Adoption and Implementation of Building Information Modelling (BIM) Application into Sri Lankan Construction Industry

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As a new paradigm in the sustainable construction industry, Building Information Modeling (BIM) has a great potential for professionals. The main objective of this paper evaluates the adoption and implementation of BIM into Sri Lankan construction industry. Thus the study mainly tested the hypothesis that effective usage of BIM applications increases the effectiveness and efficiency of service delivery in Sri Lankan construction industry. Data was collated through a designed questionnaire by examining the factors which act as barriers to the implementation of BIM and determine factors which may increase the efficiency and effectiveness of BIM implementation in the Sri Lankan construction industry. In this study, a questionnaire survey based on the nonprobability sampling was carried out to gather the possible inefficiencies, barriers and driving factors for BIM implementation in Sri Lankan construction industry. Further, the relative importance index (RII) formula was utilized to establish the respondent’s ranking on each of the BIM implementation inefficiencies, barriers and driving factors. Research findings indicate that adoption and implementation of BIM was affected by the financial strength of a company. Further, cost of implementation is high with an RII value of 0.945 and it is the most significant challenge of BIM implementation in the Sri Lankan construction industry. Enhancing BIM training program with RII of 0.940 and conducting Seminars, workshops and short courses with RII values of 0.930 are identified as the most significant approaches to overcoming the barriers of BIM implementation and adoption in Sri Lanka. Therefore, based on the findings of this study, effective usage of BIM applications increases the effectiveness and efficiency of service delivery in Sri Lankan construction industry.

Keywords: Building Information Modeling (BIM), BIM Adoption