



# KURSUS PENGURUSAN NILAI

Modul 1/2017



**ATURCARA**

**KURSUS VALUE MANAGEMENT MODULE 1 SESI 1/2018**

<b>Tarikh</b>	<b>Masa</b>	<b>Perkara</b>	<b>Penceramah</b>	<b>Fasilitator</b>
<b>14/03/2018 (Rabu)</b>	8.00pg - 8.30pg	Pendaftaran Kursus		
	8.30pg - 9.00pg	<b>Pre Course Assessment</b>	Pn. Rohanis Abd. Ghani	Pn. Sharifah Muna Syed Murtadza
	9.00pg - 10.30pg	<b>Introduction &amp; Background of Value Management</b>	Pn. Rohanis Abd. Ghani	Pn. Sharifah Muna Syed Murtadza
	10.30pg - 11.00pg	Minum Pagi		
	11.00pg - 1.00ptg	<b>Value Management in Construction and Implementation in Public Projects</b>	Pn. Rohanis Abd. Ghani	Pn. Sharifah Muna Syed Murtadza
	1.00ptg - 2.30ptg	Makan Tengahari & Solat		
	2.30 ptg - 4.30 ptg	<b>VM Body of Knowledge</b>	Pn. Rohanis Abd. Ghani	Pn. Sharifah Muna Syed Murtadza
		<b>- VM Opportunity Points</b>		
<b>15/03/2018 (Khamis)</b>	8.00pg - 8.30pg	Pendaftaran Kursus		
	8.30pg -10.30pg	<b>VM Body of Knowledge</b>	Pn. Rohanis Abd. Ghani	Pn. Sharifah Muna Syed Murtadza
		<b>- VM Opportunity Points in D&amp; B Projects</b>		
	10.30pg - 11.00pg	Minum Pagi		
	11.00pg - 1.00pg	<b>VM Body of Knowledge</b>	Pn. Sharifah Muna Syed Murtadza	Pn. Rohanis Abd. Ghani
		<b>- VM Study Process</b>		
		<b>- VM Worksyop Process</b>		
	1.00ptg - 2.30ptg	Makan Tengahari & Solat		
	2.30pg - 4.00pg	<b>Value Management Methodology and Process (phases)</b>	Pn. Sharifah Muna Syed Murtadza	Pn. Rohanis Abd. Ghani
		<b>- Information Phase</b>		
		<b>- Function Analysis Phase</b>		
		<b>- Creativity Phase</b>		
		<b>- Evaluation/Judgement Phase</b>		
		<b>- Development Phase</b>		
		<b>- Presentation Phase</b>		
	4.00ptg - 4.30 ptg	<b>Post Course Assessment</b>	Pn. Sharifah Muna Syed Murtadza	Pn. Rohanis Abd. Ghani

# Bahagian Pengurusan Projek Kompleks, Cawangan Perancangan Aset Bersepadu, JKR MALAYSIA

## Our Vision

"To lead project management in Malaysia"

## Our Initiative

- ❖ Project Management Toolkits
- ❖ Acquisition Categorisation (ACAT) Framework
- ❖ Project Health Check (PHC)
- ❖ Risk Management
- ❖ Strategi Perolehan Alternatif (SPAf)
- ❖ Enterprise Content Knowledge Management (ECKM)
- ❖ Gerbang Nilai (GN)
- ❖ Scheduling
- ❖ Project Management Competency
- ❖ Value Management
- ❖ Partnering
- ❖ Competency Based Human Resource Management
- ❖ VACCINE (Value Creation Acceleration Through Creativity and Innovation Experience)



## Fungsi Utama Unit VM JKR



- 1 Membangunkan sistem, proses, *tools*, *techniques* bagi pelaksanaan VE dalam projek kerajaan
- 2 Melaksana Kajian VE (*facilitation*) bagi projek Kerajaan (JKR dan Kementerian/Agensi lain)
- 3 Melaksana pembangunan kompetensi bagi VE di JKR / agensi luar dan program pensijilan fasilitator & CVM
- 4 Melaksana dan melapor Kajian Pasca Lab VE, sistem repositori dan pengurusan *Lessons Learned*

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History & Evolution of VM

The VALUE concept

The PRINCIPLES of Value Management

Implementation of Value Management in  
Malaysian Public Projects

What is

# Value Management ?

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A methodology

A structured process

Function orientated

Involves Multidiscipline



Why do we need

# Value Management ?

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Because...

