

TECHNOLOGY

IPD and BIM go hand in hand

However, they are not interchangeable.

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There's still some confusion in the industry when it comes to integrated project delivery (IPD) and building information modeling (BIM). Most people have a basic idea of what they are, but when reduced to a simple acronym and a vague concept, there's a tendency to use the terms interchangeably or to believe that one necessitates the other. That's not the case.

"It's really an apples and oranges thing. Integrated project delivery is a process that encompasses contracts and relationships and incentives—a whole variety of things—whereas BIM is simply a technology. It is useful in supporting IPD, but no amount of BIM gives you IPD. And it's possible to do IPD without BIM," says Jonathan Cohen, vice president with Brookwood Group, a firm that advises and consults with clients on strategic issues relating to design, development and construction program delivery. He is the author of *Integrated Project Delivery: Six Case Studies*, a work that profiles six completed buildings—varying in size, scale, and geographical location—that were completed using IPD "in as pure a form as possible."

HAND-IN-HAND. In its purest form, IPD encompasses an entire project delivery system that is dependent on close and early collaboration between the many stakeholders on a project—from designers to construction companies to utility contractors, and everyone else with a role to play. Perhaps most importantly, it requires an owner who is sold on the value of IPD.

"IPD really requires an actively involved owner, and without that you really shouldn't attempt it," Cohen says.

As a technology that is built to promote collaboration, and one that requires collaboration to reap the full benefits of its capabilities, BIM works well with the concept of IPD. While IPD can be seen as a guiding philosophy, BIM is an enabling technology.

"We feel that lean (construction principles) and IPD—thinking and working as a collaborative team—go hand in hand in driving the delivery system. We definitely feel that BIM is a powerful tool that shamelessly integrates into the process of working collaboratively or trying to eliminate waste," says Adam Jelen, vice president and district manager for **Gilbane Building Company** (Providence, RI).

Gilbane is one of the industry's largest family-owned real estate development and construction firms. They've dedicated their practice toward the green and sustainable methods associated with IPD and lean construction, and use BIM as a tool to carry out that practice.

"We as a company are definitely driving this way of thinking. It fits our values. We feel that it's the right thing to do," Jelen says.

WHERE IPD LIVES. Ideally, the benchmarks and requirements that guide IPD would be spelled out contractually. While this "in a perfect world" scenario isn't the norm, Gilbane and others are incorporating elements and components of this approach into projects that are more traditionally structured from a delivery standpoint.

"You don't need to have the IPD contract in place to do a lot of this: to be creative, to be innovative," Jelen says.

One area where IPD is catching on is in the health care industry. Cohen says this is due to many factors. Owners tend to be knowledgeable of construction practices and aware of the benefits IPD can provide. Health care buildings are also particularly complex in terms of systems and require the very latest in technology. This leads to situations where equipment or systems specified early in the design process become outdated by the time construction nears completion.

"They'll make big changes toward the end of the project. Having an integrated team makes it that much easier to do," Cohen says. Although he's seen and

documented the benefits of IPD, Cohen doesn't believe it will make broad and sweeping changes in the industry.

"I don't think it's going to replace all other forms of project delivery. It's very suitable for certain types of projects and certain types of clients. And not so suitable for others," he says.

WHERE IT DOESN'T. Owners of one-off projects or projects that fall out of their core business may feel more comfortable with a more traditional delivery method. In fact, the comfort that comes from doing things the way they've always been done is one of the bigger factors working against IPD.

"To be able to do this right, people have to be able to put their guard down and people have to trust each other. You have to knock down those barriers. You have to work collaboratively. But I think the reluctance comes from the trust piece," Jelen says.

Cohen mentions government as another owner group that may not be amenable toward IPD, due to extensive contractual restrictions and competitive bidding requirements. This illustrates his previously stated point that "no amount of BIM gives you IPD."

BIM has garnered a lot of attention in recent months as the U.S. Air Force, the Army Corps of Engineers, and the General Services Administration all announced BIM requirements will be included in their contracts.

"Just using BIM doesn't really advance you towards IPD, in and of itself. They want BIM models as a deliverable, instead of drawings. And that's fine," Cohen says.

Many proponents of BIM, including those who develop and market it, agree that collaboration is key to unlocking its full benefits.

"IPD challenges our entire profession to think creatively, to explore new ways of thinking. It's an organic, unselfish, seamlessly oriented process. BIM is a tool that feeds that, but it doesn't replace that team approach," Jelen says.

"(BIM) is useful in supporting IPD, but no amount of BIM gives you IPD."