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**ESTABLISHMENT OF VALUE MANAGEMENT FRAMEWORK FOR
IMPLEMENTATION IN JKR CONSTRUCTION PROJECT**

MUKHZANI BIN ABD LATIF

**A project report submitted in partial fulfillment of the
requirements for the award of degree of
Master Project Management**

**Faculty of Civil Engineering
Universiti Teknologi Malaysia**

MAY 2011

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For my beloved family and friends.

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ABSTRACT

Value Management (VM) has been recognized and proven worldwide as a tool of enhancing the value of the projects, facilities and systems. VM also considered as critical to the project success since it can provide basis for improving the value for money in carrying out projects. The important elements of projects which are the time, cost and quality will be optimally balance as VM application is focusing on value rather than cost. Therefore, adapting VM approach by Jabatan Kerja Raya (JKR) will ensure value for money projects delivered to the clients, ultimately benefiting the peoples since the allocation provided is limited and involved with public funding. Thus this research has established the VM framework for implementation in JKR construction project by investigating the perception and understanding of VM, study the critical elements and factor affecting of VM implementation in JKR organisation. Systematically of VM study during the project lifecycle and supported with other factors such as information and ideas from VM participants and facilitators, special budgeting for VM study and special unit for performance monitoring of VM found to be the critical elements in VM implementation in JKR construction project. In addition, the study also indicated the project viability issues must be addressed accordingly at the strategic level before being implemented by JKR to ensure maximum potential and benefit of VM. To support the successful of VM implementation in JKR, focus need to be given on the relationship with the clients particularly in fulfilling their needs and requirements. Besides, JKR have to ensure that the project being managed by experienced and knowledgeable project and applying best practices & approach during the project lifecycle.

ABSTRAK

Pengurusan Nilai (VM) telah diakui dan terbukti di seluruh dunia sebagai alat untuk meningkatkan nilai, bagi sesuatu kemudahan, projek dan sistem. VM juga dianggap sebagai faktor penting bagi kejayaan projek kerana ia boleh memberikan asas untuk meningkatkan nilai untuk wang dalam melaksanakan projek. Faktor-faktor utama dalam pelaksanaan projek iaitu masa, kos dan kualiti akan dioptimumkan dan diseimbangkan memandangkan aplikasi VM yang fokus kepada nilai berbanding kos. Oleh itu, pelaksanaan VM di Jabatan Kerja Raya (JKR) akan memastikan nilai untuk wang bagi projek yang diserahkan kepada pelanggan, dan juga memastikan rakyat mendapat faedah penuh daripadanya. Ini berikutan peruntukan pembangunan yang agak terhad dan juga ia turut melibatkan penggunaan dana awam. Justeru, kajian ini telah pun mewujudkan kerangka VM dalam pelaksanaan projek JKR dengan meneliti persepsi dan pemahaman tentang VM, elemen-elemen kritikal dan faktor yang mempengaruhi pelaksanaan VM dalam organisasi JKR. Didapati, pelaksanaan VM secara sistematik sepanjang kitar projek, dengan disokong oleh faktor-faktor lain seperti penglibatan dan perkongsian maklumat daripada peserta dan fasilitator VM, peruntukan dan pemantauan berterusan yang khusus dalam melaksanakan VM merupakan elemen-elemen kritikal dalam pelaksanaan VM untuk projek JKR. Selain itu, kajian ini juga mendapati bagi mendapatkan potensi yang maksimum daripada pengurusan nilai ini, kewujudan sesuatu aset atau projek hendaklah diberikan justifikasi sewajarnya sebelum sesuatu projek dilaksanakan oleh JKR. Untuk memastikan kejayaan pelaksanaan VM di JKR, pelanggan haruslah diutamakan terutama dalam memenuhi keperluan dan permintaan pelanggan. Selain itu, pihak JKR juga perlu memastikan projek-projek diselia urus oleh pasukan projek yang berpengalaman dan berwibawa disamping pendekatan amalan terbaik di sepanjang kitar hayat projek.

