



## ONE WAY TO PUT THE 'I' BACK IN TEAM

IPD's cooperative approach gaining favor in construction industry

By **DEREK L. MOGCK**

Most of us have heard the sports adage that "there is no 'I' in 'team.'" Integrated Project Delivery (IPD), however, is turning that phrase on its head in the design and construction industry by demanding collaboration, or team integration, to achieve greater success in capital projects.

As one national architectural organization defines it, IPD "is a project delivery approach that integrates people, systems, business structures and practices into a process that collaboratively harnesses the talents and insights of all participants to optimize project results, increase value to the owner, reduce waste, and maximize efficiency through all phases of design, fabrication, and construction." Another commentator put it more simply: the "purpose is to make better buildings faster for less."

IPD affects everyone involved in a project, including lawyers. We therefore need to be prepared to advise clients concerning the contractual framework they will use to implement this more collaborative model.

Two industry trends have made IPD an increasingly common delivery method – improved technology and a demand for greater productivity. According to federal labor statistics, non-farm productivity doubled between 1964 and 2004. However, construction productivity fell roughly 20 percent during that same period. While some dispute these figures – saying that labor alone cannot reflect productivity – it is undisputable that the industry and its customers want greater efficiency.

### Like Toyota

IPD responds to this demand by incorporating the type of efficiencies that fueled Toyota's success as a car maker. Specifically, IPD improves productivity by helping the team discover and correct defects earlier. It also coordinates design and construction activities to maintain a constant work flow. These so-called lean construction practices remove waste of both time and material in a project.

IPD is also a logical response to technology, particularly Building Information Modeling (BIM). Although BIM can create 3D images of a building, designers and constructors can do much more with it. For example, BIM can estimate costs, discover clashes between building components, analyze structural elements or energy efficiency, produce design drawings, and guide work sequencing and scheduling.

This potential can only be realized, however, when everyone from designers to specialty subcontractors participate, early, in the model's development. Unlike the design-bid-build approach, IPD permits that.

Choosing the right team – in terms of qualifications and commitment to collaboration – is probably the most important project decision. The next most important step is providing a contractual framework for that collaboration. A clear agreement is critical, if for no other reason than IPD

blurs the traditional design and construction roles, which raises interesting legal issues considering established legal concepts including the *Spearin* doctrine.

### Model Contracts

Two industry organizations, the American Institute of Architects (AIA) and ConsensusDOCS, have published model IPD contracts. (ConsensusDOCS is the name adopted by a group of 22 industry associations that developed an alternative to the AIA's collection of standard form contracts.) Further, some

project teams have even created their own agreements.

Some aspects of the AIA and ConsensusDOCS models are similar. The AIA's C196 contract and the ConsensusDOCS 300 agreement both provide for a joint project management group, address sharing of BIM-related information, and employ shared incentives, limited liability, and mutual liability waivers to align project participants' interests. Nevertheless, there are fundamental differences in the two approaches.

The AIA's C196 form creates a limited liability company (LLC) especially for the project, of which the owner, designer, and a construction manager are members. The LLC then contracts with the owner, designer, and contractors to plan, design, and construct the project. The C196's notable provisions include mandatory collaborative workshops, an



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integrated scope of services, and integrated insurance coverage. It also has more express provisions concerning BIM.

The ConsensusDOCS 300 agreement is a single, three-party contract among the owner, designer and contractor. The premise behind this arrangement is that separate owner-designer and owner-contractor agreements foster conflict on the project. ConsensusDOCS 300's unique features include express risk sharing and commitment to lean construction principles.

Regardless of what type of contract is used, experience on IPD projects reveals that tight collaboration benefits everyone involved. That also appears to be the consensus reflected in a May 2009 AIA collection of comments from owners, architects, engineers and contractors involved in IPD projects.

Contractors appreciated that IPD improved efficiency by solving problems earlier and accelerated prefabrication orders because of earlier, more reliable information. Designers like IPD because it reduces redesign. Representatives of both groups recognized that this efficiency permits them to finish their work faster, which translates into higher profits on a project. For their part, owners received high-quality buildings and realized significant savings from fewer change orders, delays, and distracting and expensive litigation.

One prominent example of IPD success is Autodesk's \$13 million, 60,000-square foot headquarters in Waltham, Mass. Using IPD and BIM, the team delivered the project early while keeping nondiscretionary change orders under one percent, even after Autodesk expanded the scope mid-stream to add space for a newly-acquired manufacturing software company—a 30 percent greater workload.

### **Energy Efficiency**

In Connecticut, there is a third factor making IPD increasingly attractive: mandates for energy efficient buildings in most public and private construction. IPD and BIM's promise as an energy modeling and facilities management tool make it a compelling option for Connecticut's owners (public and private), designers, and constructors. In this regard, in his recent congressional testimony, Michael McQuade, United Technologies Corp.'s senior vice president for science and technology, identified integrated design approaches and innovation as key tools to reduce the building sector's carbon emissions.

However, Connecticut's statutes require state agencies to put most public projects to bid. Those statutes do, however, permit limited use of design-build or construction manager at-risk delivery models, under General Statutes § 4b-24(4) and for Hart-

ford's Adriaen's Landing and the UConn 2000 capital program.

Connecticut's legislators and agency leaders should now consider adding IPD to the state's options, particularly in a time of increasing sensitivity to capital projects' costs. That's already happening elsewhere. For example, Washington State's Capital Project Advisory Review Board recently created a task force to study IPD.

Colorado is one step ahead of Washington. There, a state statute allows state and local governments to use a form of IPD; most public owners may contract with a single entity to design and construct a capital project. The Colorado law also allows public owners to select a proposal based on the concept of "best value," compared to having to accept the lowest (responsible) bid. Also, as of July 1, Wisconsin's Division of State Facilities requires BIM for all state projects with a total budget of \$5 million and new construction worth \$2.5 million.

Regardless of what its legislature and agency officials decide for public projects, Connecticut's construction lawyers must be ready for IPD. Our clients should be increasingly interested in the concept and, as members of their extended project team, we can add value by helping them craft agreements that provide a framework for that team to succeed. ■