

TECHNOLOGY

Government agencies push adoption of BIM

Technology establishing itself as a new standard, despite a series of challenges.

By DAN NAUMOVICH
Correspondent

Earlier this year, the U.S. Air Force announced that it would require building information modeling-based designs for all of its vertical military construction.

The Air Force took its lead from the General Services Administration and the Army Corps of Engineers, which have specified BIM for their projects.

"It's a very strong endorsement that we've gotten from the U.S. Air Force and the Army Corps of Engineers, who are probably the largest property owners in the world," says Bill Goodson, vice president of government sales at Autodesk.

Needless to say, these developments came as welcome news to Autodesk and other vendors of BIM software. For architects and engineers hoping to land federal contracts in the future, these developments could be heard as opportunity knocking, or as a wake-up call.

From Goodson's perspective, the government's move will impact the private sector as well.

"The Army Corps of Engineers outsources \$32 billion worth of work a year. So as they move forward, so does the commercial world," he says.

A 2010 survey conducted by McGraw-Hill Construction pegs the BIM adoption rate in North America at 49%, with much of the growth occurring over the past couple of years. Among users, 63% reported a perceived positive overall return on investment.

HINDRANCE FACTORS. Yet economics, especially during a time when operation budgets are getting cut, may also be playing a role in keeping the adoption rate from growing even more quickly.

"Cost is obviously a big issue because the process requires that you have more collaboration upfront," says Atul

Khanzode, director of virtual construction at **DPR Construction** (Redwood City, CA), a commercial contractor and construction management firm.

In addition to the licensing fees and the cost of training, the high-powered software may also require that users upgrade their computers to ones with more robust processors and additional memory.

Another roadblock slowing down the adoption rate may be the very momentum that BIM is currently enjoying. Khanzode said that all of the current hype has left many would-be practitioners questioning whether BIM is merely the latest fad or if it is truly the game-changing technology that many are claiming.

Khanzode is the co-author of a paper titled, "Transcending the BIM Hype: How to Make Sense and Dollars from Building Information Modeling."

The paper makes the case for adopting BIM, but is careful to point out that there is nothing magical about the software. The same "garbage in, garbage out" principle that applies to any software is relevant here as well. Understanding the process and implementing it as a collaborative effort with all of the project team members is critical to maximizing return on investment.

"BIM should be looked at in the context of a process and not a technology for project teams to see the benefit. By doing so, you can address many of the challenges that we experience in the industry. But if you look at it from only a tools perspective, then it becomes difficult and I think people struggle to get past the hype," Khanzode says.

GOOD FOR PUBLIC AND PRIVATE.

While BIM on federal projects is certainly sparking demand, on the commercial side Khanzode sees the demand growing, particularly on complex projects, such as those for hospitals or advanced technology firms.

"There's not a single project that we are doing right now in the health care area that is not using BIM," he says.

Recently, government work has garnered most of the attention. Designers and contractors have certainly taken notice and will want to follow the money, but it's important to know why the

government is specifying BIM requirements.

Goodson likes to compare BIM with the navigational systems that many people use in their cars. The difference between the two, however, is that BIM creates streets and addresses on the go in order to find the best way to the desired destination.

"For the federal government, it's a roadmap for them. Projects are getting more complex, involving a lot of different people and a lot of different components to the building. The government traditionally likes to lead with a process-oriented approach and taking advantage of new design tools like BIM," he says.

"There are a lot of cost overruns on projects. People can't afford to spend 20 or 30% of their budget on rework and redos. The more they can do upfront to model the project and take a look at it from a 3-D perspective, the better they can visualize it and remove all of the errors from the process. You can do this all upfront, before you ever put a nail in a piece of wood or lay a foundation," Goodson says.

COLLATERAL BENEFITS. BIM also benefits a project when it comes before a board or commission for approval. Goodson cited the Presidio Parkway project in San Francisco, not the easiest municipality to please when it comes to getting the go-ahead for a project, as an example.

"They were able to get a resolution to go ahead with the project on the first try because they were able to show these visualizations of what the project would look like. You experience it before it's real. There was no misinterpretation. Everybody knew what it was going to be so they actually sped up the approval process," says Paul Sullivan, senior PR manager for Autodesk's AEC Solutions Group.

