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THE EFFECTIVENESS OF MONITORING AND CONTROL ON RISK MANAGEMENT PRACTICES IN JABATAN KERJA RAYA

MOHD NAZIRA MOHD NASIR

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

Faculty of Civil Engineering
Universiti Teknologi Malaysia

MAY, 2011

I declare that this capstone project report entitled "*The Effectiveness of Monitoring and Control on Risk Management Practices in Jabatan Kerja Raya"* is the result of my own research except as cited in the references. The capstone project report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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Name : Mohd Nazira Bin Mohd Nasir
Date : .20 May 2011

Dedicated to my beloved wife, daughters, mother, father and family

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ABSTRACT

Risk management is one of the important processes in managing complex project such as construction. An effective risk management monitoring and control will contribute to the project success. The risks identified can be mitigated or minimized accordingly before it has an effect to the project delivery in term time, cost and quality. In Jabatan Kerja Raya (JKR), risk management is being implemented as part of the project management plan. Despite going through the process, some JKR's project still have problem in the project delivery. Hence, the aim of this study is to identify the characteristics for effective risk management monitoring and control. The study also aims to review and compare JKR current practice with the established characteristic for risk management monitoring and control and recommend improvement if necessary. Data were collected through literature review and questionnaire survey given to the targeted project team in JKR. The finding from the study identified 20 characteristics for effective risk management monitoring and control. The level of JKR effectiveness of risk management monitoring and control is moderate when compared to the identified characteristics. JKR is lacking in term of reporting and communication during the risk management monitoring and control process. The areas that JKR needed improvement are in the business sector and during construction stage.

ABSTRAK

Pengurusan Risiko adalah salah satu proses yang penting dalam menguruskan projek yang kompleks seperti pembinaan. Pemantauan dan kawalan pengurusan risiko yang efektif akan menyumbang kepada kejayaan sesebuah projek. Di mana risiko yang telah dikenalpasti dapat diatasi atau diminimakan kesannya sebelum ianya memberi impak ke atas penyampaian projek dari segi masa, kos dan kualiti. Di Jabatan Kerja Raya (JKR), pengurusan risiko dilaksanakan sebagai sebahagian daripada pelan pengurusan projek. Walaupun telah melaksanakan prosess tersebut, masih terdapat projek JKR yang menghadapi masalah. Jadi, kajian ini dibuat bagi mengenal pasti karekteristik pemantauan dan kawalan pengurusan risiko yang efektif. Kajian ini juga bertujuan untuk mengkaji dan membandingkan cara perlaksanaan JKR sekarang dengan karekteristik pemantauan dan kawalan pengurusan risiko yang efektif tersebut dan mencadangkan penambahbaikan sekiranya perlu. Data diperolehi menerusi kajian literatur dan juga melalui kajian soal selidik yang ditujukan kepada pasukan projek JKR yang terpilih. Kajian ini mendapati dan mengenalpasti 20 karekteristik pemantauan dan kawalan pengurusan risiko yang efektif. Tahap keberkesanan pemantauan dan kawalan pengurusan risiko di JKR adalah sederhana. JKR masih kekurangan dari segi melapor dan berkomunikasi semasa pemantauan dan kawalan pengurusan risiko. JKR perlu memperbaiki atau menambahbaik pemantauan dan kawalan pengurusan risiko di sektor bisnes dan semasa peringkat pembinaan.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

PWD	-	Public Works of Department, Malaysia
HOPT	-	Head of Project Team
HODT	-	Head of Design Team
RMP	-	Risk Management Plan

LIST OF APPENDICES

CHAPTER 1

INTRODUCTION

1.1 Introduction

The application of project risk management started in 1996 after the multi - displinary task force of Standards Australia/Standard New Zealand published the first Risk Management Standard, AS/NZS 4360:1995. This standard was then used to develop the ISO13000 Risk Management Standard in 2009. Risk management is part of project management nine knowledge areas. An effective project management requires effective risks management in which involved the process of mitigating risk through risk management planning, risk identification, qualitative risk analysis, quantitative risk analysis, risk response planning and risk monitoring and controlling. The most important process in risk management is risk monitoring and controlling the identified risk. Risk monitoring and controlling is a continuous process, where tracking and evaluating the identified risks are done and new risks are analysed. It is an important process to verify the execution of risk plans and evaluate their effectiveness in reducing risks. Good risk monitoring and controlling will provides valuable information in making effective decisions before or when the risk occurred, thus contribute to the success of the project.

Jabatan Kerja Raya (JKR) is responsible for planning, designing and the construction of infrastructure projects in Malaysia and act as the implementing agency and technical consultant to the government. As the implementing agency and technical consultant for majority of the government projects, JKR provide the following services as their core business:

- Technical consulting service;
- Project management; and
- Maintenance management service.

Under the 9th Malaysian Plan, JKR is entrusted to handle major infrastructure projects. In order to deliver such projects effectively, JKR has recognised the need to improve their capacity and competency in delivering these projects. To achieve this, JKR has established the Complex Project Management Division (PROKOM) and implemented a Project Managed Change Program (PMCP) to institute best practice project management and risk management within JKR.

Risk management is part of project management. An effective project management requires effective risks identification and assessment and determining the required mitigating actions. In JKR the risks are identified throughout the project cycle. Based on JKR past experience in doing construction project, a generic risk in JKR project has been established. Common risks occurred in every project stages is stated in a document titled the Generic Risk in JKR Project 2008. For example, the risks identified are an incomplete project brief during the planning stage, delay in calling tender as in procurement stage, incompetent designer at a design stage, changes in scope of work as in construction stage and incomplete record at the handover stage.

