

Building Information Modeling (BIM) to Enhance Stakeholder Satisfaction in Architecture, Engineering, and Construction (AEC) Projects

Maqsood Sandhu

Department of Marketing and Entrepreneurship
College of Business and Economics, United Arab Emirates University
Al Ain, UAE
maqsoods@uaeu.ac.ae

Afshan Naseem, Asjad Shahzad, Yasir Ahmad and Asiya Siddiq

Department of Engineering Management
National University of Sciences and Technology
Islamabad, Pakistan

Abstract

This research discusses the building information modelling drivers that can improve stakeholder satisfaction in Architecture, Engineering and Construction (AEC) projects. Kotter's Change Model is used as a lens to identify the role of the BIM implementation drivers such as training, knowledge, legalization, management, software, and standards, in enhancing stakeholder satisfaction, with innovation as the moderator. To assess these relationships, the data was obtained from 300 AEC professionals from a developing nation, through a structured questionnaire, using an exploratory deductive research approach. The findings put into perspective the current effectiveness of legislation and management and point to a general need for the enhancement of legal reforms and management practices. The failure to observe a moderating role of innovation means that within the framework of this research, innovation does not play a role in changing the nature of the relationship between the drivers and stakeholder satisfaction. This study extends the knowledge of adopting BIM in developing countries through the empirical test of BIM drivers as implementation and motivation enablers. Recommendations are preferred in the form of concrete strategies, including the scheduling of BIM awareness sessions with end-users to explain its benefits and solicit support, as well as the establishment of an organization-wide training program through which staff members can learn from BIM advancements made by other organizations. These initiatives are focused on growing the effectiveness of BIM and its adoption, advancing management ideas to boost organizational performance, and optimizing business practices to increase the satisfaction of the stakeholders and, thus, project outcomes.

Keywords

Building Information Modeling, Stakeholder Satisfaction, AEC Projects, BIM Implementation Drivers, Change Management.

Biographies

Dr. Maqsood Ahmad Sandhu is a Professor of Marketing and Entrepreneurship at the College of Business and Economics, UAEU. He holds a Ph.D. in Business Administration and has served as Head of the Department of Business Administration. His research focuses on entrepreneurship, innovation, and project management.

Dr. Asjad Shahzad is an Assistant Professor in the Department of Engineering Management at NUST, Pakistan. He earned his Ph.D. from Swinburne University, Australia and focuses his research on engineering project management and industrial operations.

Dr. Afshan Naseem is an Associate Professor of Engineering Management at NUST. She completed her Ph.D. in from the UET, Taxila. Her research interests include decision support systems, production scheduling, and engineering management.

Dr. Yasir Ahmad is an Associate Professor and the Head of Department of Engineering Management at NUST. He completed his PhD from the University of Engineering & Technology, Taxila. His research interests lie in technology management, manufacturing management, strategic management and quality engineering.

Asiya Siddiq is a student at NUST. She is focused on developing her academic foundation in project planning, operations, and management principles.