


# Is Security the Enemy of COLLABORATION?

By John J. McKeon



Moving toward Integrated Project Delivery is less a matter of “taking the plunge” than of wading, step by step, into an ever-deeper commitment. Even though the water may feel fine, many would-be swimmers still wonder what reefs, sharks and other hidden dangers they may be courting.

How much of this collaboration risk is real, though, and how much is mainly perceived? The industry is working out answers in two critical areas: Fear of liability resulting from other team members’ actions, and security of data in a “sharing” environment.

“People seem to use the legal concerns as almost a crutch. When you work through the legal issues, they’re manageable,” says Richard H. Lowe, a partner in Duane Morris LLP, a law firm specializing in construction issues and litigation.

BIM is a key enabler of collaboration, but Lowe says it’s important to keep its impacts in perspective. Even though there has been a lot of discussion of legal liabilities arising from shared BIM models, Lowe notes that no major lawsuits stemming from BIM have been reported.

Moreover, “just because an issue is present in the 3D world doesn’t mean it isn’t there in the 2D world,” he says. “I don’t think you can make a convincing argument that there are more legal risks in the 3D world.”

Concerning responsibility for changes in BIM models, Lowe says the basic principle is very simple: “If you add it, you own it.”

“Another issue is just that there is more collaboration on how to arrive at the end product, a good project, and from that people infer the concern that the line between design and construction is being blurred, or the difference between a general contractor and a subcontractor,” adds Lowe. He notes that model documents such as the ConsensusDOCS BIM Addendum (which is endorsed by CMAA) contain the legal principles to “help legally maintain each person’s proper status in the project.”

Todd J. Marlin, managing director at Navigant Consulting, says concern for the protection of private data is another area in which risks may be overstated. “As organizations share information, both internally and externally, there are increased security risks,” he says. “But by having the proper safeguards in place, you can mitigate those risks.”

## The More Things Change

*A decade ago, the 2001 CMAA National Conference in New Orleans featured a presentation entitled “Integrated Architecture, Engineering and Construction Services: How To Do It.” It was delivered by Chuck Klunker, CCM, FCMAA, with extensive input from Chuck Thomsen, FAIA, FCMAA, who has researched, studied, written and spoken on this and related topics for the last 20 years or more.*

*Today, IPD is one of the industry’s hot topics. The 2001 presentation captured a lot of what is being talked about now.”*

*As examples, here are some extracts from the 2001 paper.*

## The “Master Builder” Days

Fifty-plus years ago, most intellectual content in a design was delivered by the A/E. Now there are two tiers of intellectual content: that held by the A/E and that held by specialty subcontractors, manufacturers and suppliers. The traditional design/bid/build process is a barrier to teamwork with subcontractors and suppliers during design. The contractor’s incentive is to maximize profits through design ambiguities, errors and changes. The contractor’s procurement strategy is the primary skill needed for selection, the news on final cost comes late, and the process takes too long. The process is legally frail, and the resulting conflict and litigation inhibit collaboration between the owner, A/E and contractors.

As buildings become ever more complex, specialization, fragmentation and industrialization will continue. More people and companies are involved, the required intellectual content is dispersed, and there is an ever-increasing need for communication and collaboration.

### Guaranteed Maximum Price

At some point during design the AEC provides a Guaranteed Maximum Price (GMP) for design and construction. This is a combination of negotiated and hard-bid subcontracts and supplier contracts, an estimate of the value of the work yet to be procured, a budget for general conditions, the AEC's overhead and profit, bare cost of design and management labor, and a contingency based upon the level of certainty of established contracts and un-bid work.

Once the GMP is accepted, the AEC can begin with construction, even though the design is not complete and all subcontracts and supply contracts are not procured. The earlier in design that the GMP is established, the higher the AEC's and owner's contingencies.

### Key Approaches to the AEC's Management Responsibilities

During construction, the AEC manages all subcontractors and suppliers and provides quality control. All subcontracts, subcontractor management and payments are open to the client. Because the AEC is compensated by fee only and does not get a percent of the construction cost or a portion of any savings, conflict of interest is minimized and the professional relationship is maintained.

The integrated approach provides cost, schedule and quality guarantees without moving the AEC away from the owner's side of the table through:

- Qualifications-based selection
- Negotiated fixed fee
- Limited or no use of incentive clauses
- If used, incentive clauses that do not create perception of, or actual, conflict of interest
- Careful project definition
- A collaborative relationship with subs
- Open-book procurement
- No mark-ups
- All savings accruing to the owner
- Complete owner access to all aspects of the project

The owner may decide to bond subs and suppliers, but not bond the AEC. This will save a little money, and, more importantly, help keep the AEC in the owner's corner should problems arise. Performance risk is handled by the bonds on subs and suppliers, and by being certain they are not overpaid.

So team relationships are not strained by self-interest, the AEC remains on the owner's side of the table throughout the project, and relationships with subs and suppliers are improved.

Cost control is much more effective, as there is regular feedback during design as subcontracts and supply contracts are progressively bid. If early bids come in high, the subsequent design is developed to a lower budget. The converse is also true. In this way, small, incremental corrections can be made during the entire design process. We have more, but smaller and less painful corrections that the typical big one-time redesign that often comes after a Design/Bid/Build project comes in over budget.

Schedules are developed during design with subs and suppliers. These are incorporated into the overall design/procure/construct/occupy schedule. Scheduling information and commitments are much more reliable, and long-lead items more readily identified.

This collaborative approach is commonly used in the private sector, and can be used with any public entity that uses the CM at Risk contracting approach. Most of the benefits of IPD can be realized without stepping outside of commonly-accepted contract approaches.

After all, as Marlin puts it, "Somebody could walk out with your plans on paper just as easily as they can walk out with your plans on a USB drive."

Marlin continues, "It's necessary to monitor and control to make sure the people who have the information are authorized to have it." In this vein, he suggests people need to be aware of the tools that are already widely available. "Some very robust security is already built in (to software and operating systems). It's just a matter of implementing it properly. Take the time to understand the controls in place to safeguard your information."

Chuck Thomsen, FAIA, FCMAA, author of two books on Program Management, says the clear benefits accruing to owners from collaboration make not collaborating a suicide strategy for designers, consultants and contractors.

"Most of our buildings are built by owners with continuous building programs. Many of these serial builders simply don't tolerate members of the project team that won't share information," Thomsen says.

These owners are leading the development of secure methods for sharing project data. "The most sophisticated serial builders host the project information on their servers or in the cloud," Thomsen says. "It may be accessed by a project team with the proper credentials. That saves time, reduces errors and gets everybody on the same page."

Owners often also insist on ownership of work products like plans and specifications, shop drawings, RFIs and progress pictures. Thomsen says owners should provide reasonable protection for the creators of these products. For example, "an owner shouldn't reuse project information on a subsequent project without a waiver of liability for the author."

In the long run, solving these perceived problems means really accomplishing the climate of trust and mutual support so essential to true IPD. Owners are pressing for more collaboration and leadership in clearing away barriers and improving project delivery.

"I don't think security is the enemy of collaboration," says Marlin. "It could be the foundation of collaboration." **CM**

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