

THE ULTIMATE DESIGN-BUILD GUIDE

FOR PROJECT OWNERS





INTRODUCTION

Is this your first building project? Rest assured; you are not alone.

For many project owners the decision to assume responsibility for a new construction project can be a little intimidating and have you asking yourself – where do I start?

There are a few critical decisions you need to focus on, and ensure you approach them with eyes wide open and informed. This simplified project owners guide will walk you through these important decision milestones and increase your likelihood of project success.

There are several project delivery methods available to project owners, however we have decided to focus on the Design-Build (DB) method. The Design-Build method has grown in popularity to become the most widely adopted delivery method in use today, as it offers many benefits over other delivery methods.

If you feel overwhelmed or just want clarification on a specific element within construction – please feel to reach out to our specialist team at JB Steel Buildings. You'll find our details at the end of this owner's guide.



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PRE-PROJECT PREPARATION

OWNERS GUIDE THE STARTING POINT

Planning upfront will save you time and money – period! In the wise words of Abraham Lincoln, a sharp axe will cut down the tree a lot quicker and more efficiently than a blunt one.

Similarly, it is vital that we develop an owner’s guide before any conversations with contractors, think through and document important elements of your project. These should include:

- The intended use of your structure or facility?
- The owner’s requirements or preferences that are likely to impact the project.
- Location choices – may have regulatory or environmental challenges.
- Unique facility design requirements that will impact the project.

Design-Build Partner

If you have an existing owner-builder relationship with an experienced Design-Builder, your workload and risk can be dramatically reduced.

The Design-Builder can assume the role of consultant during the program development period and help the owner plan for the unexpected or solve for complexity.

The benefits of Design-Build are immediate: it places the combined resources of engineers, designers, architects, and other critical experts at the owner’s disposal from day one – with a single point of contact. This reduces owner stress and delivers peace-of-mind.

“Give me six hours to chop down a tree and I will spend the first four sharpening the axe.”

Abraham Lincoln



SELECT A PROCUREMENT PROCESS

Upon completing the owner's guide, it is time to select a Design-Builder who will transform your vision into a reality.

How a builder is selected usually varies depending on whether-or-not the owner operates in the public or private sector.

Private Sector

As a private commercial owner, you have the flexibility to procure Design-Build services anyway you choose. Including via sole source or through a structured bidding process.

Regardless of the method selected, several things need to be considered:

- Your approach to creating a shortlist of potential builders?
- What criteria will you apply during the decision process?
- What information needs to be submitted by prospective builders?
- How should the individual proposals be submitted?
- Which individual members will comprise the selection board?

Public Sector

As a public owner the procurement process is more complicated. Procurement statutes limit how owners decide on Design-Build services.

It usually begins with the governing authority issuing Requests for Qualifications (RFQs). The responses to these RFQs help authorities generate a builder shortlist – who in turn are invited to submit a Request for Proposal (RFP).

As elected public representatives may not be construction experts, they often rely on external consultants to help assess the merits of each RFP.

Several factors are taken into consideration, including which RFP delivers the most value to the proposed project and taxpayers.

Once a Design-Builder is selected, it is important that an initial, reasonable budget is presented. We say initial budget as costs will vary during construction.

Providing an initial budget helps guide critical decisions around factors like materials used or design features – all helping to align investment with the owner's project objectives.

It is worth noting that although project costs will vary during construction, they are very closely monitored and managed – leaving no surprises.

"It takes vision and courage to build the impossible"

Elizabeth Cox



COST DETERMINATION METHODS

This is an important decision driven by circumstances surrounding the project. Private sector owners have a lot of latitude when it comes to selecting a payment method – from lump sum, unit cost, guaranteed maximum price and cost plus.

Each method has its advantages and disadvantages; however, decisions are usually based on the amount of risk an owner is willing to accept.

As before, Public sector owners have less freedom of choice in how they pay contractors with taxpayer dollars.

Another important difference is that most of these owners do not have the authority to increase appropriations for projects once the contract has been signed.

This limitation puts a lot of extra pressure on the pre-project planning phase – measure twice, cut once.

