



EXPLO National Manual of Assets and Facilities Management

Volume 15, Chapter 3

Budget Principles

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Budget Principles

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1.0 PURPOSE

A well-conceived budget principle provides operational / financial predictability, improves decision making processes, optimizes the use of funds/expenditure with enhanced assets operational and financial performance.

Budget Procedure should address the following through its core elements:

- Assets Capital Expenditures (CAPEX) and Operational Expenditures (OPEX) for budgetary requirements over a defined fiscal year
- Funds requirement
- Approval process
- Budget / actual analysis
- Performance management through KPIs

Robust preparation of budget principles process enhances transparency and accuracy to decision making and provides Entity and Government as a whole to prioritize the CAPEX and OPEX based on strategic, Socio economical and other criteria.

2.0 SCOPE

In this document, specific minimum requirements with general specifications, guidelines and workflow processes for the preparation, assessment, development and approval of CAPEX (Capital Expenditure)/ Operational Expenditure (OPEX) will be discussed. These are presented thoroughly for the Asset Managers to use while preparing their Assets, Asset Management and Asset Management System annual Budget.

This procedure will help maintenance teams to gather information on the O&M requirements including CAPEX and OPEX classification. This will help in governance and operational excellence when used by Maintenance Contractors and internal technicians in close coordination with Asset Maintenance and Financial Management teams.

Following this document will help ensure that Budget Procedure is:

- Fit for purpose and based on good practice, while translating a realistic and justified structure to meet the Entity's set policy, scope and objectives for the asset boundary
- Consistent across the Entity by being applicable to all disciplines of assets, asset management and asset management system expenditure's type (CAPEX / OPEX)
- Effective at communicating information, data, and statuses
- Responsive of deviation from normal day-to-day activities with any unexpected work activities due to contingencies or emergency cases.

This section collates information from several interrelated procedures contained in the National Manual of Assets and Facilities Management (NMA&FM) Volume 2, 3, 4 and 15 – Asset Management, Condition, Assessment, Financial Planning and Performance Management.

3.0 DEFINITIONS

Term	Definition
Asset	An item, thing or Entity that has potential, or actual value to an organization. The value will vary between different organizations and their stakeholders, and can be tangible or intangible, financial or non-financial.
Asset Lifecycle	The cycle of activities that an asset (or facility) goes through while it remains an identity as a particular asset i.e. from planning and design to decommissioning or disposal
Asset Management	Asset Management is the coordinated activity of an organization to realize value from assets



Term	Definition
Asset Register	An Asset register is a list of the Assets owned by an Entity. It contains relevant details about each Asset. The register can identify the location, description, value and age of the Asset
CAPEX	Capital Expenditure – Financial resources used to procure new Assets
Corrective Action	Action to eliminate the cause of a nonconformity and to prevent recurrence
Facilities Management (FM)	Organizational function which integrates people, place, and process within the built environment with the purpose of improving the quality of life of the people and the productivity of the core business
Facility	An environment built, installed, or established to serve an organization in the delivery of its operational objective. This is also a generic term to describe a specific building, a group of buildings on the same site, and/or a site itself, which is used to provide an overall function, for example, a school, a research establishment, a hospital complex, a training complex, a university campus
O&M	Operations & Maintenance
OPEX	Operating Expenditure – Financial Resources used to Operate and Maintain existing Assets
VRO	Vision Realized Office, enacted by Saudi Government to realize Vision 2030.

4.0 REFERENCES

- The International Organization for Standardization (ISO) 55000/1/2
- Royal Institute of Chartered Surveyors (RICS) Property Asset Management
- RICS New Rules of Measurement (NRM) 3
- British Standard (BS) 7543 Guide to Durability of Buildings and Building Components
- National Manual for Assets & Facilities Management – Volume 3: Condition Assessment
- National Manual for Assets & Facilities Management – Volume 4 Chapter 3: Cost Indices
- National Manual for Assets & Facilities Management – Volume 4 Chapter 2: Life Cycle Costing
- National Manual for Assets & Facilities Management – Volume 15 Chapter 2: Key Performance Indicators

5.0 RESPONSIBILITIES

Role	Description
Asset Management Team of Entity	Team responsible for maintaining records of the asset's condition and systems being maintained
Operations Team	The team responsible for taking on operational ownership of the repaired, replaced, altered, or extended assets or systems
Entity	• Prepare plans for CA including frequency • Ensure that CA is aligned with the Government Regulations and the details laid out in the National Manual of Assets & Facilities Management (NMA&FM) • Identify or source the appropriate resources to carry out the exercise • Train or brief (whichever is more appropriate depending on the resources selected) the selected resources to ensure uniformity across all Asset categories and conformity to the NMA&FM • Liaise with the selected resource to ensure effective and efficient program, including required shutdowns and possible access requirements • Manage and oversee the delivery of the CA activity according to the agreed strategy and plans



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	- Assist in the compilation of the CA Report, particularly in the Prioritization of Assets and possible future requirements for the use of Assets - Plan and implement recommendations established by the CA Report
Service Delivery Team	- Understand, develop, and prepare Asset Management System requirements to undertake the Policy Development, Scenario modeling and cope with the complexity of Work in management stability for each entity - Provide & train competent and Authorized personnel to empower and steward champions to support the implementation of Asset Management System design - Follow agreed procedures and commit to project timelines - Carry out job risk assessments, support development of methods and work statement and support Risk Assessment Management System RAMS (Risk Assessment & Method Statement) across the various industry verticals - Provide a detailed report and advise based on facts and evidence in collaboration with the Entity - Prepare detailed assessment of OPEX and CAPEX options, including detailed listing, cross entity collaboration, decision making by using
Cost Estimation Team	Provide accurate and reliable cost estimation for all options
Finance Team	- Carry out detailed financial analysis for all options - Provide detailed report for the financial analysis with assumptions and methodologies used to arrive at the financial decision

6.0 PROCESS

This process covers section 4.3.1 Budget Principle of Volume – 4 “Financial Planning”.

