MERCURY

Value Engineering Skills: Planning for Performance Excellence

8 – 12 March 2027
Rome (Italy)



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Introduction

In its broadest sense, value is the benefit to the client a project offers. Value Engineering VE is a creative, organized approach that allows stakeholders to optimize project value, reduce lifecycle costs, address financial issues, and eliminate unnecessary costs. The VE methodology emphasizes the return-on-investment aspect of decision-making regarding lifecycle costs during project planning, procurement, and execution. It can be used to identify alternative ideas and solutions at any project phase to produce the client's best value requirements. VE is not about choosing the cheapest option. Rather, it concerns realizing the best value for money.

This value engineering in project management course is designed to impart expert guidance to participants for securing real benefits and cost savings through implementing VE in their projects, with a strong focus on developing project scope, charter, cost estimates, plans, and budget.

The value engineering in project management course aims to significantly enhance creative thinking, problem-solving, objective assessment, and informed decision-making skills within the project management context.

The value engineering in project management course adopts a systematic step-by-step methodology to support VE techniques' initiation, planning, and application. It covers key elements in the VE application, including forming and managing an integrated multi-disciplinary project team to generate solutions and recommend alternatives, capturing stakeholders' requirements and expectations, developing conceptual cost estimates and models, undertaking life cycle costing analysis, and producing a high-level project plan to guide project execution and control.

What is Value Engineering in Project Management?

Value engineering in project management is the systematic method of improving the value of goods, products, and services by examining function. Value, as defined, is the ratio of function to cost. Value can, therefore, be increased by either improving the function or reducing cost. It is a primary tenet of value engineering that basic functions be preserved and not reduced as a consequence of pursuing value improvements.

The Value Engineering Certification

Professionals aiming to become certified in value engineering can benefit from VE training courses, which include a rigorous study of value methodologies, the process of VA/VE, and the best practices in applying VE to projects. These certifications often culminate in an examination and are recognized by industry and professional bodies worldwide.

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Implementing a Value Engineering Program and Plan

In-depth exploration of initiating and planning for a Value Engineering Program within an organization, detailing the process of aligning VE with corporate strategy and integrating the approach comprehensively into projects.

Targeted Groups

- Project or program sponsors.
- Project managers.
- Cost estimators.
- Cost controllers.
- Engineers.
- Designers and project staff.
- Anyone involved in project initiation, engineering design, and critical assessment of projects.

Course Objectives

Participants in the value engineering in project management course will be able to:

- Understand fundamental concepts of Value Engineering and Analysis.
- Understand how value engineering supports effective project management.
- Appreciate the level and nature of the information needed to develop a project scope.
- Gather and organize information and costs related to key elements of the project.
- Learn how to capture and incorporate stakeholders' input in developing the project charter and plan.
- Critically assess and evaluate the relationships among cost, value, and function.
- Report effectively to top management and project stakeholders.
- Demonstrate proficiency in applying life cycle costing principles.
- Present a convincing case in support of project alternatives.
- Compare the costs of alternatives to ensure the most economical project at the desired level of quality.
- Keep accurate control of the progressive budgeting process.
- Manage the interface between value-adding project phases and management expectations.
- Apply systematic and innovative methodology to achieve better value and cost optimization for projects.
- Spread cost-consciousness among project team members.
- Focus on function, which develops creative thinking toward project cost reduction.

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Targeted Competencies

- Developing an appreciation of how to frame project decisions.
- Bringing value engineering into the organization's project initiation and planning processes.
- Evaluating alternatives based on their cost and true value through the project lifecycle.
- Identifying major roadblocks to thinking creatively about project challenges.
- Evaluating the results of a brainstorming session.
- Adhering to a structured sequence of logical steps to solve project challenges.
- Eliminating unnecessary costs without compromising project quality.

Course Content

Unit 1: Framework for Applying Value Engineering in Projects

- What is value engineering? Why is it important?
- Defining 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?
- Project definition and initiation.
- Project scope and charter development.
- Lifecycle costing techniques.
- Project stakeholders analysis and management.
- Identifying relationships between value, cost, and worth.
- Initiating value engineering process.
- Overview of different value engineering phases.
- The information phase - steps and procedures.
- Developing a value engineering job plan.

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Unit 2: The Function Analysis Phase - Expressing Project Functional Needs and Constraints

- The need for function analysis in projects.
- Defining project constraints - relationships and trade-offs.
- Conceptual project cost estimating techniques.
- Function-cost-worth analysis.
- Developing FAST diagrams to identify critical project components.
- The technical FAST model to perform project value analysis.
- Case study.
- Cross-functional project team approach.

Unit 3: The Creative Phase - Inspiring Creativity in Your Project Team

- 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.
- Resolving blocks to creativity within the project team.
- Brainstorming project solutions.
- Reaching consensus and leveraging project team collaboration.
- Project risk perception and identification.
- Project prioritization process using the "Delphi" technique.
- The use of force-field analysis in project problem-solving.
- Output of the creative phase.

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Unit 4: The Evaluation Phase - Making Informed Project Decisions

- Project ideas screening.
- Project evaluation methods.
- Quantitative evaluation using objective data.
- Subjective evaluation - project-related criteria weighting.
- Revisiting project lifecycle costing analysis.
- Incorporating inflation in project economic analysis.
- Performing project risk and scenario analyses.
- Risk lifecycle simulation modeling - best and worst project cost scenarios.
- Pitfalls associated with the use of existing economic models.
- Incremental benefit-cost analysis for project evaluation.
- Effective decision-making in a project environment.
- Output of the evaluation phase.

Unit 5: The Planning and Reporting Phases - Getting Results Through Effective Communication

- Develop and assess VE proposals to optimize project value.
- Develop action plans and assign project roles and responsibilities.
- Report OF findings to senior management and project stakeholders.
- Mastering oral presentation techniques and interpersonal skills.
- Strategies for project plan execution.
- Incorporating VE into the early project phases.
- Integrating VE with continuous improvement techniques.