



VALUE ENGINEERING WORKSHOP - MODULE I

5 – Day In-House Training Program

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Value Methodology Associate (SAVE)
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Introduction:

What is Value Engineering (VE)?

- A method to optimize savings during the Engineering /Design , Procurement and Construction Phases of projects without sacrificing quality, functionally or clients needs and requirements.
- A proven problem solving process adaptable to engineering design and construction Projects.
- A tool that increases design professional capabilities and stature.
- Value Methodology (VM) / Value Engineering (VE) is a step-by-step analysis and problem solving methodology using a well-established Job Plan.
- VM/VE is NOT A CHEAPENING PROCESS! It is a management tool for optimizing performance, reliability and quality (Value) at the lowest possible cost (Worth).
- An organized process to identify and remove unnecessary cost from a project and achieves the best **Value** for money by balancing between **Function and Cost.**

The techniques used in the VM/VE workshop will be of major significance to those involved in design plans, engineering, procurement, and construction projects.

Participants will gain the knowledge necessary for evaluating projects on the basis of functions performed, rather than on the cost expended.

TERMINOLOGY WITH BENEFIT YOU WILL LEARN...

- Gather and organize information and cost relevant to design and Construction project.
- Define essential functions.
- Understand and be able to use creative thinking.
- Develop new and creative design that improve while retaining client's oriented needs.
- Apply objective methods for evaluating design alternatives.
- Understanding and be able to apply for life cycle terminology.
- Present alternatives solutions to top management and clients.
- Understanding and apply new techniques for implementing design solutions, life cycle costing and value improving processes techniques.

WHO WILL BENEFIT:

- Department Managers, Sections and Units Heads.
- Senior/Junior Engineers from different disciplines: Electrical, Mechanical, Industrial, Civil and others.
- Contracts Officers.
- All individuals involved in Design, Procurement and Construction of projects.

WORKSHOP OBJECTIVES:

The value methodology has three universal characteristics: it stimulates creativity and innovation, and it emphasizes the need for complete information. Value engineering improves value by relating the elements of the function to the element of the cost to put money where it does the most good!

The objectives of the VE Workshop are to introduce the concept of VM/VE to demonstrate its application and techniques. The course of the study provides practical knowledge in creativity, weighted evaluation, life cycle costing, FAST diagramming and project selection.

Upon completion of this workshop, the participant will be able to identify functions of a project, allocate cost & worth to basic functions, apply creativity, judge alternatives designs and schemes, apply life cycle costing, develop cost model, and understand the value concept.

The workshop format includes the method and theory of value and class workshop session to apply the techniques to a selected project provided by the Client for the purpose of the workshop. Team effort and the ability to work with other is emphasized over individual performance. It is recommend having Engineers and other individuals, Non-Engineers, from different disciplines and specialization, such as procurement and administration in this VM/VE Workshop along with procurement and contracts officers. In other words, technical as well as non-technical individuals working together will enhance the output of the VE workshop.

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COURSE OUTLINE (5 days)

DAY ONE

WHAT IS VALUE ENGINEERING, VALUE ANALYSIS AND VALUE MANAGEMENT?

- Opening Comments by Management.
- Introduction.
- Purpose of Value Analysis and Value Engineering Training Workshop.
- History of Value Analysis and Engineering.
- Definition of Value Analysis, Value Engineering and Value Management.
- Value Engineering Concepts and Principles-Function, Cost and Worth!
- Value Engineering Applications.
- Life Cycle Costing (LCC).
- The VM Job Plan and Methodology.