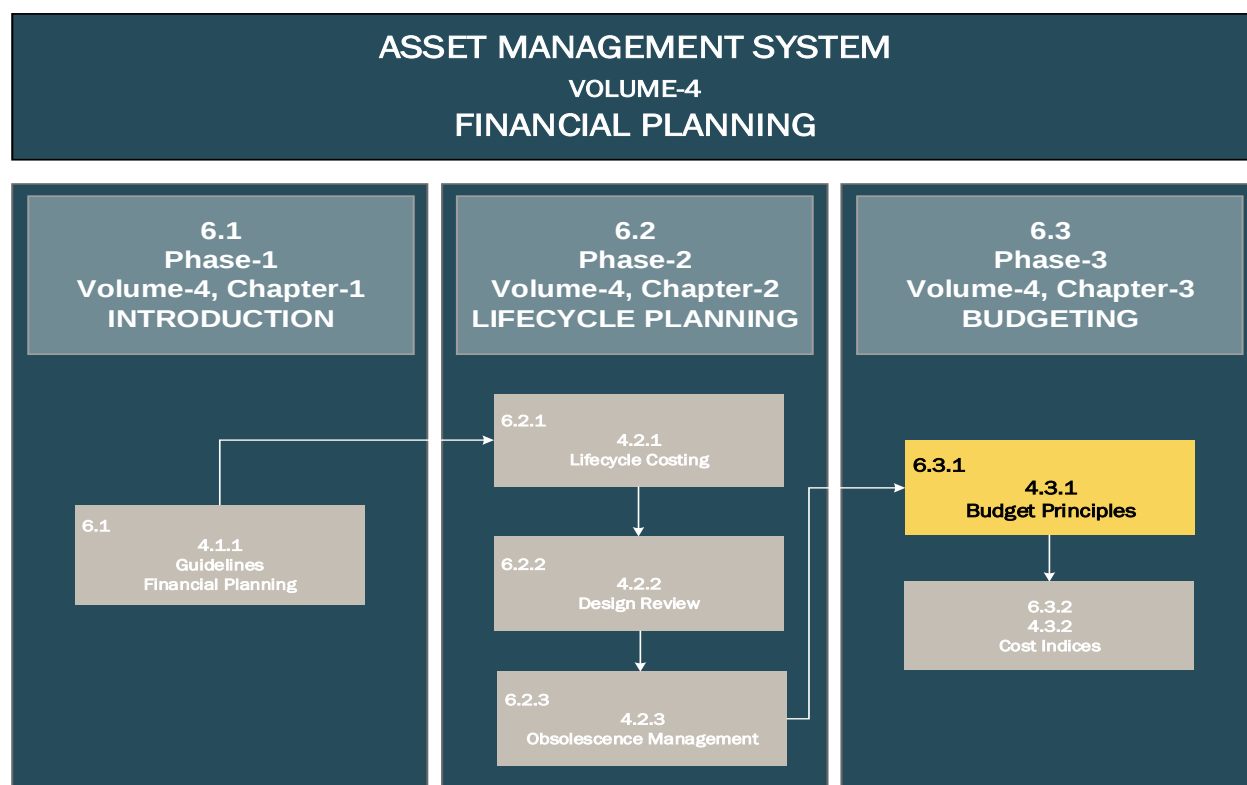


Figure 1 - Asset Management System



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In order to conform with requirements of the Ministry of Finance, the budgetary cycle should start at the beginning of the Fiscal year. There are several stages to implementation of budgets from the initial planning phase to approval of the budgets.

Budget process for National Assets starts at the Government level and goes through several gates before its final approval. However, in our context this document will focus on OPEX and CAPEX budgetary process at Entity level (Figure 2 – Budget Process Snapshot).

Following are the key elements of budgeting process:

- **Define Strategic CAPEX and OPEX Plan**
 - Establishment of Entity's objectives, goals, business models and specific limitations
- **Establish KPIs and define accountabilities**
 - Set up of KPIs that maintain focus on the key value drivers; are balanced; between leading and lagging indicators
 - Identification of individuals and divisions/departments responsible for each indicator
- **Create Realistic CAPEX / OPEX Budgets**
 - Determination of achievable yet challenging goals, linked to budgets and asset management plan
 - Establish long term CAPEX and OPEX budgets and plan 5-15 years
 - Establish short term budgets 1-5 years
 - Understand resources required for achieving short term goals (ERP and resources)
- **Track Performance Efficiency**
 - Standardization of data collection and report production process
 - Design of report formats
 - Establishment of mechanism to track progress of improvement actions
- **Hold robust performance dialogues**
 - Agreement on Entity's meeting schedule (Monthly, Quarterly and Annually)
 - Meeting agendas and attendees
 - Focus on reduction of information sharing and focus on corrective actions
- **Ensure actions and rewards**
 - Establish critical link between business performance process and department/people management



