

Position Paper on Project Delivery Methods *Empowering Owners With the Ability to Choose*

Executive Summary

Two of the most important steps in the life of a construction project occur before the Owner has hired professionals to design and construct the project:

- Choice of project delivery method (PDM)
- Selection of the design and construction entities that will execute the work

This paper focuses on the first of those and asserts that projects will be more successful when the appropriate delivery method is chosen ... which can only happen when the Owner can choose from several proven methods and not be restricted to just one.

The ability to choose the most appropriate (PDM) is critical to the success of construction projects. Empowering Owners with this latitude enables them to:

- Enhance project success in terms of cost, schedule, and quality by selecting a PDM that best aligns with the project's type, size, complexity, constraints, and other factors
- Manage risk to reduce delays, disputes, and unexpected expenses
- Foster collaboration by leveraging, when appropriate, PDMs that engage the builder long before construction begins

Introduction

The Construction Owners Association of America ([COAA](#)) was established in 1994 to help facility/project Owners improve how projects are delivered through education and peer-to-peer connections. COAA is a 501(c)(6) nonprofit organization with a membership of approximately 4,000 across the U.S. Most Owner members of COAA are public, governmental, or quasi-public entities, which are constrained in varying degrees in how they may deliver construction or renovation projects.

Overview

Organizations that own, operate, and maintain real estate, facilities, and grounds periodically have a need to expand, modernize, or repurpose their built environment. This is particularly true for large entities with a substantial inventory or campus of facilities. Examples include federal/state/county/city agencies, higher education institutions, healthcare organizations, airports, lodging/hospitality companies, and manufacturers. These “serial builders” are perpetually building or renovating and often have an in-house staff responsible for planning and executing these projects.

Private/corporate entities are typically free to deliver such projects by any means they deem to be in their best interest. Public, governmental, or quasi-public entities are normally more constrained by federal or state laws and rules dictating how construction projects may and may not be procured, contracted, and delivered.

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This COAA-authored position paper seeks to make the case for empowering those Owners – whether members of COAA or not – with greater latitude with respect to project delivery method options. The variables involved with these projects are nearly infinite, so one size (i.e., project delivery method) does not fit all. Owners – who ultimately bear most of the risk – should be able to select the appropriate project delivery method that best aligns with their capabilities and resources and the specific needs, risks, cost, scope, and constraints of a given project.

Background

Commercial construction projects are planned and executed by three primary stakeholders in the process:

- The Owner is the entity for whom design and construction services are provided. The Owner bids or selects the design and construction service providers; pays for these services; and is responsible after construction for owning and maintaining the new or renovated facility.
- The builder or contractor is responsible for accomplishing the actual construction or renovation work, normally with the assistance of trade contractors charged with specific scopes of work (sitework, carpentry, plumbing, mechanical, etc.).
- The design entity – often referred to as the A/E (architecture/engineering team) – is responsible for conceptualizing what is to be built or renovated and eventually translating those concepts into construction documents used by the builder to plan, procure, and deliver the work. The A/E normally continues work after the design phase is complete, including reviewing shop drawings and submittals, reviewing pay applications submitted by the builder, and onsite observation during construction.

The way these primary entities contract with each other and carry out the work is referred to as the “project delivery method” (PDM). As of 2024, there are four primary PDMs that differ with respect to contract type, degree of collaboration, and other factors:

Design-Bid-Build (DBB)

- **What It Is:** A traditional approach where design, bidding, and construction are handled in separate, sequential, and usually linear phases.
- **Key Features:**
 - ✓ Owner contracts separately with the design team and contractor
 - ✓ Builder selected based on lowest bid, often without considering qualifications, experience, staffing, or other factors
 - ✓ “Closed book” (non-transparent) accounting of costs
- **Challenges:** Limited collaboration and potential for higher costs due to change orders and the absence of builder input during design.

