

THE IMPLEMENTATION OF PROJECT MANAGEMENT PRACTICES IN NON-
TECHNICAL DEPARTMENT

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ABSTRACT

This research conducted aims to know whether the non-technical department applying project management practices and procedures, and appropriate tools used for handling and managing project. A theoretical framework has been developed in order to perform this research. Apart from that, the quantitative research methodology is used in conducting this research. Questionnaires were distributed to the management staff in 3 selected departments in Kuantan, Pahang. This research concludes that the department which implements the project management practices and procedures can lead the project successfully complete within the time and budget as stated by client. Apart from that, by implement project management practices and procedures the appropriate tools can be identified and applied in monitoring the project, and also can know how effectiveness its is in monitoring the project.

ABSTRAK

Kajian ini dijalankan adalah bertujuan untuk mengetahui sama ada jabatan bukan teknikal menggunakan amalan dan prosedur pengurusan projek, dan alat-alat yang sesuai digunakan untuk mengurus dan mengendalikan projek. Rangka kerja teori telah dibentuk untuk melaksanakan kajian ini. Selain itu, kaedah penyelidikan secara kuantitatif digunakan dalam menjalankan kajian ini. Borang kaji selidik telah diedarkan kepada kakitangan pengurusan dalam tiga jabatan bukan teknikal di Kuantan, Pahang. Kajian ini menyimpulkan bahawa jabatan yang melaksanakan amalan dan prosedur pengurusan projek boleh menyebabkan sesuatu projek siap dan berjaya dalam masa dan bajet yang telah ditatpkan oleh pelanggan. Di samping itu, dengan melaksanakan amalan dan prosedur pengurusan projek alat-alat yang sesuai boleh dikenal pasti dan digunakan dalam pemantauan projek, dan juga boleh tahu bagaimana keberkesanannya dalam aktiviti pemantauan projek.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The purpose of this research is to investigate the implementation of the project management in non-technical department in Malaysia. Generally, project management commonly applied in the private sector rather than the public sector, but only certain public sector applies project management in dealing their projects. To the best of our knowledge, project management is related to construction project, but project management also includes the event project. Therefore, either managing construction project or event project, project management practices should be reviewed based on the project activities that need to be executed.

This study consists of two main objectives and all of them need to be conducted and examined in order to make sure that the research objectives can be achieved. One of the research objectives is to investigate whether non-technical department implement project management procedures and practices in implementation of the project. The purpose of this objective is to identify the actual practices and procedures that non-technical department apply in their organization when dealing with the project whether same or not with the project management practices. The next objective is to know the tools use for monitoring the project in non-technical department is effective or not, this is because to make sure that the department use the right and appropriate tools when managing projects.

In this chapter also will explain what are the problem involves in which that lead to the reason on why this research need to be conducted. Usually, there will be solution to overcome the problem when it is occurs. Other than that, in this chapter also covers the topic problem background, problem statement, research objectives, research questions, scope of study, significance of study, operational definition, and expected result.

1.2 Problem Background

Project management was applied widely in worldwide. This is because project management can lead the project complying with the clients' requirement, and complete within the time and budget or in other word increasing the productivity in term of time and cost. According to Chan and Tam (2000), the client satisfaction regarding to the project quality can be increased by applying the better project management practices in the organization or department that based on the study of construction projects in Hong Kong, China. Apart from that, the real function of project management practices were undertaken during the construction phase in which delivering something valuable toward the overall project performance in order to attain the goals of clients required (Serpell and Alarcon, 1998).

Other than that, project management also includes the comprehensive range (10 Knowledge Areas) during the start until the project finish, and the organization must fully focus on the 10 Knowledge Areas, so the organization might be able to give better performance towards the project. Moreover, the organizations which apply the project management in their department can acquire projects easily through the bidding and tendering process. But, without the proficient person that really knows what is actually the project management practices can lead the project to failure. This is because this person can be project manager, contractor, or engineer are fully responsible towards the project from starting of the projects until its end. In addition, the important role of technical person is the commencement in creating of an audit that could be appears at any stage in project lifecycle (Sichombo, Muya, Shakantu & Kaliba, 2009).