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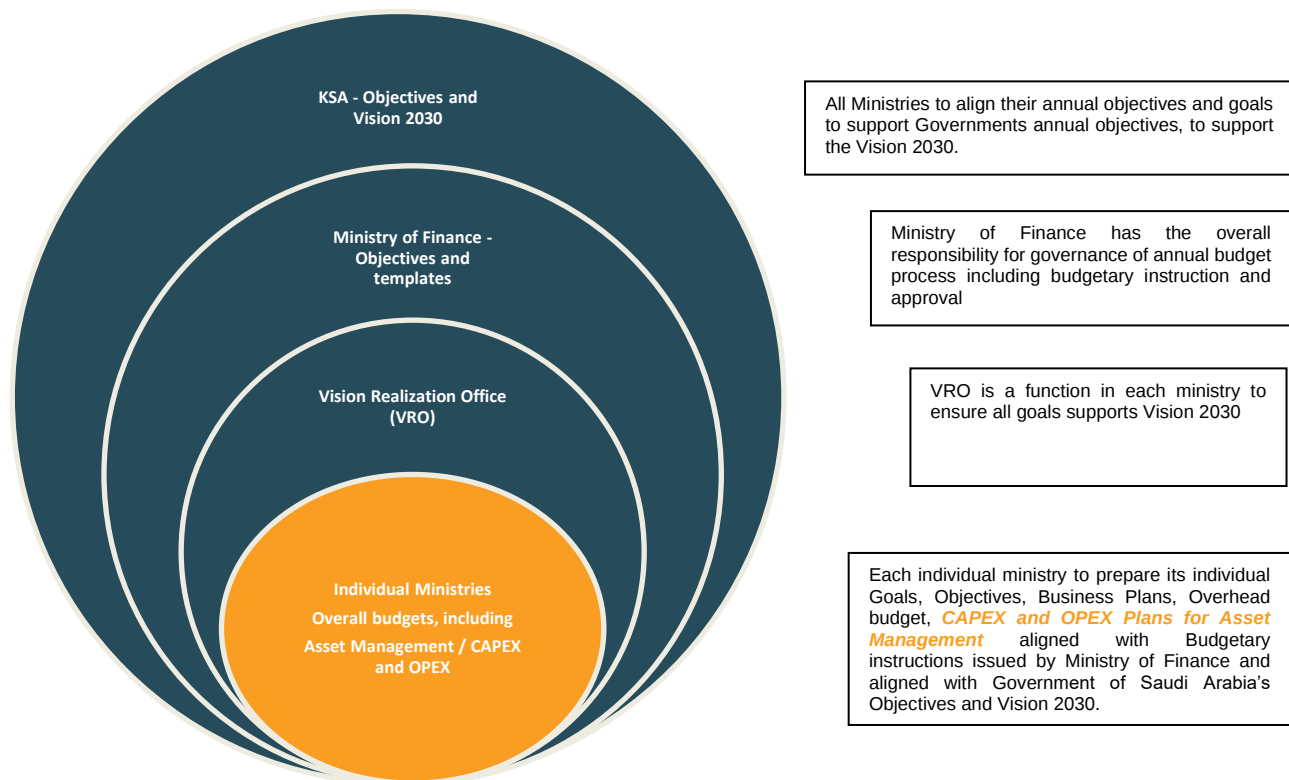


Figure 2 - Budgets Process Snapshot

6.1 Operation Expenditure (OPEX) Process:

The Operation Expenditure (OPEX) development is a process that is recurring every fiscal year and subject to yearly revision if required upon approval of an Excellency Level. This process marks the first step of fund approval to ensure all expenses are thoroughly assessed from all aspects of economics, operation improvement, compliance, qualitative and quantitative benefits.

The objective is to validate that the expenditure has a positive impact on the entity's portfolio in the short and long term. This process has been prepared to ensure that all OPEX developed by Entities for funding, have been thoroughly assessed by a consultative, integrated, multi-disciplinary and 'place-based' (i.e. site specific) planning process, prior to any submission for funding. Only once funds have been approved upon completion of this process, will funding be granted. The OPEX development workflow is shown in Figure 3, based on gated approach:

- **Primary Gate 1** is the business case preparation and assessment; once this stage is complete moves to next Gate.
- **Primary Gate 2** is looking for synergize, cost estimation and preparation of complete documentation to move to next Gate.
- **Primary Gate 3** is for approval and execution of the same.



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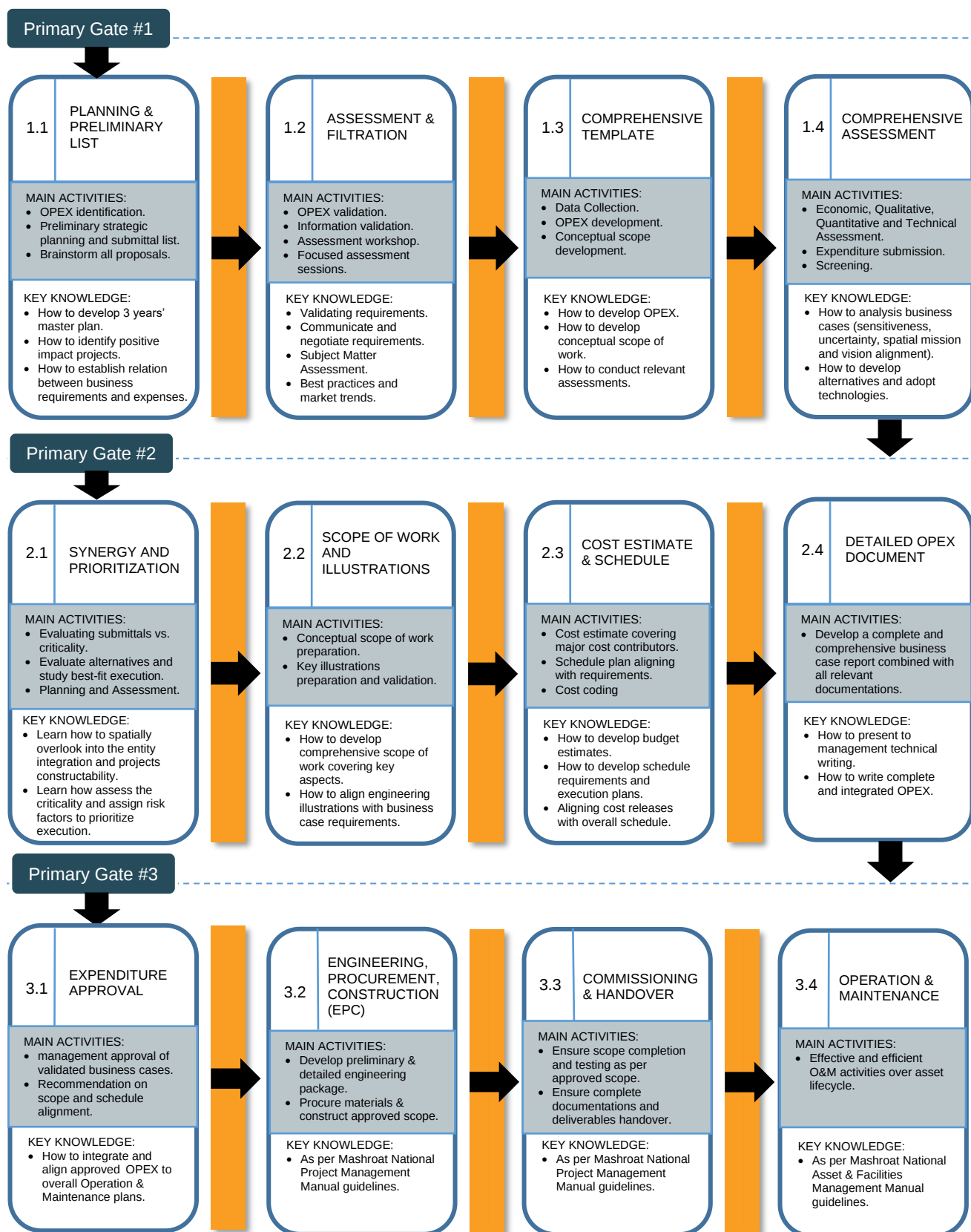


