

# PROJECT MANAGEMENT FOR EPC CONTRACTS

## INTRODUCTION | >>>>

Project Management for Engineering and Construction presents the principles and techniques of managing engineering and construction projects from the owner's study, through design and construction to completion. This workshop integrates the basic steps that are used to manage a project: Project Scope Definition, Budgeting, Planning and Scheduling, Project Tracking, and Project Close Out. Numerous exercises are included and discussed throughout this workshop to provide guidelines for management of the three basic components of a project, scope, budget, and schedule. This workshop presents the principles and techniques of managing engineering and construction projects from the original plan, through design and construction, to completion. It emphasizes project management during the early stages of project development because the ability to influence the quality, cost, and schedule of a project can best be achieved during the early stages of development.

## OBJECTIVES OF THIS WORKSHOP | >>>>

Regardless of the method that is used to handle a project, the management of a project generally follows these steps:

- Step 1. Project Definition (to meet the needs of the end user) Conceptual configurations and components to meet the intended use
- Step 2. Project Scope (to meet the project definition) Define the work that must be accomplished
- Step 3. Project Budgeting (to match the project definition and scope) Define the owner's permissible budget
- Step 4. Project Planning (the strategy to accomplish the work) Identify the tasks required to accomplish the work
- Step 5. Project Scheduling (the product of scope, budgeting and planning) Arrange and schedule activities in a logical sequence
- Step 6. Project Tracking (to ensure the project is progressing as planned) Measure work, time, and costs that are expended  
Compare "actual" to "planned" work, time, & cost
- Step 7. Project Close-out (final completion to ensure owner satisfaction) Turn over the project to the owner

## PRESENTER | >>>>

**Dr. Jamal F. AlBahar, PMP, AVS** (Registered Arbitrator Dubai, U.A.E. and Kuwait - Associate Value Specialist, SAVE, USA)

Active Member: PMI, CMAA, AACE, AAA, PMA, SAVE, CSI.

President, PROMIS- Project Management Engineering Systems

Dr. Al Bahar, is a regional expert in project management applications and a well recognized consultant in construction contracts and claims analysis. Dr. AlBahar is a frequent regional and international speaker on subjects related to project management, construction contracts, tendering procedures, claims analysis/evaluation, arbitration, and value engineering. Dr. AlBahar has conducted over 500 public and in-house training courses in the last 20 years on subjects related to contracts, claims analysis and pricing, project management, value engineering, budgeting and cost estimating, and effective project administrative procedures. Dr. AlBahar is a registered arbitrator in Kuwait, Bahrain and the U.A.E.

## PROGRAM | >>>>

### DAY ONE

- **INTRODUCTION**
  - Responsibilities of Parties
  - Key concepts of Project Management
  - Role of the Project Manager
- **PROJECT INITIATION/PROJECT SCOPE**
  - Contractual Arrangements
  - Phases of a Project
  - Owner's Study - Needs and Project Objectives
  - Project Scope Definition
- **PROJECT BUDGETING**
  - Development of Project Estimates
  - Levels of Accuracy
  - Owner's Estimate for Budgeting
  - Economic Feasibility Study
  - Design Budget
  - Contractor's Bid
- **DEVELOPMENT OF WORK PLAN/PROJECT PLANNING**
  - Project Manager's initial review
  - Organizational Structures
  - Work Breakdown Structure
  - Forming the Project Team
  - Project Work Plan & Work Packages

### DAY TWO

- **PROJECT SCHEDULING**
  - Principles of Planning and Scheduling
  - Planning for Multiple Projects
  - Techniques for Scheduling
  - Development of CPM Diagram from the WBS
  - Assigning Realistic Durations
  - Cost Distribution

### DAY THREE

- **PROJECT TRACKING**
  - Control Systems
  - Linking the WBS and CPM
  - Coding systems for Project Reports
  - Control Schedules for Time and Cost
  - Integrated cost/schedule/work graphs
  - Trend analysis and forecasting
- **DESIGN COORDINATION**
  - Project Team Meetings & Weekly/Monthly Reports
  - Distribution of Documents
  - Check list of duties for Design & Constructability

### DAY FOUR

- **CONSTRUCTION PHASE**
  - Assumptions for Construction Phase
  - Contract Pricing Formats
  - Keys to a Successful Project
  - QA/QC
  - Dispute Resolutions
  - Job Site Safety, HSE
  - Management of Changes/Variations

### DAY FIVE

- **PROJECT CLOSE OUT**
  - System testing and Start-up & Final Inspection
  - Guarantees and Warranties
  - Record and As-Built Drawings
  - Disposition of Project Files & Lessons Learned
- **TIPS OF MAKING THINGS HAPPEN**
  - Human Aspects
  - Motivation
  - Communications, Presentations & Meetings