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Construction Manager at Risk (CMAR)

- **What It Is:** The Owner hires a Construction Manager (CM) during the design phase to provide pre-construction services and, often, to also execute the actual construction work. Sometimes referred to as CM-as-Constructor (CMc).
- **Key Features:**
 - ✓ Separate contracts for design and construction
 - ✓ Builder usually selected on the basis of qualifications/experience and cost
 - ✓ Early involvement of the builder allows for collaborative planning and pre-construction services (cost estimating, design reviews, scheduling, value engineering, logistics planning)
 - ✓ Transparent (“open book”) cost accounting and normally contracted for construction with a Guaranteed Maximum Price (GMP) proposal instead of a lump sum bid
- **Benefits:** Reduces risks through early builder involvement and cost estimating.

Design-Build (D-B)

- **What It Is:** A single entity handles both design and construction under one contract with the Owner.
- **Key Features:**
 - ✓ Single contract for both design and construction, allowing for streamlined process and collaboration even before the project is awarded
 - ✓ D-B usually selected on the basis of qualifications/experience or both qualifications/experience and cost
 - ✓ Transparent (“open book”) cost accounting and normally contracted for construction with a GMP proposal
- **Benefits:** Reduces risks through early builder involvement and cost estimating.
- **Consideration:** Potential for less direct Owner control over the design process.

Integrated Project Delivery (IPD)

- **What It Is:** A highly collaborative approach involving a tri-party agreement between the Owner, builder, and design team.
- **Key Features:**
 - ✓ Shared risks and benefits among all parties
 - ✓ Focus on achieving project goals collectively
 - ✓ Heavy emphasis on collaboration and “the needs of the project”
- **Challenges:** May be complex or legally impossible to implement for public entities.

NOTE: Some would argue that there are more than four PDMs – “Public/Private Partnership,” “CM Agency,” and “Multiple Prime” as examples – but the point of this paper remains unchanged no matter how many (and which) methods are deemed to be true PDMs.

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More Background | The Spearin Doctrine

It's worth noting the importance of The Spearin Doctrine when it comes to cost, risk, and the triangular Owner/builder/designer relationship. This landmark Supreme Court case in the early 20th century established that when contractors are bound to build according to plans and specifications provided by the Owner, the contractor should not be responsible for damages that occur when said plans and specifications are defective. In other words, if the plans and specifications are not perfect, the builder may be owed additional time and/or money to remediate the imperfections and complete the work.

The problem is that courts have also established that "perfect" construction documents from the Owner's design team are not reasonable to expect. Instead, terms like "industry standard" and "reasonable care" come into play, which relieve the A/E from an expectation of perfection. The gap between this precedent and Spearin falls to the Owner.

Spearin applies equally regardless of project delivery method, but PDMs with the builder on board during design (i.e., all methods except DBB) naturally lead to construction documents that are less imperfect because of the builder's participation, reviews, suggestions, estimates, and planning.

The Business Case for Choice

Entire books have been written on the advantages and disadvantages of these project delivery methods. Likewise, there are ample resources devoted to how and why a particular PDM may be best suited to a given Owner or project.

The point of this paper is not to revisit those topics, but to make the case that Owners ought to have the ability to use any or at least most of these methods. Why? There are four primary reasons ... outlined briefly here and discussed at length below:

- *Variability*: It makes good business sense to equip Owners with the right assortment of "tools" to handle what may be a wide variety of projects and an infinite number of variables from project to project (and from Owner to Owner). Just as a worker isn't asked to dig a trench with a hammer, Owners must not be constrained with respect to delivery methods.
- *Risk & Cost Control*: Owners can likely manage risk and control costs better with delivery methods featuring builder involvement during the design phase.
- *Time/Schedule*: For projects where time is truly of the essence, some project delivery methods allow for reducing the total design and construction duration.
- *Increased Collaboration*: PDMs other than Design-Bid-Build are, by nature, more collaborative since the builder is engaged during design. Early builder involvement offers a number of tangible and intangible benefits that may lead to a more successful

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project, including market knowledge, the ability to innovate, and establishing a trusting relationship with the Owner and A/E long before “a shovel hits the ground.”

1. Variability

All projects, and Owners for that matter, are not created equal. Wide variability within both the Owner’s organization itself and the projects they are executing underscore the importance of PDM latitude and options.