PROJECT FINANCING & INSURANCE

Without acquiring finance there is no project. Design-Builders require some form of validation that the project owner has the capacity to pay and this usually comes in one of the following methods:

- An authorized letter of credit from a reputable financial institution.
- Third-party guarantees
- A substantial down payment (usually 20%+) on the total project cost.

It is also vital that both owners and builders maintain sufficient project insurance to cover the commercial general liability, builders' risk, and pollution.

In recent years we have seen an increase in project wrap-up policies that seamlessly cover all aspects of a project thus eliminating multi-policy redundancies. As wrap-up policies consolidate coverage, they also tend to be more cost-effective.

COLLECTING SITE INFORMATION

It is important we collect detailed information regarding the construction site to ensure the form and function of the proposed facility is compatible with the selected location.

Owners need to collect the following:

- Legal descriptions and surveys of the project site.
- As-built drawings of existing structures on the site.
- Detailed geotechnical surveys containing soil information.
- Agreements or easements with neighboring properties or public entities.
- Impact statements and environmental studies.

No construction site is perfect. Project owners must collect as much site information as possible to make educated decisions and mitigate potential risk.

With the facts in hand, better design and development decisions can be made as we take into consideration the sites limitations and opportunities.





IDENTIFY OWNER DELIVERABLES

Project owners are responsible for several deliverables that Design-Builders depend upon. These deliverables are identified through collecting site information and having detailed conversations with the Design-Builder.

These deliverables will include the provision of applicable construction permits, on-site furnishings, fuel, utility connections, potable water, landscaping and other infrastructure improvements or alterations. Design-Builder and owner conversations will also reveal pertinent information around responsibilities.

Project owners can however increase pre-construction efficiency by identifying and preparing for these deliverables in advance.

"Design is not just what it looks like and feels like. Design is how it works"

Steve Jobs

DESIGN SUBMISSIONS REVIEW & ALIGNMENT

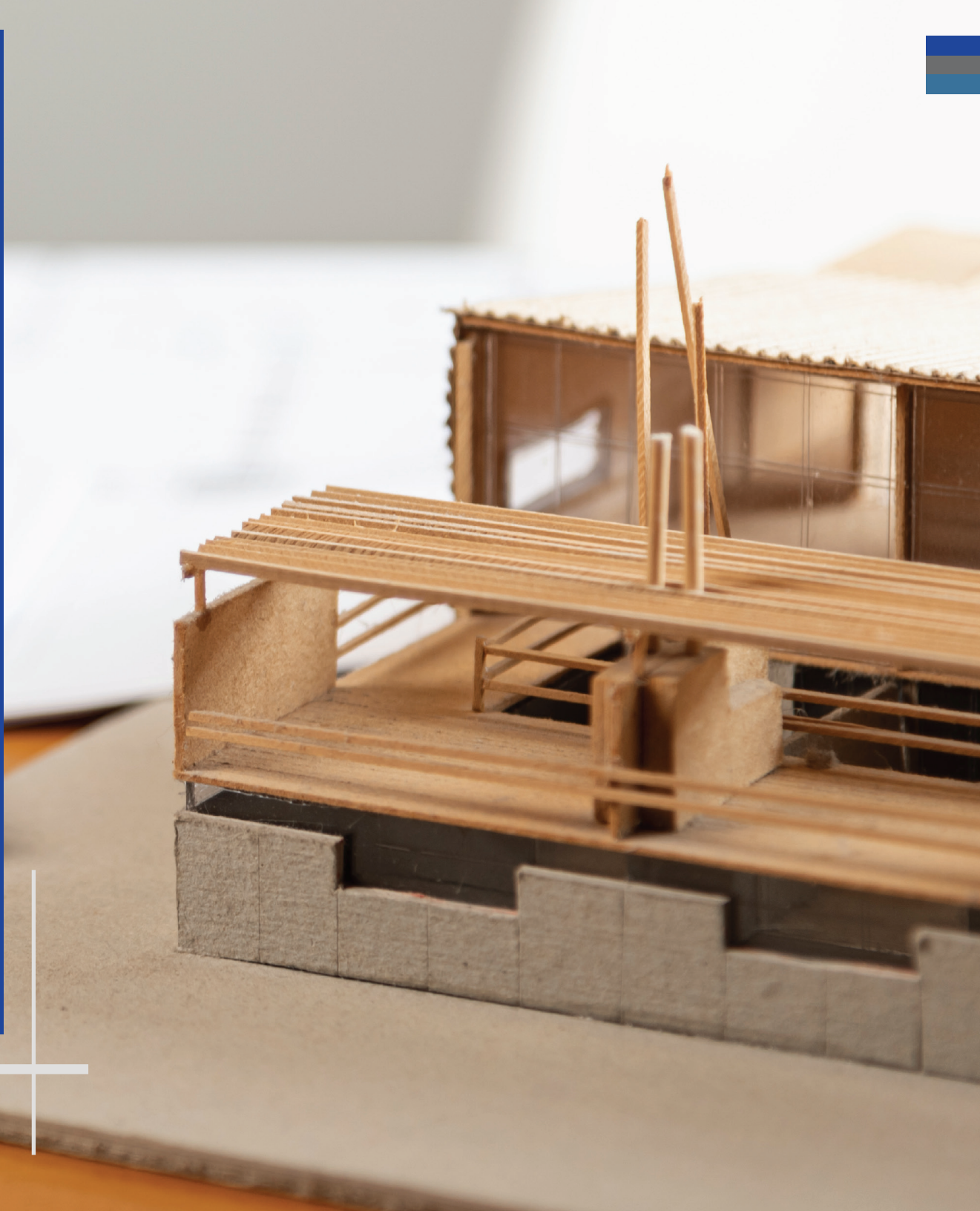
It is essential that owners and Design-Builders maintain communication and alignment throughout the construction project. With the best of intentions, both owners and Design-Builders aim to meet their respective objectives – unfortunately, at times these objectives may be misaligned.

