

Professional Practice Corner

Four Key Project Decisions

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Many years ago I worked on a mega-project in a country with little construction infrastructure. Our job was to devise the project delivery strategy. We talked to everyone we could and heard deep convictions for an endless variety of approaches.

Amid the confusion, we asked ourselves if there were some basic principles we could understand that would encompass all the choices. And if so, how should they guide us? The challenge started a life-long pursuit to understand the principles of making a deal for design and construction.

Begin with the owner's natural desire to know what a project will cost and how long it will take. Add the fact that a design and construction operation involves hundreds, sometimes thousands of organizations and millions of parts. Consider that many of the people will be working together for the first time, and most of the systems will be assembled in ways they haven't been assembled before. Then think about the benefit of having subcontractors and manufacturers collaborate in the design process and the contractual barriers to making that happen. Add in an unreasonably long delivery time, weather uncertainty, price fluctuations, political pressures, changing regulations and diverse contracting procedures. Then stir in the archaic traditions of the construction industry.

Finding the best project delivery strategy becomes at least as challenging as the technical demands of design and construction.

Conflicting motivations shape the process. We want to provide our clients with a contractually supportable definition so the sheets of drawings and specifications grow, but at the same time, we look for ways to save time and start construction before the drawings are complete. We want to choose specific products, but we want competition. We want to be professionals at our clients' side, representing their interests, but our clients understandably want responsibility and accountability.

Our clients staff their own organizations with architects and engineers to manage the AEs, CMs and GCs they hire. They wisely define the process and cherry-pick companies and people to work with. Meanwhile they want to minimize the number of contracts.

There are nearly infinite ways we assemble the nearly infinite number of interlocking parts required for a building program. All the processes exist because they satisfy different motivations to varying degrees. With good people, any of the common processes can work.

Many volumes written by project delivery pundits treat the subject as an exercise in assigning risk. The basic concept is

With infinite choices, how does one go about choosing? We worked out the following parameters for decision making—and have been polishing and thinking about it ever since.

that there is a fixed amount of risk in a project and it should be doled out to the organization best equipped to manage that risk. That's only partially true. A better thought is to bundle up a team, pick talent, build a collaborative culture and create a process that minimizes risk for everyone.

And there is another compelling school of thought that an owner can never fully shed risk. There are countless ways to contest any agreement in the world of design and construction. So the trick is to design the project delivery process that



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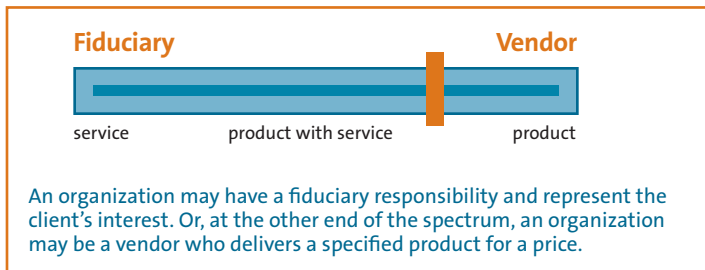
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balances collaboration and accountability, minimizes risk for everyone and enables a project team to perform at their best.

So, with infinite choices, how does one go about choosing? Here are some parameters.



Relationship

A fiduciary is an agent, a person or an organization entrusted with the power to act on behalf of and for the benefit of another. A vendor is the opposite; a vendor sells something.

When we lack knowledge or skills, we seek relationships at the fiduciary end of the spectrum: Doctors and lawyers, for instance.

But if we know what we want to buy, or exactly what we want done and the way we want it done, we tend to form a vendor relationship.

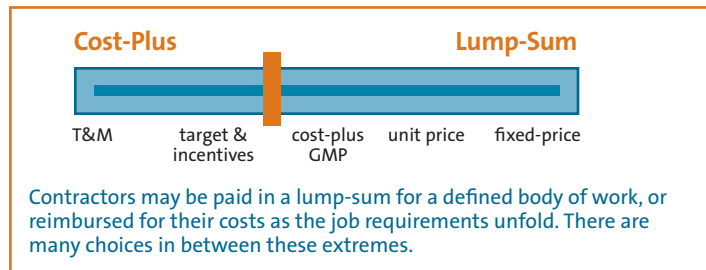
Traditionally AEs represented a client who was inexperienced in the labyrinthine practices of design and construction. So the AE was at the agency end of the spectrum. AEs defined requirements and then put the contractor at the vendor end.

But inexperienced clients are disappearing and attitudes about agents and vendors are changing. As clients become serial builders, they hire construction professionals as in-house managers to run their projects. These in-house construction professionals recognize that the professionals they hire can't provide flawless guidance and, like everyone else, are biased by self-interest.

And these in-house construction professionals usually know what they want and how to get it. They bundle packages of responsibility and treat AEs more like vendors of designs, plans and specifications. And then many of them nudge the builders toward the agent end of the spectrum when they ask them for advice during the design phase and for help procuring and managing construction.

