



**JABATAN UKUR BANGUNAN  
FAKULTI SENIBINA PERANCANGAN DAN UKUR  
UNIVERSITI TEKNOLOGI MARA**

**APPLICATION OF VALUE MANAGEMENT IN CONSTRUCTION  
INDUSTRY DURING EARLY STAGES**

**WAN ASSAD QUTUBULDIN BIN WAN ABDUL AZIZ**

**2001382371**

**IJAZAH SARJANA MUDA UKUR BANGUNAN (KEPUJIAN)**

**OKTOBER 2003**

## ABSTRACT

Value Management is relatively new to our construction industry and is still in its infancy in the Malaysian construction industry. It was originated from the United States with Lawrence Miles as the founder of Value Engineering, as it was popularly known at that time. It has undergone various changes and adjustment from the early days it was developed until today. The purpose of Value Management study is to optimize the requirements of those with an interest in the project. It involves a multidisciplinary team who works together in a structured and systematic workshop reviewing the existing designs and proposals through the functional analysis. It concerns in the elimination or modification to the items that have unnecessary costs but improving or maintaining the quality and functions.

This research is limited to the application of Value Management during preliminary stages which end during design stages. Interviews were held with various parties involved in the construction industry within the area of Klang Valley and Johor Bahru only. From the interviews, the writer found that Value Management has started to be accepted as a chosen method for reducing cost whilst maintaining the functionality but still, it has a long road to travel to achieve its goal of an accepted and recognized technique in the industry. Today, the road is there but it is being paved from time to time by the outstanding achievements of those value managers/practitioners who foresee the potential rewards to be gained by the implementation of Value Management in the future.

## ACKNOWLEDGEMENT

Above all, I would like to thank to Allah s.w.t for His merciful blessings and opportunity given to me in making the preparation and completion of this dissertation successfully as without His, there will be no such word of me today.

My heartiest appreciation especially dedicated to En. Mahyudin Mahmod, Head of Building Surveying Department, and En. MD. Nadzari Mohd Jalil, Dissertation Coordinator, Department of Building Surveying for their enthusiastic help and supports for this dissertation.

Beneath my words, I would like to express my gratitude to my supervisor, Puan Suliahti Hasyim of Building Surveying Department, and to my co-supervisor, En. Saipol Bari Abd Karim, Managing Director of K-PROVAM Sdn. Bhd. By their comment largely dictated the concepts and format and treatment the contents of this dissertation and for their valued comments, criticisms and encouragement.

Special acknowledgement is due to Cik Rahayu bte. Othman, Contract Manager of BINAPURI Construction who inspired me to write this dissertation.

I would also like to thank to:

- Mr. Tony J Barry, E-Value Engineering Sdn. Bhd.
- Mrs. Aini Jaapar, MARA University of Technology, Shah Alam.
- Mr. Ellemmy Iskandar, MARA University of Technology, Shah Alam.
- Prof. Mazlan Che Mat, MCM Associates.

# LIST OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENTS	v
LIST OF CONTENTS	vii
LIST OF FIGURES	xi
LIST OF TABLES	xii
LIST OF APPENDICES	xiii

## CHAPTER 1

INTRODUCTION TO VALUE MANAGEMENT	1
1.1 General	1
1.2 Objectives of Research	2
1.3 Scope of Research	2
1.4 Methodology of Research	3
1.5 Guide to Dissertation	4
1.5.1 Chapter 1	4
1.5.2 Chapter 2	4
1.5.3 Chapter 3	4
1.5.4 Chapter 4	5
1.5.5 Chapter 5	5
1.5.6 Chapter 6	5

## CHAPTER 2

THE CONCEPTUAL OF VALUE MANAGEMENT	7
2.1 The Meaning of Construction Management	7
2.2 Brief History of Value Management	8
2.3 Definitions	9
2.3.1 Value Engineering and Value Management	9
2.4 Perceptions of Value Management	13
2.5 The Fundamental Principles of Value Management	15

2.5.1	The Purpose of Value Management Study	15
2.5.2	Multidisciplinary Team	15
2.6	When Do We Implement Value Management?	16
2.7	Value for Money and Unnecessary Costs	17
2.7.1	Value for Money	17
2.7.2	Unnecessary Costs	20

## **CHAPTER 3**

<b>THE FEATURES OF VALUE MANAGEMENT</b>	<b>23</b>
3.1 Job Plan	23
3.1.1 Phases of Job Plans	23
3.2 Functional Analysis	33
3.2.1 Function Definitions	35
3.2.2 Function Valuation	36
3.2.3 Alternatives	36
3.3 Functional Analysis System Analysis (F.A.S.T)	36
3.4 Formal Approaches to Value Management During Design Stage	42
3.4.1 The 40-Hours Workshop	42
3.4.2 The Charette	44
3.4.3 Value Management Audit	45
3.5 Benefits of Value Management	46
3.6 Conclusion	48

## **CHAPTER 4**

<b>THE APPLICATIONS OF VALUE MANAGEMENT</b>	<b>49</b>
4.1 Value Management in the Construction Industry	49
4.1.1 General	49
4.1.2 Return on Investment	51
4.2 The Practice of Value Management	53
4.2.1 Applications during Design Stage	53