MERCURY

IT Infrastructure Cost Estimating, Budgeting, and Value Engineering Skills

14 - 25 Jul 2025
Amsterdam (Netherlands)

IT Infrastructure Cost Estimating, Budgeting, and Value Engineering Skills

Ref.: 15237_248230 **Date:** 14 - 25 Jul 2025 **Location:** Amsterdam (Netherlands) **Fees:** 9500 Euro

Introduction:

The decision to proceed with IT projects is often based almost exclusively on early conceptual cost estimates, which provide the basis for the cash flow projections. Unreliable cost estimates can result in significant cost overruns later in the project life. As potential projects are considered, management requires high-accuracy cost estimates and obtains better pricing for the original services to optimize whole-life project value.

Determining which estimation method to use at each stage of the IT project development depends on the information available during preparation and its desired accuracy. Besides, decisions regarding optimizing project costs without sacrificing functionality depend on using a set of systematic and logical procedures and techniques to enhance the whole-life project on value engineering, which is a critical conceptual framework.

This IT infrastructure cost estimating, budgeting, and value engineering course will provide the delegates with the necessary skills for accurately estimating the total cost of their proposed IT projects, enhancing the overall value of project delivery. It offers a series of estimating techniques and processes to forecast the anticipated IT infrastructure costs, infrastructure budget, and the potential value that can be unlocked through creative engineering solutions, resulting in a robust IT infrastructure budget.

The IT infrastructure cost estimating, budgeting, and value engineering course also presents the value engineering methodology used to identify alternative ideas/solutions at any project phase to meet the client's best value requirements. Within the project cost management context, this course significantly enhances cost estimating, budgeting, creative thinking, problem-solving, and informed decision-making skills, all pivoting around the core concept of value engineering definition.

Targeted Groups:

- Financial Professional.
- General Accounting Professional.
- Business Unit Professional.
- Project Managers.
- Project Cost Estimators.
- Cost Controllers.
- Project Planners.
- Contract Professionals.
- Anyone is interested in project initiation, estimation, budgeting, and development.

Course Objectives:

At the end of this IT infrastructure cost estimating, budgeting, and value engineering course, the participants will be able to:

- Gain knowledge of techniques used in IT service estimating, from the conceptual stage to the final detailed estimate.
- Understand the different estimates used to estimate project costs accurately and progressively.
- Understand the fundamental concepts of Value Engineering and Analysis.
- Understand how value engineering supports practical IT project scope analysis.
- Appreciate the level and nature of the information needed to develop an IT project scope.
- Gather and organize information and costs relevant to critical elements of the service provided.
- Report effectively to top management and project stakeholders in the context of proposing alternatives that improve the overall project value.
- Demonstrate proficiency in applying costing principles.
- Present a convincing case in support of specific project alternatives.
- Integrate all relevant project elements into a cohesive and comprehensive cost estimate.
- Prepare budget estimates that will enable the owner-organization to make informed decisions as to the feasibility of a potential project.
- Compare the costs of alternative strategies or technical approaches to ensure the most economical project at the desired quality level.
- Keep accurate control of the progressive budgeting process based on the various design stages.
- Prepare accurate budget estimates during the programming, schematic design, and design development phases.
- Obtain the skills required to prepare and manage the bidding process.
- Manage the interface between many value-adding project phases and management expectations.
- Apply systematic and innovative methodology with a multi-disciplinary approach to achieve better value for projects.

Targeted Competencies:

By the end of this IT infrastructure cost estimating, budgeting, and value engineering training, the participant's competencies will be able to:

- Skill and confidence to estimate project costs accurately and sidestep the most common cost-estimating pitfalls and problems.
- Develop initial project IT infrastructure cost estimating for the owner.
- Prepare bids and cost proposals.
- Determine the cost impacts.
- Prepare a Schedule of Values in the day-to-day market.
- Create historical cost databases to improve future estimating accuracy.
- Bring Value Engineering into the organization's project initiation.
- Evaluate the cost and the actual value of the project service.
- Evaluate the results of a brainstorming session to develop the best value-adding service.

Course Content:

Unit 1: Cost Estimating Basics:

- The estimated life cycle.
- Phases of the Design Process:
    - Programming phase.
    - Schematic design.
    - Design development.
    - Construction documents.
- Estimate accuracy by phase.
- Conceptual Cost Estimates.
- Assemblies cost estimates.
- Cost indices.
- Semi-detailed Estimates Narrow Scope Estimates.
- Definitive Estimates Detailed Scope Estimates.
- Basic procedures.
- Bid method.
- Negotiated method.
- Types of contracts.