Besides that, with adequate of knowledge about project management can lead the organization move forward and control all the administrative decisions in project realization and technical decisions through the functional department (Bobera, 2008). In addition, the fast decision making can be make in order to react with all clients or top management doubts and queries about projects. Then, project management might be able to link projects with the organization's strategies or objectives and deliver it's with proper and effective manner (Comninos and Frigenti, 2002).

1.3 Problem Statement

Although there are many organization that apply project management in their organization, but there are still a few organization or department which did not apply project management in their organization. Usually, all the private sector in Malaysia applies the project management, but half of the public sector did not apply project management in their organization when dealing or handling their project. This is because, certain of the public sector did not concern about the importance of project management and certain of them did not know the existence of project management practices. Apart from that, there is no proficient technical person that has knowledge in project management in their organization that was fully responsible toward project. Other than that, they assumes that matter was complicated due need to hire proficient technical person, which mean that wasting their time and budget in which also need to deal with many processes to attain the project.

According to Ting, Khoo & Wong (2009), there is the question remains whether the technical person (contractor, engineer, and project management staff) and non-technical person really understands the application of project management or not in managing and handling projects in the competitive environment in construction fields. Other than that, managing projects as not simple as managing our daily routine activity because managing project must be comprehensive from the start until the end of the project in which includes the estimation cost, estimation time, the quality of the projects or in other word fulfill the

clients requirements about their project. In addition, other wondered question whether the procedures, practices, and tools that practiced by non-technical department consists the element from actual project management or not.

By implementing the project management practices, the tools and techniques in handling the project also can be identified by the organization. But the majority of the construction in public sector in developing countries is not at the point of focus the project management tools and techniques implementation, due to their belief which such tools were still far away (Abbasi and Al-Mharmah, 2000). According to Abbasi and Al-Mharmah (2000), due lacking of modern tools and techniques such as planning, programming, and controlling the projects which that tools are really necessary in the field of project management, can cause the organization cannot achieve the desired project goals which is complete within time, cost and quality standard. Last but not least, a project that is considered as a success by the project manger and his/her team might be considered as a failure project by the clients because the success of the project depends on different perspectives which are tools that they used, the way of handling the project, developer, and others (Lim and Mohamed, 1999).

1.4 Research Objectives

The following research objectives that need to be achieved are:

- 1) To investigate whether non-technical department implement project management practices and procedures in implementation of the project
- 2) To know the tools use for controlling the project in non-technical department is effective or not

1.5 Research Questions

The research questions will be as guidance in order to achieve the research objectives. The following research questions are:

- 1) Does the non-technical department implement project management practices and procedures in projects implementation?
- 2) Is the tools used by non-technical department effective in controlling the project?

1.6 Scope of Study

This study will be conducted in three chosen non-technical department including Department of Community Development (KEMAS), Department of Rubber Industry and Smallholder Development (RISDA), and Department of Tourism and Culture from Kuantan, Pahang, Malaysia. The respondents which are management staff will participate in this research and the questionnaire will be distributed to the respondents in order to collect all the data that relates to this research.

1.7 Significance of Study

The purpose of this research is to provide better understanding about the importance of implementing project management practices towards the organization. In this section will be explained about the significance of this research towards the organization and the project. This is because project management practices give the great influences either to project or organization.

1.7.1 Organization

The organization can enhance their performance by applying project management practices and procedures in their daily operation. This is because project management practices can make the organization management be proactive and also helps to resolve the problems and issues timely. Other than that, through project management practices also can list out the task that everyone needs to do, and at the same time the organization can identify the type of human resources need to be assimilated into a job that fits with their qualifications. Besides that, the organization can divide their organization department by applying Work Breakdown Structure (WBS) according to their respective duties and responsibilities.

