle. Project Management Manual includes processes, procedures and tools, which are essential to all government projects, and provides guidelines and rules on projects management.

The PMM is based on a stage-gated process (details in section 4) which enables adequate preparation and planning before moving to the next stage, managing risks with time and inclusion of appropriate and specific assurance for each stage. The process also provides clear governance structure for the project with clear roles & responsibilities.

The project lifecycle splits the Government project life into 7 phases as shown in below Figure 1.

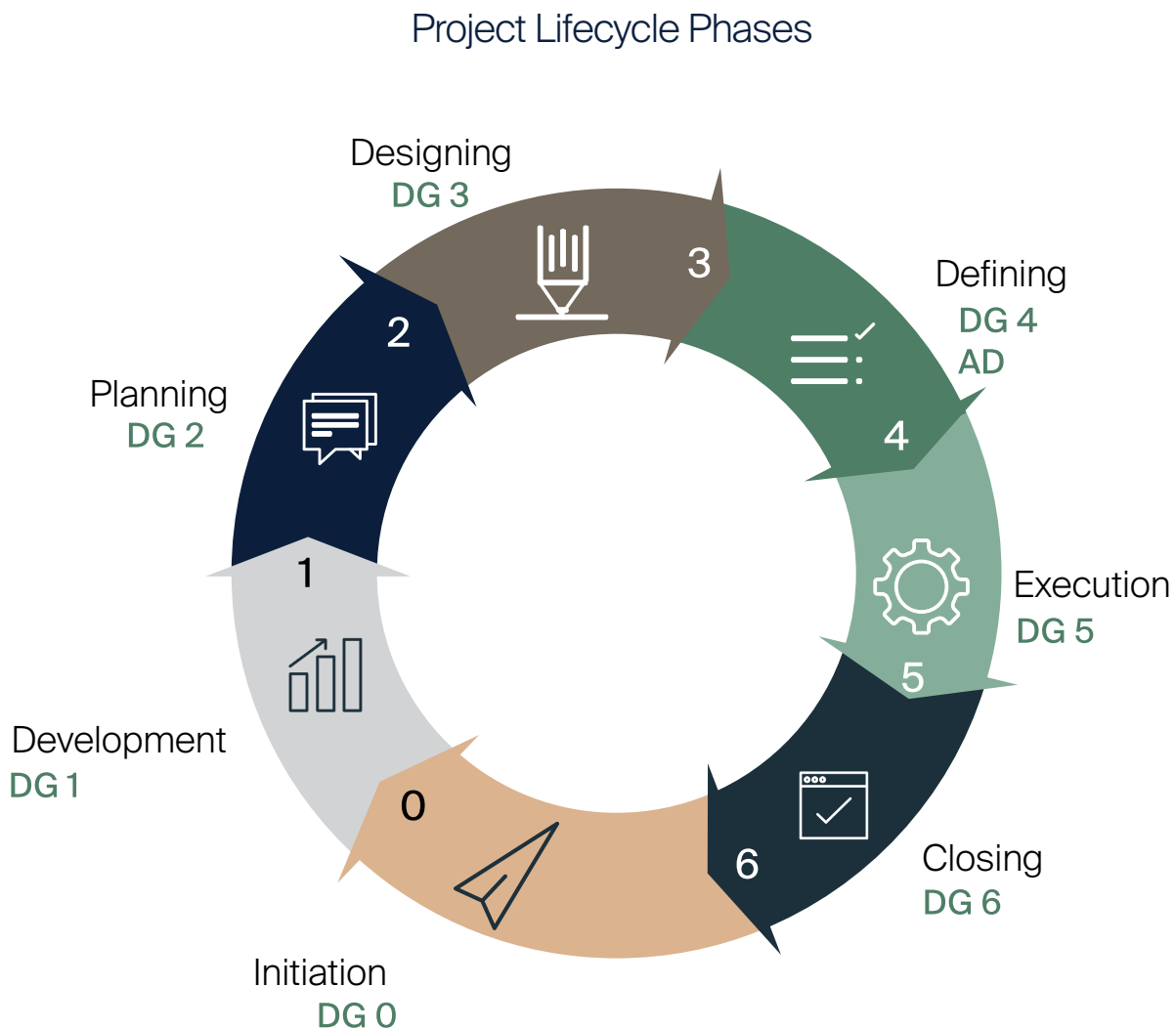


Figure 1 Project Lifecycle Phases

2.1 Purpose

The purpose of this document is to:

- Provide common and standardized guidance and rules for managing Government Entities projects throughout the project lifecycle.
- Enhance Government projects delivery performance.
- Enhance the awareness regarding importance of project management office in managing projects.
- Enhance integration between relevant Governments Entities.
- Define the deliverables required at each project stage gate.

2.2 PMM Application

The PMM processes and guidelines are mandatory requirements to all Government projects with approved budget equal or above OMR 3 million and to be used as a recommended guideline for projects below OMR 3 million. The requirements and activities should be scaled to match the size and complexity of the Project. The decision to deviate from this basic rule can only be taken by the Project Follow-up Office (PFO).

For projects within an approved programmes budget by cabinet of Ministers (Digital transformations projects, governorates developments projects) shall follow Phase 0 and phase1 internally within concerned Government Entity and other phases as per PMM processes.

2.3 Target Audience

The target audience for this procedure is all staff involved in the development and execution of capital projects and business opportunities within Government Entity. Key users will be:

- Project Sponsor
- Project Manager/Lead
- Stage Gate Review Committee
- Decision Review Board
- Ministry of Economy
- Ministry of Finance
- Government Entity
- Tender Board
- Projects, Tenders and Local Content Authority (PTLC)
 - Tendering Unit
 - Project Follow-up Office (PFO)
 - National Local Content Office

2.4 Project Value Maximization

The key words in the maximization of value of a Project shall be in early lifecycle phases of the project before execution phase. Failure to provide proper attention to the quality in early project lifecycle phases will lead to failure of the project to meet its objectives.

It is more cost-effective to make adjustments to the project early in its lifecycle and capture all lessons learned from previous projects, as it becomes more difficult and costly to make such adjustments in the later phases of the lifecycle as shown in below Figure 2. Poor definition of the project in its early phases will almost certainly lead to serious or permanent value erosion during following phases and Operation.

The main causes are often a lack of clarity on the project objectives and scope details, not deploying the right competencies from the initiator of the project and inadequate understanding of the project risks and opportunities.

Of course, there must be a balance through project lifecycle phases and not an excuse for excessive study work and project recycling in early phases. It is all about having the right competencies and applying the right tools at the right time. As the project moves through the phases, it is essential to keep focus on the value and on ways to improve it.

For that purpose, various tools are available, such as Opportunity Framing, development of details scope of work, Value Engineering, Benchmarking with other projects, Peer Review, lessons learned from other projects, etc. The earlier in the process these are being applied the better the end-result will be and as the project progresses; these tools may be re-applied at certain intervals, as the needs dictate.

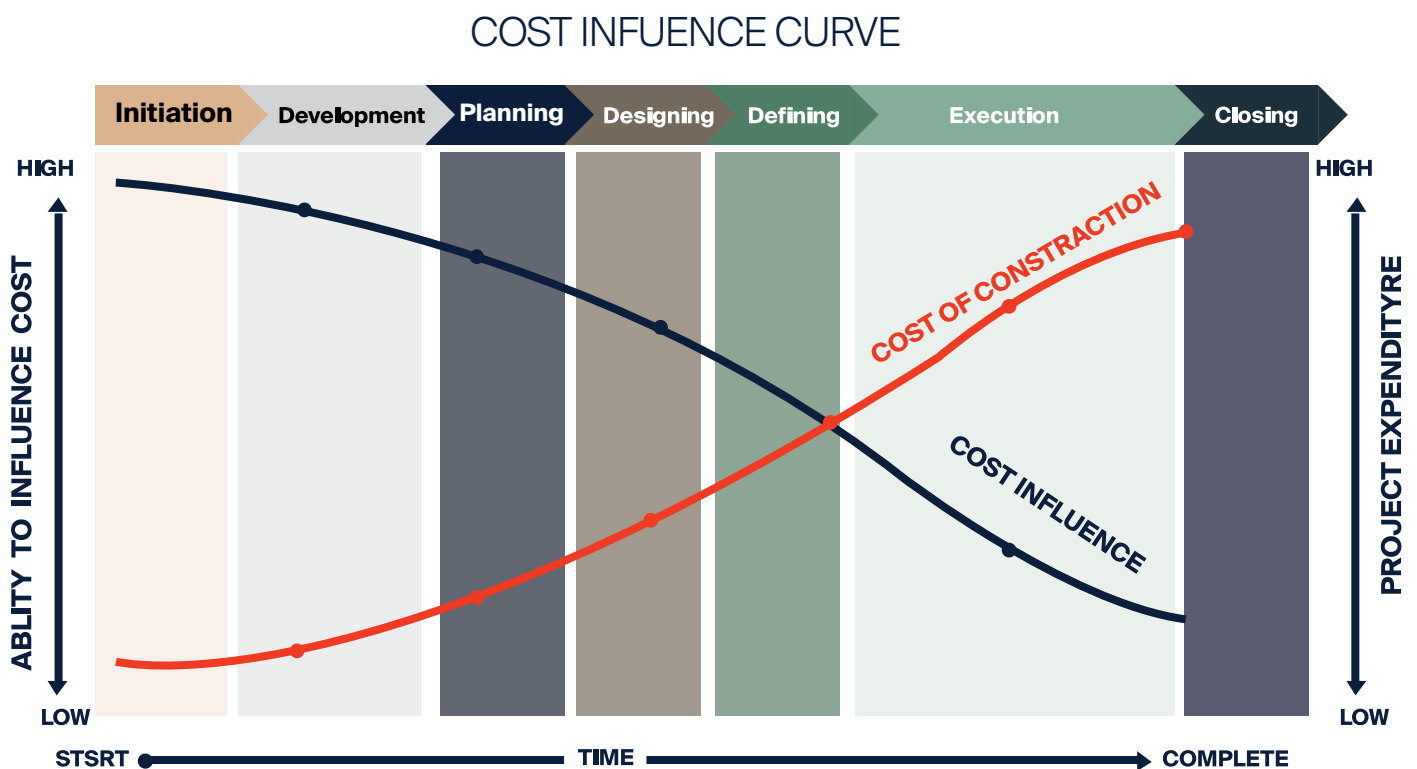


Figure 2 Cost Influence Curve

2.5 Project Governance

Project Governance is defined as the laws, regulations, processes, customs, interactions, policies, procedures and practices used by staff and stakeholders in the way the organisation is directed, administered and controlled.

The PMM is premised on the following principles:

- Project initiatives shall be based on clear and auditable business value, which shall be appropriately defined, taking into considerations all relevant technical and non-technical risk factors and properly documented.
- Projects shall be run by appropriately resourced and competent teams, with clear roles and responsibilities; guided within a fit-for-purpose governance framework.
- The right stakeholders shall be engaged early enough to achieve an early definition of optimum scope that meets the necessary functional requirements at competitive cost.
- An appropriate project change management mechanism shall be applied to ensure a 'no change' during Execution Phase without proper control as per guidelines and procedures of management of change.
- Continuous improvement shall be ensured by identifying, recording and periodically reviewing appropriate learnings from all projects.
- A culture of process compliance and disciplined execution on all projects shall be maintained.

In order to ensure that quality decisions are made as projects progress through their lifecycle, Project governance shall be exercised in three ways:

1. Taking the project through Decision Gates in accordance to project lifecycle.
2. Assign responsibility and accountability to all relevant parties to ensure that decision making process is governed throughout the project phases by development of RACI chart.
3. Carryout audits and assurance reviews.

2.6 Project Assurance

Project Assurance is integral to good project governance. The primary objective is to ensure that the project development and execution activities are executed in a controlled and assured way, risks are being managed to an acceptable level, to a quality that is consistent with the delivery of the project objectives and expected value.

Assurance support quality decision, provide confidence to stakeholders and alignment between all parties. It captures the project specific needs with respect to audits and review, such as SGRs, HSSE review and related quality assurance reviews etc. Assurance reviews are carried out in terms of meeting the Technical, HSSE, schedule, cost, quality and other targets that have been set to ensure value is delivered.

2.7 Performance Measurement

The project performance is measured against the following baselines:-

- Project scope.
- Project schedule.
- Project cost.

The scope baseline defines the scope of a project in terms of combining the scope statement and the defined work breakdown structure of the project

The schedule baseline defines the schedule of project activities based on estimated activity durations.

The cost baseline is the approved budget allocated to project activities.

To be used for performance measurement purposes, these baselines need to be approved in accordance with the project governance.

Refer to Appendix J - Government Projects KPI Procedure.

2.8 Stage Gate Review (SGR)

Stage Gate Reviews are key assurance tool where a formal review of the project's current state is performed. It is intended to:-

- Verify and evaluate the outputs of each phase of the project
- Ensure that the conditions and requirements for moving to next phase of the project are met.
- Support project managers to plan, manage and execute projects effectively and successfully.
- Support the decision makers, who are responsible for progressing the project from one phase to the next, by providing recommendations on the project readiness to move to next stage.

The SGRs focus on the technical, economic, social, HSSE, organization and political aspects of the project.

The SGR Committee is formed independently from the project team and should include relevant members according to the project scope. Section 4 describes the requirements and scope of SGR in more details. The project can only be progressed to the next phase once it has successfully passed the relevant SGR. The Government project lifecycle consists of 7 SGRs in total; (0-4) are required prior to Award Decision (AD) with SGR no. 4 before the AD while fifth and sixth SGRs come after the AD for execution and closing.

2.8 Stage Gate Review (SGR)

The key objectives of each SGR Gates are described in below Table 1.