Unit 2: Broad Scope Cost Estimating Techniques:

- Adjustments to Project Cost for Broad Scope Estimates.
- Virtual Data Center Project Cost Analysis.
- SD-WAN Cost Estimates.
- Formulae for Cost Estimating.
- Z-Value Table.
- The Probability of Project Completion.
- Estimating the Project Cost at Required Probability.
- The Probability of Completing.
- Adjustments to Estimates Based on Previous Projects.
- Adjustments for Time.
- Review: Future Value of Money.
- Review: Present Value of Money.
- Equivalent Annual Interest Rate.
- Index to Adjust for Time.
- Equivalent Compound Interest.
- Adjustments for Size.
- Economic Price Adjustment.
- Estimate Durations based on the Learning Curve Effect.
- Estimating Costs Based on the Learning Curve Effect.
- Learning Curves.

Unit 3: Price Estimates:

- Bid forms.
- Direct cost estimation.
- Variation-in-quantity contract provision.
- Risk analysis.
- Bid finalization.

Unit 4: Market Analysis:

- Market research, market insights, and 'listening posts.'
- Explore the market analysis process and different levels of competition.
- Segmentation and targeting.
- The buying process and cycle.
- Explain competitive analysis, including Porter's five forces.

Unit 5: Estimating Process:

- Estimate by design phase.
- Programming budget estimates.
- Schematic design budget estimates.
- Design development budget estimates.
- Estimate pre-construction services.
- Request for proposal.
- Development of pre-construction services estimate.
- Pre-construction services contract.

Unit 6: Bid Contract Estimating Process:

- Pre-estimate activities:
    - Estimate process.
    - Work Breakdown Structure.
    - Estimate team.
    - Schedule the estimating work.
    - Learn about accuracy and error prevention.
- Price self-performed work.
- Recap sheet.
- Apply pricing factors.
- Summary recap.
- Project summary schedule.
- Alternative techniques.
- Final document review.
- Complete the bid summary.
- Final mark-ups.
- Validate the estimate.
- Estimate the Programmer's work.
- Estimating Developer's work.
- Complete the estimate.

Unit 7: Negotiated Contract Estimating:

- Guaranteed Maximum Price Estimates:
    - Estimate process.
    - Contingencies.
- Fee determination for negotiated contracts.
- Reimbursable versus Non-reimbursable costs.
- Home office overhead.
- Risk evaluation.
- Fee structure.
- Cost savings split.
- Strategies for Responding to the Request for Proposal.
- Documents with the Request for Proposal.
- Negotiated subcontracts.
- Cost proposals for negotiated contracts.

Unit 8: Narrow Scope Cost Estimating Techniques:

- Power-sizing techniques.
- Factor estimates.
- Cost estimating relationships CER.
- Design-to-cost-estimates.
- Target cost estimates.
- Adjusting for Project Type and Quality Level.
- Features Determining the Quality Level Grade of a Structure.
- Parametric Cost Estimating.
- Analysis of Estimating Accuracy.

Unit 9: Framework for Applying Value Engineering in Projects:

- What is Value Engineering? Why is it important?
- Define Value Engineering concepts and principles.
- Purpose of Value Engineering and Value Analysis.
- Strengths and Weaknesses of Value Engineering.
- How and When is Value Engineering Applied?
- IT Project definition and initiation.
- Learn about project scope and charter development.
- Identify relationships between Value, Cost, and Worth.
- Initiating Value Engineering Process.
- Overview of Different Value Engineering Phases.
- Explore The Information Phase - steps and procedures.
- Developing Value Engineering Job Plan.

Unit 10: The Function Analysis Phase - Expressing Project Functional Needs and Constraints:

- There is a need for a function analysis of the projects.
- Define project constraints - relationships and trade-offs.
- Conceptual project cost estimating techniques.
- Function-Cost-Worth Analysis.
- Understand the technical FAST model used to perform project value analysis.
- Case Study.
- Cross-Functional Project Team Approach.

Unit 11: The Creative Phase - Inspiring Creativity in Your Project Team:

- Learn about creativity and creative thinking within the project environment.
- Individual vs. group thinking to improve the quality of project decisions.
- Creativity techniques are applied to optimize project value.
- Blocks to creativity within the project team.
- Brainstorm project solutions.
- Reach consensus and leverage the power of project team collaboration.
- Project risk perception and identification.
- Project prioritization process using the Delphi technique.
- Output of the Creative Phase.

Unit 12: The Evaluation Phase - Making Informed Project Decisions:

- Project ideas screening.
- Project evaluation methods.
- Quantitative evaluation using objective data.
- Understand subjective evaluation and project-related criteria weighting.
- Revisit project life-cycle costing analysis.
- Incorporate market advancement in project economic analysis.
- Know effective decision-making in a project environment.
- Output of the Evaluation Phase.

Unit 13: The Planning and Reporting Phases - Getting Results through Effective Communication:

- Develop and assess VE proposals to optimize project value.
- Report VE findings to Senior Management and project stakeholders.
- Explore how to master oral presentation techniques and interpersonal skills.
- Incorporate VE into the project phases.
- Integrating VE with Continuous Improvement Techniques.

Registration form on the :
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