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MARASARAWAK

THE IMPACT OF USING SOFTWARE TECHNOLOGIES IN CONSTRUCTION INDUSTRIES SAFETY

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ABSTRACT

There has been number of study and research conducted concerning the safety issues and management in the construction sector. We all know that the construction sector is a high-risk industry. This paper will identify the problems and challenges faced in implementing software technologies in the constructions safety. There are a few problems that has been identified which is lack of communications, the attitude of labourers and the safety procedures are taken very lightly on site by the employers and employees. The aim of this paper is to study the challenges and barriers of implementing software in safety management inside the construction industry and ways to solve it.

The research has three objectives: to determine the importance of software programmes in construction safety, to identify the barriers to using software as a medium for safety in the construction sector, and to offer solutions for using software as a medium for safety in the construction sector. This study used a quantitative methodology, which included a questionnaire survey, and the data was analysed using SPSS software. The barriers in implementing software for safety are high cost of implementation, high cost for installation, lack of knowledge on software, lack of technology advancement and lack of awareness in technology utility in the industry. The strategies in promoting software are subsidizing price of software, offer free safety training and government providing incentives for the software.

The selected respondents for this research is the companies specialized in building that are involved in the construction sector in Sarawak. The data has been collected through questionnaires that are distributed to 108 companies. Data analysis and a literature evaluation were used to meet the research's goals and objectives.

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF STUDY

In the construction industry we all know that it is a high risk industry. In Norway, the construction industry has one of the highest fatalities compared with other industries. The numbers of fatalities happening day by day are increasing as most of the construction companiestake safety and occupational health very poorly. Safety is one of the most important aspects in the construction scene and the development process. Labours are always at risk in the construction industry which is proven by Bratcher et al. 2010). There were 806 out of 4628 heavy injuries recorded from construction industry in the United States, according to Bureau of Labour Statistics (Demirkesen, 2015).

Poor safety awareness of senior management, lack of training, poor safety awareness of project managers, reluctance to input resources to safety, and reckless operations are the key variables impacting safety performance (C.M. Tam, 2004). The purpose of this study is to identify the causes of accidents, to analyze barrier failures that will establish a base knowledge for prioritizing and making safety measures within the construction industry and the ways we can tackle the problems using various types of modern software in Malaysia. By producing all the relevant knowledge from other countries so as ours, we can identify all the accidents which are very problematic and also other type of injuries happening in our construction industry.

After we can identify the problems, we can easily approach the problem with different methods and safety measure using software such as Building Information Modeling that in the end of the day will help to reduce the injuries and accident cases happening in the industry. Existing statistics will be analyzed