For example: project owners are under a lot of pressure to ensure that the objectives laid out in the owner's program (guide) are being achieved. It is only natural that they would want to oversee, change, or improve designs to ensure that their intent is executed.

Design-Builders also have pressures of their own once the contract has been signed. The builders are obligated to ensure that each phase of the project complies with applicable building codes and is delivered on-time and within the agreed budget.

If project owners decide to make design changes toward the end of the design phase, it can be incredibly challenging for the builders to adapt to altered construction costs and timelines. Open dialogue and mutual respect for each stakeholder's role goes a long way toward project success.

It is therefore vital that owners and Design-Builders lay the ground rules before design or construction begins. They need to agree on what constitutes appropriate involvement on the part of the owner during the design and build phases – and this needs to be clearly articulated in the project contract.



*"When you pay attention to the detail,
the big picture will take care of itself"*

Georges St-Pierre

PROJECT COMPLIANCE OWNER INSPECTIONS

During Design-Build projects, owners often retain the inspection rights granted to them under more traditional project delivery methods. These might include:

- The right to inspect ongoing work, both on and off site.
- The right to review, approve and monitor quality assurance programs established by the Design-Builder.
- The right to make a final determination that the project is complete.

The project contract must clearly articulate how owners are to exercise these rights.

As you may have noticed, time invested in drafting a well thought out, all-encompassing, clearly articulated contract is the cornerstone of risk mitigation, stakeholder understanding and ultimately project success.

We must sharpen the axe.



PROCURING DESIGN-BUILD SERVICES

As we saw in the pre-project preparation phase, a lot of work and planning is required to ensure the Design-Builder can effectively execute on the owner's vision and intent.

If the owner is not already working with a builder, then their next decision is to identify and partner with the right Design-Builder for their specific project.

Selecting a building partner is a huge decision. You want more than a builder; you need a problem solver. A building partner that has the expertise, creativity, and ability to deliver innovative solutions that are cost-effective.

JB Steel Buildings prides itself on the above qualities, and our ability to deliver peace-of-mind to project owners. We have the expertise and experience to manage all aspects of a construction project - from preparation to execution.