Furthermore, throughout our economy, vendors that sell products for a fixed price have recognized that a pervasive commitment to customer service is crucial. Like all consum-

ers, clients want quality products with service and guarantees. They want the creative, collaborative relationship that is characteristic of professional traditions. They want a reliable product and a price they can count on. The sophisticated serial builder wants both.

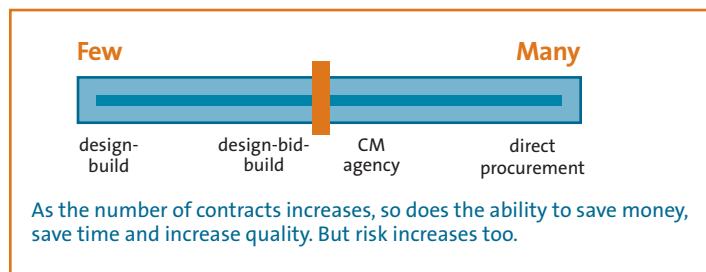


Terms of payment

Contractors may be reimbursed based on their costs or they may be paid a fixed-price. There are many variations in between these extremes, such as:

- Target price with incentives: the contractor is paid actual costs plus a fee. However, a target price is set, and the contractor shares in the savings or the overrun.
- Cost-plus with a GMP: the contractor is paid costs plus a fee. But a maximum price is set. If there's an overrun, the contractor eats it.
- Unit-price: the contractor is paid a predetermined amount for each unit of material put in place (or removed).

Different payment terms may be combined in a single contract. For instance, many contracts are fixed-price with unit-price provisions for tenant work during lease-up.

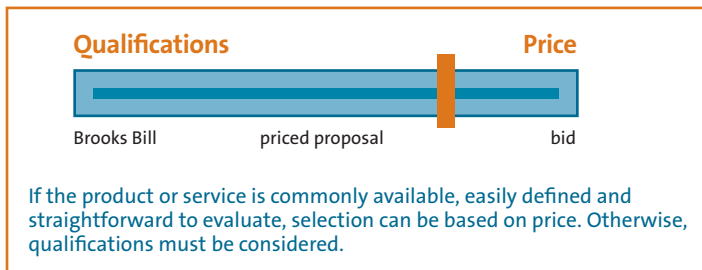


The number of contracts

The first tier of contracts in a project can be awarded to one company, as in the case with design-build; to two companies, as with the traditional design-bid-build process; to many companies, an AE, perhaps 40 prime trade contractors and a

CM when the agency approach to a CM contract is used; or perhaps hundreds in the case of direct purchase of building materials, equipment and labor.

Multiple contracts facilitate fast-track. Unbundling design and construction eliminates overhead markups and allows selection of specialists, specific manufacturers and trade contractors. The opportunity to save time and money and improve quality increases as the number of contracts increases. So do risk and the burden of management. Clients who work with multiple contracts must manage them well or take responsibility for management failures. Consequently, most clients without strong CM staffs look for ways to package contracts under a contractor or a CM to manage the risk.



Selection criteria

The selection criteria should be governed by what is to be bought. If it's a common product, easily defined and easily evaluated, there's little reason not to choose based on price. But if it's a proprietary product, or if value received is hard to measure (such as intellectual qualities of creativity, wisdom, judgment or experience) the selection will be based on qualifications.

Traditionally, AEs were selected with an emphasis on qualifications, and construction contractors were selected based on a price for their product—the building. For the first 70 years of the 20th century, the AIA had a code of ethics that prevented members from quoting a price prior to selection. There was a fee schedule that the members agreed to. But in the late 1960s, the Justice Department decided that professional ethics can't intrude on anti-competitive prohibitions.

About the same time, Congress passed the Brooks Bill that stipulated our government would select AEs based on qualifications and negotiate a fee after selection.

Meanwhile, specialization was marching on with more and more subcontractors for a single project. Smart owners recognized that the management skills of a construction contractor were crucial to project success, and qualification-based selection of contractors became more common.

Although the U.S. Government is still required to select architects and engineers based on qualifications, most private sector organizations consider price too. Selection of architects, engineers and contractors typically includes both price and qualification.

Often, a sophisticated client requires a management plan as well. A large developer with an in-house team of architects and engineers may well have more experience with the design and construction of the kind of buildings they build than the AEs and GCs who work for them. So they will likely short-list good organizations and ask for fixed prices. They know what they want and can tell whether they are getting it. They may also be pressured to demonstrate competition to their investment partners. **CM**

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Launch of Association's SSA a success

With the ease of CMAA's new Self Service Application, members have been able to access their profiles and invoices, renew their membership online, print receipts and browse the membership directory since the beginning of February.

As part of the Association's new AMS, the SSA is online, meaning members can use it at their own convenience, any time of the day or night. Members can also shop in the CMAA bookstore or register for conferences and events online with the AMS.

All members were sent a detailed e-mail with their new password and login information, along with instructions for accessing the AMS.

The SSA was the second phase of the AMS. The third and final phase will allow candidates sitting for the CCM exam to access their information and register for an exam site online. **CM**