There are many ways to  
waste

TIME, MONEY, & EFFORT

*Source: Abdulaziz S. Al-Yousefi (2008)*







## **History & Evolution of VM**

The VALUE concept

The PRINCIPLES of Value Management

Implementation of Value Management in  
Malaysian Public Projects



# History & Evolution of VM

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## 1940s (During WW II)

- Conceived by **Lawrence D. Miles** , purchasing engineer in GEC(General Electric Company), a major defense contractor in US.
- Running at maximum capacity, shortage of key raw materials & components.
- ***“if I cannot obtain the product I must obtain an alternative which perform the same function.”***
- From the observation he proposed a system called **“Value Analysis”**

# History & Evolution of VM

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## 1950s

- US Department of defense Bureau of Ships, the 1<sup>st</sup> US Government to implement VA.
- Name change to **Value Engineering** due to administration reason that engineer were considered the most appropriate personnel to undertake the task.
- Extensive development of VE through US Public Sector and emerged into service and projects.
- “Society of American Value Engineers” was incorporated in Washington ,DC.

# History & Evolution of VM

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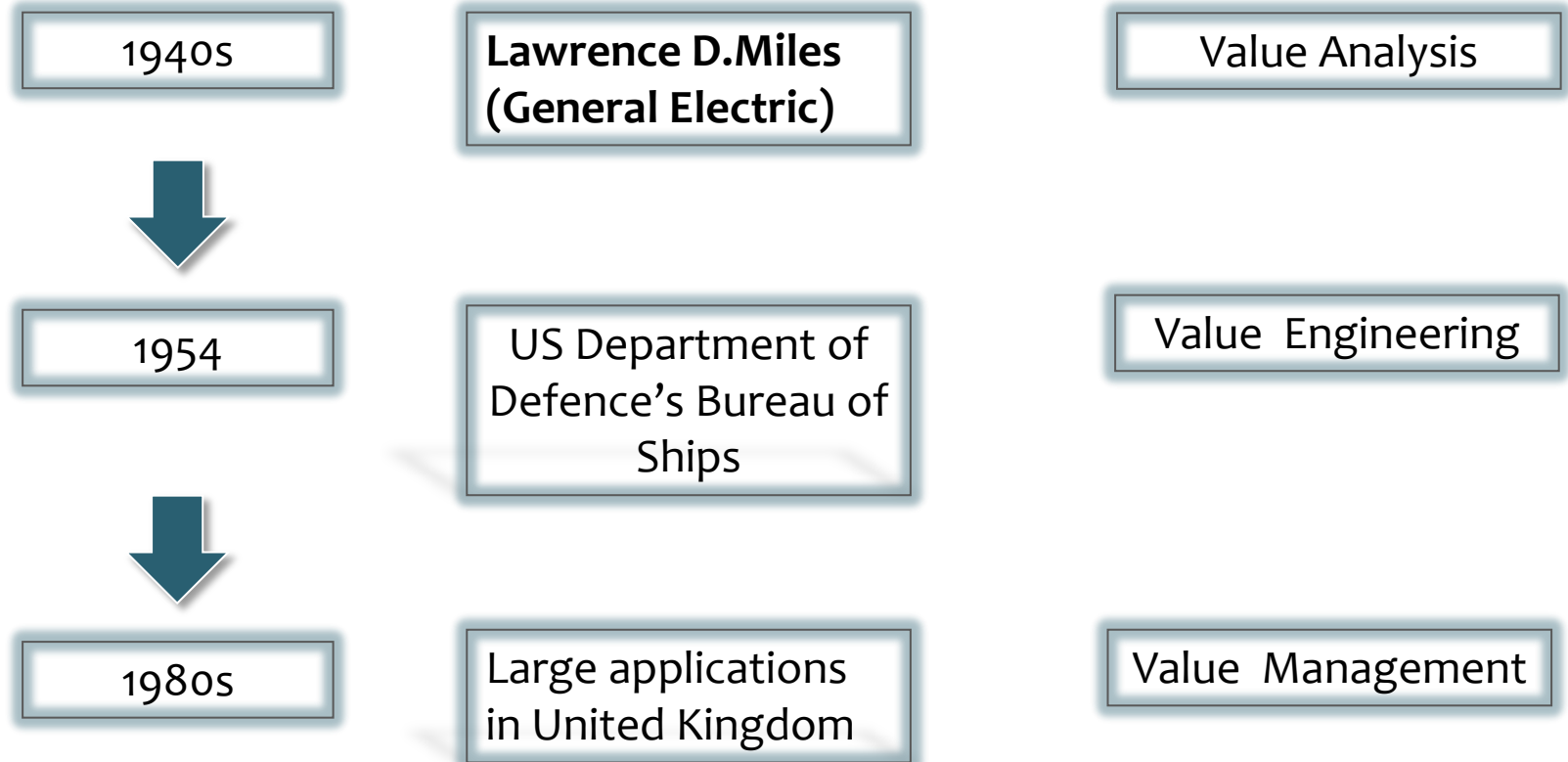
## 1960s