PHASE	SUBSEQUENT GATE	OBJECTIVES
Initiation	SGR 0	- Are the feasibility study and business case made? - Have a range of strategies and execution options been explored? - Is this project of high priority compared to other internal initiatives? - Is the project Evaluation Matrix filled?
Development	SGR 1	- Does the project impact identified, and effort complete? (Project Evaluation Matrix) - Is the project in-align with Oman vision 2040 and Strategic program/s? - Is this project of high priority compared to other entities projects?
Planning	SGR 2	- Is opportunity framing updated? - Is Project Execution Plan prepared? - Is the design/ feed scope updated and its tender documents are complete? - Is preliminary budget approval obtained?
Designing	SGR 3	- Are all requirements transformed into complete and detailed design specifications? - Are the Main Contract tender documents ready? - Is evaluation criteria finalized for main tender?
Defining	SGR 4	- Is evaluation finalized? - Is the final project budget approved? - Is the legal approval obtained? - Is the project ready to be awarded and major risk mitigated?
Execution	SGR 5	- Are all project deliverables achieved and acceptable to client? - Is the project ready to operate?
Closing	SGR 6	- Have the project objectives achieved? - Is the project technically and financially ready to be close? - Are the lessons learned captured?

2.9 Decision Gates

Decision Gates are key governance process to ensure that requirements of each project stage are fulfilled and ready to move to the next stage. The Decision Maker is the Decision Review Board (DRB), who is responsible for progressing the project from one phase to the next, based on Stage Gate Review Committee's recommendation. The Government Entities project lifecycle consists of 7 Decisions Gates as shown in Figure 3 of which Award Decision is most critical decision during the lifecycle of a project where the decision giving the go ahead – or not – for projects to proceed with execution.

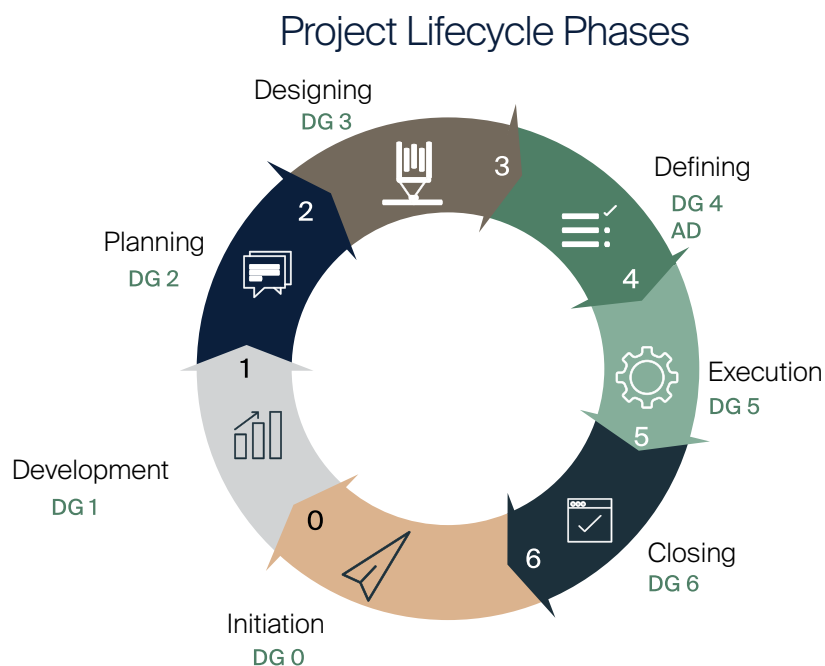


Figure 3 Project Lifecycle Stage Gates

2.10 Opportunity Framing

Opportunity Framing is an important exercise to frame the project's main boundaries at the beginning of the project stage no. 0 (typically included in the feasibility study of the project) and updated upon approval of the project. The Opportunity Framing aligns the project team and top management / authorities on the following:

- Project's mission statement
- Projects objectives, value drivers and critical success factors.
- Boundary conditions of given, assumptions
- Contracting strategy
- Initial risks list
- Stakeholders
- Road map for the project with clear decisions identified at each stage.

There might be a requirement for re-framing the project in case there is a big change to the project scope to update the above listed elements.

2.11 Project Charter

A project charter is a formal, typically short document that give authority to Project manager to utilize organization resources in project activities and describes high-level objectives, scope, risks, assumptions, constraints, and requirements. It is an essential element in project lifecycle. Developing a project charter involves assessing the project feasibility basis, the given constraints and planning the project at a high level.

Immediately after project approval and budget allocation, a Project Charter shall be prepared by project manager/ leader and approved by Project Sponsor with sign off. The project manager/ leader shall meet the requirements to Appendix E – Project Charter Template and job description and have the following experience:

- Above 100 Million OMR **more than 20 years** of relevant project management experience. Advanced certification like PMP will be advantageous.
- 40-100 Million OMR, **more than 15 years of experience** in projects management. Advanced certification like PMP will be advantageous.
- 10-40 Million OMR, **more than 10 years of experience** in projects management. Advanced certification like PMP will be advantageous.
- 3 -10 Million OMR. **5 to 10 years of experience** in projects management.
- 0.5 - 3 Million OMR. The project will assigned to a Project Manager with **1 to 5 years of experience** in projects management.

2.12 Value Engineering

Value Engineering (VE) is a systematic approach directed at analysing the function of systems, equipment's, facilities, services, and supplies for the purpose of achieving their essential functions at the lowest lifecycle cost (LCC), consistent with required performance, reliability, quality and safety.

VE shall be applied to government projects worth more than or equal to 10 million OMR in CAPEX during the following two phases: -

Phase 3: - Designing

Phase 4: - Defining (During bidding stage if require to have alternative design)

It is advised to apply VE in other Project below 10 million OMR to maximize project value.

Refer to Appendix H – Value Engineering Guideline.

3. ROLES AND RESPONSIBILITIES

3.1 Project Sponsor

- A Project Sponsor is an individual holding an executive/senior managerial position at the entity, who has the overall accountability for the project.
- Single point accountability for the success or failure of the project.
- Review and approve project charter.
- Participating in relevant Decision Review Board meetings.
- Reviewing the Stage Gate Review Summary.
- Ensure implementation of all recommendations and decisions from Decision Review Board.
- Approves the assurance and risk management plans for projects.
- Provides adequate resources to support project.
- Review and approves deviations/change from project Performance baselines and in accordance with the Authority Matrix.
- Assign Project Manager with appropriate experience, competencies and skills.
- Provide direction and guidance to the Project Manager.
- Evaluates and monitor the projects throughout the lifecycle.
- Encourages stakeholder involvement and builds and maintains their ongoing commitment through effective communication strategies
- Gains agreement among stakeholders when differences of opinion occur.
- Committing all of the resources required to successfully complete the project.

3.2 Project Manager

The Project Manager (or equivalent Project Lead or Engineer) is assigned by the entity to lead development of the project, responsible and accountable for the following:-

- Lead all project activities and deliverables throughout the project lifecycle and runs the project from day to day. The Project Manager ensures that the project deliverables completed within the agreed scope, schedule and cost.
- Develop and manage project execution plan (PEP) which includes scope of work, project schedule and cost.
- Manage project changes through the application of appropriate procedures.
- Prepare project charter.
- Leading the project team and managing the project plans to success.
- Maintaining the risk register, issue and change control logs.
- Report project progress and performance to the Project Sponsor and other stakeholders, including regular update of Project Management System.
- Evaluate contractors, consultants, vendors and other involved parties throughout the project.
- Develop and manage engineering starting from detailed design, procurement, construction and support commissioning phase(s) of the project in line with premises, cost and schedule.
- Manage project interfaces and ensure that all relevant disciplines and stakeholders are involved in the process.
- Manages and optimizes all assigned resources (including contractor resources) to ensure effective execution and value for money.
- Lead and coordinate the activities of the project execution team to ensure common objectives across all parties.
- Provide extend support to executing parties throughout project lifecycle stages.
- Support in executing Assurance events through project lifecycle stages.
- Drive and incorporate lessons learned through project lifecycle stages.
- Ensuring timely and effective communication within the project and with external stakeholders.

3.3 Stage Gate Review Committee

The SGR Committee members responsible for making quality recommendations in relation to the project by providing support and advice based on their expertise.

A Stage Gate Review Committee (SGR Committee) sets list of recommendations whether to pass, conditional pass or not pass from one phase to another through project lifecycle and reported to DRB for final decision.

The committee members varies from one Stage Gate to another depending on approved project budget and project phase which is formed by executive authority as per Appendix A -Project Lifecycle.

The roles of the SGR Committee is to:

- Conduct the Stage Gate Review Meetings.
- Confirm all Stage Gate deliverables are complete.
- Confirm that any deliverable issues have been resolved.
- Provide input within own area of expertise / experience.
- Provide technical/functional support.
- Support and challenge decision-making to maximise the project value.
- Ensure project assurance and quality control are met.
- Ensuring that the project deliverables are reliable, sustainable and can be maintained efficiently.
- Report the review recommendations to DRB.

3.4 Decision Review Board (DRB)

The DRB members varies from one Stage Gate to another depending on approved project budget and project phase. The DRB is mentioned and listed in Appendix A -Project Lifecycle. The roles of the DRB are to:

- Ensure making quality decisions in relation to the project after each SGR.
- Approve, or otherwise, the SGR committee's recommendations.
- Ensure that the project is being value assured at the appropriate stages.

Based on the outcome recommendations of the SGR committee, the DRB will have the following decision options:

- **PASS :** Required deliverables have been completed to the satisfaction of the SGR Committee.
- **CONDITIONAL PASS :** - Required deliverables that are not complete present tolerable residual risks to the project and the Gate may be passed as long as the incomplete deliverables are finally completed.
- **NOT PASS :** - Required deliverables that are not complete present intolerable residual risks to the project and the Gate may not be passed until deliverables are complete.

3.5 Ministry of Economy

- Prepare and update Project Evaluation Selection Matrix. (Stage No. 0) (Refer to Appendix-B)
- Regulate the process for new projects selection. (Stage No. 0)
- Prepare awareness sessions for prioritization of development programmes. (Stage No. 0)
- Suggested work to distribute the development ceiling. (Stage No. 1)
- Form and lead of the government projects evaluation team on annual basis (Evaluation Team. (Stage No. 1)
- Evaluation and approval of the project based on a recommendation from evaluation team.(Stage No. 1)
- Carrying out the Stage Gate Review no. (1) (Stage No. 1)
- Addressing the Ministry of Finance with the initial approval of the project. (Stage No. 1)
- Addressing the concerned Entity regarding project approval status and include its budget in the financial system in coordination with the specialists at the Ministry of Finance. (Stage No. 1)
- Approval to amend the budget in case the updated financial estimates increase more than(initial approval) by (20%) in coordination with the Ministry of Finance. (Stage No. 3)
- Approval of the project budget in case the project cost is higher than the approved budge(Stage No. 4)
- Review the recommendations of the Award Decision and options for project execution in coordination with the Governmental Projects Follow-up Office in the case project not allocated.(Stage No. 4)
- Update project budget data after contract award. (Stage No. 4)
- Obtain performance of projects execution in coordination with the Governmental Projects Follow-up Office. (Stage No. 5)
- Periodic follow-up of the project and follow-up to update the financial system in coordination with the Ministry of Finance. (Stage No. 5)
- Follow up on project closure in coordination with the Governmental Projects Follow-up Office. (Stage No. 6)
- Financial closing of the project. (Stage No. 6)

3.6 Ministry of Finance

- Approval of the development ceiling distribution framework. (Stage No. 1)
- Approval of the operating budget for new projects. (Stage No. 1)
- Contribute to the selection of development projects and evaluation of the priority of implementation on annual basis (part of Evaluation Team). (Stage No. 1)
- Issuance of initial financial approval for projects to the Ministry of Economy. (Stage No. 1)
- Coordination with the Ministry of Economy to approve the tender in case the updated financial estimates are more than the (initial approval) approved by (10%). (Stage No. 3)
- Issuance of project final financial approval (budget confirmation). It is carried out in parallel with the financial evaluation to speed up the procedure. (Stage No. 4)
- Pay-out payments to the contractor. (Stage No. 5)
- Update the financial system data. (Stage No. 5)
- Approval of the final account. (Stage No. 6)
- Close the financial commitment of the project. (Stage No. 6)

3.7 Projects, Tenders and Local Content Authority (PTLC)

The following units under the umbrella of the General Secretariat of the Tender Board.

