

## The barriers factors and driving forces for BIM implementation in Malaysian AEC companies

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### **ABSTRACT**

The emergence of high technology in the built environment industry has caused BIM (Building Information Modelling) to become one of the processes that are sought by the construction industry players to enhance and improves the project lifecycle. Previous research showed that BIM implementation had given positive impact to the return of investment (ROI), productivity, lessen disputes between the construction players, saving in construction cost and decrease the risk of project delay which crucial in delivering a project on time. However, the vast majority of AEC companies not interested in BIM because of obstacles and barriers that they need to face in the process of adopting BIM practice. Due to that, this study focusses on investigating the barriers factors in BIM implementation by Malaysian AEC construction industry and identifying the driving forces available to overcome the BIM implementation issues in Malaysia. This study used a questionnaire survey approach for data collection and analyzed it using SPSS. As a result, the critical barrier factors faced by Malaysian AEC companies such as organization cultures, technology, and government recognition are identified. Meanwhile, in term of driven forces to overcome the BIM implementation issues, proper BIM guidelines or standard for BIM requirement has been identified as a crucial factor for successful implementation. Furthermore, BIM Fund also has been found as one of the driven forces for successful BIM implementation where it can help the AEC companies to cover the cost for training, consultancy services, software purchase and hardware for business and project. Drawn specifically within the Malaysian AEC companies in Penang and Kuala Lumpur, these findings provide a basis for fostering the implementation of BIM practice for better project performance.

### **KEYWORDS**

Building Information Modelling; Barriers factors; AEC Companies; Driving force; Malaysia

**ACKNOWLEDGMENT**

The authors this research supported by Academic Research Grant, School of Housing Building and Planning, Universiti Sains Malaysia (1001.PPBGN.8080005) and USM fellowship Scheme.