Benefits & Attributes of Design-Build

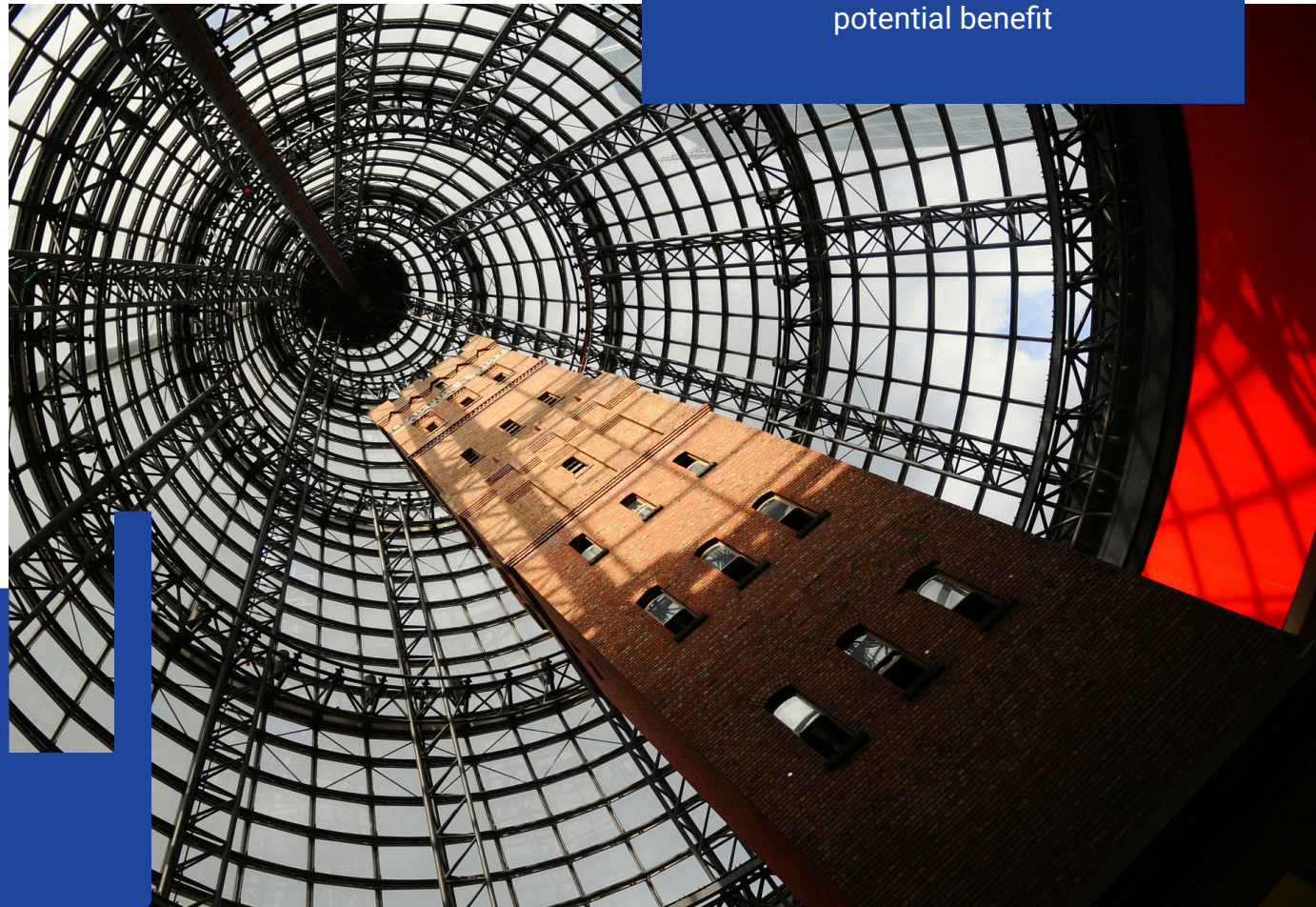
Design-Build (DB) has grown in popularity to become the most prevalent method of construction delivery.