- Value Engineering (VE) began in UK manufacturing sector
- Established Value Engineering Association – 1966
- Change name to Institute of Value Management
- and later expanded to Europe, Australia, New Zealand & Hong Kong

## 1980 - 90s

- Value Management became popular and widely emerged into the Construction Industry

# History & Evolution of VM



# VM in Malaysia

1986

VM introduced to Universiti Teknologi Malaysia (UTM)



2000

Institute Value Management of Malaysia (IVMM) was registered and formalized with 20 founding members.



29<sup>th</sup> December  
2009

Circular on Value Management institutionalizing VM Application for Federal Government projects of RM50million and above had been issued by Economic Planning Unit, Prime Minister's Department.



2011

Value Management Guideline

Source : 1998-2011 MCM





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History & Evolution of VM

**The VALUE concept**

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# Value Definition

**Value** is a measure expressed in currency, effort, exchange or on a comparative scale, which **reflects the desire** to obtain or retain **an item or service**:

- **Use value** (measures function of the item)
- **Exchange value** (amount an item may be sold)
- **Esteem value** (amount to pay for prestige)



# Cost and Worth

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**Cost** is the price paid or to be paid  
(note: one man's price is another man's cost)

**Worth** is defined as the least cost to perform the required function

*Source: Kelly and Male (2003)*



# Function

**Function** is a characteristic activity or action for which a thing is specifically fitted, used or for which something exists.

Source : Kelly and Male (1993)

## Types of function:

### BASIC FUNCTION:

The primary purpose or most important action performed by a product or service. The *basic function* must *always exist*, although *methods* or *designs to achieve it may vary*.

### SECONDARY FUNCTION:

A function that *supports* the basic function and results from the specific design approach to achieve the basic function. As methods or design approaches to achieve the basic function are changed, secondary functions may also change.

Source: SAVE VM Standard

### REQUIRED SECONDARY FUNCTION:

A function that must be achieved to *meet codes, standards* or *mandatory other requirement*.

