CHAPTER I

INTRODUCTION

1.1. <u>Background</u>

Construction sector is a sector that plays an important role in the economic development in Indonesia. It can be seen from the existence of high rest building, toll and tunnel work, and other construction projects that keep increasing over the time. By these event, it is expected to the parties who involved in construction sector to provide abilities to finish the project in a shorter period of time, excellent quality and less costly. Therefore, to fulfill those expectations, it is required a concept that could provide a project planning activity in the next level. (Chrisna, 2013)

In the construction site, it is often that several problems to be occurs such as changes in the design, utility relocation, uncertainty and etc. Those problem will be impacting the duration of project and also the cost in which make the work inefficient. Those kind of problems could be minimized by the existence of good planning that able to analyze, simulate and estimate any clash and potential problem at the early stage of construction project. (Chrisna, 2013)

A concept of Building Information Modeling (BIM) is one of the concept that could perform the next level of planning. BIM is an approach to support the design, construct and management activity. The ability of BIM would make the civil engineer and other parties involved in the project to make a better and precise decision. (Liang, 2015)

Based on that explanation, author interested in discussing the practice of BIM in the construction industry in Yogyakarta, Indonesia.

1.2.   Problem Statement

The following research question were formulated to further examine the problem statement:

1. Why is Building Information Modeling required in the construction industry?

2. What is the current condition of implementation of BIM in the construction industry inYogyakarta?

3. What are the impacts of Building Information Modeling application?

1.3.   Limitations

In order to make this research focused in the main problem, author set several limitations:

1. Research is conducted in Yogyakarta

2. Research is conducted to construction company, either consultant or contractor

1.4.   Objectives

1. To identify the importance of Building Information Modeling in the construction industry

2. To know the current condition of implementation of BIM in the construction industry in Yogyakarta

3. To identify the impact of Building Information Modeling application

1.5.   Expected benefits

1. Knowing the importance of Building Information Modeling in the construction industry

2. Knowing the current condition of implementation of BIM in the construction industry in Yogyakarta

3. Knowing the impact of Building Information Modeling application

1.6.   Outline of the thesis

This thesis is divided into five chapters that consist of introduction, literature review, research methodology, data analysis and discussion, and the last is conclusion and recommendation.

The first chapter of this thesis is introduction. It is divided into six sub-chapters which are background of the study, objective of the study and outline of the thesis. Second chapter is literature review that contains literature study to support the thesis. Third chapter is research methodology. It is about the method of data collection and analysis. Fourth chapter is data analysis and discussion. It is

about the data analysis that have been obtained before and discussed. Fifth chapter is conclusion and recommendation. It contains the conclusion of the thesis and the recommendation to encourage the thesis.

1.7. <u>Final Project Originality</u>

The topic "Identification of BIM Significance Toward Successfulness Construction Project in Yogyakarta" has never been used in any other final project before. Therefore, there has never been any attempt to conduct a similar research in Yogyakarta construction industry. This final project will be a unique and a new project in its attempt to identify the significance of BIM implementation in Yogyakarta construction industry.