



## **Chapter 3**

### **METHODOLOGY**

According to the competitive environment, engineering consultant companies have to improve themselves in order to survive. Their quality must be high enough to meet client's need. Their working system should be developed to meet the international standard such as ISO, etc. The quality control, quality assurance system must be established to assure the quality of their products. Moreover, their prices should be competitive in order to win the bidding. Therefore, the method to estimate the design and supervision cost will be developed. To develop the working system in order to control time, quality and cost and develop the method of estimating design and supervision cost. This study make:

#### **3.1 SET UP PROJECT PLANNING AND CONTROL SYSTEM FOR CONSTRUCTION PROJECT**

The purpose in this step is to develop working system and control system to be used as a plan to complete one construction project which A Engineering Consultant Co., Ltd. works for as a engineering consultant company. Before developing new working system, the existing system must be studied to understand the weak points and disadvantages of it. The project organization, working procedure will be analysed.

After studying existing system, new project planning and control system will be developed. The project organization, work procedure, checking system will be improved to increase the efficiency of working system and quality of the products.

Besides the project planning and control system, the method for calculating design and supervision cost will also be developed. The existing methods used by A Engineering Consultant will be studied and used as a base to develop an effective one.

### **3.2 SELECT ONE PROJECT AS CASE STUDY**

One factorial project will be selected to be used as a case study. This project must have enough data to study the disadvantages from existing system. It will also be used as an example to calculate the cost of design and supervision based on the developed system.

### **3.3 MAKE AND DISTRIBUTE QUESTIONNAIRES**

Questionnaires will be used in order to reduce the time to collect data. According to this study, some data are required to achieve trustable results of method to estimate the design and supervision cost. The form and content of the questionnaire will be develop to cover all of necessary data used for developing new estimating method.

### **3.4 DETERMINE THE TOTAL COST OF DESIGN AND SUPERVISION OF SELECTED PROJECT BASED ON PROJECT COST AND CONTROL SYSTEM**

After the working system and method to estimate the design and supervision cost are developed. The selected project will be used as an example to determine the total cost of design and supervision based on the developed working system. Important factors which can affect the cost of design and supervision are also considered.