

Different Reasons, Same Result

Contractors In The Midwest Have Found Long-Term Savings And Efficiency After Making The Leap Into Virtual Construction

It took years of planning for C.G. Schmidt of Milwaukee to feel prepared to take the leap into 3-D Modeling.

Once there, it took the company about five minutes to realize it had made the right decision, according to Virtual Construction Coordinator Dan Klancnik.

"We began to see rewards almost immediately from having our Project Managers trained in the technology before we started to use it," said Klancnik, who states that C.G. Schmidt has already been able to see a positive impact on its bottom line due to the use of BIM.

"We jumped into it head first, but we made sure we were prepared. The best advice I can give someone who's just starting to get into this is to train their people very well beforehand. There's a big advantage to having everybody on the same page when starting an advancement like this. You need to have a team that's dedicated to the process."

Contractors on the East and West Coasts have been quicker to adopt Building Information Modeling technology than have their counterparts in the Midwest. That doesn't mean that there are no examples of successful BIM usage in this part of the country. Reasons for the reluctance to apply BIM in the Midwest and in the Chicago area in particular vary. What isn't variable is the opinion by a number of industry experts that contractors who don't get in front of this technology will find themselves behind the 8-ball when it comes to competing for jobs.

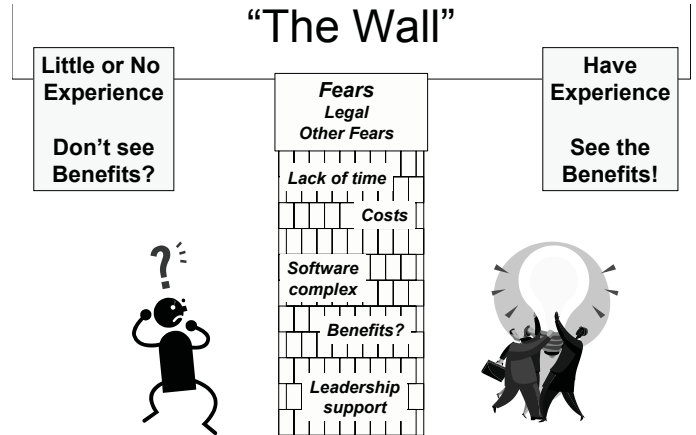
"It seems like a real battle getting contractors in this part of the country interested," said Larry Filson of Walbridge Aldinger Company in Detroit. "I think the companies who have made that investment have been happy they did. It saves a lot of time and a lot of money in terms of catching errors before you make them."

"You aren't going to get the full advantage of it right away, but it's not something you can go into half-speed. You need executive-level support and the right staff."

**-Kevin Bredeson
Gilbane Building
Company
On What Companies
Should Know Before
Starting BIM**

Building Information Modeling seemed like a natural transition for Walbridge Aldinger, which was heavily involved in lean construction before adopting the technology. Lean construction and Virtual Design & Construction have some overlap, and the advantages of both encouraged Walbridge Aldinger to make a \$500,000 investment over four years to upgrade its system in preparation for BIM.

The transition hasn't been perfect, but Filson points out that as more companies try BIM, the newer companies to the technology have more



The "wall" that exists between those using BIM and those who haven't taken to the technology yet, part of Michael Kenig's presentation at the BIM Forum. According to Kenig, lack of support from company leadership is one of the main reasons contractors in the Midwest have been slow to adopt BIM.

cases to learn from, which can help them start on solid ground.

"There are several issues that still need to be addressed," he said. "In many cases, there's a lack of training in the technology on the part of the designer. There's a lack of sufficient infrastructure, and you need computer systems that are set up in such a way that they handle potentially huge files."

Competition was one factor driving the growth of Building Information Modeling on the East and West Coasts. Once one company started to use the technology, its competitors felt as if they needed it.

Self-sustainability and other factors have played a role in the technology being slow to catch on in the Chicagoland area. According to most industry observers, however, contractors in this area will need BIM to compete sooner rather than later.

"The owners are pushing it, and we're quickly getting to a point where contractors everywhere will need to realize how critical this is to success," said Gilbane Building Company's Kevin Bredeson of BIM. From his Milwaukee office, Bredeson oversees Gilbane's Building Information Modeling operations all over the country.

"The one thing I would say to companies starting to use BIM is that they need to be ready to embrace it all the way. You aren't going to get the full advantage of it right away, but it's not something you can go into half-speed. You need executive-level support and the right staff. Those two things combined, along with collaboration with designers and owners, can get you to a place where you'll see results."