Source: Dell 'isola



# Example of Function



Doors

Basic Function  
***Control Access***

Secondary Function  
• ***Provide Aesthetic***

Required Secondary Function  
• ***Resist Fire***

# VM Value Concept (i)

**SAVE International (USA):**

$$\text{Value} = \frac{\text{Function}}{\text{Resources}}$$

Where;

Function = Customer's performance requirements;

Resources = Labour, cost, time etc

Or; as a fair return or equivalent in goods or services or money for something exchanged

# VM Value Concept (ii)

**BS EN 12973:2000 (UK/Europe):**

Value

=

Satisfaction of Needs

Use of Resources

What is necessary for  
a desired user



Everything that is required  
to satisfy needs

# VM Value Concept (iii)


$$\text{VALUE} = \frac{\text{Function (F)} + \text{Quality (Q)}}{\text{Cost (C)}}$$

by Dell 'Isola

**Function** = The specific work that a design or item must perform  
**Quality** = The owner's or user's needs, desires and expectations  
**Cost** = The life cycle cost of the product or project

# VALUE ENHANCEMENT

## VALUE ENHANCEMENT APPROACHES:

### 1. Cost Reduction Approach



Reducing cost but maintaining the function and quality

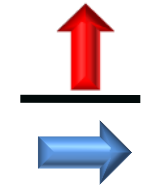
## POTENTIAL IMPROVEMENTS

- Sharing spaces / facilities
- Centralised functions
- Opt for cheaper solutions with same function and quality

## POTENTIAL OUTCOMES

- Optimized solution / design
- Elimination of redundancies
- Unnecessary cost avoidance
- Cost optimization

### 2. Function Increase Approach



Increasing either the function or quality or both but maintaining the cost

- Add or improve functionality and/or quality within cost
- Opt for better characteristic or technology, yet within cost

- Improved functionality
- Improved quality / characteristic / technology
- No cost implication

### 3. Compound Approach

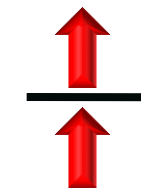


Reducing the cost and at the same time increasing the function and quality

- Eliminate unnecessary functions / facilities
- Eliminate unnecessary quality criteria or technology
- Refine functional and/or quality solutions at lower cost

- Unnecessary cost avoidance
- Project cost optimization
- Improved functionality
- Improved quality / characteristic / technology
- Cost optimization

### 4. Expand Growth Approach



Increasing the cost but at the same time improving function and quality at a higher proportion

- Increase sustainable solutions in design
- Increase operations ability
- Improve maintenance ability
- Improve constructability
- Opt for better technology

- Improved sustainability
- Improved operations / maintainability
- Improved constructability / technology
- Cost optimization





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History & Evolution of VM

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# VM Definitions

**L.D. Miles (1940s)** used ‘Value Analysis’:

*‘is an organised approach to provide the **necessary functions** at the lowest cost’;*

and later definition;

*‘is an organised approach to the identification and elimination of **unnecessary costs**’*

*‘....an organised approach to provide the **necessary functions at the lowest cost** without **affecting the quality of the product.***

# unnecessary costs

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Lack of measurement in value

Lack of information

Lack of time

New process or technology

“costs which do not meaningfully contribute to the function or purpose of the product or service”

Honest but wrong belief

Habits and attitudes

“wasteful practices in delivering a service or a failure to match the delivered service to customer needs”

Reluctance to seek advice

Unrealistic judgement

Human factor



# VM Definitions

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‘VM is a proactive, creative way, problem-solving service, using **structured systems** and **multi disciplinary team** orientated approach to generate alternatives with the relationship of **function with value**’

Source : Kelly and Male (1993)



# VM Standards

**USA** SAVE International  
(Value Standard & Body of Knowledge)

**Australia** Australian Standards  
Value Management Standards

**UK** British / European VM Standards  
BS EN 12973:2000

**Malaysia** Panduan Pelaksanaan Pengurusan  
Nilai Dalam Projek/Program Kerajaan  
(Unit Perancang Ekonomi)



# VM Terminologies

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## **VALUE MANAGEMENT**

Value Analysis  
Value Assessment  
Value Planning  
Value Engineering  
Value Review

## **VALUE METHODOLOGY**

# VM Applicability

Can be applied during any stage of a project's development cycle

- ❖ Construction projects: Concept development, preliminary design, final design, procurement, and construction phases.
- ❖ Products, consumer, industrial, or defense :
  - focus on the design or manufacturing process
- ❖ Business systems and processes: Business plans & Organizational
- ❖ Service organizations : Medical industry  
(Operating rooms, Emergency rooms and etc.)  
: Legal system (police system)