3.7.1 Tendering Unit

- Review the pre-qualification assessment of potential consultants. (Stage No. 2)
- Carry out main Bidding Processes. (Stage No. 3)
- Review of tender documents and project strategy. (Stage No. 3)
- Reviewing and submitting documents for pre-qualification of contractors according to project requirements. (Stage No. 3)
- Review the tendering documents and standard contracts for the project above 5 million Omani riyals before offering the tender and non-typical contracts for projects as part of SGR3 committee. (Stage No. 3)
- Review and approve the Technical Evaluation. (Stage No. 4)
- Review the final evaluation of bids. (Stage No. 4)
- Review the commercial evaluation of bids. (Stage No. 4)
- Approve awarding contracts more than 3-10 million Omani riyals through Mini Tender Board. (Stage No. 4)
- Review Contract (above 5 million Omani riyals) before tendering. (Stage No. 4)
- Review Contract before Award. (Stage No. 4)
- Submitting recommendations to Tender Board to award the project to contractor. (Stage No. 4)
- Review the contractor and consultant evaluation during the execution of the project phases. (Stage No. 5)

- Review and approve the Technical Evaluation. (Stage No. 4)
- Review the final evaluation of bids. (Stage No. 4)
- Review the commercial evaluation of bids. (Stage No. 4)
- Approve awarding contracts more than 3-10 million Omani riyals through Mini Tender Board. (Stage No. 4)
- Review the contractor and consultant evaluation during the execution of the project phases. (Stage No. 5)

3.7.2 Project Follow-up Officet

- Contribute with the evaluation team to review and prioritize projects in line with development goals. (Stage No. 1)
- Carrying out the Stage Gate Review no. (2) for projects whose value is equal to or greater than 10million OMR including the following : -
 - Review tender documents for the preliminary engineering design phase and permits required for the project.
 - Approval of the initiation of design tendering processes. In the event of non-approval, the concerned entity will be informed of the deficiencies.
 - Review and approve the contracting strategy.
- Carrying out the Stage Gate Review no. (3) for projects whose value is equal to or greater than 10 million OMR including the following: -
 - Review the procurement plan related to the project.
 - Review of tender documents and project strategy.
 - Review the pre-qualification assessment of potential contractors.
 - Review contracting strategies and plans.
- Carrying out the Stage Gate Review no. (4) for projects whose value is equal to or greater than 10 million OMR including the following: -
 - Review and approval Technical evaluation.
 - Review the final evaluation of bids.
 - Review the requirements of the Final Award Decision for the project.
 - Review the commercial evaluation of the project.
- Follow-up the update of project data in the government projects platform. (Stage No. 5)
- Follow up the progress in different project phases. (Stage No. 5)

- Evaluation of variation orders, if any. (Stage No. 5)
- Providing advice and guidance to concerned government entity. (Stage No. 5)
- Preparing reports and recommendations for the project. (Stage No. 5)
- Follow up the project closing. (Stage No. 6)
- Updating the lessons-learned database. (Stage No. 6)
- Maintain electronic copies of project documents. (Stage No. 6)
- Follow-up the update of project data in the government projects platform. (Stage No. 6)

3.7.3 National Local Content Office

- Review the National Local Content Office Requirements. (Stage No. 3)
- Make sure to apply the National Local Content Office. (Stage No. 5)

For more details, refer to Appendix-K About National Local Content Office Process.

3.8 Tender Board

- Approve financial evaluation. (Stage No. 4)
- Approve Award Decision for project value more than 10 million OMR. (Stage No. 4)

3.9 Government Entity

- Preparing a feasibility study for the project. (Stage No. 0)
- Evaluate project priorities and align them with plans and programs. (Stage No. 0)
- Identification of the project manager/Lead and the Project Sponsor. (Stage No. 0)
- Fulfilment of the requirements of Project Evaluation Selection Matrix for priority projects. (Stage No. 0)
(Refer to Appendix-B)
- Carrying out the Stage Gate Review no. 0 (Stage No. 0)
- Preparing a project initiation note form. (Stage No. 0)
- Submit a completed project initiation note form - August of each year. (Stage No. 1)
- Make a presentation about the project to the evaluation team and answer inquiries. (Stage No. 1)
- Identification of the engineer/project manager and the Project Sponsor of the project (an employee from the entity). (Stage No. 1)
- Determine the contracting strategy. (Stage No. 2)
- Determine tendering strategy for designs. (Stage No. 2)
- Develop scope of work for designing. (Stage No. 2)
- Ensure including innovations and lessons learned from previous projects. (Stage No. 2)

- Preparing tender documents for designs and providing all requirements. (Stage No. 2)
- Include National Local Content Office Requirements. (Stage No. 2)
- Update project manager/lead and project Sponsor. (Stage No. 2)
- Carrying out the Stage Gate Review no. (2) in partnership with the Governmental Projects Follow-up Office for projects whose value is less than 10 million Omani Riyals. (Stage No. 2)
- Provide all requirements and follow up with the Projects, Tenders and Local Content Authority. (Stage No. 3)
- Supervising the design work of the project. (Stage No. 3)
- Preparing the main construction tender documents and submitting them to the Tender Board. (Stage No. 3)
- Preparing contracting strategy for the main tender and NLCO requirements. (Stage No. 3)
- Carrying out the Stage Gate Review no. (3) in partnership with the Project Follow-up Office for projects whose value is less than 10 million Omani Riyals. (Stage No. 3)
- Technically analysing the offers and preparing the technical evaluation report. (Stage No. 4)
- Participate in bids financial evaluation. (Stage No. 4)
- Prepare and submit Award Decision requirements. (Stage No. 4)
- Coordination with companies for a field visit to the project site and coordination in the event of amending the terms of the contract. (Stage No. 4)
- Addressing the contractor after obtaining approval to award the contract. (Stage No. 4)
- Update project manager/Lead and project sponsor. (Stage No. 4)
- Awarding contracts less than 3 million OMR. (Stage No. 4)
- Coordination with the Ministry of Finance for financial endorsement. (Stage No. 4)
- Carrying out the Stage Gate Review no. (4) in partnership with the Governmental Projects Follow-up Office for projects whose value is less than 10 million Omani Riyals. (Stage No. 4)
- Signing the main contract after the Award Decision. (Stage No. 5)
- Update the financial commitment of the project. (Stage No. 5)
- Entering project data into the financial system and government projects platform. (Stage No. 5)
- Prepare monthly reports and update the government projects platform. (Stage No. 5)
- Studying and approving the Payment due for the project and update the schedule. (Stage No. 5)
- Adherence to approved scope baseline, cost baseline and schedule baseline. (Stage No. 5)

- Evaluate Contractor and consultant during execution of project phases. (Stage No. 5)
- Prepare lessons learned from the project and update lessons learned register. (Stage No. 5)
- Studying the variation orders, if any, and addressing the Projects, Tenders and Local Content Authority (Stage No. 5)
- Carrying out the Stage Gate Review no. (5) in partnership with the Governmental Projects Follow-up Office for projects whose value is more than 10 million Omani Riyals. (Stage No. 5)
- Closing the project and notifying/ submit closing report to Ministry of Economy, Ministry of Finance and General Secretariat of the Tender Board. (Stage No. 6)
- Update Government projects platform. (Stage No. 6)
- Update lessons learned register and Risk register. (Stage No. 6)
- Preparing the closure accounts of the project. (Stage No. 6)
- Evaluate Contractor and consultant of the project. (Stage No. 6)
- Maintain electronic copies of project documents. (Stage No. 6)
- Carrying out the Stage Gate Review no. (6) in partnership with the Governmental Projects Follow-up Office. (Stage No. 6)

4. Project Lifecycle Phases

PMM follows logical, methodical structure with best practice to monitor and control government entities infrastructure project through the project lifecycle. Project lifecycle phases are based on a stage-gated process that is divided into seven stages.

The process provides a framework that shall be followed by the project teams. The Project Manager shall define:

- The exact phasing of the project.
- The major deliverables for each phase.
- Key milestone events and decisions.
- Staffing and organization needs for each phase, including business continuity requirements.
- Tools and processes that will facilitate value maximization.

Figure 4 presents the fundamental structure of project lifecycle phases, illustrating the seven maturation phases of the process and the key deliverables for projects.

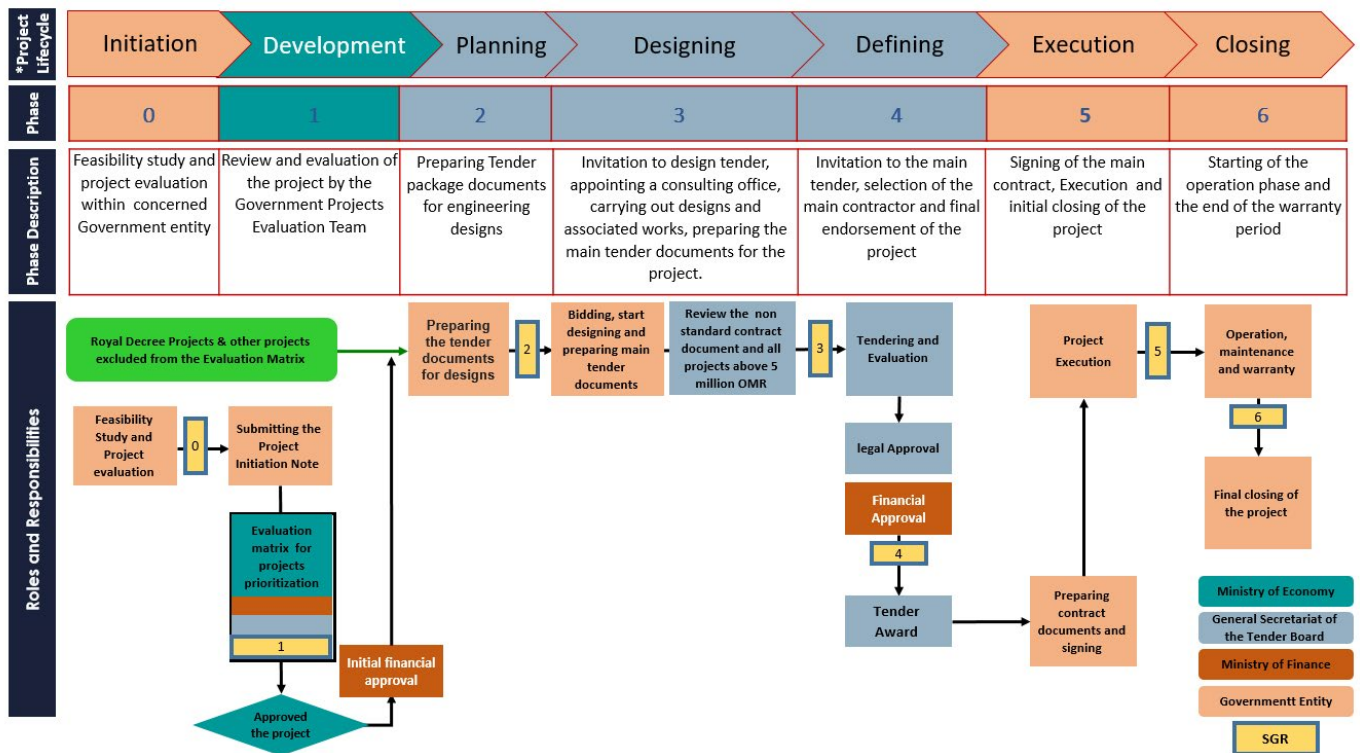


Figure 4 Project Lifecycle Framework

The Front-End Loading covers the 0-4 phases, phase five concerns the project execution, while in phase 6 the focus is on closing and operation of the project.

In the subsections below, further details are provided including the required activities - which shall made ready by concerned Government Entity before each SGR - and key deliverables at end of each phase to enable a successful SGR and secure the subsequent decision from the DRB to proceed to the next phase of maturation of the Project. The government Projects divided into 3 categories based on project budget value.

- 10 Million OMR and above
- 3 -10 Million OMR
- 0.5 - 3 Million OMR

Please refer to Appendix A for more details regarding SGR & BRD of each Sage Gate of different project budget value.

4.1 Phase 0: Initiation

The objective of this phase is to identify the potential value of the project and its alignment with the business strategies within the concerned Government Entity. All projects shall be screened using evaluation selection matrix and select the top priority against Government Entity strategic objectives. The key deliverable for this phase is Project Initiation Note and the stage is described in Figure 5.

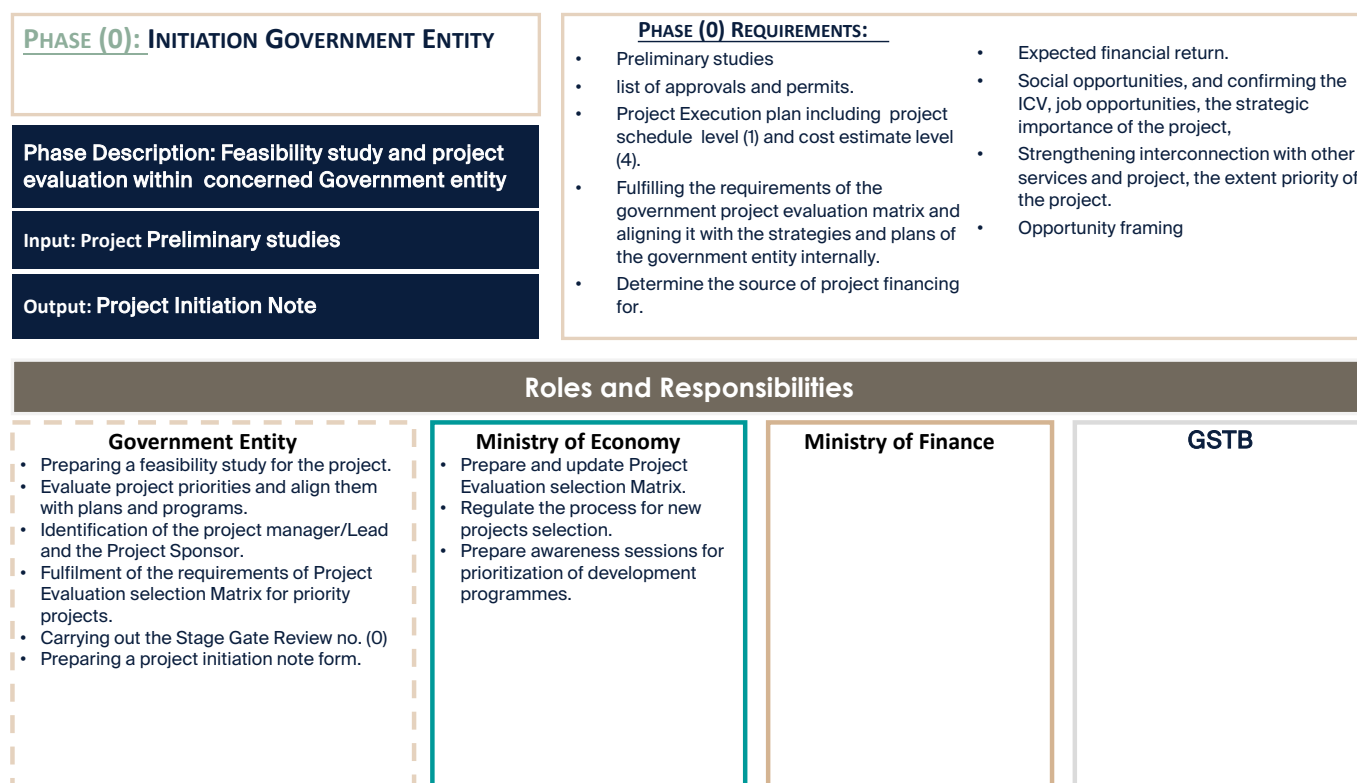


Figure 5 Initiation Phase

Opportunity Framing Workshop is the starting point (can be done as part of feasibility study – as require – and updated in Phase 2 along with Project Contracting Strategy) which allows initiation of the project and identifies its strategic fit. High-level technical and commercial data will be required to better understand or reduce the risks in the project. In addition, high-level economic screening of the development options, as identified at the time, will take place. In parallel with this work, a preliminary project development plan will be prepared. Other matters such as regulatory approvals, co-venturing or partnering options, etc. will be addressed.

