The BIM-Mostadam Application Model

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ABSTRACT

The integrative nature of BIM technology renders it an ideal platform for implementing sustainable strategies into new construction and renovation and/or retrofit of existing structures. Recently, Saudi Arabia's gasoline prices have dropped dramatically, necessitating the kingdom to establish its 2030 vision. The 2030 vision aims to make the Kingdom of Saudi Arabia (KSA) an ideal sustainable society by reducing its reliance on petrol, creating more sustainable buildings, and infrastructures. There is an imperative need to translate the green aspirations of the KSA into enforceable regulations. In order to achieve this vision, consistency across jurisdictions is needed to allow robust and well-informed decision-making in adopting and enforcing sustainability. The number of high-performance buildings in Saudi Arabia is inadequate, and the rate of change is too slow. Due to Saudi Arabia's need to enhance its built environment, it established a new green building rating named "Mostadam." Currently, there is no metric to measure the roadmap to achieve the aspects of the 2030 vision of Saudi Arabia, and the number of green buildings in the KSA is very limited. This study aims to formulate a BIM-Mostadam model to help facilitate the green building certification process in the kingdom that supports it's 2030 vision. The proposed BIM-Mostadam model seeks to address critical elements of the 2030 vision in the KSA based on integrating BIM and green building rating systems to aid in achieving the envisioned 2030 sustainability goals and implement sustainable design principles in the KSA. This research follows a mixed methodology that includes both qualitative and quantitative approaches. The limitation of the proposed model are presented along with future phases of the study.