Source: SAVE International VM Standard, 2006 edition





# VM Study Vs VE Study

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**VM  
STUDY**

**Why invest?**

(Getting the right project)



**VE  
STUDY**

**Invest in the right  
technical solution**

(Getting the project right)

# Principle of VM Intervention

**“VM (study intervention) can take place at any point in the project lifecycle and the numbers of value opportunities can and will vary from project to project...”**

*Source: The Value Management Benchmark by Male et al (1998)*



# Misconceptions about VM

**Just another cost cutting tool**

Eliminates unnecessary cost whilst retains or enhance quality or performance



**Equals to “Design Reviews” or “Cost Planning”**

More systematic, disciplined and far reaching, function orientated, structured decision making tool, emphasizes on audits and a range of alternatives



**Additional “Road Block” & time consuming**

Set strategic interventions along the project life cycle to improve delivery efficiency and whole development time

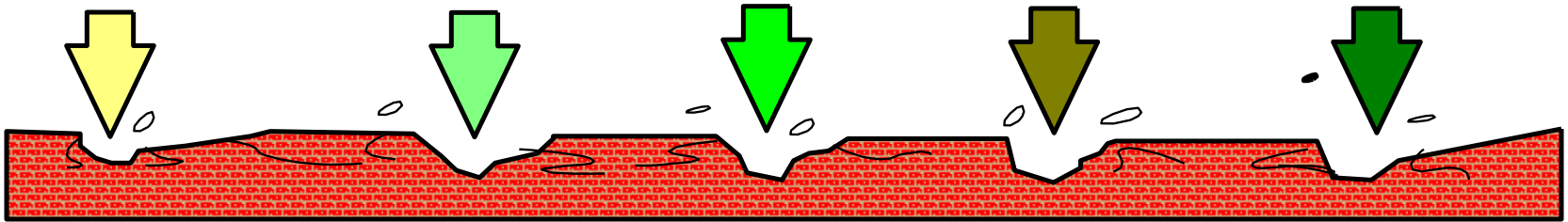


# benefits

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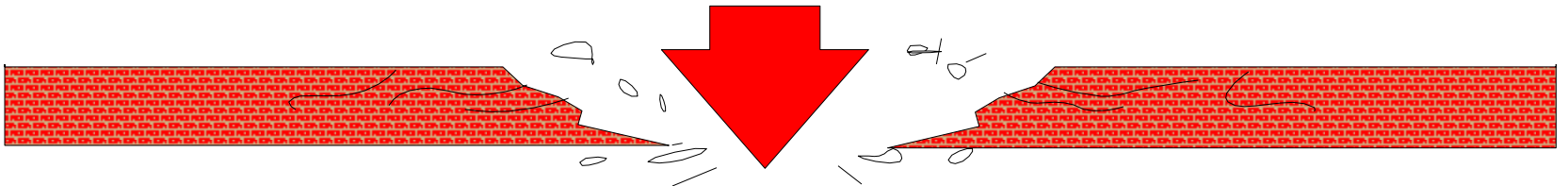
- Better investment decision
- Improved products or services
- Robust management style
- Vehicle for innovation & change
- Effective methods and tools
- Enhanced competitiveness
- Improved communication
- Positive human dynamics

