CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The research methodology in this chapter serves as a guide to the author in achieving the objectives and scopes of the study. This chapter shall further discuss in detail the research procedures, from how the data is collected till how it is processed and analysed to achieve the objectives and scopes of the study.

3.2 IDENTIFICATION OF RESEARCH TOPIC AND SCOPE OF STUDY

In this stage, it involves the identification and further understanding of the research topic, which consists of problem statement, aim, objectives and scope of studies. Literature review has been done based on several references, from electronic journals, books, magazines, articles and others to further enhance the understanding on the project topic.

Literature review is an essential stage in conducting a research project. It amounts on average to between 20 to 25 percent of a study content, although certain study contents may require up to 50 percent of the content Naoum (1998).

Various means of gathering relevant information were undertaken using textbooks, articles, newspaper and internet. The information searched was regarding overview of traditional work process, issues and problems associated with traditional work process, and methodology on improving the efficiency of construction work process which are very useful for this study. Literature review takes a while to get to
grips with as it deals with work of others. In order to complete literature review within the time given, a schedule was prepared and followed. However, on-going literature review was also carried out to gather more knowledge and relevant data and to ensure continuous improvement in quality of work.

In this study the literature search was done by referring to sources of information from books, journal and other publications. The literature aim was done to gather information related to research topic. Chapter two and three are dedicated to compile the information from the literature search done for this study.

3.3 DATA COLLECTION

Data collection is an essential aspect of the research methodology, where it involves ways to collect data and information for data analysis and interpretation. Basically, the author conducted the data collection by using questionnaire survey.

3.3.1 Questionnaire Survey

Before questionnaires can be developed, the main objectives should be outlined and well understood. The questionnaire derived shall be in line with the aim to achieve the objective stated earlier. Draft questionnaire was prepared and discussed with supervisor. Improvements and alterations were made to ensure that the questionnaires were developed in a comprehensive manner to achieve accuracy of answers from respondents.

The questionnaire is meant to evaluate on the issues related problems and limitations occur in construction process based on literature review and last interview session. As the interview session, this questionnaire was design to support the answer from the interview by additional problems and limitation from literature review. The questionnaire also was designed to determine the methodology/strategies used to enhance construction performance as per second objective of this study. This questionnaire also was structured to find the most
practical and efficient method/strategies that used by industry to enhance construction work process.

**Section A**

This section is mainly to obtain information on interviewee personal background such as name, company address, age, positions, experience in the industry and academic qualification. Interviewees selected were personnel from construction industry. They were project manager, consultant project management (PMC), engineer, and quantity surveyor and building surveyor.

**Section B**

The aim of this section is to seek the correspondent perception regarding traditional work process. To achieve aim for this section, there were three (3) parts had been categorized as below:-

a) First Part is to seek the need to improve efficiency with regard to project time and to determine the most major causes to project delay in construction management process

b) Second part is indicating the most factors of problems and limitation associated with traditional work process.

c) Third part is to find out how waste in construction affects and influence the project time.

d) Last part is needed the value of construction project to the customer and how it satisfy and meet the customer/end user expectation.

**Section C**

In this chapter, the aim is to seek correspondent perception on strategies that have been used so far to improve construction performance. The strategies and method listed in this questionnaire were based on the literature review and from the past interview session. The strategies and method listed are focus on construction work process management as stated in scope of study.