

Implementing Building Information Modelling to Attain Lean and Green Benefits

Authors : Ritu Ahuja

Abstract : Globally the built environment sector is striving to be highly efficient, quality-centred and socially-responsible. Built environment sector is an integral part of the economy and plays an important role in urbanization, industrialization and improved quality of living. The inherent challenges such as excessive material and process waste, over reliance on resources, energy usage, and carbon footprint need to be addressed in order to meet the needs of the economy. It is envisioned that these challenges can be resolved by integration of Lean-Green-Building Information Modelling (BIM) paradigms. Ipso facto, with BIM as a catalyst, this research identifies the operational and tactical connections of lean and green philosophies by providing a conceptual integration framework and underpinning theories. The research has developed a framework for BIM-based organizational capabilities for enhanced adoption and effective use of BIM within architectural organizations. The study was conducted through a sequential mixed method approach focusing on collecting and analyzing both qualitative and quantitative data. The framework developed as part of this study will enable architectural organizations to successfully embrace BIM on projects and gain lean and green benefits.

Keywords : BIM, lean, green, AEC organizations

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