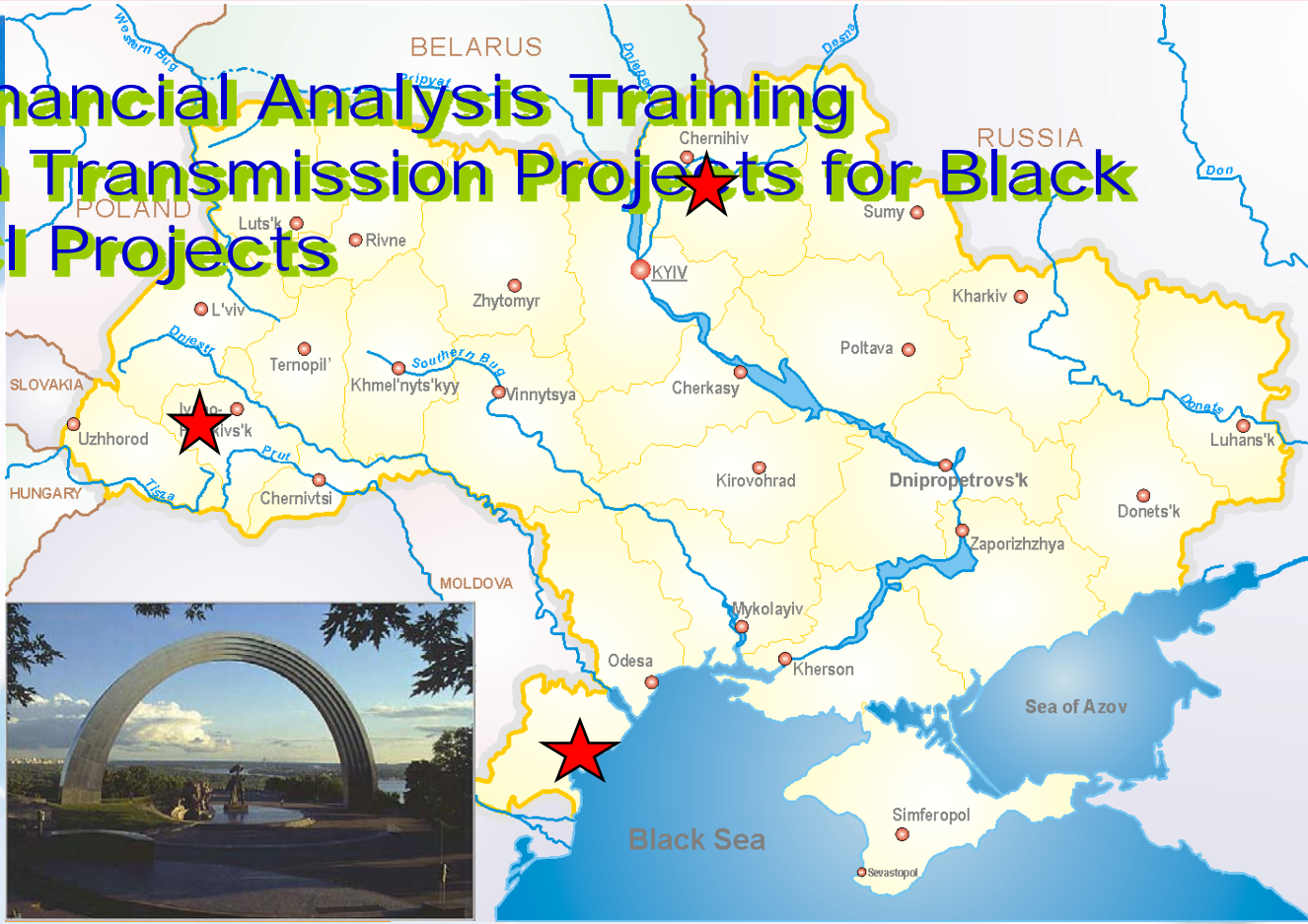


# Economic/Financial Analysis Training Workshop on Transmission Projects for Black Sea and SECI Projects

*Workshop  
8 July 2009*



## Presentation Outline

- What is A Project
- Project Delivery
- Engineering Design Cycle
- Monitoring and Evaluation
- Management for Success

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# What is a project?