The Owner’s particular circumstances may suggest that certain delivery methods are less or more favorable. For example:

- Internal decision-making structure or process
- Experience of project management staff
- Level of internal stakeholder involvement
- Current/projected workload

The specific demands of each project can be even more variable and have an even larger influence on the suitability of different delivery methods:

- Location and site/weather conditions
- Size and cost of project
- Complexity of project
- Building type and function/purpose(s)
- Schedule demands or constraints
- Market conditions
- Bonding capacity of contractors in local market
- Unique circumstances (e.g., building remaining occupied while being renovated)

The most successful Owners understand their own circumstances & limitations, plus the particulars of each project, and apply the project delivery method that best aligns with those factors. This is not possible when the Owner’s choice of PDM is limited.

2. Risk Management

Freedom of PDM choice also matters greatly when it comes to risk management. Obvious project risks relate to cost, schedule/time, and safety, but there are many others, including the Owner itself and its ability to make informed decisions and stick to them.

The type and extent of risks varies from project to project, much like the factors listed above. Successful Owners understand this, conduct risk assessments, and plan/budget/execute accordingly with a tailored and project-specific approach to managing risk. The *very* successful Owner does this collaboratively with their design

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and construction partners, but this is only possible with project delivery methods that allow for builder involvement prior to construction ... specifically, CMAR, D-B, and IPD.

Such preconstruction involvement by the builder allows them – and the Owner and its design team – to benefit from services, including conceptual and detailed cost estimating, logistics planning, schedule development and refinement, and reviews of design and construction documents. These and other preconstruction services foster enhanced team coordination and help identify project risks before the first shovel hits the ground ... in other words, at a time when resolving the risk is less costly and time-consuming.

The benefit of approaching risk management through a collaborative approach was validated in a 2017 report by Dodge Data & Analytics.¹

3. Cost

DBB is often viewed as the least expensive PDM, in part because there are no pre-construction fees and because the traditional firm fixed price bidding process usually results in the lowest bid winning the award. But how often is that “bid day” price the actual final cost of construction?

The answer is “never.” Change orders are a common occurrence on all projects, but particularly those delivered through the DBB method. The builder is only bound to execute per the A/E-produced construction documents, which are not required by legal precedent to be flawless (see above re: Spearin doctrine). While change orders and claims are possible – even likely – with all delivery methods, they are less likely and often less impactful when the builder participates in the pre-construction (design) process. This is even more true for litigation, which is more common on projects delivered through Design-Bid-Build.

Beyond the bottom line, most Owners appreciate having a deeper understanding of what exactly they’re buying. Transparency is enhanced with the CMAR, D-B, and IPD methods because costs and fees are normally presented in “open book” fashion ... versus the DBB approach, where the Owner and other stakeholders are oblivious to the details of what exactly is being purchased except for a simple schedule of values used by the builder to secure progress payments.

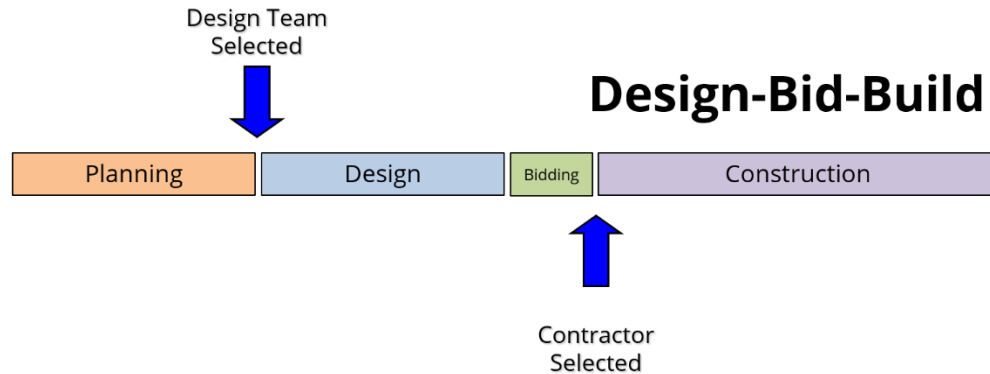
That said, the construction market is subject to cyclical and unexpected change and can vary widely from region to region. At certain times (e.g., in a “buyers’ market”), Design-Bid-Build may be most appropriate choice and result in cost savings, at least on “bid