This is partly due to its advantages over other delivery methods including Construction Manager at Risk (CMR) and Design-Bid-Build (DBB).

Design-Build is usually the fastest, most cost-effective, and best quality deliver method in the industry today.

PEACE - OF - MIND

The earlier owners partner with Design-Builders, the greater the potential benefit



HIGHEST RATED DELIVERY METHOD	DB DESIGN-BUILD	CMR CONSTRUCTION MANAGER AT RISK	DBB DESIGN-BID-BUILD
More opportunities to innovate	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
Ability to fast-track projects	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
Highest quality builds	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
Better process collaboration for the project owner	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
Final project cost closest to initial budget	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
Early knowledge of cost	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
Shorter procurement period	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
Fewer disputes	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓

* DBIA Study 2018

DESIGN-BUILD IS A GREAT DELIVERY SOLUTION



LARGE COMPLEX BUILDINGS



CHALLENGING PROJECTS



TIGHT SCHEDULES & FAST-TRACK PROJECTS

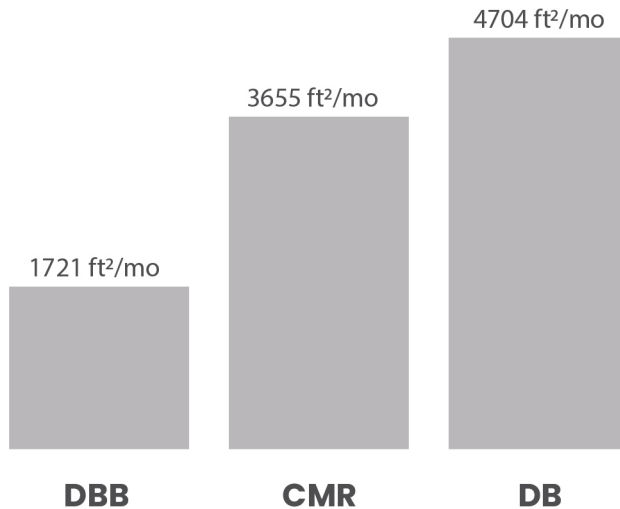


CONSTRUCTION PHASING



DESIGN-BUILD FASTER & MORE EFFICIENT

AVERAGE DELIVERY SPEED



Design-Build is significantly faster

13%

Faster than CMR

36%

Faster than DBB

THE DESIGN-BUILD DIFFERENCE

SINGLE SOURCE OF RESPONSIBILITY

The project owner passes responsibility for design and construction to one company. This is a huge benefit for owners as it eliminates contractual disputes and provides flexibility for the Design-Builder to establish the best possible team for the project.

INNOVATION & CREATIVITY

With the best team on board, comes creativity and effective problem solving. The earlier you can establish the team, the greater the integration and cohesion of team members.

With the right experts around the table, no challenge is too big or too complicated to solve.

DESIGN OPTIONS DRIVE VALUE INNOVATION

Close collaboration allows the owner and design team to assess and select design alternatives that bring the most value to the project.