A project is:

A temporary, organized human endeavor to provide a solution to an identified need.

As such, a project should have the following characteristics:

- Have a specific objective
- Have a defined beginning and end
- Be Unique
- Be bounded by schedule, budget, resources, performance, and other requirements
- Produce deliverables (end product items reports...)

# What is involved in the Project Delivery Process?

- Objectives
- Stakeholders
- Project Life Cycle
  - Project Approaches/stages/phases
  - Project Management

# Overall Project Objectives

- ***What we are trying to accomplish?***
  - Know your project
    - Why the project is necessary
    - Who will benefit from the project
    - Risks, how they will benefit
    - An estimate of both the total Budget and the resources needed for the design, construction, O&M
    - Sustainability, who will operate and maintain
  - Describe problem
    - Consider end-users needs, and
    - Be specific

# Stakeholders

- Client
- Funding Agencies /Donors
- Consultants– Specialized in studies, design, and supervision
- Construction Contractors
- Operator
- Users / Beneficiaries

# THE PROJECT LIFE CYCLE PHASES ARE:

- 1 - Defining Client's Basic Idea of Project
- 2 - Establishing the Project's Basic Requirements,
- 3 - Establishing the Feasibility of the Project
- 4 - Preparation of Engineering Designs for the Project
- 5 - Procurement of Work / Goods (Bidding Stage)
- 6 - Construction Phase of the Project
- 7 - Project Completion

# World Bank's Project Life Cycle

1. Project identification
2. Project preparation
3. Project appraisal
4. Negotiations
5. Board presentation
6. Project implementation and supervision
7. Evaluation of project

## PHASE 1

### Defining Client's Basic Idea of Project

- The Client's idea of a Project needs to be extracted in the form of basic objectives. At this stage, such extraction need only be in broad and general terms.

## PHASE 2

# Establishing the Project's Basic Requirements

- Project Concept Based on the extracted basic idea of the Project, the broad and general objectives thereof need to be further detailed into time, cost and quality objectives. These represent the output of this Phase and the input to the next Phase.

## PHASE 3

### Establishing Project Feasibility

- Using the established Project's time, cost and quality objectives, the feasibility of the project is assessed. This may be established through a
  - Pre-feasibility study and/or a
  - Feasibility study..
- As such, the results of the studies shall provide a decision-making tool as to moving on to the next step or otherwise.

## PHASE 4

### Preparation of Engineering Designs

- The preliminary design (technical solution identified in the feasibility study) is developed in this phase into a detailed engineering design for all Project components. The design shall adhere to the requirements and constraints (budgetary, time, quality) established in the feasibility study.

## PHASE 5

### Procurement of Works and Goods

- Based on the documents prepared in the design stage, bids are obtained from construction contractors and suppliers on a competitive basis. Bids are then analyzed, and the best offers selected for appointment of the related contractors and suppliers to carry out the construction and installation of the Project components.

## PHASE 6

### Project Construction

- Based on the documents prepared in the design stage, and prices obtained from construction contractors and suppliers, contractors and suppliers are appointed to carry out the construction and installation of the Project components.

## PHASE 7

### Project Completion

- In this phase, all remaining and uncompleted project components are completed and tested, Contractors and Suppliers' accounts are finalized and the project is handed over to clients.

# Benefits of a Defined Project Life Cycle

- Establishes a common framework for realizing the project
- Defines the system for managing projects, including phases and decision points
- Provides a common language for the realization process
- Institutionalizes a management system
- Improves communication, coordination, and **CONTROL**

# What is Engineering Design?

- Arrangements of things
- Has many steps
- Solves problems
- May start at different points of the design cycle

# Design Cycle

1. Know the project
2. Develop strategy
3. Gather information
4. Prepare outline design, preliminary design, and review
5. Prepare detailed design and tender documents
6. Review / evaluate design
7. Revise
8. Design complete

# Develop Strategy

You already know your project , then...

