

PROJECT MANAGEMENT

BIM Might Be Your Magic Wand

by Sam Arabia



The three most important things to a project manager are budget, schedule, and team. The combination of these elements can be the difference between a successful project and an epic disaster. BIM, can seam these things together on the path to a successful project.



71%...the percentage of A/E/C firms currently using BIM, according to McGraw-Hill Construction. It was 49% in 2009, and 17% in 2007.

49%...the amount of architects and engineers with over five years of BIM experience.

BUDGET

Cost is frequently the factor that makes or breaks a project. The data supporting cost overruns in a typical construction processes is staggering, as recent estimates suggest that over 70% of projects run over budget. These overruns stem from errors in estimating, to tasks beyond the scope of work, to errors and omissions in design.

In a BIM-based workflow, these factors are starkly limited. 5D estimating and takeoff directly from a model not only limits errors, but decreases the time an estimator must spend in manual takeoff.

The enhanced visualization that a model brings allows the project team to see the project holistically, and minimizes any added scope or omissions that may come up during construction.

SCHEDULE

When a client or owner is unable to open his/her facility, he/she loses money. BIM not only keeps the project on schedule, but in many cases compresses the end dates. On one project, pre-construction reports from the BIM model eliminated over 30 RFIs per floor with zero subcontractor hours. These are RFIs that would have caused delays, rework and added cost.

The accuracy of a BIM model lends itself to pre-fabrication and modular construction and allows you to accomplish overlapping tasks in different locations, thus compressing the schedule. Recent projects using pre-fabrication have been completed three months earlier than originally estimated.

TEAM

There is an old adage that bears repeating: "There is no 'I' in team." That attitude fosters a successful project. We see it from interaction with the owner and design team to relationships between subcontractors and the construction manager.

BIM requires teamwork and interaction. It cultivates collaboration and transparency, as each team member utilizes a common server to interact with the design model.

With BIM, instant notifications can be made via the server as each participant changes their design. This communication and collaboration helps participants feel that they have a stake in the success of the project. A team that utilizes 3D MEP coordination greatly enhances the standard practice. These BIM coordination efforts have been, and remain, the core of a BIM project. 3D MEP coordination is extremely effective, and through the enhanced visualization of the model environment, the entire team is invested in and participates with conflict resolution.

A project does not have to be termed a BIM project by the client to have BIM play a role in its completion. If budget, schedule, and team are important to the success of your projects, simply adding the BIM process to your workflow will consistently aid you in meeting and exceeding your expectations. ●

Sam Arabia is Manager of BIM Services at Torcon, Inc. a nationally recognized General Contractor / Construction Management firm with locations in Philadelphia PA, Red Bank NJ, and Guaynabo Puerto Rico.



Torcon, Inc.
One Crescent Drive
Navy Yard Corporate Center
Philadelphia, PA 19112
215.271.1449 ■ www.torcon.com