Typically, the Project Initiation Note (PIN) contains the following elements as a guide:

- Strategic fit with both business and corporate strategies.
- Key technical and commercial data.
- Preliminary project development plan.
- Preliminary operations philosophy.
- HSE issues, as could be identified in this early stage.
- Economic screening with high-level cost estimates.

- Preliminary feasibility study.
 - SWOT analysis.
 - Key success factors and value drivers.
 - Key risks and opportunities
 - Preliminary schedule.
 - Objectives of the next sub-phase, feasibility, including planned activities, timing, resources, etc.
- Following the successful completion of the Initiation phase, and as may be supported by the SGR-O and BRD-O, the project will be ready to move to Development Phase.

4.2 Phase 1: Development

The objective of this phase is to review and evaluate the received Project Initiation Note from concerned Government Entity and identify the potential value of the project and its alignment with the Oman Vision 2040, the five-year plans and strategies of the Sultanates among all projects in Sultanate of Oman. The Government Projects Evaluation Team using clear methodology - evaluation selection matrix -through which priority projects are selected for ensuring social impact economic, will screen all projects. The Evaluation Team in SGR-1 consist of members from Ministry of Finance, Project Follow-up Office, led by Ministry of Economy, and report the recommendation to DRB-1. The key deliverable for this phase is Endorse of the project initiation note (Project Charter) and the stage is described in Figure 6.

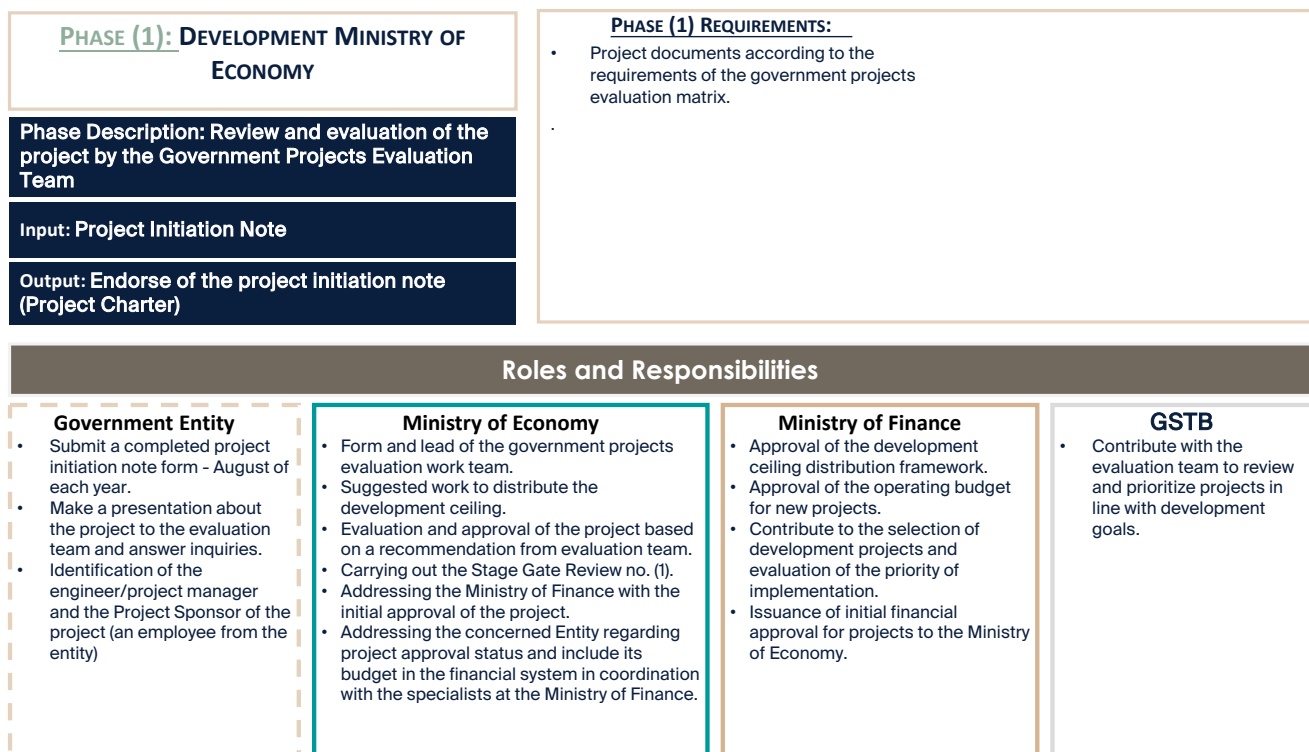


Figure 6 Development Phase

4.3 Phase 2: Planning

The objective of Planning Phase is to generate and evaluate options and select the preferred development option. The key deliverable for this phase is tender package documents for engineering designs and the stage is describing in Figure 7 below. In the Planning phase, a selected concept will be developed to realize the project from the several possible concepts in the feasibility report. This is also the phase in which most of the strategic decisions on how the project will be executed and operated are made. In this phase, the options identified in the feasibility study are further developed by completion of the technical and commercial studies, so that the choice of the single development option can be made. This is the most critical phase from a “Front End Loading”- Phase 0 – 4 - perspective as the strategic thinking and planning activities thereby impacting significantly on the value of the project. The Planning Phase may start with Opportunity Framing update where contracting strategy workshop with concerned stakeholders to be conducting and identify best contracting strategy fit for the project.

The end of the Planning Phase is marked by the SGR-2 and DRB-2 ensure all requirements are fulfilled and determine if the project is ready to move to Designing phase.

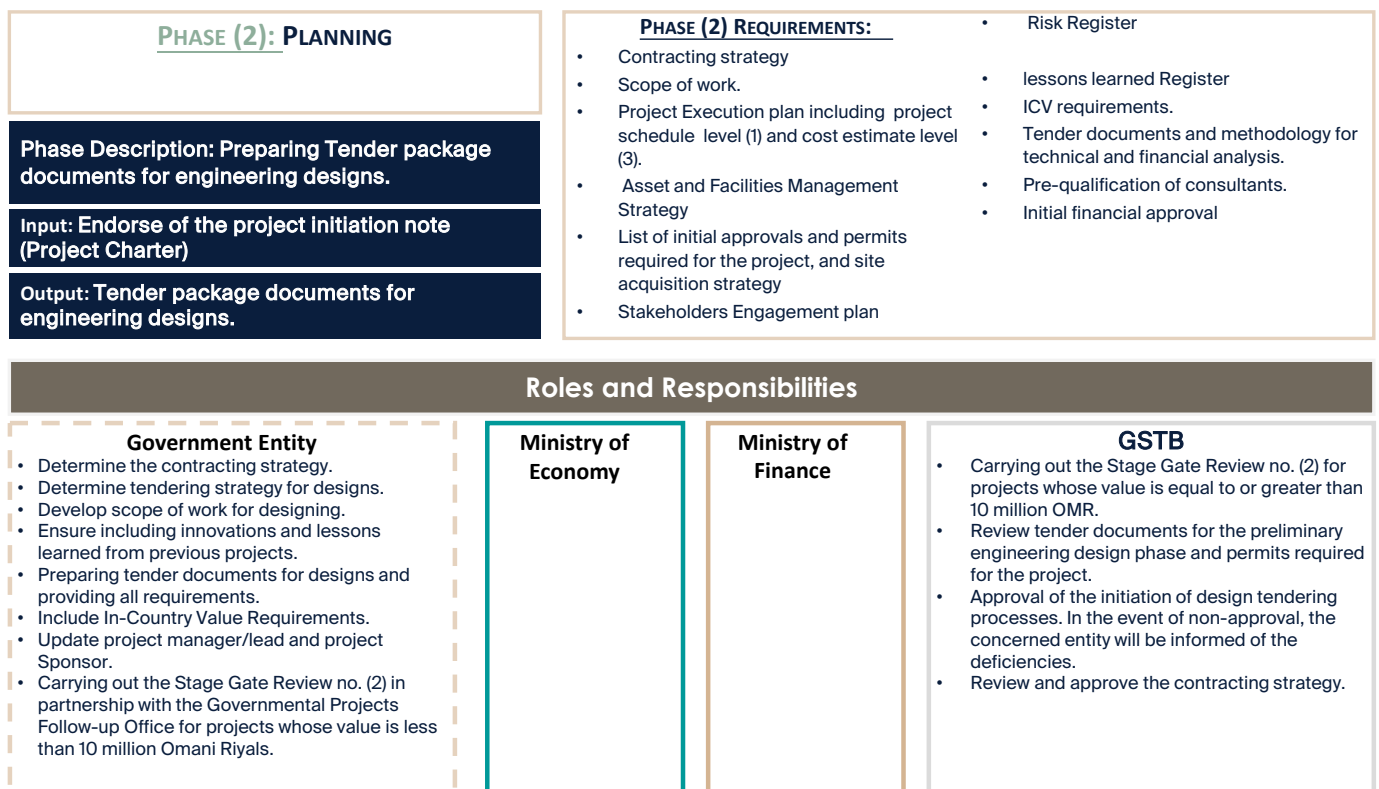


Figure 7 Planning Phase

4.4 Phase 3: Designing

The objective of this Phase is Invitation to design tender, appointing a consulting office, carrying out designs, associated works, and preparing the main tender documents for the project. The key deliverable for this phase is updated estimated cost, construction tender documents and any accompanying services for main tender. Moreover, to define, technical specify and develop scope and cost of selected development to a matured state required to reach AD in next phase.

Moreover, in this phase the design work of main project shall made ready along with below requirements shows in Figure 8 to process to next phase. The end of the Designing Phase is marked by the SGR-3 and DRB-3 to ensure all requirements are fulfilled and determine if the project is ready to move to the Defining phase.

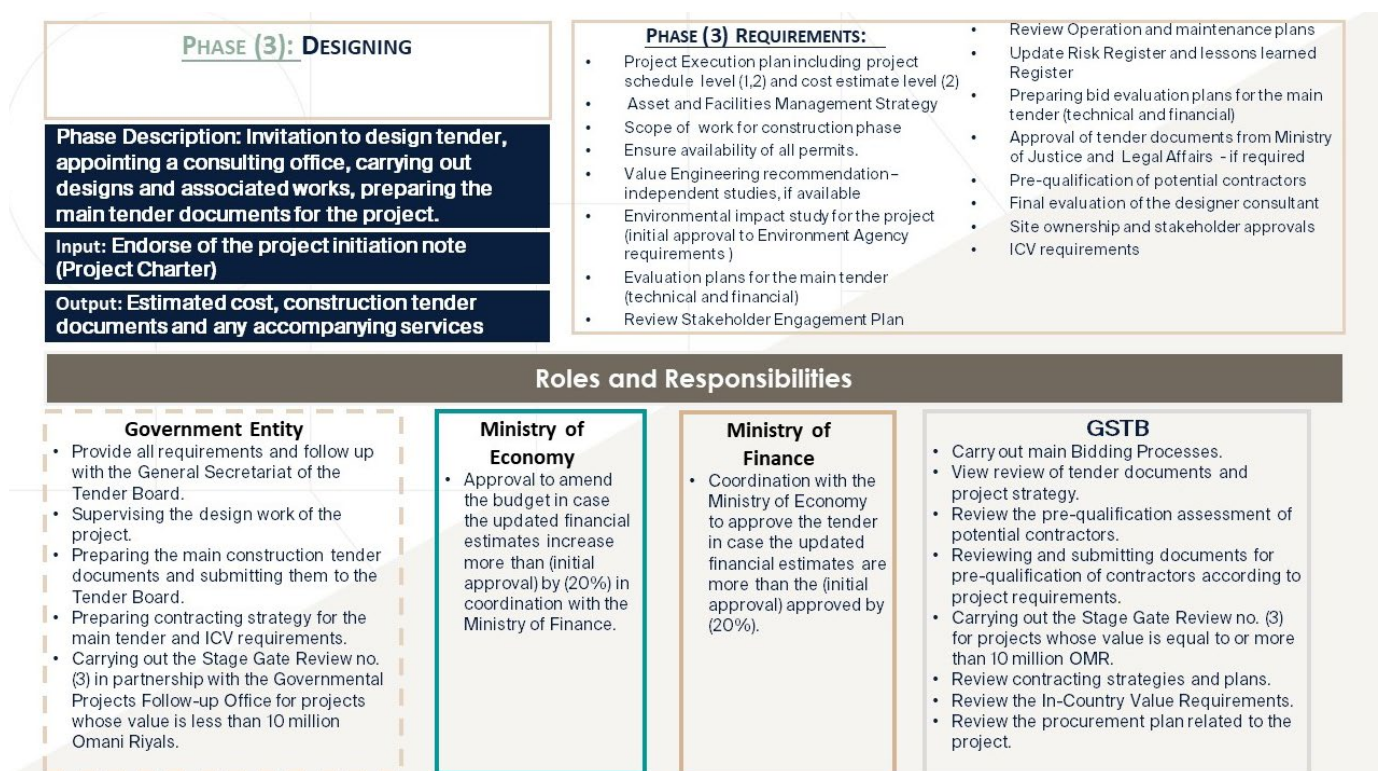


Figure 8 Designing Phase

4.5 Phase 4: Defining

The objective of this phase is Invitation to the main tender, selection of the main contractor and taking Award Decision of the project. The key deliverables for this phase are selection of the project contractor, Project Award Decision, endorsement of contracts, and updating of the project execution plan.