- Prepare Methodology and active plan
- Prepare resource plan
- Prepare design budget
- Highlight any comments on the TOR

# Gather information

- All development work should be based on reliable, accurate, and sufficient information
- Information should include, social, technical, environmental, economic and political factors
- Imagine-brainstorm, ask questions, research the problem, check what have others done?

# Prepare outline design, Preliminary design,

- Design parameters and criteria
- Study Technical alternatives options
- Evaluate using (Environmental, technical, economic and financial criteria)
- Decide on the preferred technical alternative

# Prepare Detailed Design Tender Documents

..... which Include

- Conditions of Contract
- Design Report
- Technical specifications
- Bill of quantities
- Drawings

# Review / evaluate design

- Draft Detailed Design
- Review period (client, donors and others )
- Comments received / discussed
- Final Design Documents

# Final Design

## Final design Should

- Work reliably
- Meet technical specifications
- Meet cost requirements
- Requires minimal maintenance
- Be safe
- Be ethical

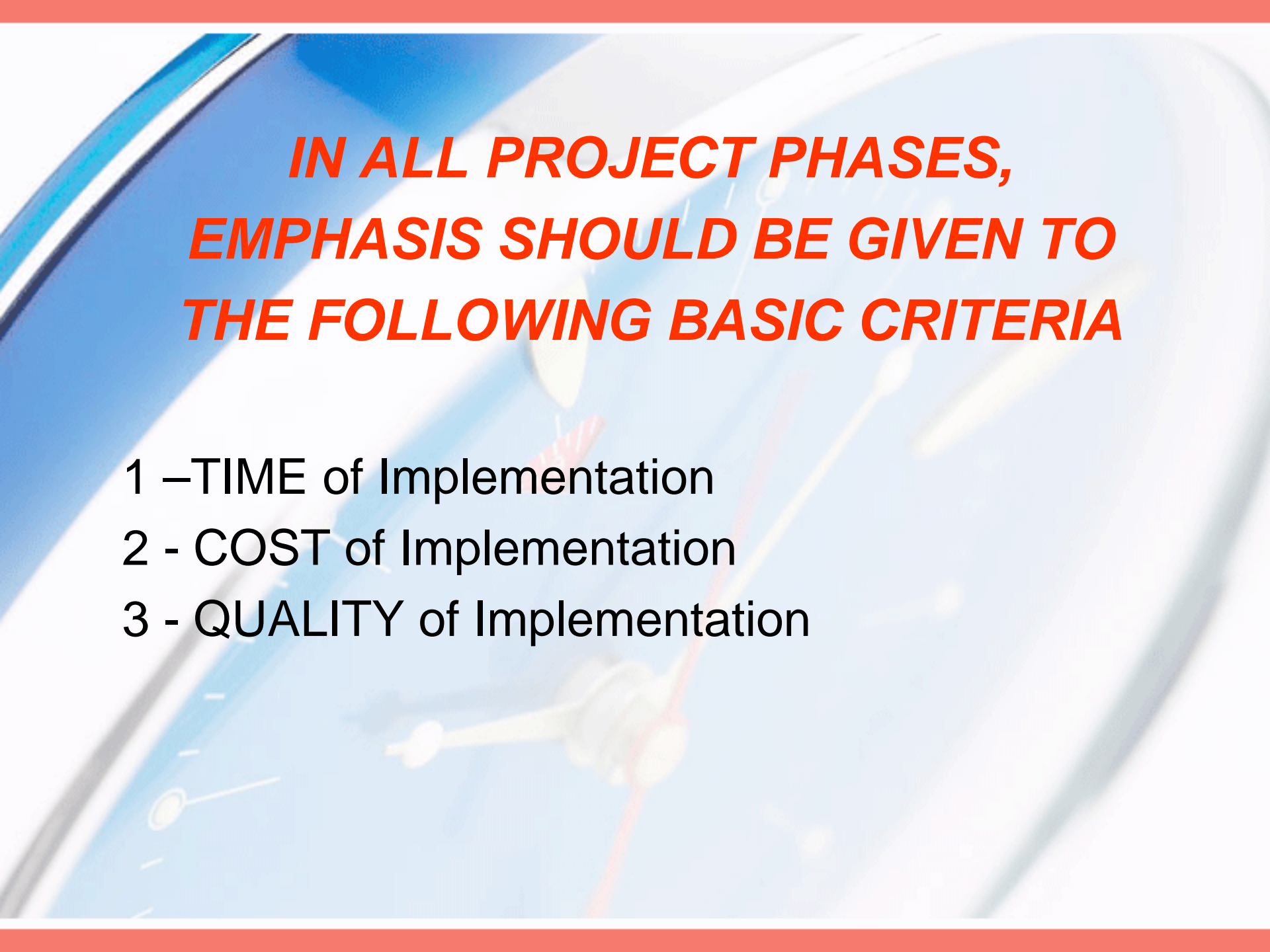
# Project Management



- If managed properly
  - Completed on time
  - Within budget
  - Meet clients needs and expectations
- If Mismanaged
  - Delayed completion
  - Budget overrun
  - Does not meet client expectations and need

# Performance measure

- ***How will we know if we have achieved our goal?***
  - evidence indicators
    - Quantities
    - Relevance
    - Etc...



***IN ALL PROJECT PHASES,  
EMPHASIS SHOULD BE GIVEN TO  
THE FOLLOWING BASIC CRITERIA***

- 1 - TIME of Implementation
- 2 - COST of Implementation
- 3 - QUALITY of Implementation

# Evidence and indicators

How do we know whether what we planned is happening, or has happened? Why?

**Indicators** help us to monitor, review and evaluate the project

**Indicators** are Targets that show progress towards achieving objectives

**Indicators** enable us know whether the project plans need adjustment, learn lessons to avoid make the same mistakes in future projects



.....Indicators should be

- Relevant
- Sufficient
- Specific
- Sensitive to the change
- Cost effective
- Available

# Periodic Review of a Project

During implementation of any project, review with clients is done at different phases with several if not all stockholders