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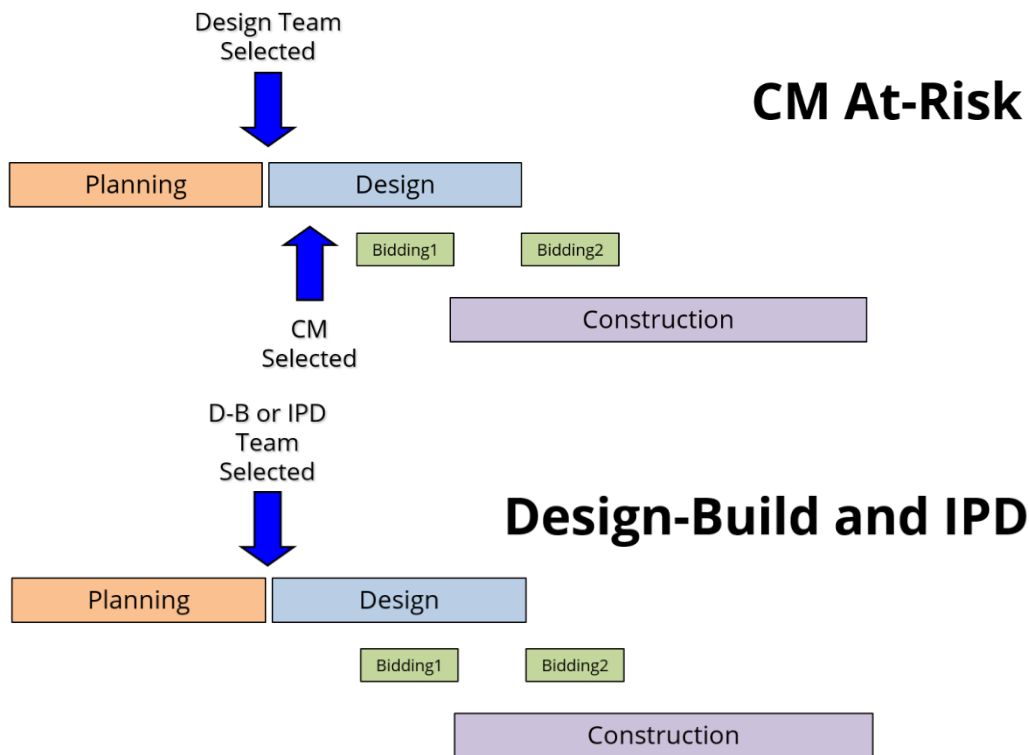
day.” This underscores the importance of having the ability to employ whichever PDM is best given the Owner, market conditions, project type, etc.

4. Speed

Design-Bid-Build delivery involves a simple, linear approach to delivery, where construction takes place after completion of design and a bidding/procurement phase.



The other primary delivery methods (CMAR, D-B, IPD) involve – or at least allow for – a concurrent approach, where some portions of construction can begin before the design phase is complete.



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The overlapping of design and construction may offer a shorter overall project duration – perhaps weeks or months faster – but there are at least two other time-related benefits possible with CMAR, D-B, and IPD delivery:

- Builder input during design may lead to ideas for alternate materials, systems, or equipment with shorter lead times. This proved to be critical for projects delivered during and after the COVID-19 pandemic, when supply chain issues were rampant.
- As noted above in the Cost discussion, change orders and claims are often less frequent and/or less impactful within projects delivered using more collaborative methods. This includes delay claims and time extension requests, which can often be more negatively impactful to Owners than cost overruns.

5. Collaborative vs. Transactional Approach

Construction projects are more successful – in terms of cost, quality, timeliness, and other measures of success – when there is a higher level of collaboration between the Owner, the builder, and the design team. This was intangibly sensed by all stakeholders for decades but was quantified and shown to be true in multiple formal studies issued over the past five years.²

That being the case, how can collaboration be emphasized and facilitated? It starts with the Owner:

In construction, there are degrees of collaboration. Owners, more than any other stakeholder, drive the degree of collaboration they receive on their projects. They influence this before projects even begin through their procurement and contracting process.³

In other words, the Owner sets the stage for greater collaboration by the delivery method employed and selection/award process. Maximizing collaboration between the (3) primary stakeholders requires bringing them together as soon as possible. As noted in a 2018 report by Dodge Data & Analytics:

