World Academy of Science, Engineering and Technology
International Journal of Structural and Construction Engineering
Vol:17, No:06, 2023

Militating Factors Against Building Information Modeling Adoption in Quantity Surveying Practice in South Africa

Authors : Kenneth O. Otasowie, Matthew Ikuabe, Clinton Aigbavboa, Ayodeji Oke

Abstract : The quantity surveying (QS) profession is one of the professions in the construction industry, and it is saddled with the responsibility of measuring the number of materials as well as the workmanship required to get work done in the industry. This responsibility is vital to the success of a construction project as it determines if a project will be completed on time, within budget, and up to the required standard. However, the practice has been criticised severally for failure to accurately execute her responsibility. The need to reduce errors, inaccuracies and omissions has made the adoption of modern technologies such as building information modeling (BIM) inevitable in its practice. Nevertheless, there are barriers to the adoption of BIM in QS practice in South Africa (SA). Thus, this study aims to investigate these barriers. A survey design was adopted. A total number of one hundred and fifteen (115) questionnaires were administered to quantity surveyors in Guateng Province, SA, and ninety (90) were returned and found suitable for analysis. Collected data were analysed using percentage, mean item score, standard deviation, one-sample t-test, and Kruskal-Wallis. The findings show that lack of BIM expertise, lack of government enforcement, resistance to change, and no client demand for BIM are the most significant barriers to the adoption of BIM in QS practice. As a result, this study recommends that trainings on BIM technology be prioritised, and government must take the lead in BIM adoption in the country, particularly in public projects.

Keywords : barriers, BIM, quantity surveying practice, South Africa
Conference Title : ICCECM 2023 : International Conference on Construction Engineering and Construction Management
Conference Location : Toronto, Canada
Conference Dates : June 19-20, 2023