The project plans in Defining phase must contain a sufficient level of detailed information to permit a decision on whether to proceed further with the Project. Defining Phase provides assurance for the Project in achieving cost effective solutions prior to committing any fund. It is therefore critical to utilize the most experienced and creative staff. The Figure 9 below describe the phase.

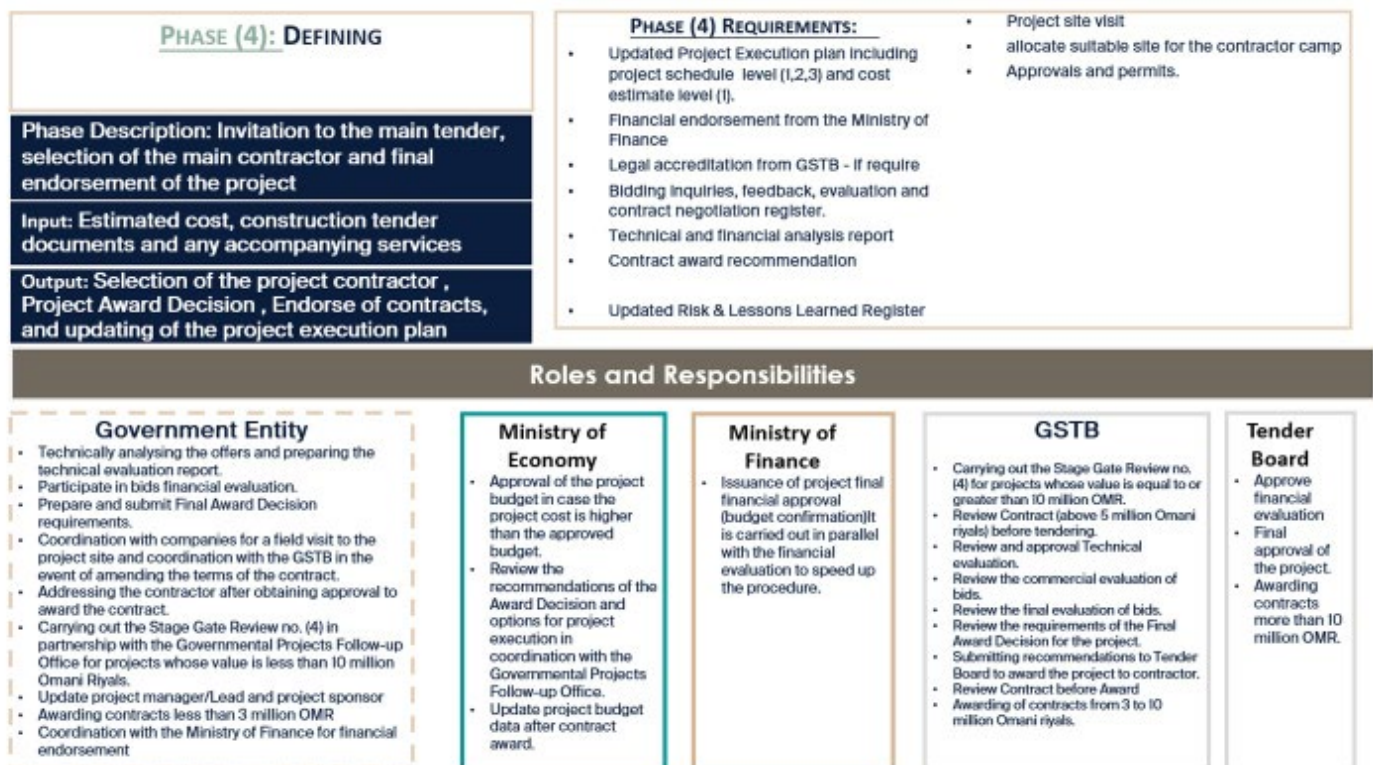


Figure 9 Defining Phase

Before moving to Award Decision, value assurance is conducted in SGR-4, which check the fulfilment of all phase requirements and report the recommendation to DRB-4 for Award Decision. Once the Award Decision (AD) has been made, the project will move into Phase 5: Execution.

4.6 Phase 5: Execution

The objective of Execution Phase 5 is signing of the main contract, Execution and initial closing of the project. The key deliverable for this phase is signing the main contract, delivering the project & Initial closing, Project Handover & Close out Report and the stage is described in Figure 10 below.

The execution phase has the primary aim of delivering an asset that is ready for start-up by the Owner and that has been realized in accordance with the project objectives for HSSE, cost, time and quality.

The end of the Execution Phase is marked by the SGR-5 and DRB-5 to ensure all requirements are fulfilled and determine if the project is ready to move to the Closing phase.

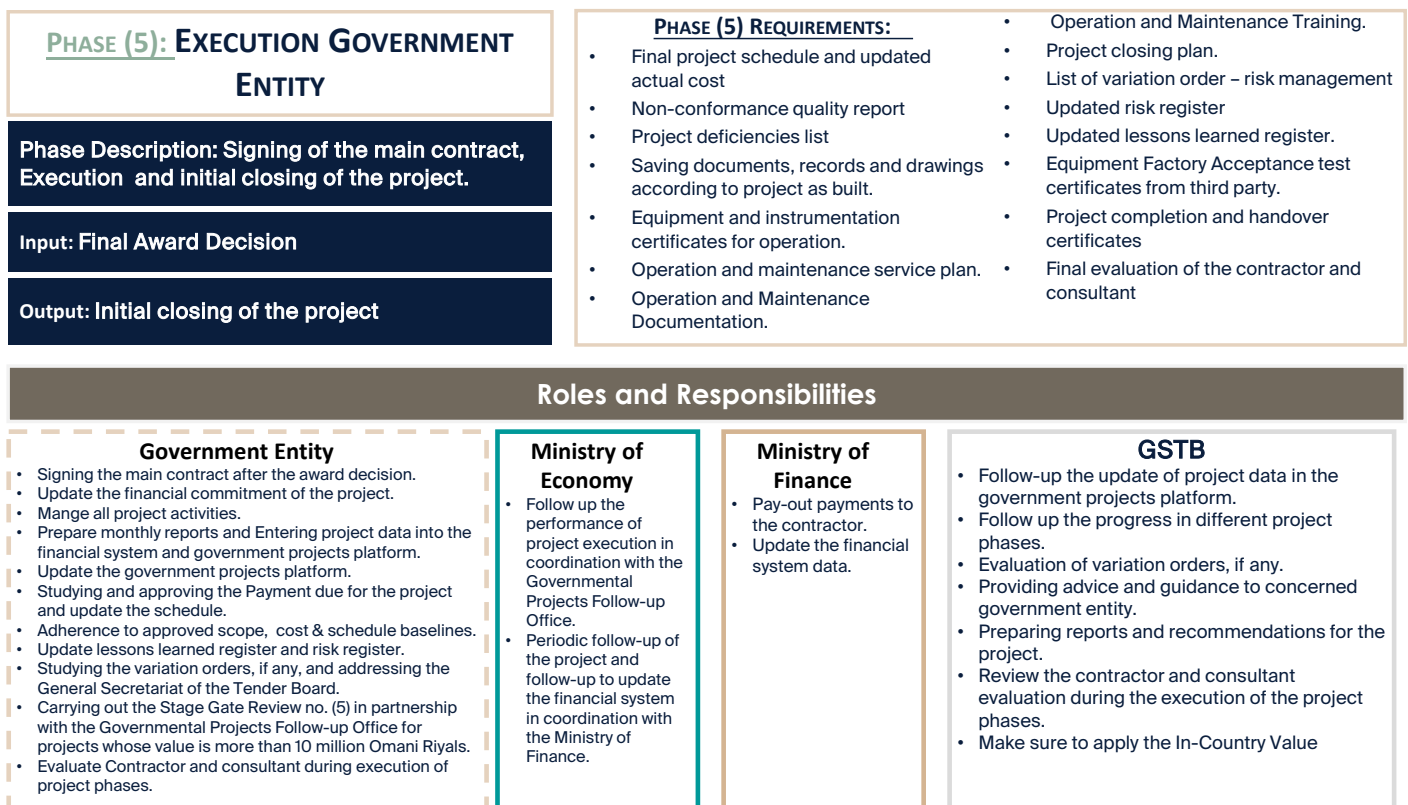


Figure 10 Execution Phase

4.7 Phase 6: Closing

The objective of this phase is to start-up and operate the facilities, ensuring performance is in accordance with specifications and validate the project implementation during the warranty period. The key deliverable for this phase is Final closing of the project. After completion of Warranty period, the Project Manager shall submit Final close out report along with all Phase requirements to SGR-6 Committee. The end of the closing Phase is marked by the SGR-6 and DRB-6 to ensure all requirements are fulfilled and determine if the project is close or not. Figure 11 below describe phase 6.

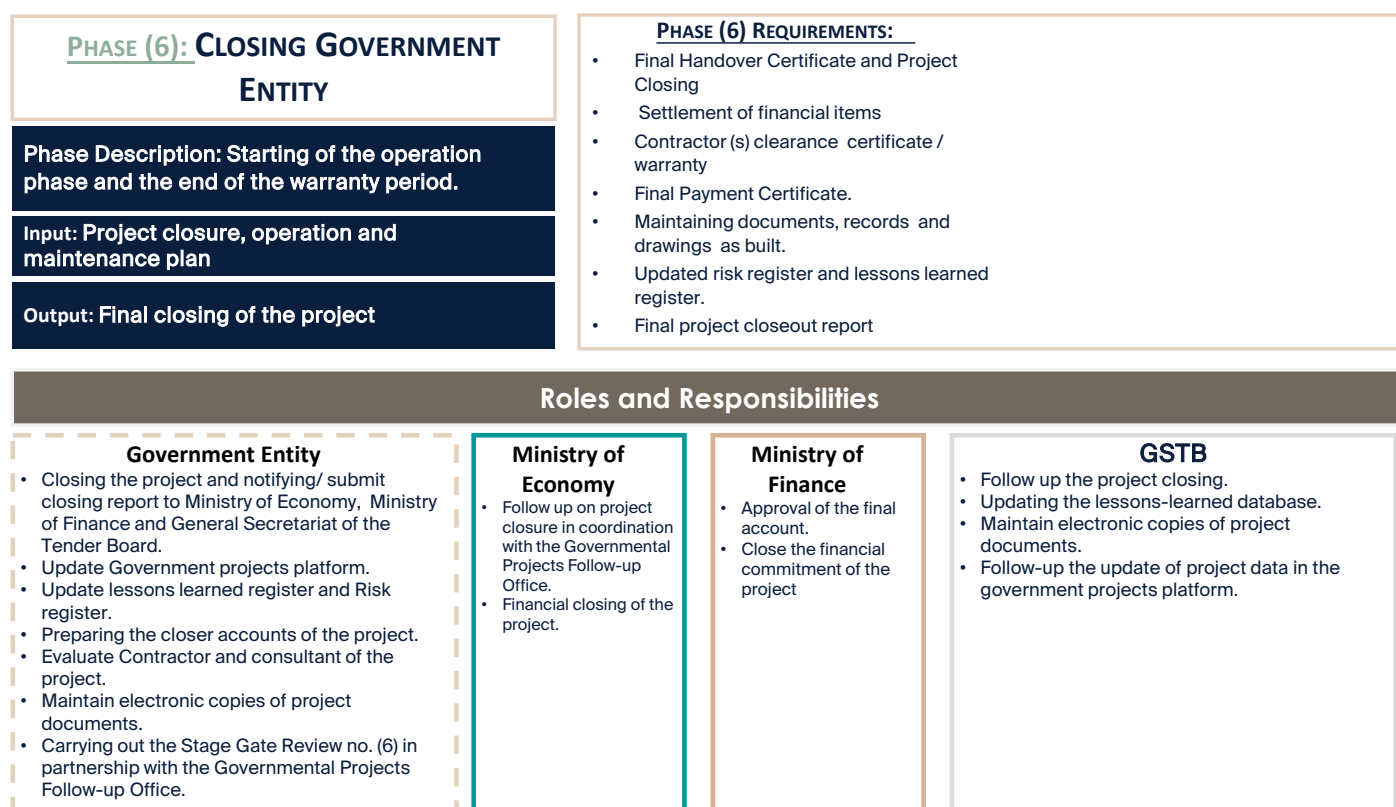


Figure 11 Closing Phase

5. Project Management of Change (PMOC)

Management of project changes is an essential element in the management of project scope, quality and project performance and key to the success of any project to ensure projects completion within budget and on time.

Management of Change Procedure in Appendix O - Project Management of Change Procedure is a systematic approach to the identification, quantification, evaluation, approval, implementation and reporting of changes to the approved Project Basis, during the Execution Phase of the project.

The Procedure describes the process of how to manage the early identification, recording, documentation, screening, impact assessment, review, approval, implementation and reporting of a Change.

Early identification of potential Changes, rapid information flow and timely decision making will lead to success in this process.

6. PROJECT ESSENTIALS

6.1 Project Controls

Project controls are processes for gathering and analysing project data to keep monitoring and controlling scope, cost and schedule as per project baselines using different programmes e.g. Primavera, SAP, Project Management System, GIS or others. The functions of project controls include initiating, planning, monitoring and controlling, communicating, and closing out project costs and schedule. Ultimately, project controls are iterative processes for measuring project status, forecasting likely outcomes based on those measurements and then improving project performance if those projected outcomes are unacceptable. This ensures the project remains on track, on budget and on time. Project baselines are the most important project management tool to track cost, schedule and scope performance. That is why making a project baseline can truly mean the difference between success and failure.