THE INFORMATION PHASE

- The Information Phase of the VE Job Plan - Overview
- Information Gathering
- The Function Approach
- Function based Models
- Cost, Energy and Life Cycle Models
- Examples of VA/VE – Why Unnecessary Costs Exist
- Team Member Selection
- Habits and Attitudes

DAY TWO

THE FUNCTION ANALYSIS PHASE

- What is Function Analysis?
- Function-Cost-Worth Analysis?
- Development of Function Logic Diagrams - F.A.S.T. Diagrams
- Examples of Function Analysis
- Associate “Worth” to each “Function”
- Cost/Value & Cost/Worth Ratios
- Multi Discipline team approach
- **F.A.S.T. Workshop**
- Cost-Function Workshop

DAY THREE

THE “SPECULATIVE” CREATIVE PHASE

- The Creativity Process, Team Dynamics
- Create by Primary Function or Secondary Function
- Creativity Techniques
- Brain Storming, Delphi, Force Field Analysis
- Idea Listing and Ranking
- Suspend Judgment till later stage!

DAY FOUR

THE EVALUATION “JUDGMENT” PHASE

- Evaluation Techniques
- Decision Analysis
- Weighted Evaluation
- Idea comparison
- Criteria Establishment
- Alternative costing (Construction, Operation)
- Life Cycle costing with Escalation and Inflation
- Present Worth Method
- Annualized Method
- Matrix Evaluation
- Evaluation Workshop

DAY FIVE

THE RECOMMENDATION PHASE

THE DEVELOPMENT STAGE

- Assess Alternatives and Develop Firm Costs
- Develop Written Proposals
- Assess Proposal Quality
- Strategies for Implementation and Follow Up Plan

THE PRESENTATION STAGE

- Presentation of Recommendation to Management
- Objectives
- Tasks
- Procedures
- Oral Presentation Techniques

- Workshop to Prepare Status Reports

IMPLEMENTATION AND FOLLOW-UP STAGE

- Integrating Value Engineering into the Organization
- Expedite Change
- Assist Decision Makers
- Resolve Problems
- Minimize Delays
- Follow-up
- Team Reports Workshop
- Management Comments

The participants shall work on one or two current real projects during the VE Workshop and use it as “REAL” LIVE Case Studies for maximum benefits to the participants. From previous VE Workshops that Dr. AlBahar has conducted in the region, it was found that it is more effective and productive for the participants to participate in real projects rather than “Canned” project which might have no relevance to the nature of projects that the participants are familiar with.

PRESENTER:



Dr. Jamal F. AlBahar PMP, VMA, RMP

Registered Arbitrator; Member: CMAA, PMI, AACE, AAA, PMA, CSI, SAVE

Dr. AlBahar, President of PROMIS- Project Management Engineering Systems, is A CERTIFIED VALUE MANAGEMENT ASSOCIATE (VMA) by SAVE INTERNATIONAL USA. Dr. AlBahar has conducted over 70 value engineering workshops for several clients in the GCC countries.

He is an expert in construction contracts and claims analysis and project management tools and techniques. His recent consulting work is focusing on analysis of delay claims using CPM schedules and amicable settlement of disputes between Clients and Contractors. Dr. AlBahar is a frequent regional and international speaker on all subjects related to project management, construction contracts, tendering procedures, claims analysis and evaluation, contract administration and management, and value engineering.

Dr. AlBahar is a registered arbitrator in the Emirate of Dubai, U.A.E., the State of Kuwait, and was a full time professor at Kuwait University where he taught project management, contracts and specifications, construction management, construction methods, surveying, legal, social and ethical aspects of engineering. He was formerly a marketing and business development manager for Morrison Knudsen Corporation in San Francisco, California

Dr. AlBahar has conducted over 600 public and in-house training courses in the last 27 years on subjects related to Project Management, Contracts Management, Claims Analysis and Disputes Resolution, PMP Exam Preparation Workshops, Value Engineering, Budgeting and Cost Estimating & Control, Effective Project Site Administrative Procedures & Management, and Project Risk Management. His most recent consulting agreement, and as part of team, was to review and rewrite the General Conditions of Contracts and Consultancy Agreement (both General and Particular) for Dubai Municipality and Public Works in Abu Dhabi. He is a Contract Advisor for Qatar Petroleum, Doha, Qatar. He is a Risk Management Consultant/Specialist and a Registered Arbitrator for Construction Claims and Disputes.