

## A LDI Training Course

# **COST ESTIMATION, BUDGETING and RISK ANALYSIS**

*Pulung Susilo Rahardjo*

---

## Overview

Cost estimating is one of the fundamental and yet most challenging tasks for Project teams. In the course, you'll learn straightforward, step-by-step processes for developing accurate, realistic project cost estimates that withstand the security of stakeholders and management and form a baseline for tight financial control. You'll also learn how to incorporate risk and uncertainty in your project cost estimates with Monte Carlo risk simulation, provide range cost estimates in accordance with AACE International Recommended Practice and manage the cost estimating process throughout the project life cycle.

*The intensive and practical course will be provide participants to understanding of project cost estimation techniques & methodologies to counted cost in accurate, valid & trusted.*

## What You'll Learn

- Comprehensive in consistent and effective process across the execution of project then improve the result of the entire of project
- Understand the cost engineering practices to increase your cost engineering accuracy and gain more i-depth knowledge of cost engineering estimation and control terminology
- Understand and identify the different requirements & methodologies for cost estimating throughout the project life cycle
- Recognize the effects and implications of risk and the need for effective risk management to develop the realistic cost estimation
- Understand how progress measurement, performance assessment, forecasting and change management contribute to project success

## Course Content

### **Essential Background**

- What is project & their characteristics
- Project goals and objectives
- Dynamics of the project life cycle & Phase of system life cycle
- Building the project organization & WBS
- Developing project network, cost, schedules and project plan included risk assessment
- Developing cost measurement & control, and performance criteria to success with EVM

### **Project Cost Estimating & Process**

- Common categories of cost
- Purpose of project cost estimating
- Cost estimate types & descriptions
- Cost estimating process
- Ground rules, assumptions and collect data
- Selecting estimating methodology
- Perform & verify the estimate
- Review & document the cost estimate

#### **Cost Elements and Cost Pools**

- Understanding cost behaviors
- Direct & Indirect costs
- Variable & fixed costs
- Semivariable costs
- Recurring vs. Nonrecurring costs
- Relationships among cost behaviors
- Types of costs included in estimates

#### **Introduction to Estimating Methodologies**

- Estimating methodologies
- Estimating by analogy & Developing complexity factors
- Parametric cost estimating
- Quantitative relationships
- Catalogs, Vendor quotes and Analogy

#### **Cost Uncertainty Analysis**

- Introduction Risk Analysis & Montecarlo Simulation
- A Typical project cost estimate
- An Alternative: a range of estimates & a cost probability distribution function
- Cost Uncertainty Analysis
- Life-cycle cost & commitment, and decision making
- Time value of money
- Inflation & Interest adjustments
- Design to cost

#### **Case Study**

- Project cost estimation process
- Hands on simulation with Monte Carlo Software

### **Who Should Attend**

- Project Manager
- Project Engineers
- Project Economic
- Project Risk Engineers
- Project Planning & Control Engineers
- Project Cost & Control Engineers
- Planner
- Cost Estimator
- Project Construction Engineers
- Procurement

- Legal & Contract Engineers
- Cost Accounting
- Financial Controller
- Corporate & Business Planning
- Auditor
- Contractor & Vendors
- Person who get benefit for attending this Course

## Your Course Instructor

### **Ir. Pulung Susilo Rahardjo**

He received Bachelor degree in Aeronautical Engineering from Mechanical Engineering Department, Industrial Engineering Faculty, Bandung Institute of Technology (ITB) on 1981. He has a professional and practice experiences as Project Management Senior Staff more than 35 years in National & Multinational Company special Oil & Gas Onshore & Offshore Industry. He also attended at many project management seminar & course program at Indonesian & overseas institution. He retired from Petronas Carigali Indonesia (PCINO) on year 2014 and focused in Project Management Advisor and Project Management Instructor

NOTE: CONDUCTED IN BAHASA INDONESIA