



Advanced Value Engineering and Cost Optimization Course

10 – 14 October 2027
Johannesburg



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Ref: 1053_177694 **Date:** 10 – 14 October 2027 **Location:** Johannesburg **Fees:** 4500 Euro

Overview

Advanced Value Engineering and Cost Optimization Course is a one-week advanced course for cost engineers, value specialists, procurement leaders, project controls managers, and finance business partners, who leave with a Governed Value Study Pack. Participants use function analysis, FAST diagrams, function-cost models, lifecycle trade-offs, alternatives evaluation, proposal development, implementation controls, and benefit tracking. Agile Leaders Training Center develops value engineering and cost optimization capability.

Who Should Attend

- Cost teams responsible for estimates, cost models, lifecycle trade-offs, and value evidence
- Value teams responsible for function analysis, study facilitation, alternatives, and recommendations
- Procurement teams responsible for supplier input, specification challenge, and commercial evaluation
- Project controls teams responsible for baselines, change evidence, implementation, and benefit tracking
- Finance partners responsible for investment logic, affordability, and decision assurance

The course assumes participants can interpret project scopes, cost estimates, and performance requirements, and it leaves introductory estimating and routine purchasing outside its scope.

Departments and Industries

The course supports departments and industries that must improve function and performance while controlling lifecycle resources.



- Cost engineering, project controls, procurement, and finance
- Design, engineering, asset management, and operations
- Construction, infrastructure, energy, and manufacturing
- Technology, telecommunications, healthcare, and professional services
- Transport, logistics, facilities, and public-service organizations

Learning Objectives

By the end of this course, participants will be able to:

- Build a governed value study scope and evidence base
- Apply function analysis and FAST diagramming
- Analyze function costs and value improvement priorities
- Compare alternatives using lifecycle and performance criteria
- Evaluate value proposals and implementation risks
- Build benefit tracking and decision governance controls



Course Agenda

Day 1: Value Study Definition

- Value Study Charter and Decision Scope
- Stakeholder Need and Performance Requirement Map
- Value Driver Prioritization Matrix
- Baseline Cost and Resource Evidence Pack
- Value Study Governance and Decision-Rights Framework

Day 2: Function Analysis and Cost Allocation

- Active-Verb and Measurable-Noun Function Dictionary
- Basic and Secondary Function Classification Tree
- FAST Function Analysis Diagram
- Function Resource Allocation Worksheet
- Function-Cost and Performance Opportunity Matrix



Day 3: Alternatives and Lifecycle Trade-Offs

- Creative Alternative Generation Protocol
- Design and Supplier Collaboration Canvas
- Alternative Screening Criteria Matrix
- Lifecycle Cost Comparison Model
- Performance, Risk, and Resource Trade-Off Grid

Day 4: Proposal Development and Governance

- Value Proposal Business Case Template
- Incremental Cost and Benefit Analysis Sheet
- Implementation Risk and Dependency Register
- Value Recommendation Evaluation Scorecard
- Benefit Ownership and Tracking Plan

Day 5: Governed Value Study Practice

- Exercise: Build a Value Study Charter
- Exercise: Develop a FAST Function Model
- Exercise: Compare Lifecycle Alternatives
- Exercise: Defend a Value Recommendation
- Capstone Exercise: Governed Value Study Pack



Practical Exercises

The course uses suggested activities that connect function evidence, costs, alternatives, recommendations, and realized benefits.

- Suggested activity: separate required functions from the current design solution in an infrastructure case
- Suggested activity: allocate manufacturing costs to functions and identify value improvement priorities
- Suggested activity: compare supplier and design alternatives using lifecycle cost and performance criteria
- Suggested activity: present a value proposal with risks, owners, controls, and benefit measures

FAQs

Who suits advanced value engineering and cost optimization training?

Cost, value, procurement, project controls, design, and finance professionals who already interpret scopes, estimates, and performance requirements suit the training. The course assumes practical exposure to project or product decisions.

How does value engineering differ from conventional cost reduction training?

Value engineering begins with required functions and evaluates alternative ways to deliver them while balancing performance, quality, risk, and lifecycle resources. Conventional cost reduction may focus more narrowly on lowering expenditure.

What is function analysis in value engineering?

Function analysis defines what a project, product, process, or service must accomplish independently of its current solution. It creates a disciplined basis for allocating resources, identifying unnecessary cost, and generating alternatives.

How should value engineering alternatives be evaluated?

Value engineering alternatives should be compared against agreed function, performance, lifecycle cost, risk, feasibility, and implementation criteria. The decision record should show assumptions, evidence, trade-offs, ownership, and expected benefits.



Conclusion

Participants take back a Governed Value Study Pack containing the charter, function model, function-cost evidence, alternatives, lifecycle comparisons, proposals, implementation risks, decision records, and benefit controls. It makes value recommendations traceable beyond idea generation. Cross-functional teams can use it to improve function and performance without reducing decisions to cost cutting.