

Use building information modeling (BIM) to reduce the time and cost of changes during implementation

Abstract

Changes during implementation in construction projects are one of the inevitable factors. If these items are taken care of and managed properly, they can be directed towards achieving the project goals, otherwise they will have negative effects on the project. Among the negative effects of unmanaged changes are reduced quality, increased cost and time. Changes can also cause positive effects such as the use of modern science and technology, value engineering, etc. in construction projects, if identified in time and managed properly. Building information modeling (BIM) offers significant benefits in coordinating changes to a model. Therefore, in this research, by examining the status of projects of contracting companies, the amount of deviation from their time and initial cost that are due to changes and changes during executions is identified and the factors related to the contractor in making changes during execution and changes. Understand and study the application of BIM in the management of construction projects, to examine the requirements and the necessary context for its use in contracting companies to manage changes and changes during executions and to avoid time and cost deviations. In this research, first, a practical method is used to develop BIM knowledge in contracting companies to manage the time and cost of construction projects, and then in terms of data collection, a descriptive-survey research method has been selected by preparing a questionnaire and Analyze them with SPSS software to examine the current situation in the country. The results show that the use of BIM in the current situation is a good justification for contractors to reduce costs and time due to changes during implementation.

Keywords: Time management, cost management, on-site changes, building information modeling (BIM), building contractors.