Eastern Caribbean Climate Resilient Infrastructure Workshop
Kingstown, Saint Vincent and the Grenadines

- Project Cycle Management
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Overview

• Total Project Management
• Concept
• Pre feasibility
• Feasibility
• Preliminary Design
• Detailed Design
• Procurement

• Work Activities
• Construction
• Quality Control
• Quality Assurance
• Cost Control
• Project Risks
• Sustainability
• Monit. and Eval.
Total Project Management

is the art of directing and coordinating human and material resources throughout the life of a project by using modern management techniques to achieve predetermined objectives of:

- scope;
- cost;
- time;
- quality; and
- participant satisfaction.
Project Life Span

Project Life Span has four Phases

1. Concept - for developing project parameters
2. Development - of the plan, design and facility
3. Execution of the plan, and
4. Transfer of the completed facility over to operations

These phases may be more easily remembered by the letters C-D-E-F standing for:
Conceive, Develop, Execute and Finish
Concept

- Idea stage often put forward by user agencies, stakeholders, and political entities
- General requirement as to purpose
- General location
- General expectations with respect to architecture and functionality.
Initial Concept Review

- Engineering assessments
- User’s engagement
- Initial costing- Rough Cost estimate
- Implementation plan
- Assignment of agency responsibility
Pre-feasibility

- Required for large and complex projects
- Functional Baseline Data
- Explore possible options
- Community and user involvement
- Identification of the preferred option
Feasibility - I

- Site selection
- Site investigation
- Issue identification
- Final form and Function
- Refined costing
- Design constraints
- Detailed implementation schedule
Feasibility - II

• Environmental Impact Assessment
• Social assessment if it involves resettlements
• Other sector studies
• Decision to Proceed
• Budget availability
• Identify source of funding
Preliminary Engineering Design - I

- Preliminary design requirements about material skilled labor and equipment
- Land Acquisition
- Resettlement action plan
- Capacity of local consultants if they can do detailed engineering design
- Capacity of local contractors if they can execute the proposed work
Preliminary Engineering Design -II

- Initial site preparation
- Demolition
- Site stabilization (Slope protection)
- Implementation schedule
- Preparation of preliminary engineering design
- Revised/Updated Cost estimate
- Confirming the availability of final budget
Detailed Engineering Design

- Community review and comments
- Selection of consultants for detailed design
- Engineering review and comments
- User community review and comments
- Bill of Quantities (un priced)
- Bill of Quantities (priced)
- Operational Manual
Procurement Guiding Principles

- The need for economy and efficiency
- Cost effective
- Quality output
- All eligible bidders should be given opportunity to compete
- Encourage the interest of local contractors.
- Need for transparency in procurement process
Procurement of Civil Works and Goods

- Preparation of bidding documents
- Invite bids
- Bid security
- Prepare bid evaluation report
- Contract award
- Contract management
Procurement of Consulting Services

- Prepare Terms of Reference
- Advertise Expression of Interest (EOI)
- Evaluate EOI received and made a shortlist
- Prepare Request of Proposals
- Invite proposal in two envelopes one for technical proposal and one for financial proposals
- Prepare technical evaluation report
- Prepare combined evaluation reports.
Work Activities

- New construction
- Rehabilitation
- Upgrading
- Retrofitting
- Routine maintenance
- Periodic maintenance
- Major repairs
- Minor repairs
Construction Management

- Award contract
- Ensure Supervision arrangement
- Reach agreement on mobilization plan
- Reach agreement on work program
- Reach agreement on quality assurance plan
- Follow implementation of critical path activities
- Final completion report including as built drawings
- Final acceptance and taking over of the project
- Site inspections during defect liability period
Quality Control

*Quality Control* in the construction industry can be looked at as having the following three elements:

- To produce a construction project which satisfies the client
- To produce a construction project where quality is related to the price.
- To produce a construction project in which sufficient time is allowed to obtain the desired quality
Quality Assurance Plan

- *Quality assurance* plan (QAP) is a mechanism for ensuring that the construction process takes place within the framework of a quality management system. The QAP defines:

- Organization structure
- Tasks and duties for the staff responsible
- Provision of appropriate facilities including laboratories
- Design standards, Technical specifications and manuals
- Testing procedures, and
- Guidelines for certification of payments
Project Costs

Project costs in five categories:

- **Budgeted Cost**: Prepared at the start of the project
- **Estimated total cost**: based on progress and any changes since the budget was formed
- **Cost Committed**: material orders or subcontracts for which firm dollar amounts have been committed
- **Cost to Date**: The actual cost incurred to date
- **Over or (Under)** - Amount over or under the budget
Cost Control

[Graph showing percent completion and percent of budgeted expenditure with curves for planned expenditure, forecast expenditure, and actual expenditure.]
Project Risks

Risks can come from uncertainty in:

- financial markets
- project failures (design, development or operation)
- legal liabilities
- credit risk
- accidents
- natural causes and disasters, and
- security risk due to deliberate attack
Risk Management Strategies

The risk management strategies are:

- Transferring the risk to another party
- Avoiding the risk
- Reducing the negative effect
- Reducing probability of the risk
- Accepting some or all of the potential or actual consequences of a particular risk.
Project Sustainability

- Provide maintenance budget
- Agency responsible for Maintenance
- Evaluate capacity for carrying out maintenance
- Setup inspection schedules
- Prepare routine maintenance plan
- Prepare periodic maintenance plan
- Review maintenance report
Monitoring and Evaluation

- Carry out beneficiary’s survey
- Carry out stake holder’s surveys
- Carry out economic surveys
- Compare with performance indicators
- Compare with output indicators
- Compare with outcome indicators
- Produce M&E reports
Thank You