

OPINION

## Is Design-Build Right for Your Project?

Collaborative techniques, such as design-build and integrated project delivery, are gaining in popularity.

by **Bill Palmer**

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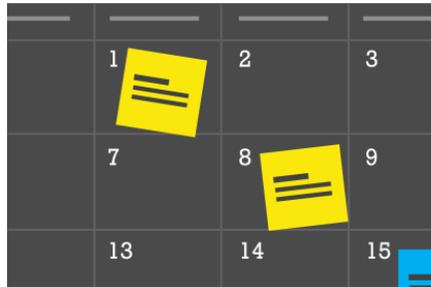
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### **Not all productivity-reducing factors in construction happen in the field.**

Disagreements or misunderstandings among the parties on the construction team can lead to delays, rework, and change orders. And with the increasing complexity and fast-track schedules on construction projects, success requires the owner (or construction manager), contractor, and designer to work together. The key is mutual respect. An [exhaustive report from McGraw Hill Construction and the Design-Build Institute of America](#) (DBIA) explores “one of the most fundamental ways in which project owners can impact efficiency, productivity, and profitability: the selection of a project delivery system.”

In pursuit of these project delivery goals, several alternate project delivery techniques have

collaborate and to share the risks and rewards. One delivery method showing particularly rapid growth is design-build. A recent [FMI study](#) documents increased use of design-build and forecasts that from 2018 to 2021, design-build will be used on 44% of the \$1.2 trillion market for commercial and public projects. That represents a consistent annual increase of around 6%. The largest construction segments using design-build are manufacturing, education, and transportation, although there are also a significant number of designer-builders in the residential sector.



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Traditional design-bid-build remains the predominant delivery method for construction in the United States today. It has been successful on many projects but also has some drawbacks. It can create an adversarial relationship between the designer and the builder. And with its typical reliance on accepting the low bid, design-bid-build sets the stage for reduced quality and significant overruns via change orders. With this method, the owner or his construction manager has separate contracts with the designer and builder.

#### Shifting Risk

The construction manager at risk (CMAR) delivery method is a variation where the construction manager agrees to deliver the project within a guaranteed maximum price (GMP). The CMAR bases the GMP on the construction documents and specifications available at the time, which means that the design must be reasonably complete and accurate. This generally happens prior to bidding the project and selecting the contractor, and, since the GMP is already in place, the CMAR does not have to select the low bid. During construction, the CMAR must be diligent in controlling costs through value engineering so as not to exceed the GMP, since any extra costs that are not due to owner-approved change orders are the financial liability of the CMAR. This method takes much of the burden of managing the construction off of the owner.

Design-build takes this a step further by reducing the construction process to a single contract with the designer-builder, which forces the designer and builder into a cooperative arrangement. While the owner may still hire a construction manager or owner's

designer-builder is normally contracted through a qualification process and then develops a GMP.

Lisa Dal Gallo, an attorney and partner specializing in construction with San Francisco-based Hanson Bridgett, explains that design-build is a value-based process, so the designer and the builder must be willing to work as partners to collaborate and innovate. But design-build provides a reduced risk for the owner since there is a single point of responsibility. And because design and construction can have significant overlap with this method, it usually results in faster delivery and a reduction in claims, delays, and change orders. But it's not perfect.

“Design-build is like a marriage,” Dal Gallo says. “It only works with two willing and committed parties, and the outcome will be better if it's not forced.” Design-build is not as effective when the owner selects an architect and then separately selects the contractor and announces that they are going to work together, she says. “That is a forced marriage and it may or may not work well.”

The most successful projects run a mini design-build competition, Dal Gallo says. The design-build teams self-select, qualify as a team (including key consultants and trade contractors), and then submit a team proposal. Usually a conceptual design is included, and the teams are evaluated based on selection criteria disclosed in the RFP—which, among other things, should include cost and schedule. “Selecting a team with a track record of working well together and collaborating with the owner is key to the success of the project,” she says.

### **A United Front**

A variation of design-build is what has been called enhanced design-build. In this case, a single company has the expertise to be both the designer and the builder. One proponent of this is McCree General Contractors & Architects in Orlando, Fla. Cindy McCree-Bodine, vice president of business development, says that this technique may not be right for every project but is very effective for most.

“It means they are handing over all the risk to one company to handle everything seamlessly—there's no stress for the owner,” McCree-Bodine says. With regular design-build, there's still the potential for an adversarial relationship between the architect and the contractor since



the stage for success,” she says. “We define the vision, goals, and budget and make sure everything is in alignment. With other delivery systems, the design could be too expensive. The goal is to give the owner a GMP. That’s the point of design-build. There are no change orders unless the owner makes a change or there are unforeseen conditions.”

And last but not least is integrated project delivery (IPD), which over the past decade has emerged as an alternative to other project delivery methods. The American Institute of Architects’ [IPD guide](#) describes this as “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.”