DESIGN-BUILD PROCUREMENT

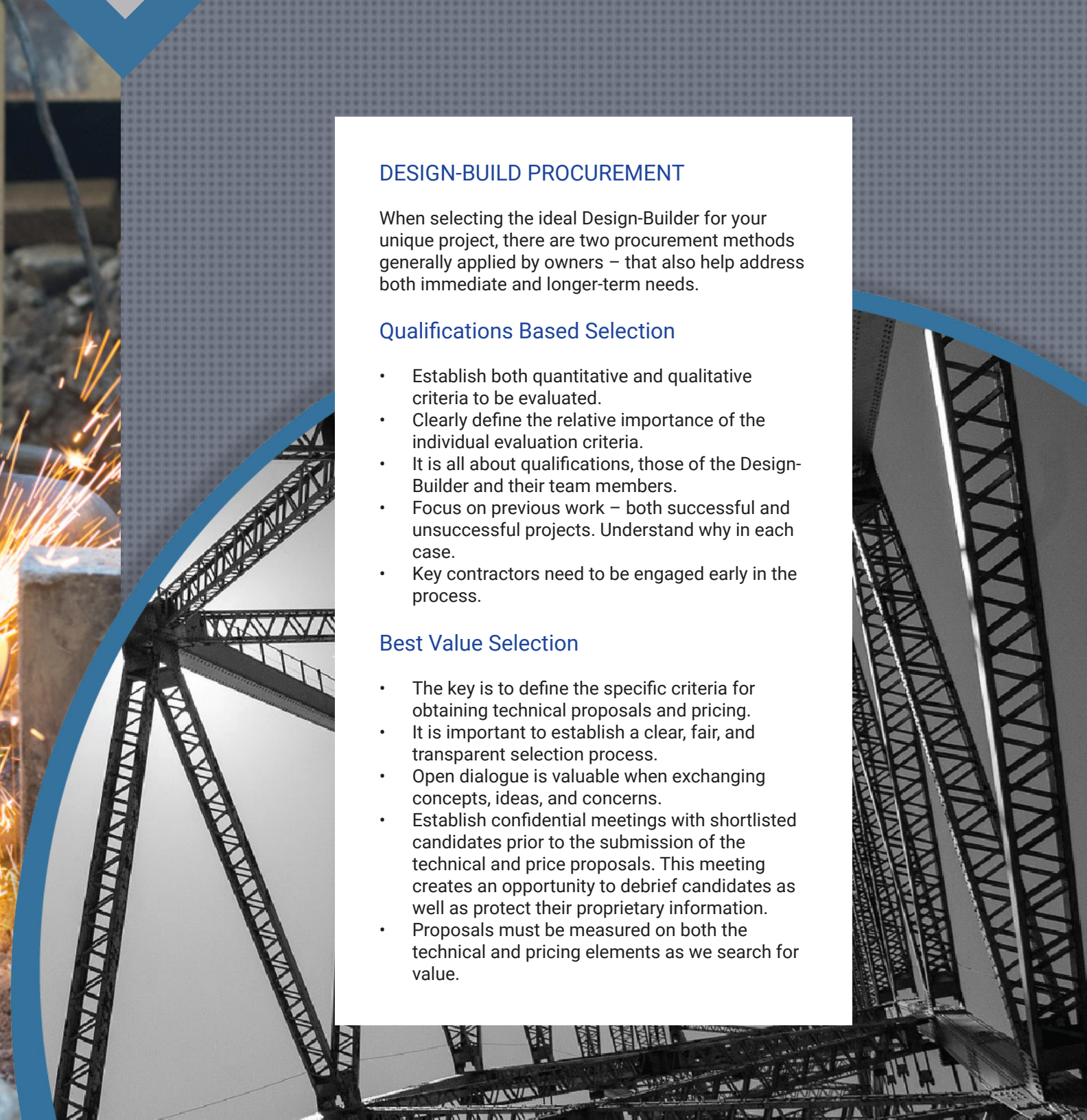
When selecting the ideal Design-Builder for your unique project, there are two procurement methods generally applied by owners – that also help address both immediate and longer-term needs.

Qualifications Based Selection

- Establish both quantitative and qualitative criteria to be evaluated.
- Clearly define the relative importance of the individual evaluation criteria.
- It is all about qualifications, those of the Design-Builder and their team members.
- Focus on previous work – both successful and unsuccessful projects. Understand why in each case.
- Key contractors need to be engaged early in the process.

Best Value Selection

- The key is to define the specific criteria for obtaining technical proposals and pricing.
- It is important to establish a clear, fair, and transparent selection process.
- Open dialogue is valuable when exchanging concepts, ideas, and concerns.
- Establish confidential meetings with shortlisted candidates prior to the submission of the technical and price proposals. This meeting creates an opportunity to debrief candidates as well as protect their proprietary information.
- Proposals must be measured on both the technical and pricing elements as we search for value.



IDENTIFYING DESIGN-BUILD PARTNERS

As highlighted previously – contracts are a cornerstone of a successful construction project. Having a clear, well-articulated and fair contract is key to any delivery method.