1.7.2 Project

Without applying project management practices and procedures, the project cannot be complete within stated time and budget. This is because project management practices manage the project into the processes or procedures which are initiating, planning, executing, monitoring and controlling, and last but not least closing process. Other than that, with the sufficient resources and workforce can lead the project manager to estimate and schedule the projects in order to comply with the project requirements. Other than that, by applying project management practices in organization the project will be managed well and definitely comply with the quality that is required by the client.

1.8 Operational Definition

1.8.1 Project Management

According to PMBOK (2013), project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements and it is accomplished through the appropriate application and integration of the 47 logically grouped project management processes, which are categorized into Five Process Groups

(initiating, planning, executing, monitoring and controlling, and closing). Other than that, project management is the process of achieving project objectives (schedules, budget and performance) through a set of activities that start and end at certain points in time and produce quantifiable and qualifiable deliverables (Chandler Arizona, 2010).

1.8.2 Project

Project is a temporary endeavor undertaken to create a unique product, service, or result. The temporary nature of projects indicates that a project has a definite beginning and end. Other than that, project is an ongoing work effort is generally a repetitive process that follows an organization's existing procedures (PMBOK, 2013, p.3).

1.8.3 Non-technical Department

According to Oxford Dictionaries (2014), non-technical department refer that the organization not having or requiring specialized or technical knowledge when handling or manage the project.

1.9 Expected Result

From this study, the answer from the research question is expected to be clarified. It is expected that the non-technical department did not implement the project management practices and procedures in their organization because they could not recognize the importance of project management practices. Other than that, non-technical department also did not use the appropriate tools that relates to project management tools in monitoring their projects. This is because without implement project management practices, they could not know which appropriate tools that effective that can be applied when monitoring their project.

Chapter 2

Literature Review

2.1 Understanding Project

2.2 What is Project

The term of the project is described and defined in different ways in this chapter and all of them are illustrated below:

- A project is a temporary endeavor undertaken to create a unique product, service or result. The temporary nature of projects indicates that a project has a definite beginning of the project until the project end, and unique means that the product or service that serves are differs from all the similar products or services in some distinguishing way. Other than that, project is the ongoing and repetitive process that follows an organization's existing procedures (PMBOK, 2013, p.3).
- Project is described as a 'value creation undertaking based on specifics, which is completed in a given or agreed timeframe and under constraints including resources and external circumstances' (Ohara, 2005, p.15).
- Project has been termed as a human endeavor and might legitimately regarded as a project by its stakeholders when it includes a unique scope of work in which constrained by time and cost, the purpose is to achieve the beneficial change by creating or modifying the product or service via quantitative and qualitative objectives (Cooke-Davies, 2001, p.20).
- Project is an endeavor in which the human material and financial resources are organized in a novel way, to undertake a unique scope of work in a given

specification, within cost and time constraints, so as to achieve beneficial change and unitary through the delivery of quantitative and qualitative objectives (Turner and Cochrane, 1993).

Usually, the common themes of the project always temporary endeavor in which by creating the unique and specific in their product or service, and definitely encounter the starting of the project until the end in order to achieve the strategic organization objectives or goals.

2.2.1 Classification of Project

The projects that carried in this worldwide differ between each other according to their size, cost, scope and others. This is because, if the size of the project are small and the cost are not necessary at high cost, so the cost of the project will be determined based on their size and their scope of project. There are two well known approaches in project classification which are goal and method matrix which presented by Turner and Cochrane (1993), and the four dimensional NCTP (novelty (N), complexity (C), technology (T), and pace (P)) which presented by Shenhar and Dvir (2004). This classification is based on the principle in which how well the methods and goals defining the projects.