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LIST OF ABBREVIATIONS

JKR	Jabatan Kerja Raya
VM	Value Management
EPU	Economic Planning Unit
VP	Value Planning
VE	Value Engineering
VA	Value Analysis
PMBOK	Project Management Body of Knowledge
RIBA	Royal Institute British Architect
AIA	American Institute Architect
SPK	Sistem Pengurusan Kualiti
KKR	Kementerian Kerja Raya
IVM	Institute of Value Management
ICE	Institute of Civil Engineers

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The construction industry nowadays has become one of the leading and growing industries in Malaysia. However, in a competitive market, the construction industry face challenges and among of it, is the failure of the project to meet deadline and cost and quality targets. This factor therefore, has leaded the construction industry to the very poor reputation particularly in delivering the value to the customers. Thus, the industry players has important roles in term of continuous improvement and innovation in their products or projects development in order to ensure the customers obtain the value for money products and projects.

Government programs and projects are also facing with the same problems. Therefore, in order to improve value for money for government programs and projects, Economic Planning Unit (EPU) of Prime Minister's Department has enforced a policy on the implementation of Value Management for programs and projects that cost more than RM 50 million (EPU, 2009). With the introduction of the policy, it was anticipated the concept of value for money will be adhered by the ministries and departments in implementing such programs and projects.

Jabatan Kerja Raya (JKR) as the technical arm of government and the main project implementer of government projects has direct relation with the policy and directive by EPU. With the core business of providing consultation, project management and maintenance services to the government, the establishment of Value Management Framework in JKR definitely help the organization to implement and produce value for money projects for the government and thus optimizing public fund.

1.2 Problem Statement

In order to achieve stronger and more value added economy of the country, Malaysian Government in 9th Malaysian Plan (9th MP) have allocated about RM200,000.00 million on development programs (9th Malaysian Plan, 2006). Four (4) sectors have been identified in received the development allocation namely as economy, social, safety and general administration. This allocation therefore distributed to the respective states, ministries and departments with the ultimate aims to enhance the life quality of the people. However, the allocation provided is limited, and it needs to be used appropriately. Therefore, projects and programs proposed by the government agencies must adapted 'value for money' to ensure it's really benefits the people.

In 9th MP, JKR has received amounting of RM42.9 billion allocation for implementing government projects. Total number projects of 6166 have been implemented where 4160 was completed (88.42%), 242 number in pre tender stage and 207 number postponed by the client. The cost of JKR projects ranging as high as billions and millions, and as low as thousands of Ringgits. Therefore, any savings particularly on high cost projects (billions and millions) will be very significant to the government due to fund limitation and responsibility in using public money for the development.

Besides, JKR did face problems in implementing projects, even though the projects have already completed. Among the major problems are frequent design change, project does not meet the cost, quality and time targeted, clients requirements and stakeholders needs is not well considered, and related problems during operation (functionality, serviceability and maintainability).

Therefore, introduction of Value Management in JKR project implementation will ensure the adoption of 'value for money' projects and improve JKR project delivery as it has become one of the foremost and modern management tools and technique. It is also systematically supported the policy that have been introduced by the government on the implementation of Value Management in government projects.

1.3 The Aim and Objectives

The aim of the study is to establish a Value Management Framework in JKR project implementation. To achieve the aim, the following research objectives have been formulated:

- i. To study the perception and understanding of Value Management by JKR staff
- ii. To study the critical elements of Value Management implementation in JKR construction projects.
- iii. To determine factors affecting Value Management implementation in JKR construction project
- iv. To propose a framework of Value Management that suitable for JKR project implementation.

1.4 Scope of Study

In this research, application of Value Management in construction industry, related JKR processes and procedures in project development and factors affecting of value management implementation in JKR construction project has been investigated and studied accordingly.

Although the establishment of Value Management Framework consist of many elements but due to time limitation, the framework developed only limited to value opportunities (intervention time), its objectives and the output produce at each value opportunities in relation to JKR project development phases with regardless of type of procurement.

1.5 Brief Research Methodology

Research methodology is a framework for the researcher on how a study is carried out, such as process of collecting, analyzing, interpreting observations. Therefore, Figure 1.1 outlined the research methodology of this study. It is divided into two distinct phases: Phase 1 encompasses of scope and objectives determination, and literature review which considered as the information gathering and investigation process. Phase 2 is the phase where data collection and analysis has been made. Base on the findings of the analysis, the JKR Value Management Framework then developed and present to the panels for feedbacks for improvements.