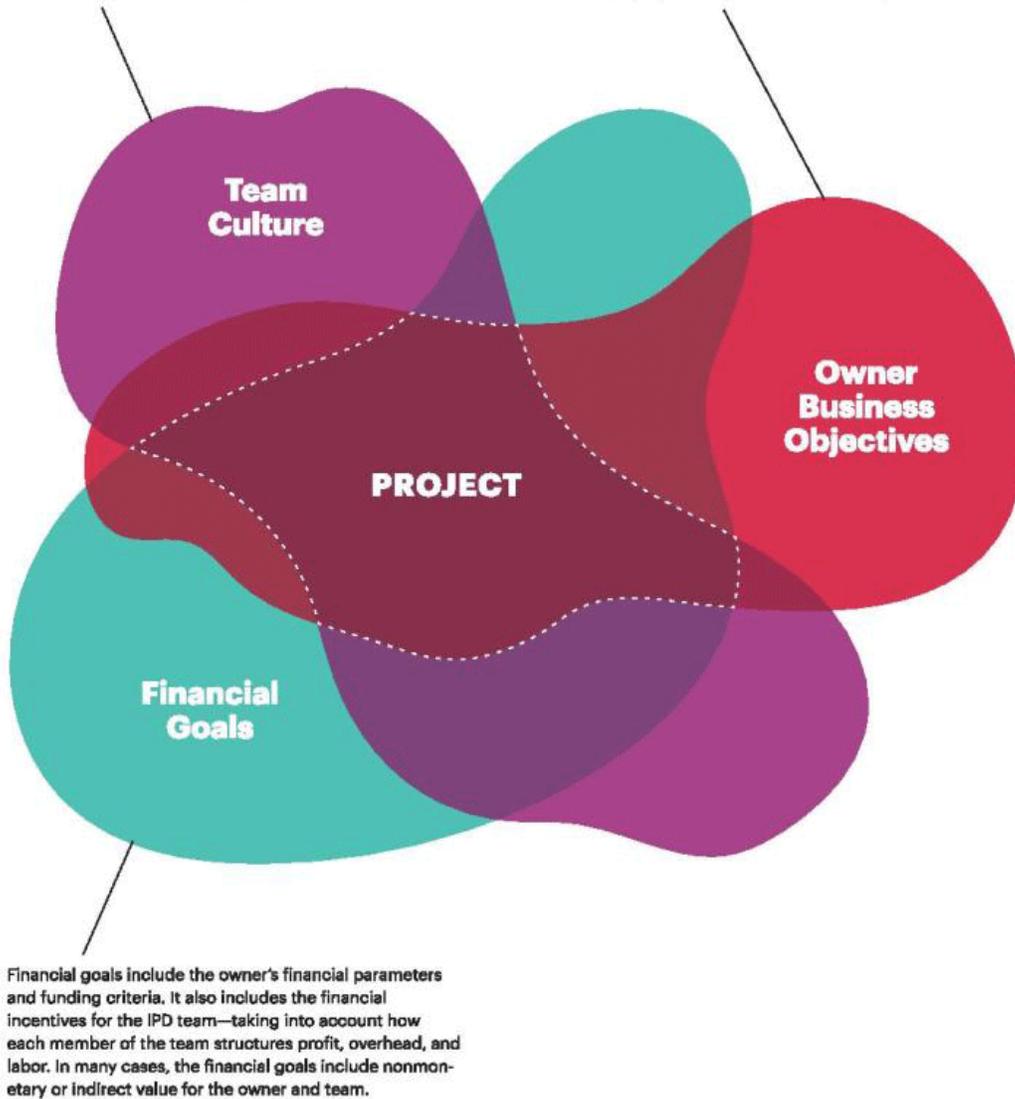
One proponent of this delivery method is the Charles Pankow Foundation, which has developed a [practitioner’s guide](#) that notes that “adherents have reported improvements in cost, schedule, and quality, achieved in an atmosphere that is less adversarial and more collaborative.” The guide does caution, however, that IPD is not right for every project: “Because IPD is cost-based and team-managed, it inherently requires greater leadership and administrative effort than a lump sum, hierarchical project. This effort is amply repaid on most projects—but not all.”

## WHAT IS A PROJECT?

In a project with a high-level understanding, there is often an intersection of three spheres: financial goals, owner business objectives, and team culture.

Team culture includes the vast range of so-called soft elements, including shared values, alignment of goals, creation of psychological safety, mutual trust, and respect as well as lean thinking and a "project first" attitude. An IPD team invests a substantial amount of time and energy in establishing, supporting, and maintaining a strong team culture.

Owner business objectives are critically important for the IPD team, since a building project is the solution to the owner's needs, not an end in itself. Business objectives typically include meeting budget and schedule goals but go well beyond into areas of performance, brand identity, employee wellness, and societal impact.



An infographic describing integrated project delivery from the Charles Pankow Foundation shows how team culture, financial goals, and owner business objectives overlap on a project. [Charles Pankow Foundation](#)

Which delivery method is right for any given project and project team takes some judgment and experience. The [DBIA study](#) concludes that the perception of which delivery system is best varies among the players, although it did find that for most projects, contractors prefer and see better results with design-build. With its potential to put projects on a faster track, design-

build offers the potential not just for improved communication but also for improved efficiency and productivity.

**Bill Palmer**

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