Monitor and control processes are provided by project manager monitor project performance throughout the project lifecycle based on project baselines. The Monitor and control process is concerned with:

- Comparing actual project performance against the project management plans and baselines.
- Assessing performance to determine whether any corrective or preventive actions are indicated, and then recommending those actions as necessary.
- Maintaining an accurate, timely information base concerning the project's deliverables and their associated documentation through project completion.
- Providing information to support status reporting, progress measurement and forecasting.

- Maintaining an accurate, timely information base concerning the project's deliverables and their associated documentation through project completion.
- Providing information to support status reporting, progress measurement and forecasting.
- Providing forecasts to update schedule information based on remaining duration.
- Assessment after reviewing the actual progress.
- Monitoring implementation of approved changes when and as they occur.
- Monthly standard project dashboard will be updated by project Manager through digital platform Project Management System (PMS). The standard dashboard covers: Refer to Appendix J - Government Projects KPI Procedures
 1. Key metrics for project status
 2. Cost actuals curve
 3. Schedule progress curve
 4. Key Risks
 5. Key Issues & Lessons learned

6.1.1 Scope Management

Controlling the project scope since the early stages of the project is a good practice to minimize changes and change orders during the Execution phase. Scope management and control requirements is a continuous process across the project lifecycle up to and including the Execution Phase. The project scope shall be outlined so far as practical in the Initial phases to support the project initiation activities and shall be summarised in the Project Initiation Note and the Project Feasibility Report. The project scope shall then be further defined through the project documentation to be delivered in the subsequent phases.

At the end of the Defining Phase the scope of work will form part of the Invitation to Bid (ITB) for main tender. At this point of time, it is mandatory to establish a sufficient definition of scope that is clear enough to support a successful project objective. No tender shall be floated unless the finalized scope of work is reviewed in accordance with the project assurance process. This applies to all tenders, Design, Construct/Build, Design & Build, EPC, EPCM, Cost Plus, etc.

The work breakdown structure (WBS) is a hierarchical decomposition of the scope of work. The WBS shall include the totality of the project scope. Refer to Appendix L –WBS Procedure.

6.1.2 Schedule Management

Proper project planning and scheduling usually results gives better chances for a successful project completion. Development of project schedules shall focus on the overall Project and be at an appropriate level of detail throughout the project lifecycle. It covers all important project activities, milestones and resources required to deliver the project on time. Schedule development shall start early in the project lifecycle.

The scheduling system shall be based on logic networking, using computerized critical path analysis method of which the lowest level rolls up into higher levels. Hierarchical scheduling system that shall be used as the basis for detailed schedule monitoring and control of the progress of the Services. The schedule hierarchy comprises four levels in which each lower schedule level represents the Project activities in more detail. The structure and detail of the schedules shall be such that the schedule status can be summarised from the detailed level and provide effective control of the project. The schedule level hierarchy implemented shall be as per following:

- Level-1 Project Master Schedule
- Level-2 Project Overall Schedule
- Level-3 Project Detailed Schedule

The critical path method (CPM) shall be used for planning, organizing and directing the work. CPM shall be used to calculate the schedule's early and late dates, total float and free float.

Planning engineers typically use a scheduling or project management software to develop this so-called schedule model. This schedule model is often presented as a diagram (e.g. a Gantt chart) accompanied by a documentation of additional details, such as resource requirements and assumptions. Once the relevant stakeholders approved the schedule model, it becomes the schedule baseline of the project.

Effective schedule control is needed to confirm that project execution is in line with the baseline schedule and that any deviations are identified and actioned in a timely manner. Comparing the progress of the project against a scheduled baseline allows project managers to determine if a particular project activity is ahead or behind the schedule. The project schedule ones approved becomes the project baseline. It is used to measure and monitor the performance of a project.

The detailed components of the schedule baseline may vary among projects. However, the essential information reflected in the baseline is usually:

- Sequence of project activities.
- Dependencies between activities, including leads and lags.
- Activity durations.
- Planned/baselined start and finish dates of activities.

- Underlying assumptions and constraints,
- Resource requirements, and
- Other elements necessary for the schedule planning of the project.

There are several tools used in the industry to assess the quality of the project schedule, by analysing the percentage of critical path activities, activity relationships, resource loading, etc. Such tools are very useful to ensure that project is following a proper reliable schedule.

Schedule Key Performance

Schedule Key Performance Indicators shall be established to monitor the project performance throughout the duration of the project.

For more details, refer to Appendix J - Government Projects KPI Procedures.

6.1.3 Cost Management

The key elements for project cost management are as follows:

- Cost Estimation
- Cost Control

Cost Estimation

Cost Estimation is the prediction of quantities, cost, and/or price of resources required by the scope of a project. As a prediction, cost estimate must address risks and uncertainties. Cost estimates are determined using experience, calculating and forecasting the future cost of resources, methods, and management at a point in time to be executed within a scheduled time frame.

The quality of an estimate is largely determined by the following:

- The project scope definition or development scenario being considered, should be as required / defined for each relevant estimate classification; refer to Appendix L - WBS Procedure for more details.
- Sufficiently detailed Project Execution and Contracting Strategy as appropriate to the project phase (should be available even in preliminary format for early estimates)
- The associated risks and opportunities of the project, should be recognised and reflected in the estimate
- Complete and correct local cost data, at an appropriate level of detail, commodity and other price indices.

The cost estimate accuracy normally increases with each project phase as the scope definition progresses and assumptions diminish. Different Type of estimates are used for various purposes, such as initiation, feasibility, concept, Award Decision, budget approvals. Estimates should correspond to the requirements for the referenced project phase, any deficiency increase, and decision risk should be clearly identified. The type of estimate is determined by its purpose, the maturity of the inputs and the quality of the engineering data.

A dedicated cost estimating application may be used by the cost estimators to produce their project estimates. Assurance review of all estimates shall be conducted before presentation for the SGRs.

The Base Estimate shall be calculated based on the project phase, using the appropriate methods like capacity factored, equipment factored, parametric, analogous, detailed estimate, etc. The Base Estimate shall also include allowances, usually expressed as percentages, to allow for the 'known unknowns', for example design growth that could occur in future phases.

It is important to assess the level of risk of the estimates to make the proper evaluation. The contingency shall be applied to an estimate depends on the project risk score.

The general cost estimating process can be summarized as follows:

- Collect available information (project deliverables, schedules, risks, assumptions, complexity).
- Choose estimate method.
- Validates available information with all stakeholders.
- Generate estimate.
- Assess allowances, market factors, contingency, Contractor premium, escalation.
- Validate estimate with all stakeholders.

The estimate shall be subjected to specific reviews to assess the validity and the robustness of its content before present for approval.

Refer to Appendix C –Projects Cost Estimate Procedure.

Cost control

Completing a project within the approved budget is one of the most important project success criteria. Effective project cost control provides the project team with visibility of the project costs, accurate, up to date, and reliable forecasts to enable timely interventions and mitigation.

Cost control is the process of measuring cost variances from the baseline and taking appropriate action, such as increasing the budget allocated or reducing the scope of work, to correct that gap. Cost control is a continuous process done throughout the project lifecycle.

Project budgeting is determining the total amount of money that is allocated for the project to use. The budget is an estimate of all the costs that should be required to complete each project activity over each phase of a project. The cost baseline is the budget approved for the project, usually broken down in some detail by cost category and cost period.

The Project cost control process is:

- Setting up the Original Budget in accordance with the CWBS;
- Load the cost WBS in project management software program.
- Calculate VOWD, earned value metrics, etc.
- Calculates the cost forecast
- Change control
- Cost reporting

The Cost Work Breakdown Structure (CWBS) is a breakdown or hierarchical representation of the various costs in a project. The CWBS shall be created in the initial phases and it is a critical tool in managing the financial aspects of any project and creates a structure for executing cost control.

6.1.4 Knowledge Management

Types of knowledge management:

Knowledge management is the process of organizing, creating, using and sharing collective knowledge within in an organization and with other parties. Successful knowledge management includes maintaining information in a place where it is easy to access, communicate, transmit and share.

Knowledge is one of most valuable assets in organization. Storing, growing, and sharing that knowledge is critical to any enterprise. Knowledge management includes the process that helps you acquire, organize and share:

- Explicit knowledge – knowledge that is easy to write down and share
- Implicit knowledge – applied knowledge
- Tacit knowledge – knowledge gained from personal experience.

Knowledge management process:

Knowledge management process is the way in which a business manages knowledge, from it creating through to its organization methodology, to how it then continues to make sure it's shared.

a. Knowledge creation: It starts with knowledge acquisition. This knowledge may come from any sources, including employees within an organization or outside individual that are brought in for knowledge or expertise on a specific subject. It is typical to have a Research and Development section as a team to advance the knowledge of an organization.

b. Knowledge organization: The knowledge must then be structured in a knowledge management system for future use. This knowledge not only be organized but it also needs to include security features so that knowledge can be accessed by authorized personnel when needed. Organization is an important part of knowledge management.

c. Knowledge sharing: Knowledge sharing includes everything from knowledge training to knowledge exchange, where knowledge can be acquired or enhanced through knowledge discussion with other employees in an organization.

When an organization can easily access, share, and update business knowledge, it can become more productive and cost efficient. The ability to access the right knowledge at the right time through a robust knowledge management system, informs accurate decision making and stimulates collaboration and innovation.

Lessons learned

Lessons learned are the documented information that reflects both the positive and negative experiences of a project. Capturing lessons learned should be an on-going effort throughout the lifecycle of the project. This mind-set of using lessons learned from previous experiences and well as the ongoing activities of capturing lessons should be strongly encouraged by the project manager from day one.

By not learning from projects failures may lead to repeating similar situations; and by not maximizing on project successes may lead to missing opportunities in better managing the project. Below figure 13 illustrate the lessons learned process. Lessons learned sessions should be generally organised at least every quarter.

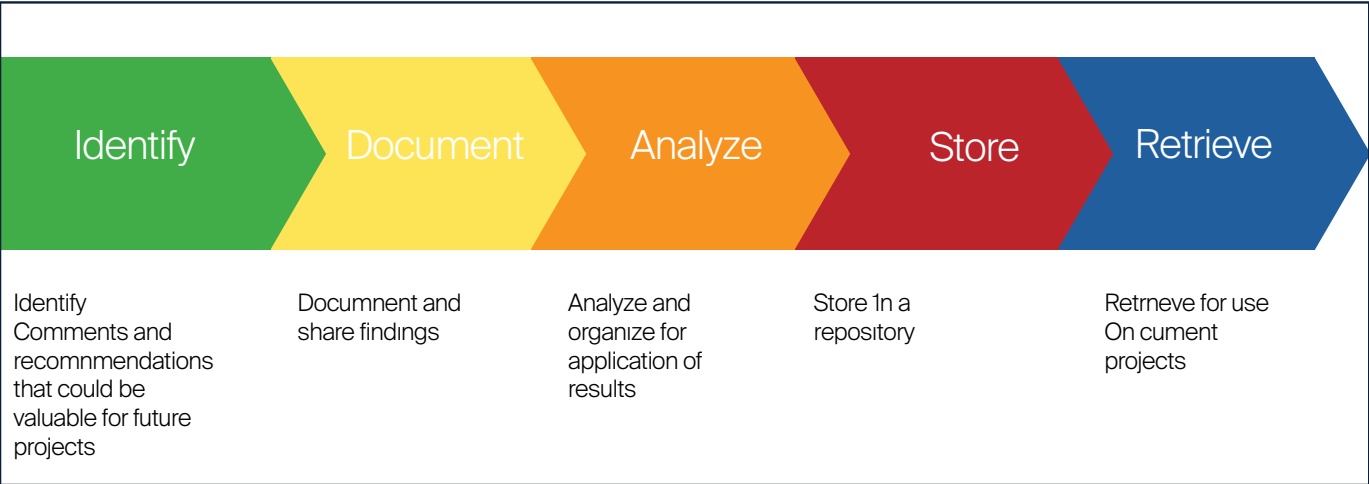


Figure 12 Lessons Learned Process

Document Control:

Document control, in project management, is a function that involves the management of project documents to store, track, transmit, communicate, manage, and organise all project documents called an Electronic Document Management System (EDMS) as one of the functions of PMS System.

6.1.5 Risk Management

Risk management is an integral part of project management, the aim is to minimize & mitigate the impact of potential exposures and to take advantage of opportunity for improvement.

The risk management process, as showed in figure 13 below, starts with the planning phase by defining roles, responsibilities, procedures, and templates to be used during the project execution.



Figure 13 Risk management Process

The following process refers to a systematic identification of all possible risk events (threats and opportunities) that can impact the project. Negative risks commonly referred to as 'threat' are those that will have a negative impact on the value drivers/objectives of the project.

While positive risks are often referred to as 'opportunities', which if exploited can have a positive impact on the performance of the project. All risks may be conveniently classified according to their cause or source (financial uncertainties, legal liabilities, technology issues, strategic management errors, accidents, and natural disasters). A standard Risk Register shall be used to document the risks, response plan & audit trail.

For assessment of risk impact & probability a Standard Risk Assessment Matrix - as shown in Figure 14 is used. The Risk Assessment Matrix can be 3x3, 4x4 or 5x5 as per complexity of the project and can be selected based on the project team judgement. Project team will have regular (monthly) meetings to reassess risk's impact & probability, along with tracking mitigations, preventive & recovery actions. Closed out risks should be marked "closed" in the risk register & new risks introduced as they arise.