In his paper, Khanzode and his co-authors mention the hype cycle, a graph that plots consumer attitudes toward new technology as its visibility increases, and expectations rise and fall before leveling off at a plateau of productivity. From this perspective, BIM invites

See BIM, page 8

MARKETING METRICS

Selling specific

Avoid the commodity trap by positioning your services for a specific client and opportunity.

As important as price has become in the selection process, in many cases it isn't the dominant criteria involved in the decision to buy professional services. If it's not price, then what is it? Often the key factor is perceived value to the end user. As we develop our approach with value-added services that make the client feel special, or meet and anticipate their needs better than our competitors, we position our solution above a price tag alone.

Selling value requires that you think strategically—specific to a client and/or an opportunity. Here are a few steps to focusing on your clients and giving them what they really want:

■ **Perform a client analysis.** Ask some far-reaching questions, such as, "How is my client positioned in his or her marketplace?" "What are my client's strengths and weaknesses?" and "What does my client look for when

The key is to know when your client will look for, consider, and pay for higher value.

purchasing products and services?" Understanding your clients' business is the foundation to building a client-focused culture. If your company and colleagues are wedded to your product alone, it will stand in the way of thinking from your customer's perspective.



Wally Hise

■ **Conduct a self-assessment.** Gaining objective insight into your position can enlighten you as much as analyzing the client or the competition. To that end, ask, "What does my firm do so uncommonly well that far exceeds the competition?" and "What is truly unique about us?" So you won't be taken by surprise, understand your vulnerabilities by asking, "In what areas are we deficient?" and "Why do we lose business?"

■ **Look closely at the competition.** Understand the competition's strengths and weaknesses, scrutinize their vulnerabilities and their selling propositions, and then use this information to enhance your position. You can find out a lot of relevant information by asking your client what they like and dislike about the competition's products and services. It may also make sense to ask suppliers, vendors, and subcontractors what they know about your competition; they can serve as a tremendous source of information because they often want to please you and get your business.

Next, you must understand the following:

- **High quality is not enough.** Customers now expect quality. Delivering the best quality will no longer set you apart from competitors.
- **Low prices aren't enough.** Cutting

your price just makes you vulnerable to somebody else who is willing to sell cheaper.

■ **Good service is not enough.** While good service is expected and even valued, clients tend to take it for granted, too.

Finally, find out how your client defines and experiences value. This search takes some work, and some hands-on interviewing. Ask them for examples of other products and services they use that they consider valuable to their business. Dig deep to find out their concept of value! Armed with this information, you're ready to craft a value proposition—specific to this client—to win an opportunity, solidify a relationship, and build loyalty.

Of course, everyone knows there is a time and place for buying on price (e.g., routine services that meet an exacting standard or specification). A good friend of mine, who is also a great salesman, uses the expression "stuck in procurement jail" to refer to fighting the price war with a contracts person who wouldn't know the value of technical services if his job depended on it. The key is to know when your client will look for, consider, and pay for higher value.

My experience over the years substantiates that most salespeople define value from their perspective, say what they think the client wants to hear, and move from one transaction to the next claiming to sell value. If you follow the above process, you won't just sell value, but you will also create and deliver value to your client. ▽▲

WALLY HISE is vice president of federal marketing for **HDR Engineering, Inc.** (Omaha, NE). Contact him at wally.hise@hdrinc.com.

BIM, from page 5

comparisons to other technologies that eventually took a sizable bite out of the paper industry.

"The old way of blueprints is much different. When you print something out, it has a measure of permanence to it, but much of the intelligence is lost. By keeping it digital, you not only retain the value, but you increase it for the

next stage. The intelligence is what's shared. By building the project twice, first digitally and then in reality, it's actually a much safer and faster process. And more reliable in the long run," Anderson says.

If BIM is poised to become the industry standard, it will take the testimony of actual practitioners.

Daniel Perruzzi, Jr., is a principal at **Margulies Peruzzi Architects** (Bos-

ton, MA). When he talks about BIM, the bottom line comes down to the fact that BIM saves money for their clients.

"For one project, the final budget came in nearly \$250,000 under the design development phase budget through savings that could only be realized by the early problem detection afforded by BIM. That's a considerable savings for using a technological tool," Perruzzi says. ▽▲