

# Chapter 1

## INTRODUCTION



### 1.1 BACKGROUND

A Engineering Consultants Co., Ltd. (A) was established in 1993. Its main business are design and construction supervision. It is one of seven companies in B. Group of companies. (B Group). A is a famous engineering consultants company in Thailand. It has won many of prestigious consulting projects such as GM-Opel car manufacturing plant, LPN Plate Mill plant and IPP 700 MW IPP Project.

In recent years, Thailand has faced the economic crisis. The number of new projects decrease rapidly. Every consultant companies are in high competitive market. Their competitors are not only the Thai consultant companies but also the foreign consultant companies which come with high technology and good system.

In order to survive in this environment, A has to develop itself. Many items should be improved to compete with other consultant companies. The system of work should be more effective, the products must have high quality and accuracy.

The cost of design and supervision is very important item for winning new project from the client. A confronts the problems not only how to determine the cost of design, but also how to compete with other companies in a bid competition.

In this high competitive situation, the sum of money allowed in the estimate must be at least high enough to cover the cost of design and supervision work, but the total cost must be low enough to be competitive with other companies.

Normally, A estimates the number of concerned people for that project. Then, the man-hours for each people to perform the design and supervision work are estimated. The other costs are plus to get the total cost. Sometimes, the cost of design and supervision are determined from percentages of construction cost.

The cost from these two methods may be too high or too low. In order to get the suitable cost, the estimator should determine it based on the project planning. All of activities in designing and supervising the project should be thoroughly considered.

## **1.2 Statement of Problems**

Nowadays, engineering consulting firms are facing higher competitive situation making each firm has to find the ways to support their companies' financial status producing profit in order to survive in difficult business environment. This increasing emphasis on quality competition and price competition makes A try to develop its control system for each project and method of estimating design and supervision cost.

Normally, the work procedure and control system for each project of A are not effective. There are not certain work procedure and formal control system. The time and cost often exceed the estimated ones.

Furthermore, the method used to estimate design and supervision cost in A is not a good one. The details of schedule and resource allocation are not considered in this method. Thus, if A would like to reduce the costs in order to compete in bidding, A does not know how much these cost can be reduced. Moreover, this method cannot be used as base plan to control resources and time during design and supervision phase.

## **1.3 Objective of Research**

To develop a cost estimating and control system for construction project planning.

## **1.4 Scope of Research**

1. This study is confined to the estimating design and supervising cost of the factories.
2. The unit costs which are used in this study are the ones which are used in A Engineering Consultants Co., Ltd.

### **1.5 Procedure and Methodology of Research**

1. Study literature and related theory surveys.
2. Set up a project planning and control system for construction project.
3. Select one project as case study.
4. Make and distribute questionnaires to find standard work.
5. Determine the total cost of design and supervision of this project based on project control system.
6. Make the calculation and recommendation.
7. Prepare the presentation and final report.

### **1.6 Expected Benefit**

After the accomplishment of this study, the understanding of design and supervising cost estimation based on project control system will be accomplished. Furthermore, the suitable resources allocation in order to reduce design and supervising cost is understood.

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