

# VALUE ENGINEERING

Saves money and sharpens your competitive edge !

## Some Examples of Value Engineering Studies

- To produce a rubber seal that satisfies the customer's expectations for a 25% cost improvement over the current manufacturing product cost.
- To provide management with value analysis proposals that would improve the process for manufacturing a strip nail.
- To evaluate heating, ventilating and air conditioning system retrofit options relative to their ability to minimize costs to the building owner over the life of the building system.
- To determine the optimum layout of a manufacturing facility for improved work flows and economy of space utilization.
- To provide training services and policy guidelines for establishing a real estate management division in-house value management program for a large telecommunications company. The purpose of the program was to maximize earnings on real estate assets and assure that services are provided to customers at minimum overall cost and improved performance.
- To provide ideas for re-design of a tire manufacturing machine that is superior to the machine offered by the competition and have the product ready for sale within one year.
- To identify and eliminate unnecessary costs associated with the design and construction of a new manufacturing plant.



## The Sievert Group

For over 80 years, The Sievert Group has maintained a reputation for providing innovative high-quality professional services. In keeping with our mission to optimize and improve the value of our customers' assets and resources we conduct value engineering studies and workshops. Value engineering is a powerful method for reducing costs while improving performance of products, a facility design, system or service. The value methodology can be applied to any business or economic sector: including manufacturing, construction, service and government. The Sievert Group uses only qualified value specialists who are trained and experienced to lead value engineering studies.

## Value Engineering Studies and Workshops

Due to competitive pressures and technology developments, organizations continue to search for better ways to conduct business. They evaluate the products and services they offer, including how they are produced and the markets they serve. The real challenge today is meeting customer needs while maintaining profit objectives.

Improving efficiency and quality where there is already excess capacity can be a waste of time and money. Businesses must go beyond the traditional Total Quality Management (TQM) practices to develop products and services which provide superior customer value. If customers do not perceive the value of a product or service, it will not sell-regardless of its quality or how efficiently it was produced.

## Need For Continuous Improvement

Without a doubt, a significant problem within organizations is making time for improvement activities. Successful companies budget time for this. They understand that they must improve at a faster rate than their competitors in order to survive and prosper.

To be successful, businesses must create an environment of innovation and participation with customers, employees and suppliers. Change must come from a systematic process, not unplanned events. Senior management needs a team-based, systematic method for identifying those changes that are vital to achieve optimum value and customer satisfaction in today's dynamic and cut-throat business environment.

The Sievert Group offers a customized, highly interactive program to help organizations improve the value and marketability of their products and services using the value engineering methodology. When applied properly, value engineering enables organizations to challenge the status quo, identify opportunities for improvement, and reach consensus decisions needed to exploit changes as profitable business opportunities.



## What is Value Engineering?

Value engineering is a powerful management methodology which has been employed ever since World War II. Value engineering is a systematic, multi-disciplined, team approach directed at analyzing the functions of products, processes and services to achieve only those functions that are necessary.

The approach ensures that required quality and performance will be maintained while minimizing cost, thus providing higher overall value, marketability and profitability of the product or service. Value engineering identifies new, lower cost approaches and alternatives to the design of products and services, facilities, business administration and production processes.

## When Do You Need Value Engineering ?

Some examples of when value engineering studies are conducted include the following:

1. When price competition has reduced profits.
2. At the beginning of each new product, project or service life cycle.
3. When it appears that a new project or program may exceed budget expectations.
4. When there is a need to reduce process cycle times.
5. When there is a need to maintain the same programs at reduced costs.
6. When there is a need to produce new ideas for marketing and procuring goods and services.
7. When there is a need for productivity improvement.

## How Value Engineering Works

Our approach to value engineering brings together a multi-disciplined team of people who have the expertise to identify and solve a given problem. The value study team works under the direction of an experienced value specialist who facilitates the study by following a five-phase job plan:

- Phase 1: Information
- Phase 2: Creativity
- Phase 3: Evaluation
- Phase 4: Development
- Phase 5: Presentation

Participants are assigned to value study teams who learn the methodology by applying it to a "live" project selected by their organization. This approach yields a high return on investment potential.

## Strength of Value Engineering

Improving value and customer satisfaction is what value engineering is all about. Its strength is derived from analysis of the relationship of function cost and worth from the customer's perspective, cross-disciplinary team problem-solving, identification of value mismatches, use of methods analysis, creativity techniques and a systematic approach to generate alternatives.

Industries and businesses interested in team-based re-engineering methodologies for improving the competitive position, marketability and value of their products and services are candidates for value engineering. Value engineering helps businesses understand what functions the customer needs and is willing to pay for, then moves to align an organization to satisfy those requirements profitably. Establishing value from the customer's perspective (market-oriented approach) provides businesses with a competitive advantage that will improve profitability and customer satisfaction. Value engineering provides what businesses need today - to survive, to compete, and to prosper.

## Value Engineering Workshop Outline

### A. Introduction

Why Value Engineering / Value Management? Benefits of Value Engineering  
Value Engineering History, Concepts, Philosophy, Methodology  
Top Management Policies (support) Regarding Implementation of Value Engineering  
Recognition of Value Engineering Road blocks and Overcoming Them  
Value Engineering Success Stories in The Industry  
Definition of Value Engineering / Value Management  
Kinds of Value  
Common Reasons for Poor Value  
Value Engineering Terms  
Value Engineering Job Plan

### B. Application of the Value Engineering Process

#### Phase 1: Information

Define the Problem  
Collect Data  
Select Product, Service, Project or Process for Study  
Conduct Customer Attitude Study  
Create Cost Model  
Identify and Classify Functions  
Determine Function Costs  
Prepare a FAST Diagram  
Apply Pareto's Law of Distribution  
Apply Life-Cycle Cost Analysis  
Identify Value Mismatches

#### Phase 2: Creativity

Apply Group Think Dynamics  
Generate Alternative Solutions  
Conduct Brainstorming Session  
Perform Creative Hitchhiking

#### Phase 3: Evaluation

Evaluate Ideas  
Refine Ideas  
Evaluate the Functions  
Estimate Cost of Alternative Solutions

#### Phase 4: Development

Develop the Best Alternatives  
Develop Proposals for Consideration by Management

#### Phase 5: Presentation

Prepare a Presentation  
Present Recommendations for Consideration by Management