# *INDIVIDUAL EFFORTS*



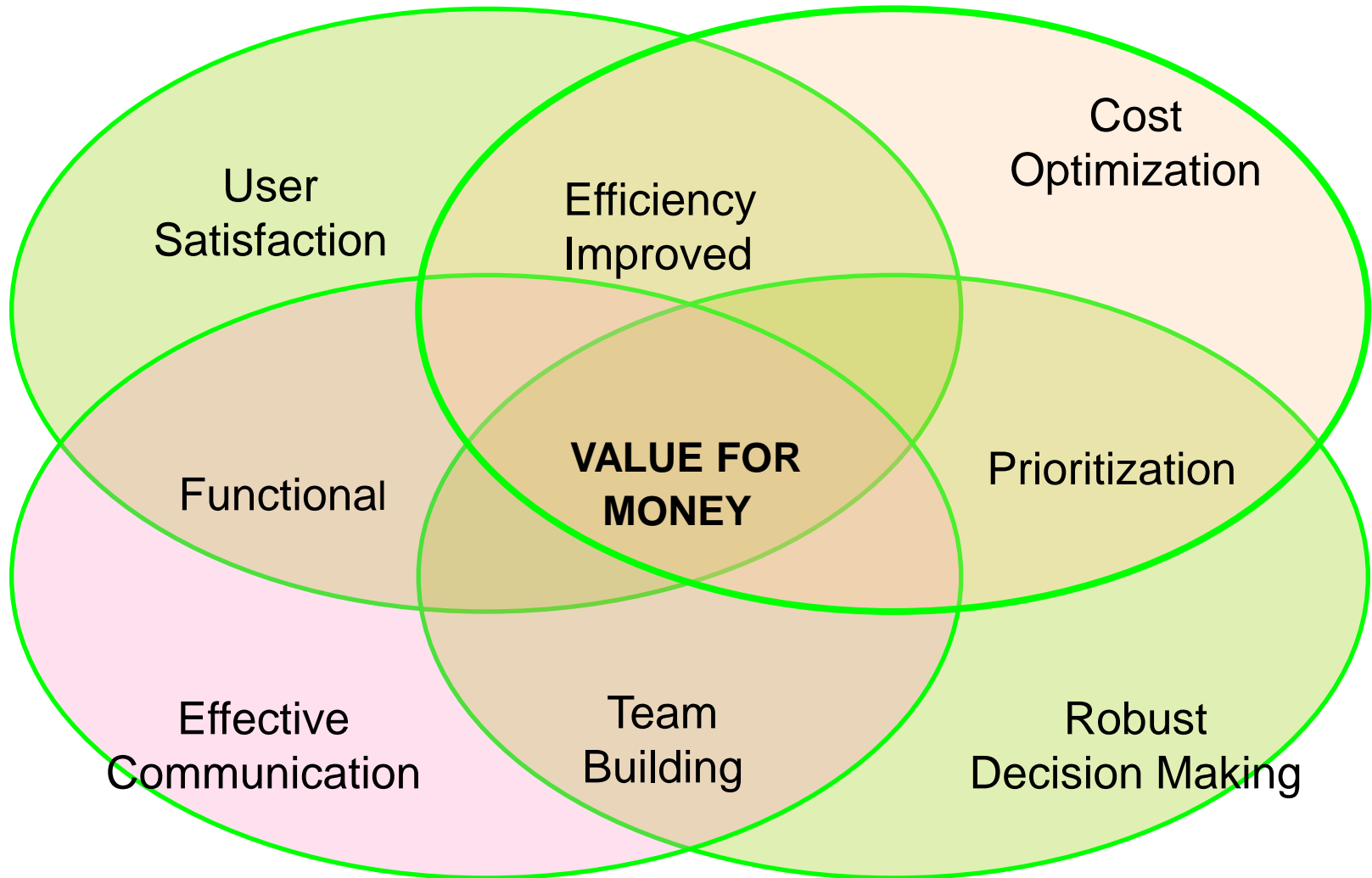
## *VM APPROACH*

## *VM TEAM EFFORT*



## *SOLUTION*

# outcomes of VM



# challenges in VM

- ❖ Misconceptions about VM
- ❖ Misconduct of VM practices
- ❖ Confusion in VM terminology and process
- ❖ Lack of commitment and support
- ❖ Negative attitudes and rejections
- ❖ Unreliable information and data been provided
- ❖ Time schedule & cost expenses for VM workshop
- ❖ No financial incentive for contractors (VECP)



# Value management key message



**COST CUTTING**



**maximising  
PROJECT VALUE**



# value management to achieve





TERIMA KASIH