

CHAPTER 1

Introduction



1.1 Introduction

Project management has becoming more and more popular object nowadays. There are many tools and techniques available to help managing project and one of them is information system. Undeniably, the information system itself has been the point of interest for the past recent years. This research is meant to develop a system that can be implemented in project management of a case company because currently the company does not utilize information system for project management correctly.

The case company in this research was founded in 1947. In the beginning, the company focused only on being a distributor of many European machinery products and trading company. Then, the company decides that they will concentrate on using their experience and know-how to compete in the new market segment, the installation project. In doing so it is not easy, the company soon realizes that it takes not only experience but processes and technology are also important.

This research will develop a system that the company can follow when they are involved in future projects. The implementation of the system should give the company better planning, scheduling, and control which translate to lower cost and time for the project.

1.2 Statement of Problem

The scope of the work is divided into material supply and installation for mechanical and electrical installation project. The problem for each area is also different. In this project, there are hundreds of activities to deal with and more than thousands of equipments and materials, therefore it is important that the company organizes and manages these materials and equipments well. The problems that the

company is facing can be divided into resource problem which is related to installation process and procurement problem which is related to materials.

Many activities are competing for a limited amount of resources in a project, therefore the company needs to prioritize each activity and also plan ahead of what resources are going to be needed. The problem of resource conflicting not only slow down the work which causes delays or schedule slippage, it also generates extra costs. Examples of resource conflict are: the number of areas and jobs that an engineer needs to supervise at the same time; limited number of tools and equipments such as hand tools, back hoes, generators; etc. Therefore, careful planning is required so that these resources are fully utilized.

The problem for material supply is that there are many occasions that equipments or materials required are not exactly the planned quantity or specifications. The project plan should be easily adjusted and flexible enough to cope with these problems. The company also faces the problem of ordering materials which do not meet specifications. The problem arises because they do not have purchasing plan which can be verified by the contractors before a purchase is made. This results in double-ordering and raising the cost for the project.

1.3 Objective of the Study

To implement a project management information system in mechanical and electrical installations for a water treatment plant project, in order to improve project management process.

1.4 Scope of the Study

The research is conducted on a project which involves electrical and mechanical installation for water treatment plant. The information system is introduced in the project and tested for improvements made.

The research on this project is meant to be a pilot project for implementing information system for project management for the company. The implementation of

information system for project management process involves project planning, scheduling, and control according to project life cycle.

1.5 Methodology

The following steps are taken in this study:

1. Study related literature, journals, Internet and research studies in project management process and information system
2. Collect data and study the scope of the company including the current practice of project management process.
3. Develop an information system for project management process template using information from completed project which will be used for future projects.
4. Analyze and summarize the result of the study from the implementation of information system.
5. Discuss the implementation process and aspects to achieve desired result.
6. Conclude, discuss, and recommend further studies for the research.
7. Thesis write-up and submission.

1.6 Results

A system of information system for project management process is presented. This system includes methodology and template of project planning, scheduling, and control. Implementation guideline is also presented so the company knows when and how to apply the system.

1.7 Expected Benefits

The benefit of this research is for the company to be able to use a standard methodology and format for project management process and information system to the

greatest efficiency in the future. The research will also give a guideline of how the information system can be used to control the project. By implementing the research on the project, it is expecting to save the company on both time and cost. A better planning method and scope management plan should reduce effect from changes to the project and make changes manageable. Project is easier to control and delivered on time because scheduling process is better from planning and adjustment. Resource allocation can be easily monitored and controlled. Lastly, project control and manage is easier but more efficient with the aid of information system.