According to Turner and Cochrane (1993) in goal and method matrix, they define the type 1 projects give the both of goals and methods are well defined. This is because they are denoted by large engineering projects in which many authors gained the experiences by adopting this type of project. The type 2 projects according to them, is the only ones that the goals are well defined, but the methods is not able be well defined. Usually the project in this category typified with the development of the product in the early stages when the modern project management was developed. Besides that, for the type 3 in this category the methods for this type are well defined, meanwhile the goals are not well defined. In this category, the projects usually related to the software development in which the user's requirement is notoriously difficult to be specified. They also perceive that the last type of the goal and method matrix is the type 4 projects, which are this type neither the goals or methods are not well defined. This type of the projects in this category related to the development of organizational projects. This is depicted in Figure 1 below:

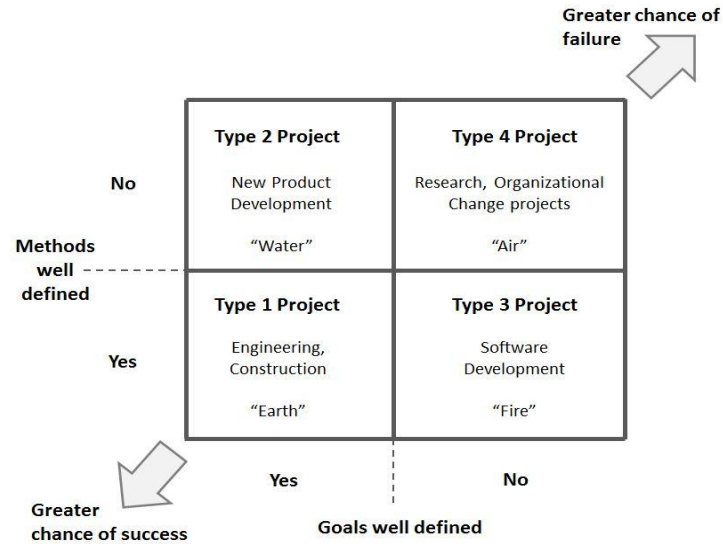


Figure 2.1: Goal-and-method Matrix (Source: Turner and Cochrane, 1993)

After have done a series of research studies, Shenhar and Dvir (2004) developed the NCTP framework which involves four dimensions includes novelty (N), complexity (C), technology (T), and pace (P). Besides that, for each dimension includes at least three or four different types of the projects. This NCTP framework is presented in Figure 2 below:

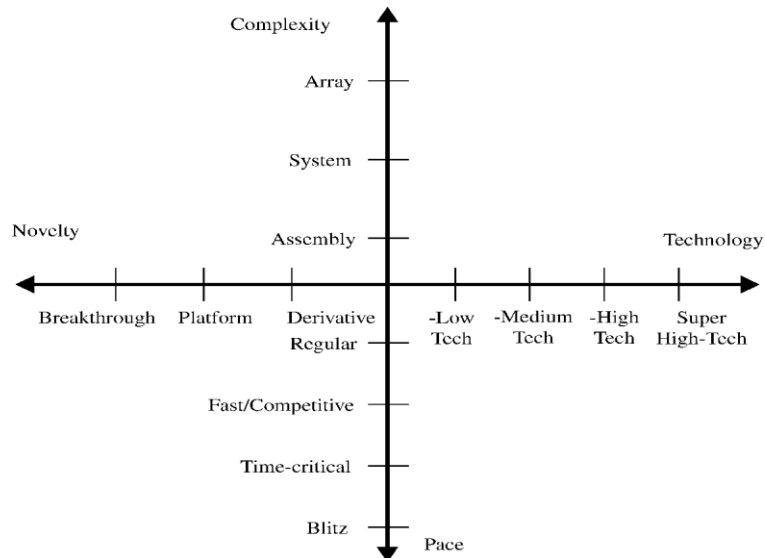


Figure 2.2: The NCTP Framework (Source: Shenhar and Dvir, 2004)