It is useful to understand the differences between Design-Build contracts and those of other delivery methods. Owners must understand contract language and its practical application within a construction project.

It is equally important to understand Design-Build principles to effectively incorporate them into the contracts of the entire Design-Build team.

Design-Build contracts must be simple to understand, fair and realistic.

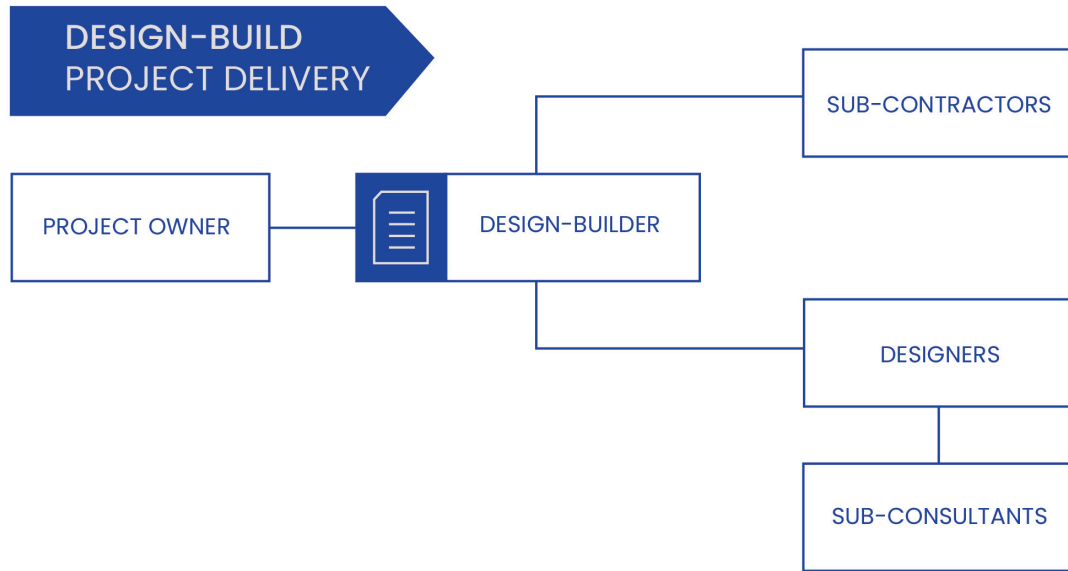
It is important that owners and builders identify project-specific risks and reasonably allocate them to the partner best capable of addressing and mitigating that risk.

Communication is critical throughout the project to ensure there are no unforeseen surprises.

