

# From BIM to BIM<sup>f</sup>®

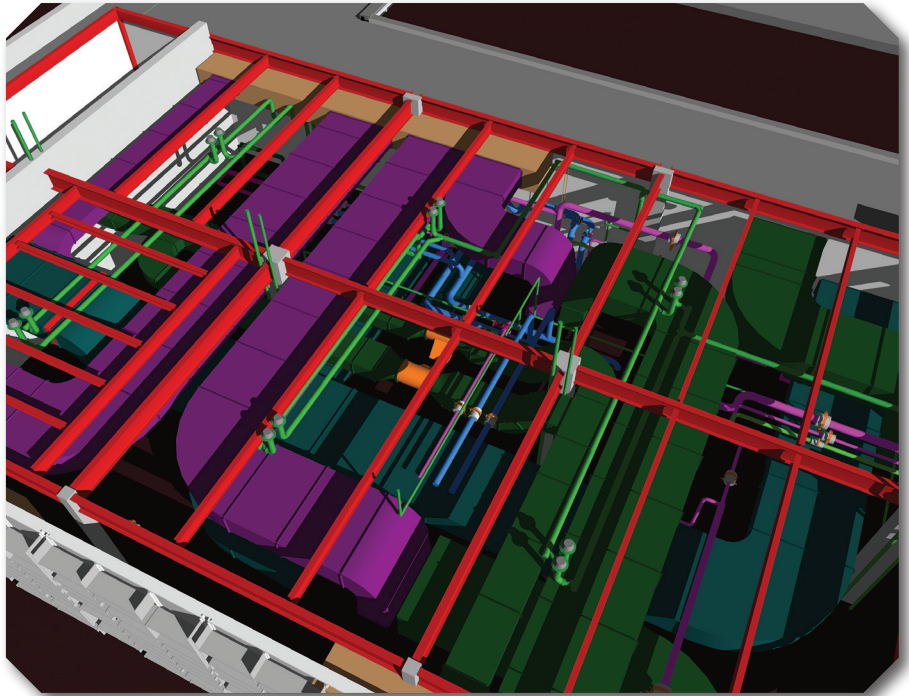
## Transitioning to Building Information Management for Facilities

By Sam Arabia

In the fast-paced world of construction today, every contractor is looking for the best solution to help them deliver a high-quality product quickly and efficiently. In the last few years, the market has seen a rapid adoption of BIM (Building Information Modeling). BIM has offered a level of efficiency we were never quite able to attain using traditional methods of construction. Pre-construction activities have been streamlined by attaining a higher level in understanding of design intent through enhanced visualization. Major conflicts have been resolved prior to release of final drawings. Major design levels RFI's (requests for information) have simply been eliminated. We have never seen the 3D coordination of MEP trades (mechanical, electrical, and plumbing) be as productive, which naturally leads to a much smoother field installation. In short, the solution is: It simply saves everyone time and money to change things in pixels rather than in steel.

In a recent survey McGraw-Hill reports<sup>1</sup> that in 2007 only 28 percent of companies adopted a BIM-based workflow. In 2009, the number jumps to 49 percent, and finally in 2012, the number of organizations adopting a BIM-based workflow skyrockets to 71 percent. The survey concludes that looking forward into 2014 the adoption of BIM by contractors and construction managers will continue to rise dramatically. Clearly, if a contractor has not yet fully adopted BIM as a solution to keep them successful, they will need to in the near future.

BIM has its place in pre-construction and construction, but where does it fit in when we talk about post-construction? We are currently turning over building models teeming with information. As construction professionals, we have utilized this data to make the project more efficient. We turn over this information rich model and place our clients at a crossroad with little guidance. It seems obvious with our new knowledge and skill in utilizing BIM that we have an opportunity. We can bring added value to our clients by offering the ability to leverage the information rich model over the lifecycle that they



will operate their facility. The key is the transition at turnover from BIM to BIM<sup>f</sup>® (Building Information Management for Facilities).

### INFORMATION GATHERING

A typical facility will conduct day-to-day operations on a work order-based system. In the market today, several software programs aid in the creation and tracking of work orders for an organization. In the past what always created a gap in efficiency was the lack of information on the work order ticket. Traditionally, the work order ticket is supplemented by the manual task of gathering information from plan and spec sheets, Operations and Maintenance manuals (O&M), and as-built drawings. Simply said, the task of manual information gathering takes time and creates a major bottleneck to productivity.

We live in a world where information is at the tips of our fingers through smartphones, computers, and tablets.

### ABOUT THE AUTHOR

Sam Arabia is manager of BIM services at Torcon, Inc. a nationally recognized general contractor/construction management firm with locations in Philadelphia, Pennsylvania; Red Bank, New Jersey; and Guaynabo, Puerto Rico. For more information, visit [www.torcon.com](http://www.torcon.com).

Why shouldn't a facility manager expect the same thing from the buildings they operate every day? BIM<sup>f</sup>® automates the task of manual information gathering and permits owners to capture savings never before seen. Information held within the BIM model can be accessed in the BIM<sup>f</sup>® process in a fraction of time, thus capturing thousands of man hours correlating to savings, not only for a single year, but every year for the lifecycle of the facility.

### A NEW SOLUTION

It is important to keep the end use in sight from the start of a project. Clients need to be made aware of the potential for a BIM model to evolve to a facility use model before the process of design and construction begins. This is where our opportunity to deliver a new solution, offering additional value to our clients shines. With the aid of a capable construction professional, the client can realize the supplementary value and tremendous benefit to their organization. This added value is recognized after the construction of the project is complete, and operation of the facility begins. The ability to bring this added value to the client, coupled with the knowledge and skill in implementing a BIM<sup>f</sup>® program, clearly sets any contractor apart from their competitors.

With that realization at the beginning of the project, data collection should grow with design and not be redundant at the end. Regardless of the project delivery method, whether it is IPD, design-build, or traditional design-bid-build, the information an owner needs must be captured. The only change from a BIM to a BIM<sup>f</sup>® workflow is addressing three key questions: What information will need to be captured? Who is responsible for the information? When it is due? All of these questions are answered clearly in the BIM execution plan developed at the start of the project.

### REALIZED SAVINGS

It would be prudent to note that some effort outside the scope of construction is required at turnover to link the model data with an existing facility program. Additionally, there may be some added cost to this method of BIM for facilities and in data collection while the subcontractors incorporate this modeling style into their standard workflow. However, these costs are

typically offset by savings captured utilizing different BIM processes and delivery methods. Many owners realize savings so quickly the ROI (return on investment) is often realized in as little as 3 years, allowing the full savings to be compounded over the next 15 to 20 years of operation. When a side-by-side comparison is looked at between

a traditional approach to facilities management and a BIM<sup>f</sup>® approach, the results are clear and unmistakable. We as construction professionals should be looking to BIM<sup>f</sup>® as the solution our clients deserve and will demand. ■

<sup>1</sup> McGraw Hill Smart Market Report The Business Value of BIM in North America, March 2012.



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