- For study / report
  - Report outline
  - Development of design criteria and parameters
  - Completion of Draft report
- For design project
  - Ten to twenty design
  - Fifty to sixty percent design
  - Ninety percent design
- For Construction
  - Supervision of construction
- In WB project monitoring is done through Supervision missions and the Mid term review of a project

# Administering a Contract

- Select the **most appropriate person or team to administer** the contract
- Ensure that a signed copy of the contract is received from the supplier/contractor.
- Ensure that any required performance security or advance payment security is received.
- Ensure that the PMT meets any immediate obligations, advance payment, opening L/C, etc.
- Prepare a contract implementation plan, showing key milestones, such as dates for mobilization, deliveries or completion of certain deliverables or sections of work, and the implementing agency's obligations, such as providing access to a works site, payment or approval of reports.

# Project Manager Qualifications

A Project Manager / PMT Director/ Program Manager/  
Team Leader /should:

1. Understand the project: Clarify problems and project objectives
2. Structure the organization, Clarify organizational relationships and roles; Recruit the team.
3. Build the team: Develop individuals into a cohesive team
4. Analyze the context, Determine the outside factors and actors that might influence or be influenced by the project
5. Prepare the work breakdown structure: Responsibility Matrix, and Master. Summary Schedule, Organize all project deliverables and components hierarchically

# Project Manager Should...

6. Plan and schedule: Prepare detailed activity-based schedule, Identify dependencies, Allocate resources to activities
7. Design control and reporting systems: Time, Cost, Resources, and Quality), Prepare tracking and reporting systems for scope changes, progress, and expenditures
8. Organize procurement: Prepare for letting and managing contracts, Procure services, equipment, and works
9. Execute and control the work: Begin work on deliverables, Track and control progress
10. Complete the project: Ensure completion of commitments of all parties involved, Turn control over to clients, supervision/operations personnel

# ROLES & RESPONSIBILITIES IN PROCUREMENT PROCESS