According to Shenhar and Dvir (2004), the first dimensions in NCTP framework are novelty which defined as the product novelty, in which the new products gives their potential to the users. This dimension represents how the customer familiar with this product, and which gives benefit to them in order to lead them using in daily life. There are three kinds of the project type in this dimension which are derivative product, platform product, and breakthrough product. For the first type which is derivative product, the product is extended and improved from the existing products and this kind of project also includes the cost reduction, product enhancement and modification, and additions to exist the lines of the products. The second types for the novelty product are platform product, in which it's create new generations through the creation of new families from the existing products in order to form the basis of the numerous product derivatives. The last types for novelty product are breakthrough product, in which the new system was introduced to apply into the ideas, concepts, and the uses for the product.

The second dimensions in NCTP framework are complexity. In this dimension, there are also three types which are assembly level, system level and array level projects. For the assembly level, the collection of elements, components, and modules which combined into a single entity that is performing a single function was created in order to assembly the projects. The second types for this dimension are system level, which the system-type projects involves the complex collection of the interactive elements and subsystems in order to meet the specific operational need by dedicating the wide range of functions. For the last types is array level, in which dealing with large and wide dispersed with the collections systems in order to achieve the common purpose that was function together (Shenhar and Dvir, 2004).

The third dimensions in NCTP framework are technology. The common types for this dimension include low-tech projects, medium-tech projects, high-medium projects and super high-tech projects. This dimension was influenced by the magnitude of new technologies which are required by the product. Through this action, the design process and managerial style was affected in which for the low-tech and medium-tech projects there is no new technology is needed, while for high-tech and super high-tech should be

approached with the much more flexible and open to change for the new technology (Orhof, Shenhar & Dori, 2014).

The last dimensions in NCTP framework are pace. The types of projects in this dimension are different between with the other projects by their urgency, goals and time and the types include regular project, fast-competitive project, and critical-blitz project. Generally, for the regular project typically initiated for the long term goals and infrastructure goals. Meanwhile, for the fast-competitive project typically intended to create a strategic positioning and to form new business lines by entering market opportunities, because this type of project commonly carried out by industrial and profit-driven organizations. The last types of project for this dimension are critical-blitz project. This type of project can be considered as the most important and critical time because the project will be exposed crisis and unexpected event during the project initiation phase (Shenhar and Dvir, 2004).

2.3 Project Management

Project management has been practiced about half a century ago since the Egyptian era, because the organization starts to apply the project management due to the complex projects that need to be handled (Young, 2003). In the 1950s until 1980s, the leading organizations such as NASA, Department of Defense, Navy, and Manufacturing and Software Development applied the project management practices in their organization. However, by the 1990s, the project management practices, tools and techniques were widely received and applied in different industries and organizations throughout the world (Young, 2003).

2.3.1 What is Project Management

The term of the project management is described in different ways in this chapter and all of them are illustrated below:

- Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements and it is accomplished through the appropriate application and integration of the 47 logically grouped project management processes, which are categorized into Five Process Groups (initiating, planning, executing, monitoring and controlling, and closing), (PMBOK, 2013, p.5).
- Project management is the process of achieving project objectives (schedule, budget and performance) through a set of activities that start and end at certain points in time and produce quantifiable and qualifiable deliverables (Chandler Arizona, 2010, p.2).
- Project management is also articulated as a professional's capability to deliver, with due diligence, a project product that fulfills a given mission, by organizing a dedicated project team, effectively combining the most appropriate technical and managerial methods and techniques and devising the most efficient and effective breakdown and implementation routes (Ohara, 2005).