From there, risk management has gained increasing recognition as an important area in JKR project management. In JKR, risk management is widely used particularly in high impact projects. A high impact project is project that has a project cost of more than RM 50 Million, having high profile client such as Prime Minister Office and in a sensitive location. JKR risk management process was developed base on the AS/NZS 4360:2004. The implementation of risk management is expected to contribute to the improvements of project delivery. However, despite going through the risk management process of risk identification, risk analysis, risk evaluation, risk treatment, communication and consultation as well as risk monitoring and review, some of the projects still fail to be delivered.

1.2 Problem Statement

Risk has a strong effect on productivity, performance quality and the budget of a project (Mills, 2001). JKR has implemented many government building and infrastructure projects in Malaysia, but numbers of project delayed still remain high. According to JKR's record and data in 2008 in Figure 1.1, 914 out of 1,174 or 78% of JKR's projects are delayed and have to be given an Extension of Time (EOT). The delayed are because of many reasons and some of them were under JKR control. These problems occurred throughout the project cycles, either in planning, designing, procurement, construction and handing over stage. These include the projects that have an established and implemented the Risk Management Plan, where most the risk already being foreseen or identified.

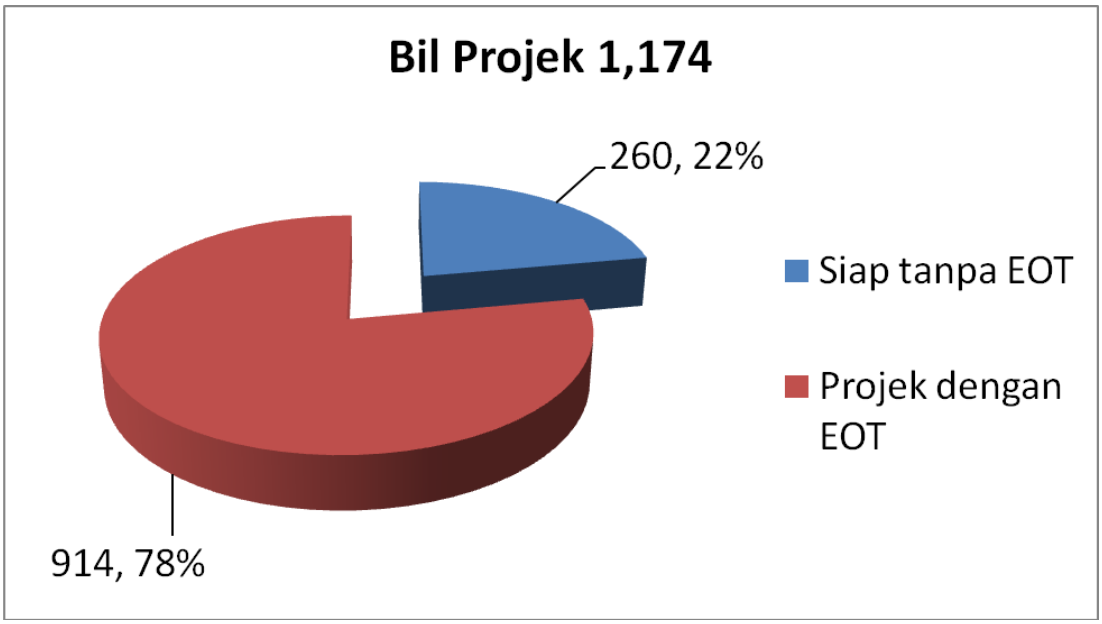

Figure 1.1 JKR's project with Extention of Time (EOT) in 2008

The construction industry also has a very poor reputation in managing risk, with many projects failing to meet target deadlines and cost (Mills, 2001).The Risk Management Plan is a document that was produced during a risk management workshop. The document consists of risk register and risk analysis which was developed and agreed upon by major stakeholders during the workshop. If these risks identified are closely monitored and control the effect can be minimized or

even mitigated effectively. The result of these poor risk management will contribute to the failure of the project management, thus the project does not achieve the objectives in term of:

- Delay in the hand over or delivery of project to client.
- Cost of project increases or budget overrun.
- Does not meet the specified quality.
- Does not met client requirement

Therefore there is need to study the effectiveness of risk management monitoring and control in JKR in order to improve or overcome the problems.

1.3 The Objectives

The aims are to carry out a study on the current practice of risk management monitoring and control in JKR and determine the level of their effectiveness. The objectives of this study are as follows:

a) To establish the characteristic for effective risk management monitoring and controlling.

b) To review and compare JKR current practice with the establish characteristic for risk management monitoring and controlling.

c) To recommend improvement in JKR's risk management monitoring and controlling practices.

1.4 Scope of Study

For the purpose of the study, JKR construction projects are selected. These projects are selected because they have established and implemented the Risk Management Plan (RMP). The projects are headed or owned by different sectors in JKR which are Business sector, Management sector, Expert sector and JKR State.

The study focuses on the risk monitoring and control process throughout the entire project phases which are planning, design, procurement, construction and hand over stage. The identified risks during all these phases can have major impact to the project delivery, time, cost and quality.

In JKR, the custodian and person responsible for the project risk management is the Risk Manager or sometimes is the Project Manager itself. Meanwhile, the involvement of other project team members is also essential in managing the risk. Therefore, the selected respondents for the data collection were the Project Manager, Risk Manager and Risk officer which consist of JKR staff involved with the selected project only. These are the key personnel that have the responsibility to the overall risk management process including monitoring and control.

1.5 Summary

This chapter has discussed on the overview of the project risk management in general and their acceptance in JKR. Furthermore, it explained on the research problem statement, the objectives and scope of the study.