5 Almost Certain (Above 80%)	5 Tolerable	10 Critical	15 Critical	20 Intolerable	25 Intolerable
4 Likely (50%-80%)	4 Tolerable	8 Tolerable	12 Critical	16 Critical	20 Intolerable
3 Probable (10%-50%)	3 Acceptable	6 Tolerable	9 Tolerable	12 Critical	15 Critical
2 Unlikely (1% -10%)	2 Acceptable	4 Tolerable	6 Tolerable	8 Tolerable	10 Critical
1 Rare (0% - 1%)	1 Acceptable	2 Acceptable	3 Acceptable	4 Tolerable	5 Tolerable
	1 Insignificant	2 Low	3 Moderate	4 High	5 Severe
IMPACT					

Figure 14 Standard Risk Assessment Matrix

Risk response involves developing options and determining actions to reduce threats or enhance opportunities to project objectives. Actions are identified and assigned to parties that take responsibility for the risk response. This process ensures each risk requiring a response has an "owner." The Project Manager and the project team identify a strategy that is best for each risk, depending on the score and criticality, and then select specific actions to implement that strategy.

Risk monitoring and update tracks identified risks and its response plan, monitors residual risks, identifies new risks, and ensure the full execution of risk plan and the effectiveness in reducing risk. Risk monitoring and control are ongoing process for the life of the project.

Refer to Appendix F - Risk Register Template.

6.2 Quality Management

Quality management is essential to achieve the project objectives and always shall be taken as a given and not an option, similar to HSSE management. Historically, failure to implement quality management yielded catastrophic consequences of harm to people, asset and environment as well as decaying the project objectives which always result in cost overrun and schedule slippage.

Quality management is based on certain processes and it comes to ensure compliance to these processes to ultimately meet and enhance project objectives.

In order to ensure that quality is properly integrated through the lifecycle of a project there are four key elements that need to be addressed by the project team:

1. Risk Management – Manage uncertainty in meeting set objectives and repeating of past incidents/ failures.
2. Continual Improvement – enhance value in Project Execution process.
3. Quality Assurance - plan for the success.
4. Quality Control – Verification and control of the need or expectation that is stated, generally implied or obligatory .

6.2.1 Quality Management

Figure 15 shows the QMS with the main 5 thematic steps to translate the requirements.

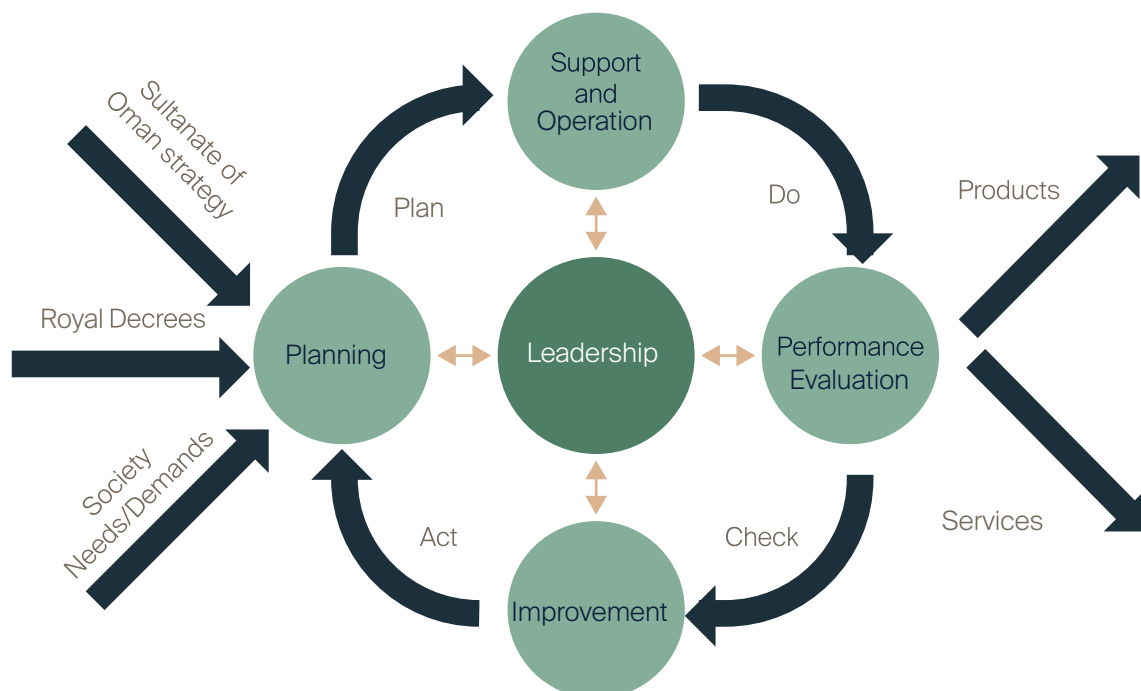


Figure 15 Quality Management System Steps

Leadership:

Leaders are the driver to ensure all staff including government entity and contractor side complies with the Quality Management requirements. Leaders will provide support to ensure the right quality management resources are provided and relevant quality training are given. In addition, leaders shall be committed to the quality policy of the government entity and to the fulfillment of its requirements using their authority of decisions making.

Planning:

All standards, procedures, guidelines, and processes are in place to allow people using them. All of these shall be part of the Project Quality Plan (PQP).

Refer to Appendix G- Project Quality Plan Guideline.

Support and Operation:

Execute the requirements set in planning step and ensure compliance and verification. This for example, include execution of the audits and reviews and carry out the required assessment to ensure quality requirements are met.

Performance Evaluation:

Key performance indicators (KPI) are essential to monitor the quality performance within the project.

Refer to Appendix J - Government Projects KPI Procedures.

Improvements:

Continual improvements required by referring to the lessons learnt from quality monitoring, the Non-conformance reports (NCR) and review of the quality management system.

The purpose of this Project Quality Management is to define the process by which quality requirements are consistently applied and implemented for all projects.

It outlines how quality management activities shall be planned, performed, recorded, and monitored throughout the lifecycle of projects. It addresses quality assurance (QA), quality control (QC), reporting and continual improvement.

Scaling and Tailoring of QMS shall be defined by the project team and implemented via the PQP and reviewed at each decision gate.

Refer to appendix G - Project Quality Plan Guideline for more details.

6.3 Resource Management

Resources management is a key pillar to deliver projects. This includes providing the adequate and competent people on timely manner to support the project delivery, talent development following a set competency framework.

6.3.1 Project Resourcing

The project manager is responsible to create the project organigram and include the required resources which should include core and non-core resources and full-time and part time resources in order to effectively manage the resources within the government entity. The Project Manager to update the organigram before each project phase/gate for the next phase and to allow sufficient time to allocate the resources as the process of allocating and resourcing people normally takes time.

The project manager shall submit an organigram plan for review and approval following the relevant authority matrix within government entity.

Project Manager is also responsible to control the resources within the government entity depending on the requirements & criticality of each project.

6.3.2 Talent development

To develop talents in the government entity three main aspects are to be followed: on the job-training or job experience and this represents around 70%, learning from others through coaching and mentoring which should represent around 20% of talent development and finally the 10% represented by the structured and formal training such as courses, workshops and E-learning as illustrated in Figure 16. Project scope may include any technical or specialize training that's require for Omani local talent.



Figure 16 Talent Development Models

6.4 Health, Safety, Security and Environment (HSSE)

HSSE shall be the government entity first priority throughout the project lifecycle and shall be considered as a given a not a choice. During the project phases all HSSE deliverables shall be identified and assured by the right technical authority. Also, the HSSE procedures and processes, especially during project Execution Phase, are compiled to. This includes as minimum the following for project and as illustrated in the Figure 17.

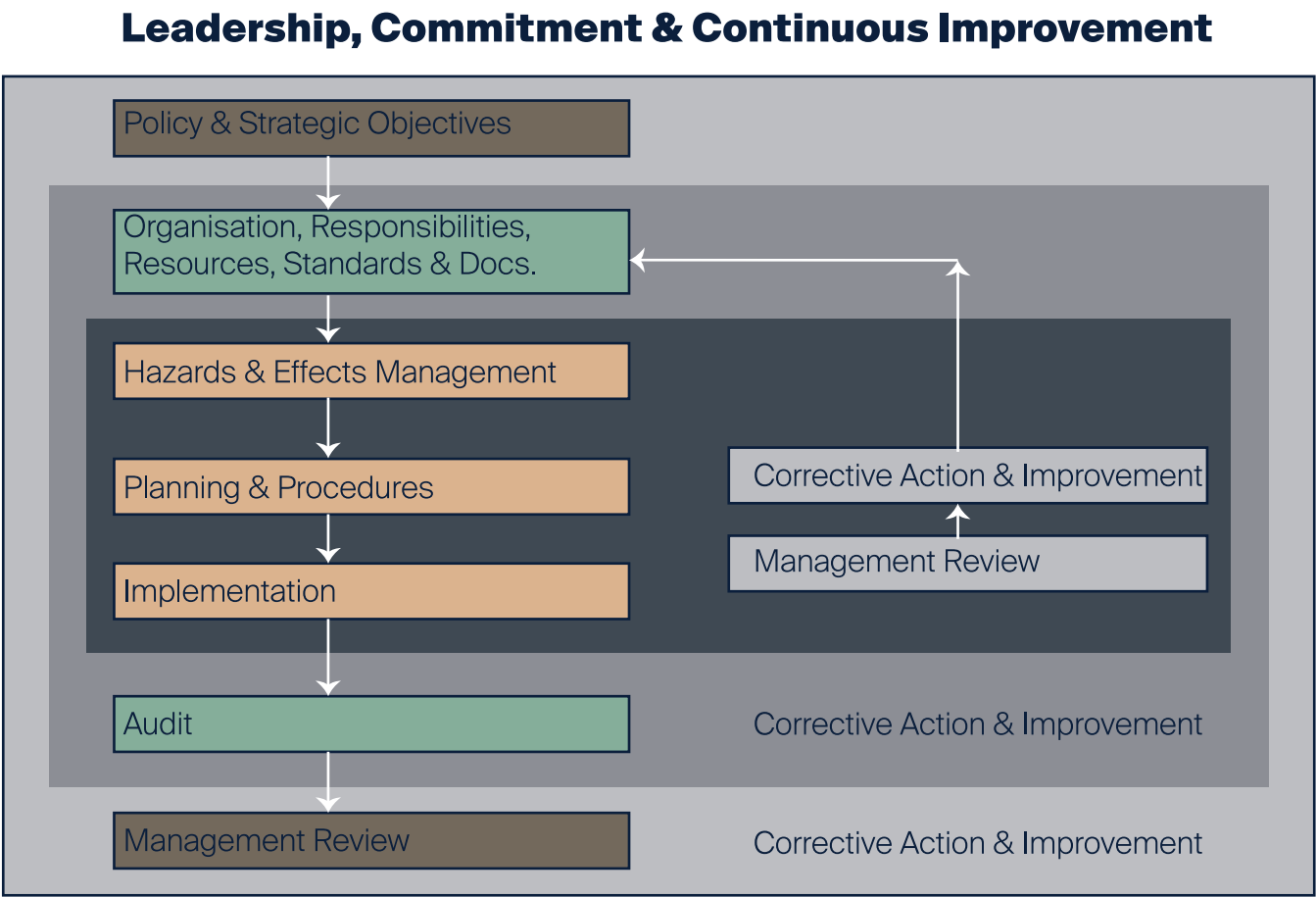


Figure 17 HSSE Management System

6.5 Communication Management

There are many things that contribute to the success of a project, but one of the most important is effective communication among all stakeholders. Every project has its unique set of individuals and circumstances that dictate which forms of communication will work best. Decisions require open channels of communication so information can flow back and forth as needed.

Communication with stakeholders can take place via written or verbal means, and it can be formal or informal. Examples of each type of communication are shown in Table 2.

Type	Formal	Informal
Verbal	• Presentations Project • reviews Briefings • Product demos • Brainstorming • Meetings	• Conversations • Ad hoc discussions
Written	• Progress reports • Project documents • Business case • letters • Email	• Brief notes • Messaging/texting • Social media

Table 2 Type of Communication

The purpose of the Communication Management is to define the communication protocol and requirements for the project and how information will be distributed to and feedback received from all stakeholders. The Communication Management defines the following:

- Stakeholder communication requirements.
- Analysis, design, development and evaluation of communications.
- Identification and best use of communication modes.
- Handling recurring and triggered communications.
- Communication standards for the project.
- The Communication approval process.
- Completion and use of the Communication Matrix.

The Communication Management sets the communications framework for the project. It serves as a guide for communications throughout the project lifecycle. The contents within the communication will need to be updated from time to time due to changes along project lifecycle.

To develop a comprehensive Communication Management strategy/plan, it is highly recommended that the Project Manager and/or team member responsible for communications planning guide the project team through several steps to ensure that the plan is as robust and effective as possible. These steps include:

- Identify Stakeholders Needs.
- Develop Objectives & Key Messages.
- Define Information Items.

