

# BANKER & TRADESMAN

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## Project 'Value' Settles Design-Build Viability

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**F**undamentally, organizations and institutions take on building projects to create value for their various constituents, such as customers or users, employees or shareholders. When taking on a new building or renovation project, the goal is to assemble a series of component parts: land, bricks and mortar, equipment – and creative ideas – in such a way that their value exceeds their cost.



Naturally, the definition of “value” varies from owner to owner and project to project. For instance, the critical success factors for a manufacturing plant differ substantially from what is most important in building a church. While this concept may seem simplistic, this basic idea frequently becomes lost in the process of developing a building project.

In selecting the method of project delivery that most closely aligns with an organization’s definition of value, design-build may be the best way to achieve the desired result. For the most successful outcome of a design-build process, the method’s benefits should be considered when computing the “formula for value.”

Among design-build’s advantages are:

- Shorter project duration;
- Reduced project costs;
- Early cost, schedule and constructability data for more informed decision-making during design;
- Enhanced project teamwork and seamless project coordination.

The fourth advantage, enhanced teamwork, includes a series of ancillary benefits:

- Reduced demands on time and manage-



**The American Superconductor building in Devens was a perfect example of design-build. Final design of the warehouse area was on hold while the equipment went through a number of redesigns, but construction continued in other areas of the facility.**

ment by owners;

- Greater flexibility to deal with change;
- Fewer disputes;
- Readier incentives to generate cost savings;
- Increased access to alternative sources of financing;
- Ability to deal with complex issues in a collaborative manner;
- Single-source responsibility and reduction in claims.

You may find it helpful to examine these advantages in the context of the three main factors that can effect project success: schedule, cost and management considerations.

### Project Schedule

The design-build approach facilitates fast-track delivery, as activities which ordinarily proceed sequentially are, instead, orchestrated concurrently. For example, site and foundation construction may begin while interior design detailing work continues. This overlapping of activities results in a shorter project duration.

Project types for which a reduced overall schedule is a component of the value equation include:

- Facilities where time to market is a critical strategic factor in their success, such as a manufacturing plant for a prototypical product;
- Projects that have a crucial early deadline, such as a college residence hall that must be available for a fall semester;
- Projects whose ongoing carrying costs are such that reduced duration yields significantly lower expense.

The design-build method allows organizations and the project teams to establish firm schedule information at preliminary stages, which may be an important factor for certain projects. For instance, in cases where building completion and occupancy must be achieved rapidly, design-build is advantageous – allowing the design, pre-construction and bid phases to be combined. The scheduling implications of alternative approaches

*continued on page 2*

Build Boston

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can be critical to making appropriate choices.

## Project Cost

In the early stages of a project the owner needs maximum flexibility and comprehensive information to make cost-sensitive decisions about major building systems and components. The development of accurate and timely cost models will provide the knowledge necessary for informed decision-making, which ultimately results in lowering the total project cost.

While it seems that every project would benefit from early cost models, that is not always the case. Should a project variable other than cost be preeminent — such as design — it's possible that cost information may detract from, or even compromise, the creative process. In some instances, the building design should evolve freely and completely before its cost is considered.

When the definition of project success includes meeting a predetermined budget, design-build may be the most beneficial approach. Examples include manufacturing plants, investment property and revenue-dependent facilities. An additional benefit of the design-build approach is the availability of creative financing alternatives, such as design, build, finance or design, own or lease-back.

## Integrated Approach

The design-build method integrates the project team in a unique way that the traditional delivery method does not, making it an ideal approach for certain project types. Because the design-build project team is structured as a seamless unit, it often reduces time demands on the owner, as well as the incidence of disputes and resultant claims. An integrated team also can react to changes more flexibly and deal with complex issues more collaboratively. Projects that benefit from this integrated approach include those with loosely defined or changeable parameters, phasing requirements or complex logistics, such as highly technical processing plants and projects that must proceed in occupied buildings.

When trying to choose a method of building delivery, project needs are not the only issues that may influence a decision. The nature of an organization must be factored in, as some clients — primarily those in the public sector — may be precluded by law from



The construction of the Bancroft School in Worcester utilized the design-build delivery method. The project was finished four months ahead of schedule.

choosing design-build. Therefore, the first thing to determine is whether an organization or company can legally select the design-build option.

Assuming that legality is not an issue, there are a number of other considerations that an organization should assess before choosing design-build. First and foremost is the preferred level of participation and the availability of staff during the project. If limited involvement during the project is the goal, the design-build approach may be preferred. Meanwhile, if an organization is willing and able to invest staff or consultant time during the building process, the shortened schedule and enhanced value can offset that cost.

Before choosing the design-build method for a building project, the market forces in the area should be assessed. Are the design-build resources available for the project given its location, type and size? How busy are those resources and will they be competitive?

Other strong considerations may include the complexity of the project and/or the need for specialty components within the new facility. Traditionally, design-build has been considered most appropriate for simple building projects on which the scope is easily defined or design is not the central element. However, given the sophistication of most of today's design-build firms, and the owners that hire them, this alternative

method is becoming more widely used throughout the country for both simple and complex projects.

If a building project is a simple one, the client may well want a fast-track schedule and limited involvement during the project — which design-build will achieve. However, once a project becomes more complex, the finished building must be more clearly visualized before the project begins, which will require the client's input. Therefore, if considering the design-build method, the client must be willing to work closely with the design-build team upfront to define the expectations and project parameters — such as schedule, program and budget restrictions.

In unique cases, projects may have special requirements that could best be met by a design-build team that has in-house expertise in a particular area — making the approach a particularly appropriate one. An example would be a project in which specialized equipment built by the design-build firm is the driving force behind the facility.

Because there are numerous factors to consider when choosing a delivery method for a building project, focusing on the definition of "value" is a good place to start. Just remember that when cost, schedule and logistics are central to the value equation, the design-build approach may be the most advantageous route to achieving the project's success.