Figure 3 Business Case Expenditure development process



This process driven approach enables the following key benefits:

- Early and continuous alignment of Entity initiatives with broader strategic objectives.
- Improved understanding of the OPEX allocation.
- Continuous enhancement of the Operation & Maintenance methodologies.
- Early identification of potential expenditure focus areas.
- Establishment of an Outline Strategic OPEX to assist with project feasibility assessment.
- Preparation of more coordinated initiatives, with increased levels of inter-disciplinary and cross sectoral consensus.
- Improved levels of project prioritization within an Entity's portfolio of investment initiatives.
- Improved alignment of annual Entity OPEX with overall budget.

In order to maintain the desired level of service at the lowest life cycle cost of an asset, a comprehensive Asset Management System in accordance to Mashroat National Manual of Assets and Facilities Management shall be in place. The overall framework of the Asset Management System is driven by decisions about how and when to operate, maintain, rehabilitate and retire the asset. It is important that Entities prior to allocation of any OPEX to develop a comprehensive medium-term portfolio. This portfolio will guide the early identification of potential expenses, screening, validation, cross-sectoral integration and prioritization.

Outlined below are key tasks in the process of OPEX Strategic Planning and Approval in accordance to the process shown in Figure 3.

6.1.1 Preliminary OPEX list:

The objective of this task is to identify the executive details of each potential OPEX for the consecutive year in the O&M business plan. Identifying asset demands and establishing potential OPEX is undertaken by filling the Preliminary OPEX template (Figure 3 – Preliminary OPEX template). The template must include all available details to support the next stage of the process.

Subject	Entity/ Location	Category	Scope	Alternative	Part of an Identified Program	Cost Estimate (SAR)	Required Schedule	Supporting Documents

Figure 3 – Preliminary OPEX template

In order to ensure the template is filled correctly, below must be taken into considerations:

- **Subject:** The title should be specific to identify the objective and location where the expenditure is proposed.
- **Entity/Location:** This section should identify the details of ownership, entity, organization, business line and location of which the proposed expenditure belongs to.
- **Category:** The classification should be identified under which the proposed potential expenditure is targeting. This includes economic growth, business continuity, business improvement, compliance (safety, standards, regulations, etc.), urgency, etc.
- **Scope:** This section should identify the major scope components of the proposed expenditure which contributes mainly to the cost and it should recognize any interference with existing assets, projects or programs.
- **Alternative:** The proposal should identify two main focus points, the result of Do Nothing alternative and a different alternative which fulfills the scope but different from the proposed original scope.
- **Part of an Identified Program:** The template should identify the associated program under which this expenditure will serve or integrate its operation with including Vision Realization Program, Master Plan, 5 Years Portfolio Program, Operation & Maintenance Program, etc.
- **Cost Estimate:** A cost estimate of major components under the scope of the proposed expenditure must be available including major material quotations, Material Take-off, etc.



- **Required Schedule:** The template must include the required timeline to execute the proposed scope and identify the impact of delay if any.

6.1.2 OPEX Assessment & Filtration:

After the Preliminary OPEX Development stage above, a filtration workshop with participation of management level decision makers, technical Subject Matter Experts, Financial and Economic experts in addition to Project Management Team must be conducted. The objective of the Business Case Assessment & Filtration stage is to assess the proposed potential expenditures technically, practically, financially and spatially to ensure that they align with the overall long-term missions and goals of the entity. Additionally, the filtration stage should conclude by allowing the potentially proposed business cases to proceed to the comprehensive assessment prior to final approval, dropping unsupported business cases or conditionally allowing the in-completed expenditure to proceed to the comprehensive assessment for further evaluation. The outcome of this phase is a confirmed list of Initial OPEX Portfolio (Figure 4 – OPEX Portfolio) which will pass through the comprehensive assessment phase.

SN	OPEX Title	Details Completed (YES / NO)	Decision	Workshop Recommendations
			1- Provisionally Approved pending assessment outcomes. 2- Rejected /Dropped. 3- Accepted to proceed to assessment.	

Figure 4 – OPEX Portfolio

6.1.3 Comprehensive OPEX Template Preparation:

The identification of required assessment of each OPEX depends heavily on how much data is available to develop a suitable action plan. This stage is critical as its outcomes will allow the next stage of conducting the comprehensive assessment to take place. The template in (Figure 5 – Comprehensive OPEX Template Preparation) ensures this assessment stage have all required details to investigate the proposed OPEX validity.