Companies thinking of using BIM may be concerned that it's too different from what they've done in the past. J.F. Ahern Company of Fon du Lac, Wisconsin has been a respected mechanical and fire protection contractor since the late 1800's, but a long tradition of doing things one way didn't stop the company from approaching new technology.

Despite the necessary commitment, Gary Hunter of J.F. Ahern feels that Virtual Design & Construction is worth the investment

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OSHA, from page 12*Front End Loaders*

- Chains and rigging for lifting loads to prevent struck by load deaths
- Operator and pedestrian worker training and communication to prevent struck by vehicle deaths
- High visibility clothing for pedestrian employees

Scrapers and Graders

- Operator and pedestrian worker training and communication to prevent struck by vehicle deaths
- High visibility clothing for pedestrian employees

Semi Trailers

- Driver and pedestrian worker training and communication to prevent struck by vehicle deaths
- Dock safety program to prevent crushed by deaths- Fatal are primarily spotter employees who are signaling to the truck driver as the truck is backing up.

*Skid Steer Loaders and Bobcats***BIM, from page 5**

to any company.

“We got started about five years ago using a 3D software called CadDuct,” said Gary Hunter of J.F. Ahern Company. “We use it on the largest projects and many of the other ones. It streamlines the whole process. It eliminates a lot of the errors.

“One of the main bumps in the road for us has been getting the database and the software set up. The whole process required a commitment to this technology from management.”

Contractors that make the investment to work with new technology are being looked for with increased frequency by owners and architects. David A. Cintron, Jr., of DAC Studios is one of many big believers in BIM in the Chicagoland architectural community.

“It allows designers and architects to focus on what their main task is, really,” Cintron said. “From quality assurance and quality control standpoints, this software is the wave of the future, and it saves a tremendous amount of time. It provides a consistent document for everyone involved.

“Not only does it allow you to avoid mistakes that can cost a lot of money, but it allows you to run through a number of different options and scenarios. It lets you know what’s available to you.”

Klanchnik says that to adopt the technology had its advantages for C.G. Schmidt. For one thing, the company could take advantage of case studies and learn from mistakes made by construction industry firms that have already implemented BIM. “Our case studies taught us that training was the key,” Klanchnik said. “If we wanted to move forward, we had to make sure everyone had the proper training. It took a big commitment from everyone involved.

“The range of reasons a company has for getting into Building Information Modeling varies. Some believe it will increase their profit down the line, with some they think they need it to be competitive. No matter what the reason, I think this is something any contractor should look at. Understanding the technology is important to any construction business.”



- Driver and pedestrian worker training to prevent struck by vehicle deaths
- Seat belt use
- Safety interlocks not bypassed or malfunctioning
- Driver training to keep head and body inside driver cockpit to prevent caught between deaths

Hopefully, by using this information, you can keep your employees safe and healthy. Remember the goal of OSHA is to ensure all workers go home at the end of each work day in the same condition as when they started that day.

For more information, checklists and other helpful tools please visit OSHA at www.osha.gov or contact your local OSHA Area Office.

Healthcare, from page 2

certification process with the FDA,” he said. “The FDA relies on Loyola and their consultants, who measure particulate matter, take a sampling and provide the FDA with results.

In addition to the FDA’s regulations for clean spaces are the hospital’s own rules regarding the control of infectious disease. Usually, specific contracts are drawn up prior to the start of construction in order to make sure that all sanitation guidelines are followed.

Most workers will be required to gown up at some point, and all of their tools will have to be disinfected regularly, as well as the materials they are working with.

“Each employee has to go through training and sign a document,” Zielinski stated. “It’s in the contract that you must adhere to these rules. If someone is violating these rules we have the legal documentation to remove them from the jobsite.

“The other thing that we had to do at Loyola was assemble the duct work in a separate room. In that case, the workers were armed with individual dust busters and we had to bring in individually sealed and numbered ductwork into that separate room.”

LaJeunesse, Wojkovich and Zielinski agree that the most important aspect of working in a healthcare facility is controlling the spread of disease.

“People with deficient immune systems are susceptible (to infectious disease),” Zielinski said. “For instance, it’s always good practice to never eat on a jobsite because that brings mice around, but in a hospital even a few crumbs of food can turn into spores, which can be a problem.”

All of the extra work that healthcare facilities require of contractors seems worth it to Zielinski.

“When someone is literally bringing an organ into a building and putting it into someone’s body – that’s when you have to make sure that you’re space is really clean and meets all of the standards.”