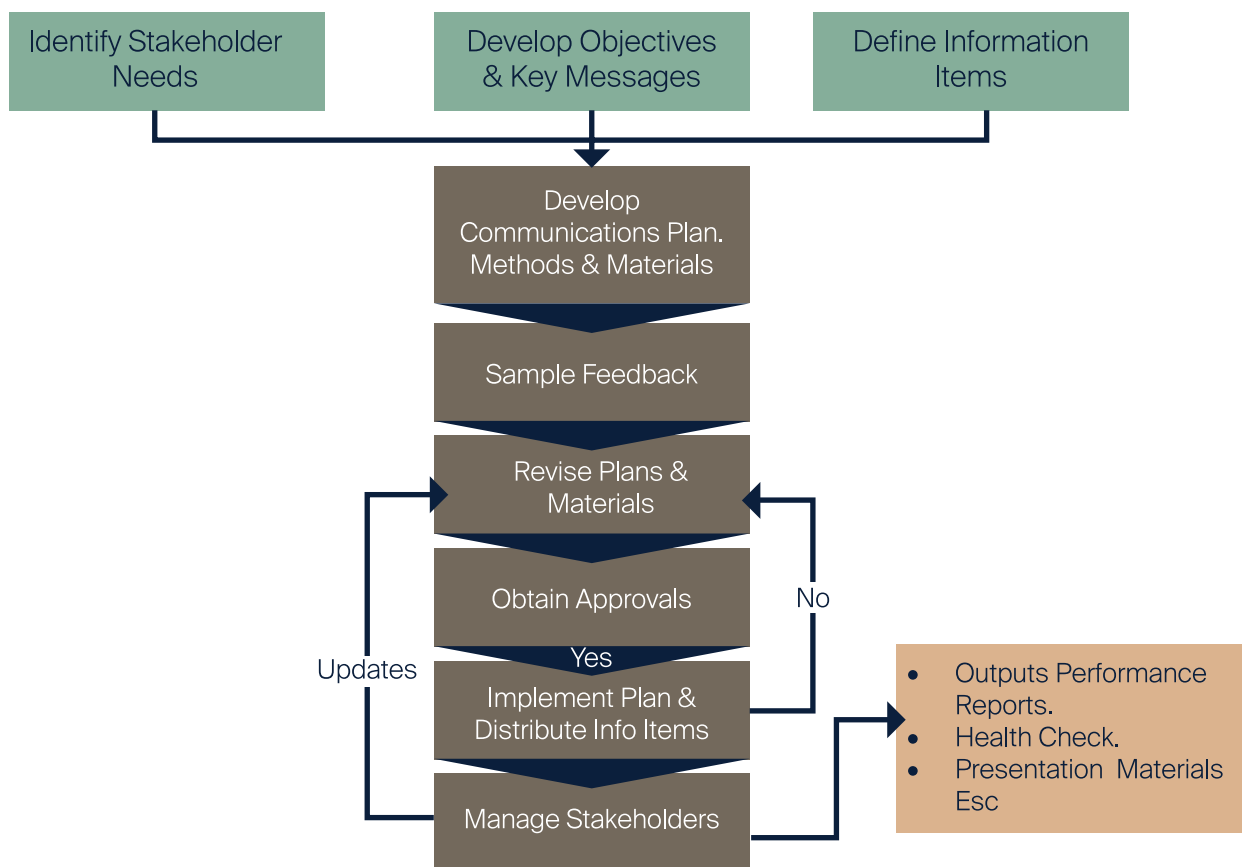


Figure 18 Communication Management Process

The tools for communications management are in the form of documents and equipment. The documentation of the project takes the form of financial input data; design and planning drawings; specifications and contracts; standards and codes; policy and procedures; scheduling and monitoring; and the reporting systems. Depending upon the project the aforementioned are generally required. All professional disciplines have their unique individual language to facilitate communications within their particular field of endeavour.

Project managers need an understanding of the language and terminology of architecture, several engineering disciplines, accounting, contract law, construction, industrial processing and the various trades.

6.6 Stakeholder management

Stakeholder engagement is the systematic identification, analysis, planning and implementation of actions designed to influence stakeholders. This process entails identifying, mapping, prioritizing and documenting all internal and external stakeholders on the project in stakeholder register to determine the best tactics for effective communication while making the best use of available resources. Stakeholder engagement helps organizations to proactively consider the needs and desires of relative stakeholders in an organization, which can foster connections, trust, confidence, and buy-in for your organization's key initiatives. When done well, stakeholder engagement can mitigate potential risks and conflicts with stakeholder groups, including uncertainty, dissatisfaction, misalignment, disengagement, and resistance to change.

A stakeholder engagement strategy identifies the needs of key groups and the Project Manager plays a vital role in ensuring those business needs are met. It includes a detailed listing of the various stakeholder needs, interests, concerns and expectations leading to the development of the required communications strategy, applicable project phases, mitigation actions, action owners, frequency of engagements and engagement parties. The objective of the stakeholder management plan is to proactively manage the risk of stakeholders that can have an impact on the project's objective. A sample project stakeholder mapping is provided Figure 19 below for reference.

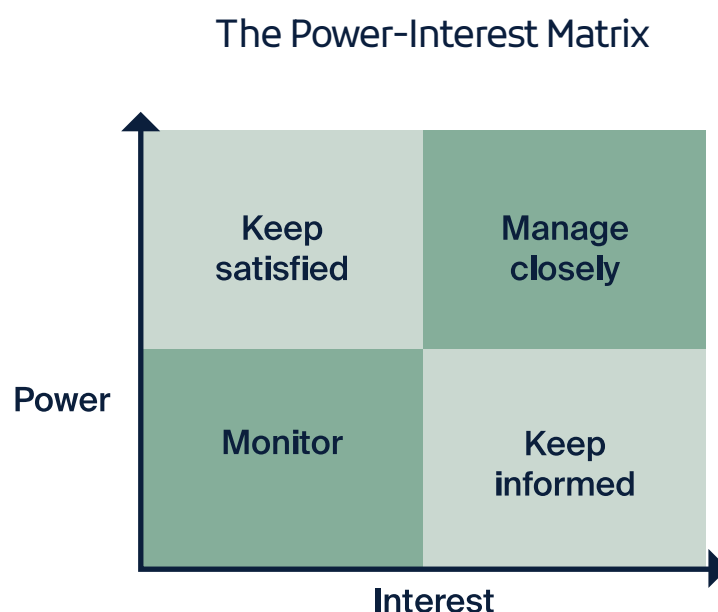


Figure 19 project stakeholder Power – Interest Matrix

Stakeholders are those who have a stake or an interest in a project or strategy undertaken by an organisation, they have certain influence on the project due to various reasons and level of interest. They may benefit from the project and so will be supportive and positive about it; conversely, the project may damage their interests or they may perceive it will have a negative outcome for them so they will seek to stop it or, at the very least, project it in a bad light. Stakeholder engagement includes implementing strategies and actions to promote productive involvement of stakeholders. Stakeholder engagement activities start before or when the project starts and continue throughout the project as shown in figure 20 below.

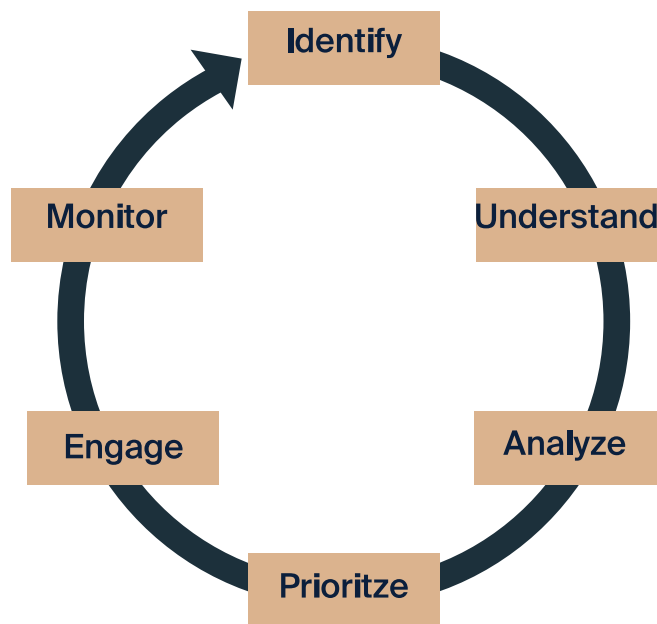


Figure 20 Navigating Effective Stakeholder Engagement

Typical stakeholders are:

- Within the same organisation
- Users of a building or facilities
- Funding bodies
- Neighbours
- Regulatory bodies
- General public
- Utility suppliers

It generally falls to the client to manage project stakeholders in the early phases of the project and later provides support to contractors during Execution Phase.

Stakeholder matrix is a project management tool used to analyse project stakeholder to determine the actions which are necessary to align their goals with the project.

The term multi headed client is often used to describe organisations where the decisions are not made by one individual but by a group. Some projects are the result of a joint venture between different organisations or development partners. This is common in the public sector, for example transport projects. For public projects or projects within large private organisations it is often the case that there are numerous internal stakeholders as well as external ones.

Stakeholder influence is often felt most keenly in the early stages of the project. The project is flexible at this stage and can be changed and stakeholders are generally aware of this. Once it starts to progress, it takes on a momentum and a power of its own and the cost of stopping it or altering its direction becomes high. Stakeholder influence often drops off remarkably when construction starts but will increase again as handover nears. Project managers should continue to manage stakeholder expectations to ensure that the completed building meets the needs of stakeholders as well as possible and is favourably accepted.

Some clients are better at managing stakeholder influence than others, and some stakeholders are easier to manage than others. On a sizeable, publicly funded project it is easy to identify 40 – 50 stakeholder groups all with different involvement, requirements, levels of power to influence the project and levels of interest in doing so. This is a very complex situation to manage.

Internal and External Stakeholders

Internal Stakeholders:

There are broadly two groups of project stakeholders, those internal and those external to the client organisation. The type most usually recognised are the external stakeholders, however the management of internal stakeholders is often more problematic. In construction projects it is often difficult to identify who actually is the client, there may be a nominated single point of contact, but this person is not really the 'client' just the representative of the client organisation. Very often it is the case that this person has the responsibility of juggling a whole range of different requirements within the client organisation and as a result they will be subject to many influences which will may well affect the project as change. Within the client organisation there will be a whole range of individuals with very different 'stakes' in the project, unless the nominated client representative takes a very strong line they will succeed in influencing the course of the project.

The client organisation is made up of a whole range of individuals with differing wants and needs who make up a 'multi headed' client. In these situations, the decision-making process becomes complex. Questions cannot be answered directly by the nominated client single point of contact. That single point of contact must negotiate with the various other stakeholders within the client organisation in order to get an answer.

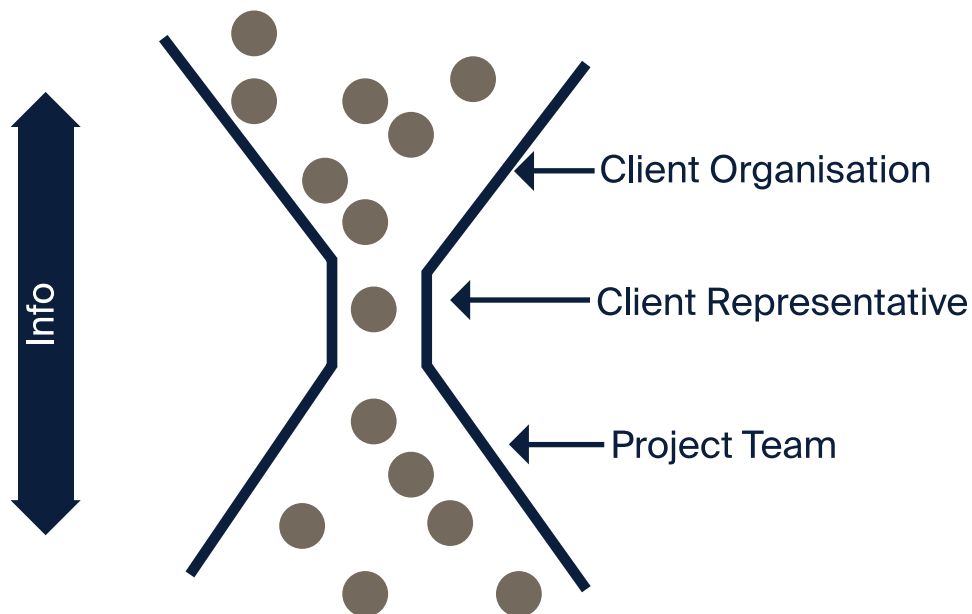


Figure 21 Navigating Effective Stakeholder Engagement

Generally, all project information passes from the various members of the client organisation via the client representative and vice versa. The client representative acts as a filter.

Internal stakeholders could be anyone within the organisation. Most commonly, they are the eventual users of the project, but they could also be the heads of marketing, IT or human resources, other employees, trade unions and so on. All have a stake in the project, and all can affect it, directly or by influence.

External Stakeholders:

External stakeholders are the individuals or organisations who are not part of the client organisation but nevertheless have an interest in the project. They are perhaps the stakeholder groups most readily recognised. For publicly funded projects the number of stakeholders who can be identified is high. These generally consist of:

Funders, whether this be a government department, grant provider or private sector partner.

Users, whether these be passengers for a transport project or visitors for a museum.

Regulatory authorities. Most commonly the planning authorities, but also specialist regulatory authorities for example those involved in rail projects.

Those affected, who may be neighbours or those working or living nearby.

The press and media are another significant group who can greatly influence perception of the project and its perceived, and in some cases actual, success.

6.7 Contract and Procurement Management

It encompasses the evaluation, selection, and creation of formal contractual agreements as well as managing the company's ongoing supplier relationships. Procurement is a complex discipline spanning many interrelated activities. For that reason, the contracting and procurement management involves clear value drivers and factors to be selected for assessing the method of contracting out products and services so that they are aligned with the project objectives. The contract and procurement management shall also strive to achieve competitive tendering considering the project lifecycle costs. Besides, maximising the use of NLCO products and services and achieve sustainable development. Refer to Appendix N- Contract Closeout Procedure.

7. APPENDICES

[Appendix A – Project Lifecycle](#)

[Appendix B - Development projects matrix form](#)

[Appendix C - Projects Cost Estimate Procedure](#)

[Appendix D – Project Framing Workshop Template](#)

[Appendix E - Project Charter Template](#)

[Appendix F - Risk Register Template](#)

[Appendix G - Project Quality Plan Guideline](#)

[Appendix H – Value Engineering Guideline](#)

[Appendix I - Project Lessons Learned Procedure](#)

[Appendix J - Government Projects KPI Procedures](#)

[Appendix K - National Local Content Office Process](#)

[Appendix L - WBS Procedure](#)

[Appendix M – Project Lifecycle RACI](#)

[Appendix N - Contract Closeout Procedure](#)

[Appendix O \(Project Management of Change](#)