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COMPREHENSIVE OPEX TEMPLATE PREPARATION	
OPEX Title:	Unique Asset ID:
Entity:	Capital Cost:
Organization	NBV:
Location:	Total OPEX incurred to-date:
Cost Estimate	This request:
Schedule:	Total OPEX with this request:
Prepared by:	Code: Level 1
Reviewed by:	Code: Level 2
Approved by:	Code: Level 3 & 4
Justification Category	
Primary	Justification category which most effectively explains the business rational for the proposed OPEX.
Secondary	Justification category which most effectively explains other business rational for the proposed OPEX.
Justification Narrative	Write-up the executive summary of the proposed scope of the OPEX.
Supporting Documents / studies	Brief description of information attached to support the OPEX for approval
Capital Item Details	
Title	Describe in a concise manner the primary benefits and geographical location.
Objective	Accurately summarize what would be physically provided and accomplished in relation to the overall objective of the entity.
Current Situation / Problem	Describe the present situation by explaining the importance and need in addition to providing a credible basis for the stated justification
Conceptual scoping write-up	Provide accurate and overall write-up of the proposed OPEX scope covering the major cost contributors
Priority	Provide priority level and reasons of urgency with credible justification
Required time of completion	Provide required execution schedule and impact of deferral to the overall entity master plan
Quantitative Benefits	
Qualitative Benefits	
Alternatives & Do-Nothing Impact	Provide similar alternative of the proposed scope and facts of what will (or will not) happen if the OPEX is not undertaken in addition to supporting evidence of the claim
Manpower Impact	Provide preliminary estimate of additional manpower required, displaced manpower or No Impact result of the proposed OPEX
Health, Safety and Environmental Impact	Brief description of the anticipated HSE impact in quantitative way for both approving or rejecting the OPEX
Requirements and/or Recommendation	
Technical	List required studies to which the OPEX needs to validate its desired outcome. Also state final recommendations in reference to the comprehensive assessment completed
Financial	
Managerial	
Approval	
Final Approval and Recommendation	Provide recommendations of proceeding forward (proceed to study, drop/reject, provisional approval pending assessment, etc.)

Figure 5 – Comprehensive OPEX Template Preparation



6.1.4 Comprehensive OPEX Assessment:

This phase of the Comprehensive OPEX Assessment Process is where the majority of the work will be undertaken by the Entity and its O&M. This phase is critical in order to convert proposed OPEX with limited and/or uncertain information into a Draft O&M Portfolio of Projects that have been adequately scrutinized for potential risks and assessed for strategic alignment (i.e. in line with National and Entity objectives). The comprehensive assessment phase helps to identify potential benefits of the submitted OPEX and allow management to decide easily on its approval. This exercise includes a diverse number of Technical, Financial, Quantitative and Qualitative assessments.

This task is the first step in the detailed preparation of the Strategic Assessment. This assessment provides required justification for the need to invest and forms the first significant deliverable of the Strategic Plans. The initial assessment must identify key stakeholders and analyze their interest. Moreover, a series of workshops to complete a comprehensive assessment of each OPEX submittal shall focus on validity, root-cause of the problem, compliance causes, analysis of why this OPEX is required, alignment with entity strategic context and alignment to existing policies or strategies, and to identify and agree investment drivers (problems, improvements and opportunities). Also, the Risk Potential Assessment exercise is an integrated part of this phase to examines investment risk at an early stage. This assessment evaluates the re-occurrence probability and should explore future investment opportunity or avoidance. The submitted OPEX shall cover the main following focus areas:

- Quantitative (Financial/Economical) assessment:
 - Profit.
 - Net Present Value (NPV) & Internal Rate of Return (IRR).
 - Accounting Rate of Return (ARR).
 - Adjusted Present Value (APV).
 - Total Cost of Ownership (TCO).
 - Real Option Analysis.
 - Demand and forecast.
 - Etc.
- Qualitative assessment:
 - Assessment of new technology implementation on Operation and Maintenance.
 - Numerical impact assessment of increased staff Productivity and morale.
 - Reduced maintenance costs due to implementation of more efficient industry standard solution.
 - Time savings due to operation improvement and optimization.
 - Potentials to implement future plans without further investment.
 - Relationship improvement with contractors to reduce expenditures.
 - Anticipating and dealing with future risks.
 - Sensitivity and scenario analysis.
 - Plans and Targets analysis.
 - Etc.
- Technical assessment:
 - OPEX must be technically assessed and approved by a Subject-Matter-Expert (SME) to validate the necessity and applicability.
 - Special studies to support the OPEX requiring external (3rd party) specialists must be completed and provides recommendation of implementation.
 - Analysis of failure data, historical data, evidence of safety incidents, etc.
 - Review and assessment of Life-Cycle Management of the asset.
 - Benchmarking the data.
 - Value Engineering, Constructability and Risk Assessments.
- Compliance and Continuity:
 - Assessment of regulations, directives, policies and standards.
 - Demonstration of non-compliance in existing asset.
 - Demonstration that the OPEX will provide compliance.
 - Consequences of non-compliance.
 - Risk analysis of current and after OPEX completion.



Once the assessment of all filtered OPEX items is complete, final list of all OPEX which include all supporting documents in addition to the final recommendation must be submitted to a screening committee to ensure all requirements are fulfilled prior to the next stage.

