MaineGeneral Health

Integrating IBM Maximo software with virtual design tool transforms asset management at new hospital

Overview

The need
MaineGeneral Health sought to extend a 3-D design and construction tool used in building a new hospital to manage the hospital's assets after construction.

The solution
Using an IBM-developed framework, the organization, working with IBM Business Partner Strategic Maintenance Solutions, integrated IBM® Maximo® Asset Management software with its cloud-based building information modeling tool.

The benefit
Automating asset data workflows immediately saved the company approximately 600 staff hours and eliminated the need for paper-record storage square footage valued at more than USD100 per square foot.

Overseeing construction of a 1,700-bed hospital for MaineGeneral Health, construction manager Adam Troidl needed to ensure asset data amassed during the design/construction phase flowed seamlessly into the organization's asset management solution post-construction.

Establishing an asset management foundation

Building information modeling (BIM) is rapidly becoming the standard in construction management. Used by owners, architects and contractors as a tool for virtual design and construction, BIM involves generating 3-D virtual representations of a construction project and providing all stakeholders with an interactive, collaborative computer model for problem solving and coordination—a significant departure from traditional 2-D paper drawings.

In many cases, once a project's managers produce physical drawings from the 3-D model, the role of BIM significantly diminishes. Such is not the approach used by Troidl.

Integration of the hospital's asset management software and its BIM tool allows staff to view the specs and maintenance histories of more than 5,000 assets with unprecedented efficiency. "Now, they're able to find that information in a few clicks instead of going to the shop and digging through a bunch of books," says Adam Troidl, construction manager, MaineGeneral Medical Center.

"This is about taking a viewer for the 3-D building information models that carried us through the design and construction phases and integrating it with Maximo, which extends its value to the ownership phase."

— Adam Troidl, construction manager, MaineGeneral Medical Center

"BIM is really the only feasible way to coordinate the complexities of building a modern hospital," he says. "But beyond using it as a design tool, we wanted to take those models to the ownership side—extending their role to managing the hospital's assets post-construction and increasing maintenance staff efficiency. If a frontline maintenance person gets a work order to repair a light fixture, for example, I wanted them to have the ability to find that specific asset in the model—even on their iPad or tablet—and open an attachment library, where they could click to find the information they need, such as maintenance records."

Cloud-based, automated asset management

MaineGeneral had deployed IBM Maximo Asset Management software throughout its hospital network more than two years prior to the construction of its new medical center. "Our asset management application wasn't going to change, and we saw tremendous value in bringing the robust building-asset data developed in the BIM tool during the design and construction phases into Maximo for the building operations phase," says Troidl, who adds that MaineGeneral and its BIM provider then teamed with IBM and IBM Business Partner Strategic Maintenance Solutions to connect the tool to the Maximo solution using an IBM-developed BIM integration framework.

As construction manager, Troidl is also responsible for managing the renovation of existing MaineGeneral facilities, and he sees the integration of the BIM and Maximo solutions as having a role to play in those projects moving forward, particularly because the Maximo software-based asset tracking technology and the BIM viewer itself are cloud-based. This means that the company can model or update new additions or renovations in its Maximo asset management system.

"We recently renovated a building from the 1950s and created a 3-D BIM model for the project, including architectural, electrical and the HVAC system," he says. "So, rather than getting the proverbial truckload of drawings from the contractor detailing each part in the HVAC system, we were able to bring all that information electronically through the BIM system and further leverage BIM by bringing that asset data into Maximo."

Solution Components

Software

- IBM® Maximo® Asset Management

IBM Business Partner

- Strategic Maintenance Solutions

"Once we made the investment in building information modeling, why not integrate it into our asset management application on the back-end? It just made sense."

— Adam Troidl, construction manager, MaineGeneral Medical Center

Savings through automation

Although MaineGeneral Medical Center opened less than one year ago and long-term efficiency and asset management benefits of the BIM integration framework are yet to be realized, Troidl points to one immediate dividend.

"We finished the front-end data loading from the construction model to the Maximo application on the owner's side before we even moved in," he says. "That process was automated through the BIM integration framework, so right there we estimate we saved about 600 hours of manual data entry time and who knows how many square feet of document storage space in the new building, valued at hundreds of dollars per square foot." Additionally, based on multiple national studies, Troidl estimates that the company could save as much as USD225,000 annually through automation.

"In healthcare, everything is changing all the time, so we'll always be working on a construction or renovation project," says Troidl. "This BIM integration framework will remain vital to managing the construction and asset management processes at MaineGeneral Health."

For more information

To learn more about IBM Maximo Asset Management software, please contact your IBM marketing representative or IBM Business Partner, or visit the following website:
ibm.com/software/products/maximoassetmanagement

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