

Integrating Building Information Modeling into Facilities Management Operations

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Abstract : Facilities such as residential buildings, office buildings, and hospitals house large density of occupants. Therefore, a low-cost facility management program (FMP) should be used to provide a satisfactory built environment for these occupants. Facility management (FM) has been recently used in building projects as a critical task. It has been effective in reducing operation and maintenance cost of these facilities. Issues of information integration and visualization capabilities are critical for reducing the complexity and cost of FM. Building information modeling (BIM) can be used as a strong visual modeling tool and database in FM. The main objective of this study is to examine the applicability of BIM in the FM process during a building's operational phase. For this purpose, a seven-storey office building is modeled Autodesk Revit software. Authors integrated the cloud-based environment using a visual programming tool, Dynamo, for the purpose of having a real-time cloud-based communication between the facility managers and the participants involved in the project. An appropriate and effective integrated data source and visual model such as BIM can reduce a building's operational and maintenance costs by managing the building life cycle properly.

Keywords : building information modeling, facility management, operational phase, building life cycle

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