Our goal is to eliminate surprises
& plan for every eventuality



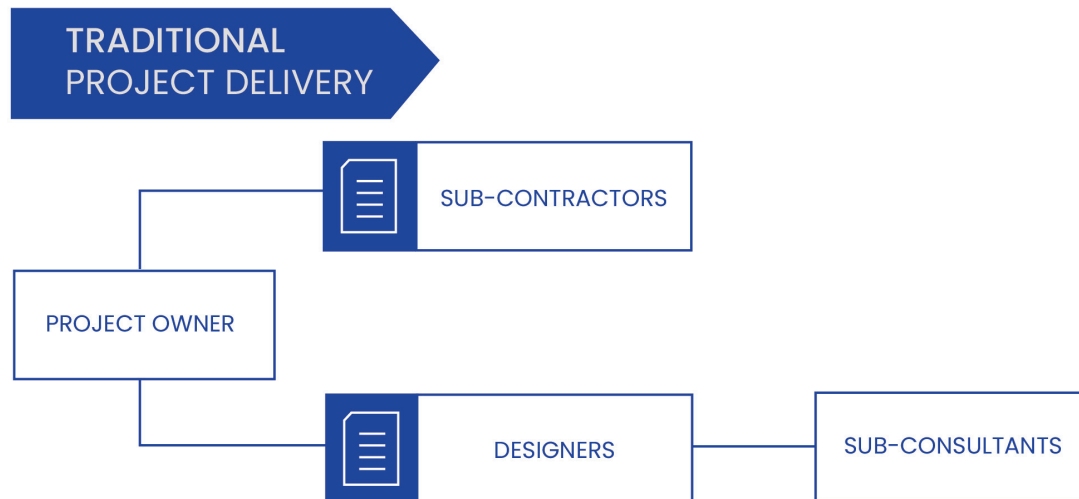
PROJECT DELIVERY METHODS



DESIGN-BUILD DELIVERY METHOD

The owner has only one contract with a single point of responsibility. The designer and contractor are on the same side and can offer unified recommendations and ideas.

Changes are addressed to the same Design-Build team who are solely responsible for all aspects of the project.



TRADITIONAL DELIVERY METHOD

The owner must handle at least two separate contracts. They must manage, and settle interests and/or conflicts between the designer and contractor which may compromise the project.

When the designer and contractor are different companies they may point fingers and blame each other for over-budget costs or delays etc.

EXECUTING YOUR PROJECT

*"Ideas are a dime a dozen.
People who execute them are not"*

Dave Ramsey

Communication is an essential theme when it comes to complex construction projects.

To ensure project success, it is vital that direct and real-time communication is established between all project stakeholders.

The importance of interactive collaboration cannot be over emphasized. The quality of your communication will directly reflect the quality of your construction project.

OWNERS BENEFIT FROM INTERACTIVE COLLABORATION

Accelerated Schedules are Possible

- Construction timelines can be aggressive.
- Early project starts are achievable.
 - Design-Builders 'nest' multiple project phases, purposely starting elements of construction early.
 - Often results in expediting design and construction for faster delivery.
 - Operates in a similar way to Just-In-Time (JIT) inventory management in manufacturing.

With great communication,
collaboration, and trust – most
things are possible





Early Support and expertise from subcontractors

- Interactive Collaboration fosters honest, open communication among project members.
- A room of experts can add a lot of value in the early stages of a project. With expertise and skills in specialist areas, it becomes a lot easier to add value through creativity, design and construction innovation.

Design-Build teams comprise contractors and partners

- Projects are more collaborative and focused with a unified team.
- Effective teams have usually worked together in the past – they appreciate each other’s strength and weaknesses and leverage them for the benefit of the project.
- Most specialty contractors have experience applying the Design-Build delivery method.

Frequent, open communication among stakeholders

- Do not underestimate the value of communication – it is the most powerful tool for gathering and implementing ideas with real value.
- Direct, real-time communication facilitates efficient problem solving.
- The best solutions usually come from the most capable experts.

Transforming vision into reality

- The project owners’ vision is represented through tangible design and construction elements.
- Embed owner value and beliefs into the final construction results.

Design-Build team ensures schedules are maintained

- Project owners receive clear, realistic, and timely submittal and review processes.
- Through a combination of technology, resources and expertise, Design-Builders continuously monitor key elements of the project.
- Design-Builders provide a single point of contact for stakeholders – making it easy to follow and review progress.
- Decisions that impact project objectives are made in a collaborative and knowledgeable environment.
- Absolute transparency facilitates the owner’s ability to make well-informed decisions at any stage throughout the Design-Build process.



COMPARISON OF PROJECT DELIVERY METHODS
Across Varied Project Types & Sectors

Metric	DB vs. CMR	CMR vs. DBB	DB vs. DBB
Unit Cost	1.9% less	1.6% more	0.3% less
Cost Growth	2.4% less	1.4% less	3.8% less
Schedule Growth	3.9% less	2.2% more	1.7% less
Construction Speed	13% faster	20% faster	36% faster

* DBIA Study 2018

Design Build (DB)

Construction Manager at Risk (CMR)

Design Bid Build (DBB)

Project Ownership

- Project owners define and allocate funds cost-effectively. They have access to all relevant information and experts.
- Owners directly influence how and where to invest in the construction project.
- Risks and opportunities can be assessed and acted upon very quickly using the Design-Build method of delivery.
- The project outcome will reflect the owners needs and corporate vision.





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