2.4 Evolution of Project Management

Project management had encountered four periods until present, in order to become the modern project management in the worldwide. The four periods include: (1) prior to 1958, (2) 1958 until 1979, (3) 1980 until 1994, and (4) 1995 to present, (Young, 2003). According to Snyder and Kline (1987), the start of modern project management begins when the CPM/PERT which was developed in 1958. Other than that, Morris (1987) argues about the origin of the project management, he stated that the project management originated from the chemical industry in which begins in prior until to World War II. Project management begins when the people face difficulty with the complex situation in

managing the projects, and indirectly we apply the tools of project management unknowingly in our daily life. The Figure 3 below may illustrate this evolution.

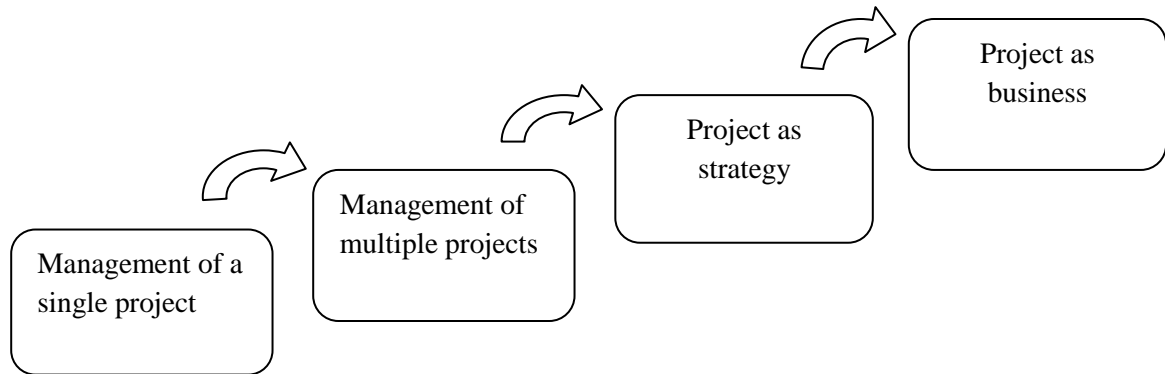


Figure 2.3: The Evolution of Project Management (Source: Ali, 2010)

2.5 Current Project Management Practices

The organization should apply the project management practices in order to make their organization could achieve the objectives or goals. According to Thomas and Tilke (2007), there are five key process groups which are initiating, planning, executing, controlling and monitoring, and closing, in which to assist in project delivery which all of them are outlined in PMBOK Guide.

2.5.1 Project Initiation Phase (Defining the initial of scope and financial resources)

Basically, before starting the projects we must recognize the actual scope and required financial resources for the project. This is because, the successful project is depending on the project scope in which all the project requirements are in the project scope. Meanwhile, the project also must define the financial resources in order to identify the real cost needed for each task that related to the project. At the same time, the organization must determine whether the project is aligned with the organization's overall charter (Thomas and Tilke, 2007).

2.5.2 Project Planning Phase (Establishing work schedule)

According to Andersen (1996), the initial planning stage of the project is very difficult to know precisely, because we need to identify first which activities that need to be carried out in order to complete the project within the cost and duration as stated. By establishing the work schedule, we can know precisely what the activities that we should do are and also we can identify the completion date for the project from the start until the project finish.

2.5.3 Project Execution Phase (Performing risk management)

Risk management is the important part in project management and it should be applied for each ongoing project. This is because we do not know what are the uncertainties that might be happen when we handling the project. However, not all the risk that appears gives the negative impact towards our project because through risks we can create the opportunity to make our project in super high quality. Other than that, some researchers argued that the risk management process is being capable in managing both risk and opportunity.

2.5.4 Project Monitoring and Controlling Phase (Measuring the project progress)

According to Erel and Raz (2000), the project control cycle usually consists of the project status, comparison plans, deviation analysis, and implement appropriate corrective actions for each project. This is because when the project reaches the construction phase, monitoring and controlling are the important and critical part in order to deliver the project success. Other than that, this phase also the determinant for the project, whether the project approaching the client requirements or not and corrective actions will be implements if the project did not fulfill the client requirements.