Advanced Value Engineering: Optimizing Project Performance

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Düsseldorf (Germany)

UK Traininig
PARTNER



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Why This Course

Value engineering is a powerful approach for improving project value by optimizing function, cost, quality, performance, and long-term benefits. In complex projects, value improvement requires more than cost reduction; it demands structured analysis, creativity, stakeholder alignment, life-cycle thinking, and strong implementation planning.

This advanced 1-week Value Engineering Training program equips participants with practical and advanced techniques to lead value engineering studies across different industries. The course covers advanced VE concepts, project integration, stakeholder management, cost estimation, function analysis, FAST diagramming, creative problem-solving, TRIZ, life-cycle costing, risk assessment, multi-criteria decision analysis, VE proposal development, change management, and performance reporting. Through practical exercises and applied case studies, participants will learn how to identify value gaps, develop innovative alternatives, and implement recommendations that improve project outcomes.

What You'll Learn and Practice

By joining this program, you will:

- Apply advanced value engineering concepts to complex projects.
- Integrate VE principles into project management processes.
- Conduct stakeholder analysis for VE studies.
- Apply advanced cost estimation techniques.
- Identify and classify project functions accurately.
- Develop complex FAST diagrams.
- Conduct function-cost-worth analysis.
- Identify value mismatches and improvement opportunities.
- Use advanced brainstorming, TRIZ, lateral thinking, and analogical reasoning.
- Evaluate alternatives using life-cycle costing and multi-criteria analysis.
- Assess risks and develop mitigation strategies for VE proposals.
- Create compelling VE proposals and implementation plans.
- Present recommendations effectively to gain stakeholder buy-in.
- Measure and report VE performance.



The Program Flow

Day 1: Advanced VE Concepts and Project Integration

- Review advanced VE principles and their impact on project performance.
- Integrate VE into project management phases and decision-making processes.
- Conduct stakeholder analysis and manage expectations during VE studies.
- Apply advanced cost estimation techniques to support value decisions.
- Identify where VE can create the greatest project impact.

Day 2: Function Analysis and FAST Diagramming

- Apply advanced function identification and classification methods.
- Develop complex FAST diagrams for project systems, processes, and components.
- Conduct function-cost-worth analysis.
- Identify value mismatches between cost, function, and performance.
- Define improvement opportunities based on structured function analysis.

Day 3: Creative Problem-Solving and Innovation

- Apply advanced brainstorming and ideation techniques.
- Use TRIZ methodology to solve complex project challenges.
- Apply lateral thinking and analogical reasoning to generate innovative alternatives.
- Overcome mental blocks that limit creativity.
- Build a structured environment that supports innovation during VE workshops.

Day 4: Evaluation and Life-Cycle Costing

- Apply multi-criteria decision analysis to compare alternatives.
- Use advanced life-cycle costing methodologies.
- Assess risks linked to VE proposals and alternative solutions.
- Prioritize options based on value, feasibility, performance, risk, and long-term cost.
- Select optimal alternatives that support project objectives and stakeholder priorities.

Day 5: Implementation and Change Management

- Develop clear and compelling VE proposals.
- Present VE recommendations effectively to decision-makers and stakeholders.
- Build implementation plans with responsibilities, timelines, and success measures.
- Apply change management techniques to support adoption.
- Measure and report VE performance and realized value.



Individual Impact

- Build confidence in leading complex value engineering studies.
- Strengthen function analysis, FAST diagramming, and life-cycle costing skills.
- Improve advanced problem-solving and innovation capabilities.
- Develop stronger stakeholder management and presentation skills.
- Gain practical tools for turning VE recommendations into implemented improvements.

Work Impact

- Improve project value through better function, cost, and performance alignment.
- Reduce unnecessary costs while protecting quality and functionality.
- Strengthen decision-making through structured evaluation and life-cycle analysis.
- Improve stakeholder buy-in for value improvement initiatives.
- Support integration of VE into organizational project management practices.

Training Methodology

This program combines advanced VE theory with practical application through:

- Complex value engineering case studies.
- Function analysis and FAST diagramming workshops.
- Function-cost-worth analysis exercises.
- TRIZ, lateral thinking, and creative ideation sessions.
- Life-cycle costing and multi-criteria evaluation activities.
- VE proposal presentation and implementation planning simulations.

Beyond the Course

Upon completion, participants will be able to:

- Lead complex VE studies across different industries.
- Develop FAST diagrams and conduct function-cost-worth analysis.
- Generate innovative solutions using advanced creativity techniques.
- Evaluate alternatives using life-cycle costing, risk analysis, and decision criteria.
- Prepare compelling VE proposals and implementation plans.
- Integrate VE principles into project and organizational processes.

