What Is Design-Build?

It’s the fastest growing, most cost and time efficient method used to deliver construction projects in America.

Design-build saves time and money by encouraging innovation and collaboration. This Design-Build Data Sourcebook details how.

Traditional Project Delivery

The Owner must manage two separate contracts which all-too-often creates an adversarial relationship between the designer and the contractor. If something goes wrong or an unforeseen circumstance requires changes, the designer and contractor blame one another for the cost overruns or schedule changes, often leading to litigation and delays which add to the project cost.

Design-Build Project Delivery

The Owner manages only one contract with a single point of responsibility. The designer and contractor work together from the beginning, as a team, providing unified project recommendations to fit the Owner’s schedule and budget. Any changes are addressed by the entire team, leading to collaborative problem-solving and innovation, not excuses or blame-shifting. While single-source contracting is the fundamental difference between design-build and the old ways, equally important is the culture of collaboration inherent in design-build.

Research over decades has consistently shown the innovation and collaboration inherent in design-build leads to faster project delivery, with more reliable performance and less cost and schedule growth.
The Big Picture

102% faster than traditional design-bid-build (DBB)

61% faster than construction manager at risk (CMR)

3.8% less cost growth than traditional design-bid-build

1,200,000,000,000,000 (that’s $1.2 trillion) in design-build total combined spending 2018–2021
Digging Deeper

**PROJECT COST**
Projects using Design-Build (DB) **cost less** per square foot when compared to Construction Manager at Risk (CMR) and Design-Bid-Build (DBB). Design-Build projects also average **less cost growth** than a comparably scoped project using CMR and DBB.

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>DB vs. CMR</th>
<th>CMR vs. DBB</th>
<th>DB vs. DBB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Cost</td>
<td>1.9% less</td>
<td>1.6% more</td>
<td>0.3% less</td>
</tr>
<tr>
<td>Cost Growth</td>
<td>2.4% less</td>
<td>1.4% less</td>
<td>3.8% less</td>
</tr>
<tr>
<td>Schedule Growth</td>
<td>3.9% less</td>
<td>2.2% more</td>
<td>1.7% less</td>
</tr>
<tr>
<td>Construction Speed</td>
<td>13% faster</td>
<td>20% faster</td>
<td>36% faster</td>
</tr>
<tr>
<td>Delivery Speed</td>
<td>61% faster</td>
<td>25% faster</td>
<td>102% faster</td>
</tr>
</tbody>
</table>

**PROJECT SCHEDULE**
Design-Build was also the **best performing** project delivery system in terms of schedule growth, delivery speed and construction speed.

![Cost Growth Chart](chart1.png)
![Schedule Growth Chart](chart2.png)
![Delivery Speed Chart](chart3.png)
Behind the Numbers

These conditions are most influential in delivering both cost and schedule efficient projects.

**LOWER UNIT COST**
- Higher team chemistry among the Owner, designer and builder (GC, CM or design-builder)
- Open book contracting terms, such as a cost plus a fee with a guaranteed maximum price (GMP)
- Lower initial contracted unit cost

**LESS COST GROWTH**
- Use of a DB project delivery system
- Higher team chemistry among the Owner, designer and builder (GC, CM or design-builder)
- Earlier involvement of the builder

**LESS SCHEDULE GROWTH**
- Participation of the designer and builder (GC, CM or design-builder) in project goal-setting
- Earlier involvement of the builder
- Lower project complexity

**FASTER CONSTRUCTION SPEED**
- Use of a DB or CMR project delivery system
- Larger gross square footage of the project
- Higher initial contracted unit cost

**FASTER DELIVERY SPEED**
- Use of a DB or CMR project delivery system
- Larger gross square footage of the project
- Higher initial contracted unit cost
The Keys to Success

BEST PERFORMERS
Across the case studies of the most successful projects, there were two recurring themes:

— The Owner placed a high emphasis on creating a relational project culture
— Repeated use of the same designer and/or builder (GC, CM or design-builder)

WORST PERFORMERS
Across the case studies of the least successful projects, three themes emerged:

— Lack of experience with the project delivery system or project management in general
— Poor communication between the Owner and the builder
— Understaffing or turnover within the Owner, designer or builder’s organization

THE LIKELIHOOD OF PROJECT DELIVERY SUCCESS CAN BE IMPROVED THROUGH PROCESSES WHICH ARE CENTRAL TO DESIGN-BUILD DONE RIGHT™.

1. Assembling the project team early
2. Developing a relational project culture
3. Communicating expectations
4. Engaging in succession planning
DESIGN-BUILD IS THE FASTEST GROWING, MOST POPULAR DELIVERY SYSTEM IN THE NATION

Design-build will account for nearly half of all construction spending by 2021 with spending increasing 18% over the 2018–2021 period.

The largest design-build growth will be seen in the Manufacturing, Educational and Highway/Street sectors.
DESIGN-BUILD WILL CONTINUE TO GROW IN EVERY REGION

<table>
<thead>
<tr>
<th>Region</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountain</td>
<td>6.3%</td>
</tr>
<tr>
<td>Pacific</td>
<td>6.1%</td>
</tr>
<tr>
<td>East North Central</td>
<td>5.5%</td>
</tr>
<tr>
<td>West North Central</td>
<td>5.1%</td>
</tr>
<tr>
<td>New England</td>
<td>4.8%</td>
</tr>
<tr>
<td>Middle Atlantic</td>
<td>5.0%</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>6.2%</td>
</tr>
<tr>
<td>East South Central</td>
<td>5.6%</td>
</tr>
<tr>
<td>West South Central</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

“Design-build is no longer an alternative method. It is a main part of how we deliver our program.”
—Public Owner

Highest rated experiences among delivery methods

76% very good & excellent

Experience with design-build was rated highest across all project delivery methods with 76% reporting very good and excellent experiences.
Opportunities to innovate and the ability to fast track a project were identified as top benefits associated with design-build.

## BENEFITS ASSOCIATED WITH EACH PROJECT DELIVERY METHOD

<table>
<thead>
<tr>
<th>Benefit</th>
<th>DESIGN-BUILD</th>
<th>CMR</th>
<th>DBB</th>
</tr>
</thead>
<tbody>
<tr>
<td>More opportunities to innovate</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Ability to fast track project</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Highest quality</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>More collaborative process for the Owner</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Final cost closest to budget</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Early knowledge of cost</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Shorter procurement period</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Fewer disputes</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Design-Build at a Glance

- **Lower Unit Costs**
  - 0.3% vs DBB
  - 1.9% vs CM@R

- **Faster Construction**
  - 36% vs DBB
  - 13% vs CM@R

- **Less Cost Growth**
  - 3.8% vs DBB
  - 2.4% vs CM@R

- **Less Schedule Growth**
  - 1.7% vs DBB
  - 3.9% vs CM@R

- **Faster Delivery Speed**
  - 102% vs DBB
  - 61% vs CM@R

2018 Project Performance Review, CII/Pankow
Sources

Revisiting Project Delivery Performance, CII/Pankow, 2018.

Design-Build Utilization Combined Market Study, FMI, 2018

Design-Build Resources

Design-Build Done Right™ Best Practices

DBIA Design-Build Done Right™ Courses

Design-Build Professional Certification

Design-Build Projects Database

Design-Build Contracts

DBIA Advocacy Resources

DBIA Conferences