6.1.5 Synergy & Prioritization:

The potential OPEX items are to be assessed for Cross-Sector Integration in order to ensure proposed items are well-coordinated and deliver efficiencies wherever possible. All projects that are validated to have a positive impact and pass the Comprehensive OPEX Assessment Gate Review, are to be assessed for potential synergies among the entire entity umbrella before being prioritized within the portfolio including ongoing and upcoming OPEX items. The completed final OPEX list will pass through a Cross-Divisional/Portfolio Synergies workshops to conduct an assessment and study of investigating the potentials of cooperation and collaboration between OPEX and future plans of all entity business lines. This stage will include the assessment of overall long-term business plan of the entity and all other approved OPEX. The outcomes expected is that all new potential OPEX will either be merged with other expenditures, redefined or approved for execution as a stand-alone OPEX. Additionally, a cross-sectoral integration assessment shall be conducted in details to assess opportunities of optimized execution plans among the entity including Value Engineering and Constructability workshops.

This ensures that OPEX items which the Entity envision would have been holistically prepared among the entire Entity, are based on a homogenous set of data and policies. The assessment will establish a well-coordinated effort within the entity different organizations and externally with different stakeholders and their plans to deliver an integrated cross sectoral outcome. This task establishes consistency in the use of data / projections and policy assumptions, identifies interdependencies (with other Entities), form cross-sectoral partnerships through formation of Working Groups to check for fragmentation, duplication of services, bottlenecks etc. In addition, it maximizes solution enhancement through collaborative approach to demand management across related Entities. Finally, undertaking a cross-sectoral integration assessment for each proposed project ensures potential areas of collaboration or conflict (between the different stakeholders) have been identified and addressed, and the Entity is ready to identify and confirm which item within its portfolio are suitable for potential private sector participation, if applicable.

As for Prioritization exercise, the purpose of this task is to prepare a prioritized OPEX plan of all items that were validated to have a beneficial outcome and pass the Comprehensive OPEX Assessment Gate Review for the Entity. This is achieved by using the various merit factors identified in the Risk, Benefit Cost Ratio, Social and Environmental Index, coupled with additional merit factors such as National Security / Mandatory, Regional Equity (RE) and Quick Wins (QW), with weightings assigned to each factor to inform a priority score for each OPEX. The collection of projects with the highest normalized scores, forms the Entity's prioritized OPEX plan. This task can be achieved by identifying all items that have had the most valuable impact on the entity O&M strategy utilizing Prioritization Spreadsheets to assign scores and weighting against each of merit factors (BCR, Risk, SEI, RE, QW, etc.) and calculate overall investment score for each project. Also, using the initial cost estimate and initial project schedule prepared to map projects with the highest overall investment scores on the Entity OPEX plan, ensuring the entity budget allocation is optimized and not exceeded.

Additionally, the Entity must review its existing available policy framework and clearly define its own O&M strategic goals and objectives. Strategic Goals should be outcomes based and written as a 'SMART' statement of intent (i.e. goals should be specific, measurable, achievable, relevant and time related). Strategic Objectives should clearly state what the Entity intends to do, in order to achieve its strategic goals in accordance to the approved OPEX list and schedule.

6.1.6 Preliminary Scope of Work and Illustration Preparation:

Scope of work defines the limits of the OPEX item requirements and estimating effort. All OPEX items must include a conceptual, concise and precise scope of work description which shall include:

- Project Background and Objectives.
- Overall description of the work.
- Scope and Requirements.
- Justification for the project.
- Constraints.
- Assumptions and Exclusions.



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- Inclusions/Exclusions.
- Statement to explain alignment with entity strategy, goals and mission.
- Uncertainties are investigated.
- Vendor Cost Proposal and a cost estimate of major components (+ - 40%).
- Any known issues or risk.
- Timeline.
- Pre-Design Work completed to date (or) required.
- Stakeholder review and approval.
- Relevant/governing standards, procedures, guidelines, etc.
- Available data and documents.

Generally, the OPEX item scope of work includes the following major aspects:

- **Introduction:** Include a brief description of the work, as well list of parties (Contractor, Vendor, Consultant, etc.) involved in that activity / project.
- **Purpose of the Project:** Mention the need for the project. What is the added value of this project? What is the purpose of the project including required deliverables, objectives and return on investment?
- **Scope of Work:** Include a brief scope of the work that need to be executed under this project. Also list the requirement of equipment, hardware and software. A brief description of process that will be involved to complete the work, including clear outcomes, time involved and steps to achieve that work.
- **Work Location:** Describe the work location, i.e., Office, Sites, etc. for resources including manpower, equipment and software.
- **Tasks:** In order to achieve what is included in the scope; explicitly mentioned the detailed level task to achieve the desired outcome.
- **Milestones:** Based on the work to be performed, define the milestones based on time required to complete the project. Break it down into billable hours, lump-sum, etc. Split of work between contractors, vendors and Entity should be mentioned here.
- **Deliverables:** List down detailed deliverables with defined due dates and other requirements, if any.
- **Schedule:** Include a detailed list of deliverables, responsibility matrix, i.e., work to be executed by Vendor/Contract, kick off date, design stage, review stage, development, implementation, testing, close of the project, etc.
- **Standards and Testing:** Include the industry standards in this section, if any required for this project, i.e., ISO, OSHA, and other Quality Control standards. Also highlight the testing and commissioning resources required for the project, including equipment and resources required.
- **Define Success:** Clearly stipulate the desired outcome of the project in this section.
- **Requirements:** Any other requirement for successful execution of the work, list them here. This may include certain specific qualification/ degree required of team members, including business travel requirement, IKTVA requirements and compliance criteria and Saudization training requirement.
- **Payments:** Based on the budget and cashflows of the project, list the payments related to project to ensure cash positivity is availed at all times including smooth completion of the project. Payment can be based on progress or milestone basis. Also consider other criteria for advance payment, retention/holdback and final release after completion of warranty period.
- **Other:** Any other requirement related to project, i.e., office space, taxes, health & safety, quality requirement, travel, etc., can be mentioned in this section.
- **Closure:** List here all requirements for acceptance criteria for final deliverables, including who will delivery, signatory authority and etc. This should also include site cleanup, documents archive and other closure requirements of the project.



