

The Ticket to Performance Projects Is Doing Research

Some owners of major U.S. construction projects seem bound and determined to make many of the mistakes of the past. With surprising uniformity, the procurers of design and construction services say they are under intense pressure to deliver

better projects quicker and cheaper and with less risk. But without careful planning and thought, this could be a ruthless recipe that will transform the construction industry into nothing more than a bin of commodities.

Owners seem to want it all, but many offer no incentive to the industry to meet their expectations. Some are trying to drive down costs by using online commodity-type procurement for construction, undermining engineering education with demands for offshoring of design and trying to push all of the risks onto the construction team. The lowest bid is the best bid, their actions scream.

The industry adds its own flaws to the project equation. Contractors are slow adopters of modern project collaboration technology, designers duck their responsibility to keep an eye on construction for fear of liability and many subcontractors are not overly concerned about the quality of their work as prices are driven down and volume is cranked up (see p. 38).

But there is a way out of this maze of conflicting values that gives owners what they want and the industry (at least the quality firms) what it needs, say some researchers. The Performance Information Procurement System (PIPS) developed at Arizona State University has been successful 99% of the time in helping owners select project teams by focusing attention on contractor performance rather than low bids.

The latter forces owners to make decisions based on acceptable performance and contractors to make a profit by providing the cheapest construction. In the win-win environment that PIPS attempts to provide, owner expectations are met by contractor capabilities and project risk can be minimized and shifted as the owner eases control and relies on performance and maximum value.

The heart of the process is research—to assign values to various performance aspects of contractors and then use an artificial intelligence system to determine the relative strong and weak points among contractors based on the items mea-

One system assigns values to various performance aspects of contractors and then uses artificial intelligence to pick a winner based on project needs.

sured. These are determined by project needs. Past performance will identify future performance and a firm's ability to predict rather than react. These are highly correlated and easily measured, researchers say.

By doing statistical research up front without cronyism to pick performers and weed out losers, owners can have successful projects without undermining the industry. ■

