Projacs
an egis company
بروجاكس للتدريب والتطوير
Projacs Training and Development

Life Cycle Costing (LCC) Optimization and Value Engineering

تخفيض تكلفة دورة حياة المشاريع وتطبيق الهندسة القيمية خلال التصميم والتوريد والانشاء

09 – 13 September 2019

Kuala Lumpur

A Member of:
PROJACS ACADEMY

ProjacsAcademy.com

Introduction

Value engineering (VE) is a methodology that is known, accepted and has an impressive history of improving value through customizing Quality and optimizing Life Cycle Cost (LCC). VE is an organized process that has been effectively used by a wide range of companies and establishments to achieve their continuous goals. The success of the VE process is due to its ability to identify opportunities to remove unnecessary costs while assuring quality, reliability, performance, and other critical factors that meet or exceed customers' expectation. The Value Engineering Technology is a problem-solving system designed to accomplish essential functions of products and services at the lowest cost without sacrifice of quality or delivery requirements. A Value Management Program manages costs and manages change through the deliberate use of the technology. A successful program requires management support, proper planning and organization, and an understanding of the technology. The Training Course and Its Workshops deal primarily with the learning and application of the technology.

Increasing demands for capital projects are placing greater stress on available funding resources. In this period of belt-tightening and reduced budgets, it is imperative to find ways of doing more with less. Value Engineering (VE) has proved to be a valuable tool in stretching capital, construction, operation and maintenance dollars to achieve the required goals for reduced costs, both in the public and private sector. Use of VE techniques also typically results in improvements in facility performance, even at these lesser costs.

Objectives

By the end of this course practitioners shall learn to:

- Mitigation of risk by selection of the most suitable project design type
- Methods of selection of the most suitable building systems
- Terms and conditions - examples of commercial terms
- Reducing total cost of project without any changes of functions and quality
- Developing better building functions
- How to determine fair and reasonable prices and times
- Structuring economic price adjustments
- Negotiation planning and strategies
- Value Engineering management techniques

The organization will benefit by:

- Greater strategic focus of those involved in Value Engineering
- Higher productivity of design and costing personnel
- Reduced cost of contracts for materials & services
- Better outcomes in design methods evaluation
- Improved building performance

Who Should Attend?

In general, this course is intended for all those individuals who are interested in Value, Quality, and Process Improvement. More specifically to Design and Site engineers, Architects, Quality Managers, Value Manager/ Engineers, Construction/Project Managers, Procurement Managers, Industrial Engineers, Maintenance Engineer, Building and construction Consultants and Professionals. Individuals who are interested in standards and codes related to Industry and Construction. The improvements are the result of recommendations made by multi-disciplined teams from all concerned parties.

Course Outline

DAY 1:
exam

1. INTRODUCTION

- Course Objectives

2. VALUE ENGINEERING BRIEFING

- Definition of Value Analysis/ Engineering
- Results of VA/ VE Programs
- History of Value Analysis/ Engineering
- Reasons for Unnecessary Cost
- All Cost is for Function
- Value Methodology
- Case Studies

3. INFORMATION PHASE

- Project Selection, VE Objectives, VE Team Selection
- Information Requirements for VE
- Workshop Logistics
- Workshop Information Phase

4. PROJECT WORKSHOP – INFORMATION PHASE

- Organize Into Project Teams (4-6 People Each)
- Select Team Leader & Recorder
- Project Overview, Design Documents, Cost Estimate, cost analysis, cost breakdown
- VE Objectives

Solved examples, open discussion, case studies

DAY 2:

5. FUNCTION ANALYSIS PHASE

- Function Models:
- Cost, Quality, Risk, LEED (Sustainability)
- Function Analysis Process
- Function, Cost, Worth Worksheet
- FAST Diagramming
- Level of Abstraction
- Development of Worth
- Function, Cost, Worth Worksheet
- FAST Diagramming

6. PROJECT WORKSHOP - FUNCTION ANALYSIS PHASE

- Function Cost Model
- Quality, Risk and Other Function Models
- Solved examples, open discussion, case studies

DAY 3:

7. CREATIVE PHASE

- In-Depth Brainstorming
- Delphi Technique
- Force Field Analysis
- Other Creativity Techniques

8. PROJECT WORKSHOP - CREATIVE PHASE

- Idea Generation for Basic Function(s)
- Force Field Analysis
- Other Creativity Techniques

9. EVALUATION PHASE

- Idea Generation - Advantages/Disadvantages
- Cost Estimating
- Matrix Evaluation Techniques
- Sample Projects

- Class Exercise
- Solved examples, open discussion, case studies

DAY 4:

10. PROJECT WORKSHOP - EVALUATION PHASE

- Idea Comparison
- Idea Ranking
- Initial Criteria Evaluation
- Cost Estimating
- Initial Matrix Evaluation

11. SPECIAL TOPIC: "VE IN DESIGN BUILD"

12. DEVELOPMENT PHASE

- Life Cycle Costing Techniques
- Manual Method Using Short Format
  - Annualized & Present Worth Methods
  - Inflation & Escalation
- Computer Spreadsheet Approach to LCC
- Exercise – Life Cycle Cost Analysis

13. PROJECT WORKSHOP - DEVELOPMENT PHASE

- Life Cycle Cost of Alternates
- Evaluation Matrix
- Life Cycle Cost of Alternates
- Weighted Evaluation
- Proposal Sketches, Narratives, etc.
- Solved examples, open discussion, case studies

DAY 5:

PRESENTATION PHASE

- Salesmanship, Overcoming Resistance to Change
- Oral Presentation
- Written Proposal
- Sample Projects

15. PROJECT WORKSHOP - PRESENTATION PHASE

- Individual Counseling Sessions - Optional
- Complete Written Proposals
- Prepare Oral Presentations

- Instructor Review of Proposals
- Team Oral Presentations
- Post exams

16. CERTIFICATES/ CLOSING REMARKS

- Solved examples, open discussion, case studies

Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a binder containing a copy of the presentation
- slides and handouts
- Post-assessment

Program Support

This program is supported by interactive discussions, role-play, and case studies and highlight the techniques available to the participants.

Schedule

The course agenda will be as follows:

- Technical Session 08.30-10.00 am
- Coffee Break 10.00-10.15 am
- Technical Session 10.15-12.15 noon
- Coffee Break 12.15-12.45 pm
- Technical Session 12.45-02.30 pm
- Course Ends 02.30 pm

Course Fees*

- **2,950USD**
  **VAT is Excluded If Applicable*