6.1.7 Cost Estimate Preparation & Assignment of Expenditure Fiscal Year:

The OPEX cost estimate is essential at this stage especially for the major scope components in order to ensure that the strategic planning and fiscal year expenses are well organized and accounted for. Additionally, the cost estimate supports in defining the criticality of the OPEX and selection of vendors. It is used to prepare a cost baseline, which is the milestone-based point of comparison for assessing a OPEX actual cost performance. A cost estimate is a summation of all the costs involved in successfully finishing an OPEX, from inception to completion. It is important to note that preparation of a cost estimate can be developed based on comparison to similar projects executed in the past but taking into account the variables of such risky comparison. In OPEX where equipment or contract cost constitutes a substantial portion of the costs, the cost is estimated and a correlation of total project cost is used to estimate total OPEX cost based on the estimate. This methodology is to be used in process related items that have an equipment intensive cost expenditure. The Estimate Plan shall be updated to capture any changes in scope of work, estimate basis, assumptions and qualification etc.

Also, the purpose of the Initial OPEX Schedule is to develop the high-level schedule durations for delivery and establish service life of the new asset i.e. OPEX period. This information sets the overall outline duration of the intended project and provides information for use in the subsequent stages of the Planning Process. An initial schedule should be prepared at this phase. As a minimum, it should identify the total duration, major phases and high-level milestones such as completion of initial planning and specialist technical studies, tender for design, design, tender for construction, construction, testing & commissioning and handover and closeout. If the nature of OPEX is a service contract, deliverable and service level auditing must be accounted for in the schedule. Finally, it should identify major work packages / scope breakdown include all worksheets, specific information used, reference to any historical data, published industry data, metrics, indices etc., and any other document that has been used in the preparation of the estimate.

Once the cost estimates are ready, cost shall be categorized using coding structure that can help in correct allocation of cost, financial and cost analysis in future. These codes are obtained from the Cost Control department. These codes are categorized in various levels to capture specific information and for specific use, as below: (please see the Appendix for an example)

Level 1: is a set of accounting codes

Level 2: is service based and consistent with the segmentation of the public entity

Level 3 and 4: are system and asset-based

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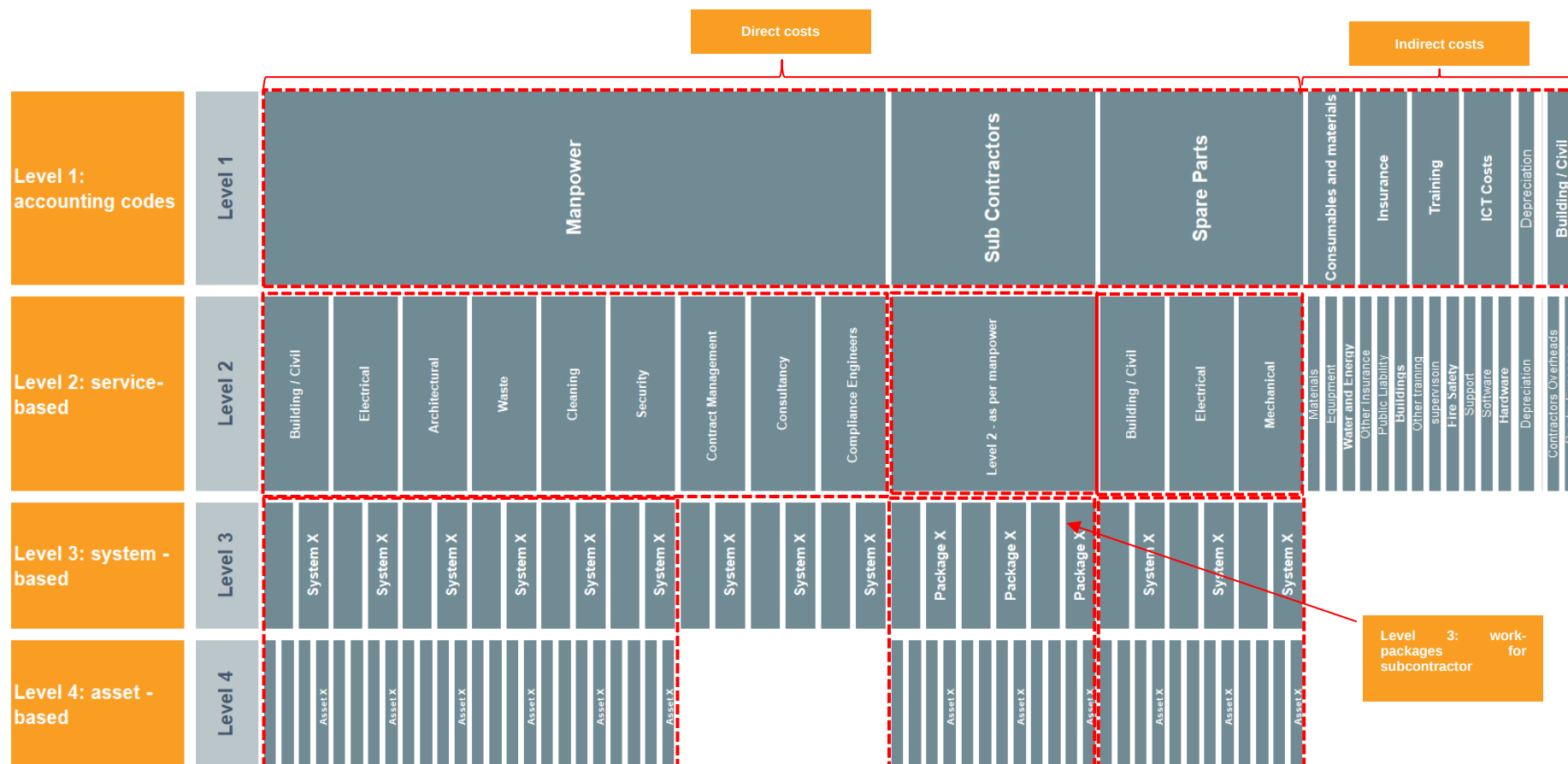


Figure 6 – O&M Cost categorization system – Example



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6.1.8 Development of the Master OPEX Document:

Once the above steps are completed, this stage involves consolidating all relevant documentations which were conducted from previous steps into one Master OPEX document which shall be used for the final review and approval by Excellency level. There must be one document per OPEX to form the final report which shall consist of the following:

- Preliminary Business Case Template.
- Comprehensive Business Case Template.
- Comprehensive Business Case Assessment studies, documentations, reports, etc.
- Preliminary Scope of Work and Drawings.
- Cost estimate package and Schedule.