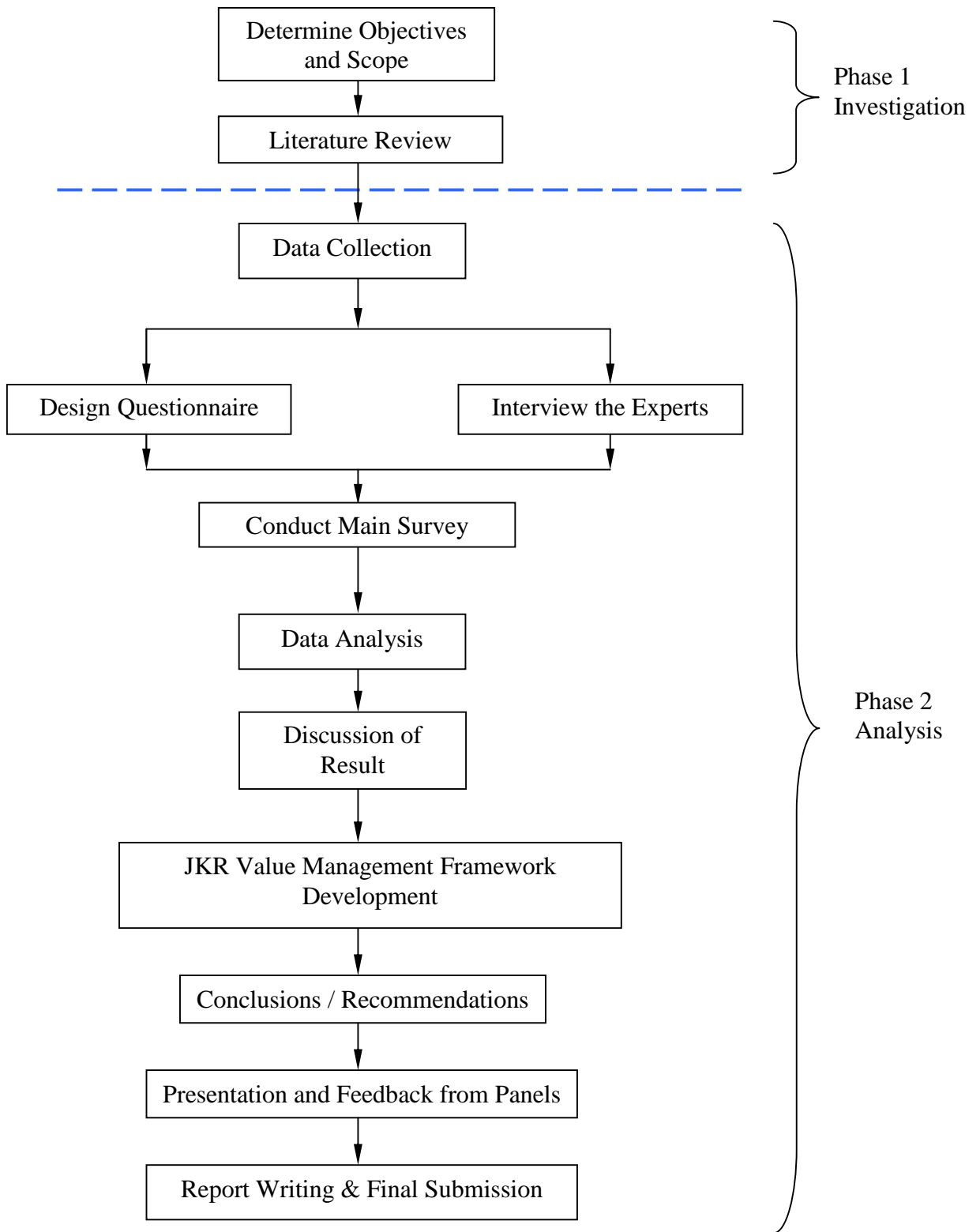


Figure 1.1 Schematic of Research Methodology