



## Audience Profile

The manual aims at every maintenance or asset management professional or practitioner who wants to develop the most effective and efficient alternative design, product, asset or procedures. At the same time, the method records the experience of many people, addresses risk and root causes and optimises your budget and profits. The manual systematically guides you through the application of Value Method and will provide practical knowledge in project selection, FAST diagramming, accessing team creativity, weighted evaluation and life cycle costing of alternatives, up to detailed development of the selected alternative, implementation and performance review.

## Objectives

To equip those active in the management of productive and infrastructure assets with the knowledge, skills and attitudes needed to maintain the delivery of functional performance levels at reduced life cycle costs and risk via the optimisation of asset or procedure designs. The course further aims at providing an improved understanding of:

- the technique as applied to production, maintenance or support functions. It aims at providing the same functionality but the method may be different to what you currently have, it does not try to cut costs by making what you currently have cheaper. (Replace coat buttons and button holes with a zip or Velcro)
- the interaction between the value method, risk and life cycle costs
- the requirements and skills needed for participating in or facilitating value studies
- modifying a design of processes, assets or operating and maintenance procedures, as a result of the value study.



## What makes our approach different?

The main difference is the detailed coverage of each step in the value analyses job plan and the inclusion of many forms that will take you in an effective and efficient manner through the value method process to achieve your goal. The forms provide the discipline of following the analysis process step by step. We also suggest performing the complete study in five days, without interruption. This favours creativity and reduces inhibitions and long deliberations, based on doubt.

To assist in mastering the material in this manual, we include questions throughout the chapters and team exercises at the end of most chapters. The questions intend to link the material to implementation in the reader's organization. If you have limited experience with the material, it is important to wholeheartedly embrace these questions. The team exercises further intend to 'capture' important members of the readers' work teams in the hope of promoting a wider interest in what the techniques can do for the organisation.

One organisation used the value method to decide whether to upgrade an existing packaging machine or purchase a new one, with the decision to purchase a new machine. After finding that this did not perform as expected, they used the value method again to improve the asset, resulting in a redesign of its controls, encasing it to control fumes, modifying its body to facilitate dismantling for cleaning and maintenance, installing new access points, replacing a chrome plated mild steel conveyor drive shafts with polypropylene units (design, manufacture, install). This re-engineering process cut maintenance costs on this machine by 93%.

The value method can bring out cost factors that are not readily apparent during other types of analysis and, by costing out the various alternatives makes the selection process much simpler. The majority of the emotional dialog and subjectivity can be removed and the decision process can be based upon quantifiable data.

You may link the value method to a HazOps analysis, which provides a disciplined approach of assessing design alternatives for hazards and operational problems.



## Contents

### 1. The Value Method Explained

Historic development of the Value Method  
What is the Value Method?  
What are the Objectives and Goals of the Value Method?  
How does the Value Method link to Asset Management?  
Naming Convention and Definitions  
What are the Benefits of the Value Method?  
Why should you consider using the Value Method?  
What is the Value Method Process?  
How should you implement the Value Method?

### 2. What Are the VM Job Plan and Team?

Desired Learning Outcomes  
What is the Value Method Job Plan?  
Who are the Value Study Participants?  
Who is the Study Sponsor?  
Who is the Study Team Leader?  
Who should be in the Study Team?  
What is the best Study Venue?  
Main Outcomes of Chapter Two

### 3. How Do You Identify Subjects and Gather Information?

Desired Learning Outcomes  
How to Select the Item for analyses?  
Can you use a Pareto Analysis?  
What are Sources of excessive or unnecessary Costs?  
Select Areas that look promising  
What Information do you gather (pre-workshop)?  
When does Team Work start?  
How to finalise the Value Study Scope and Terms of Reference?  
How to determine evaluation Factors?  
What analysis Aids or Models can you develop?  
Main Outcomes of Chapter Three  
Syndicate Exercise

### 4. How to Determine Function, Cost and Value?

Desired Learning Outcomes  
How to define Function, Cost and Value?  
Why reassess and challenge the Information?  
What does it do now?  
Why do you describe Functions with active Verbs and measurable Nouns?  
How to classify the Functions as primary or secondary?  
What is the Abstraction Ladder?  
How to develop the functional Relationships?  
What does it cost/what are the Resources?  
What is its Value?  
What are Value, Worth and Cost?  
How to specify essential Functions?

Refine the Study Scope  
Main Outcomes of Chapter Four  
Syndicate Exercise

### 5. How To be Creative In The Speculative Phase?

Desired Learning Outcomes  
Introduction  
What else will do?  
How to brainstorm?  
What is the Role of a Facilitator?  
What is Synectics?  
What is a morphological Analysis?

Main Outcomes of Chapter Five  
Syndicate Exercise

### 6. How To Evaluate and Develop Alternatives?

Desired Learning Outcomes  
What is the best-value Alternative?  
How to develop the Best Alternative?  
How do you plan implementation?  
Main Outcomes of Chapter Six  
Syndicate Exercise

### 7. Presentation of Alternatives and Decision Making

Desired Learning Outcomes  
Oral presentation and written Report  
What are the aspects of decision-making?  
Main Outcomes of Chapter Seven  
Syndicate Exercise

### 8. How to Implement And Verify Study Outcomes?

Desired Learning Outcomes  
How do you implement the Recommendations?  
How do you verify improved Value?  
Main Outcomes of Chapter Eight  
Syndicate Exercise

### 9. How Do You Implement the Value Method?

Desired Learning Outcomes  
What are the main Characteristics of a Value Method Study?  
Pre-requisites for successful implementation  
The Organisation and Phases of a Value Method Study.  
What happens in a Strategy Meeting?  
What is a Preparatory Meeting?  
How to plan the actual Study Workshop?  
What is involved in Report writing?  
Implementation Meeting and implementation  
How applicable is the Value Method?  
Main Outcomes of Chapter Nine  
Appendix 1: Value Method Questions  
Appendix 2: Value Method Checklist  
Bibliography