6.1.9 Approval of OPEX by Excellency Level:

To ensure alignment with the entity's overall goals, missions, budget and strategic planning, a higher level of management concurrence on the findings and recommendations of the OPEX development is required, the Master OPEX document shall be reviewed and approved by:

- Deputy Excellence.
- Excellency Level.

Upon approval, the OPEX can now be submitted for fund request and then the Master OPEX shall be segregated based on schedule, priority and synergies and execution shall be conducted after a constructability session is held to plan efficient execution.

6.1.10 Engineering, Procurement, Construction (EPC):

As applicable, these activities including Engineering, Procurement and Construction after the approval of OPEX items shall follow the guidelines as set out in Mashroat's National Manual of Project Management.

6.1.11 Commissioning & Handover:

As applicable, these activities Commissioning and Handover of OPEX items after the completion of the project activities above shall follow the guidelines as set out in Mashroat's National Manual of Project Management and Assets and Facilities Management Manual.

6.1.12 Operation & Maintenance:

The activities of Operation & Maintenance (O&M) after above commissioning and Handover stage shall follow the guidelines as set out in Mashroat's National Manual of Assets and Facilities Management Manual.

6.2 Capital Expenditure (CAPEX) Process:

The Capital Expenditure (CAPEX) development is a process that mainly covers:

- Major refurbishment to an existing capital asset, that adds to economic useful life of the asset;
- New Capital investment (Derived from Entity's 5-years project portfolio planning)

For detailed process of CAPEX plans, please refer to Document No. ENT-S00-MN-000001 Rev 001.



6.3 Integration with the Entity Yearly Budgeting:

The entity is required as per Mashroat 5-year Projects Portfolio Planning Process (5YPPP) to establish, assess and submit the annual portfolio planning. This process has been prepared to ensure that all future national infrastructure projects (investment initiatives) put forward by Entities for capital funding, have been through a consultative, integrated, multi-disciplinary and 'place-based' (i.e. site specific) planning process, prior to any submission for funding. Only once funds have been approved (by the Ministry of Finance), will projects be permitted to enter the Mashroat's formal Stage Gate Process.

In order to align the requirements and establish an efficient work frame, integration of the Operation Expenditure (OPEX) with the entity's Capital Expenditure (CAPEX) is critical. Though these two processes are conducted separately, the alignment of outcome requirements and time frame are mandatory. The OPEX shall be prepared starting by forming a team of concerned O&M stakeholders, a representative from CAPEX planning and a representative from the entity Budgeting. This requirement is essential to align the OPEX development process with the overall entity budgeting and CAPEX planning. Along the development process, the representative of the CAPEX and Budgeting shall report all ongoing project to which O&M OPEX may have an interface to explore areas of optimization.

Ultimately, once the entity 5-year Projects Portfolio Planning and Yearly CAPEX are completed, a synergy exercise shall be conducted between all stakeholders to discuss every expenditure and seek areas of optimization, synergies and improvement of the expenditure allocation between OPEX and CAPEX items and subsequently submitted as Overall Entity Budget Plan to Ministry of Finance.

7.0 CONCLUSION

Budgetary process helps an entity to optimize the fund requirements, as well help in prioritizing the CAPEX and OPEX based on strategic requirements, i.e., Strategic location as identified by Government

Overall, robust budget process helps the Entity in aligning and engaging all stakeholders to achieve the common desired outcomes based on optimal performance with optimal required funding.

The provided principles above to preparing the assets budget is a core planning tool to financial requirements, it shall enlighten the Asset management team to the core important management tools to properly prepare a justified and compliant financial budget, correct budgeting shall be aligned to comfortably achieving set objectives, and to optimally meet deliverables, relieve the management from burdens of deficits or over spending, or even of embarrassing unused over budgeting. Correct budgeting ensures the availability of the operable and managed assets, further it provides the essential requirements for the acquisition of future planned to add or replace assets.



8.0 APPENDIX

Example of Coding structure

Subject	Entity/ Location	Category	Scope	Alternative	Part of an Identified Program	Cost Estimate (SAR)	Required Schedule	Supporting Documents
- New contract of HVAC services.	- MHRSD HQ Complex / Riyadh	- Business continuity.	- Carry out O&M activities and implement all maintenance strategies of all HVAC units, and change any damaged part or filters if required	- Any alternative proposals which fulfills the scope EX. In house training for implementations by HVAC SMEs	- This should identify the associated program under which this expenditure will sit. Ex. Fulfillment of O&M department requirements in delivering the FM services.	- Proposed expenditure must be provided including all cost elements. Ex. Historical cost estimation or new quotation from the market	- The required start & timeline to carry the proposed scope.	- Any document required to support the mandate of the contract and the scope.

We can use the following codes for the above example:

Overall code would be **016-0319-78-4205-30-XXX-XXXX**

Entity code: MHRSD **016**

Location: HQ Complex / Riyadh **0319**

Asset and Facilities Management Organization / Business Unit: **78**

Cost Code: Service Code for HVAC: **4205-30**

System: **XXX**

Sub-System/Activity: **XXXX**