

PRACTICAL BENEFITS OF INFORMATION MODELING OF BUILDINGS

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ABSTRACT

BIM building data modeling is actively used by many construction companies as an effective tool for coordination, visualization, communication, site management, collection and marketing. Using BIM construction information modeling technology, it is possible to create a virtual model of the building and track all the processes related to construction. Team members, planning engineers, architects, project coordinators, project managers and stakeholders can easily understand the project being built. In this article, we review the advantages of bim construction data modeling in the construction industry for owners and contractors.

Keywords: Standard, design, construction, building model

INTRODUCTION

According to the U.S. National Building Information Model Standard Project Committee, Building Data Modeling (BIM) is a digital representation of the physical and functional characteristics of an object. BIM is a general information resource for obtaining information about this object and will be a reliable basis for making decisions throughout its life; described as existing from the original concept to the demolition. BIM Building Information Modeling is a process based on a 3D model. Traditional building designs consist of two-dimensional drawings. Building data modeling (BIM) extends this beyond 3D, adding latitude, height, and depth dimensions to these plans as time as the fourth dimension and price as the fifth dimension consists of. Building data modeling (BIM) extends this beyond 3D, by adding latitude, height, and depth dimensions to these plans as time as the fourth dimension and price as the fifth dimension.

BIM describes the entire life cycle from the beginning and design of construction to demolition. While BIM offers many benefits to all project stakeholders, from the feasibility stage to the demolition phase, the main advantages of BIM for contractors and owners are: Construction projects are short-term and multi-sectoral operations and face many challenges due to a lack of cooperation between project stakeholders.

The single BIM model used in the analysis and documentation stages allows the owner, designer, contractor and subcontractor to work on the same platform, which helps to solve communication problems. The BIM Building Information Modeling project allows you to combine all documents into one view. Increased collaboration and coordination will save project time and costs. Construction Sequence Building a structure involves different types of

resources. It takes a lot of time and effort. The construction data model can be used effectively to coordinate material ordering, production, and delivery schedules for all building components. This allows you to evaluate the sequence of work between different construction scenarios and make a decision. BIM simulations are also for field groups to understand the sequence of work and work accordingly. The digital look of a project is more important to the owner in terms of explaining what he is investing in, what the project will look like, than preparing physical architectural models. It also helps you evaluate different design options and / or make quick decisions to solve problems encountered in the design.

Another aspect is that BIM offers many simulation tools, which allow designers to imagine things like sunlight in different seasons. In addition, the BIM model helps cost estimators build the project in almost detail at the tender stage. On top of that, visualization is used as an effective marketing tool. Structural, architectural, mechanical, electrical and plumbing (MEP) projects are included in a single overall model. Conflicts will be identified in the early stages of the project and resolved accordingly before actual construction begins. Thus, construction teams can work more efficiently and increase unexpected costs and reduce time delays.

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