

عنوان مقاله:

Parallel impact of IPD and BIM approaches on facilitating constructability implementation

محل انتشار:

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خلاصه مقاله:

Constructability is a project management technique to review the construction process throughout the project before starting its implementation. This technique reduces project mistakes, delays, and also overflows through identifying possible barriers. It requires project agents' aligned cooperation and their early presence -particularly contractors- in the preliminary studies and design phases. Due to common contractual problems in the construction industry, aligned cooperation of stakeholders and project key agents is very restricted. Despite careful planning and cost estimations, we usually encounter lack of constructability of the plans, lack of integration and weak coordination in projects, due to anticipated and/or unanticipated reasons, some of which are because of the absence of key stakeholders in all phases of the project. In this regard, Building Information Modeling (BIM) is a new approach toward assurance of this integration. BIM replaces traditional methods of documenting and, through creating a virtual environment, makes possible cooperation and communication, which are far beyond the traditional processes. Yet, BIM is a means for facilitating the Integrated Project Delivery (IPD) approach, which tries to facilitate the constructability process through focusing on the contractual reforms. The aim of this study is evaluating the parallel impacts of IPD and BIM approaches on facilitating constructability implementation. Practically, these new approaches portray common objectives for various project stakeholders that prevent dissatisfactions in projects. Applied research method for this study is qualitative method. Literature review is used for in-depth data collection, reviewing previous studies and their interpretation; then data were classified through descriptive analysis. The necessity of conducting this study comes from this fact that a great deal of problems in projects -such as increased time and cost, lack of integration of the plan, and weak implementation system- are due to lack of information exchange and effective communication of design and construction people and ignoring the effects of design decisions on plan's constructability. In this study, through evaluating the parallel impact of IPD and BIM approaches on facilitating constructability implementation, common impacts are presented. This study highlights the significance of paying attention to both parallel impacts of technical and contractual aspects on facilitating constructability in construction projects.

کلمات کلیدی:

Building Information Modeling (BIM); Constructability; Integrated Project Delivery (IPD); Integration

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