Most owners, architects, and builders agree that it is important to get the entire project team on board very early in the design stage. More than 75% of owners in our research favored early assembly of their design and construction partners over the traditional design/bid/build approach, which does not bring a builder to the table until the end of project design.⁴

Beyond the obvious benefits of a more collaborative approach to a given project, a longer view comes into play. Builders selected on the basis of their qualifications & experience (not just cost) – which is often the case with the CMAR, D-B, and IPD methods – are more inclined to act in the best interests of the client (Owner) since their business leans heavily on positive references or repeat work. This often translates to fewer claims by builders working under a CMAR, D-B, or IPD agreement.

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Finally, collaboration can be extended to the trade contractors who actually perform the work under certain project delivery methods. Projects that leverage “design assist” by involving specific key trades long before construction often see higher quality, and/or reduced field conflicts, and/or cost savings, but this strategy cannot be employed in DBB delivery because the builder is not engaged until after the design phase is complete.

Conclusion

There are advantages and disadvantages associated with all project delivery methods. No PDM is the “right” choice for all projects ... in part due to those innate drawbacks and because of the many variables associated with each Owner and each project.

So what is the “best delivery system” for a design and construction project? The answer is IT DEPENDS! There is NO silver bullet! There is NO best system! The “best delivery system” debate is wrong and misses a great opportunity for the design and construction industry. Selection of the project delivery system should be based on specific project requirements, specific characteristics and circumstances of the Owner, and the successful formulation of the project team.⁵

The key to helping Owners lead more successful projects is to empower them with PDM options so they can select the right method for a given project. Some projects may be simpler and have no real need for early involvement by the builder. Many others, though, are more complex and/or challenging. Those projects benefit greatly from the builder’s pre-construction services and presence “at the table” during design as important decisions are made that impact cost, schedule, quality, safety, sustainability, and other measures of project success.

Desired longevity of the planned facility matters, too. A commercial building with an expected lifespan of 20 years may be executed very well using DBB. A higher education facility with an expected lifespan of 100+ years requires a very different approach to stewardship. Since money expended on a capital project today may only represent 5% of the total cost of ownership over the building’s life, the Owner will want as much professional expertise at the table as possible when planning a facility expected to be relevant and responsive for generations.

The Construction Owners Association of America has been in the business of “helping Owners be better Owners” for 30 years. Amongst the thousands of topics discussed over the organization’s history, content related to project delivery methods ranks as one of the 3-4 most frequently presented, debated, and case studied. Of all the best practices, lessons learned, and “how to” content produced regarding PDMs, the most fundamental truth is that Owners must be empowered with the ability to use all or most PDMs.

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Guidance

Organizations and/or governing bodies that wish to expand PDM options should do so deliberately, with assistance from industry organizations, with input from trusted local or regional service providers experienced with other PDMs.

Specific recommendations and next steps:

1. **Conduct a Needs Assessment:** Policymakers and governing bodies should evaluate current PDM restrictions and their impact on project outcomes.
2. **Engage Industry Experts:** Collaborate with organizations like COAA, DBIA, CMAA, AIA, AGC, ABC, and others to understand the benefits of, and implementation strategies for, alternative PDMs.
3. **Provide Training and Resources:** Equip public Owners with education and tools to effectively leverage alternative PDMs, such as workshops, case studies, courses and webinars that address PDM best practices, and decision-making frameworks.
4. **Implement Pilot Programs:** Introduce policy adjustments on a trial basis to evaluate the impact of expanded PDM options in a controlled environment.
5. **Update Procurement Processes and Contracts:** Update contracting and procurement procedures to accommodate collaborative PDMs while ensuring transparency and accountability.

By taking these steps, policymakers and governing bodies can unlock the full potential of alternative PDMs, leading to better stewardship of public resources and more successful construction projects.

References

- ¹ *Dodge SmartMarket Report: Managing Risk (2017)*
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- ⁴ *Project Planning Guide for Owners and Project Teams | Managing Uncertainty and Expectations in Building Design and Construction (Dodge 2018)*
- ⁵ *Selecting the best project delivery system (D. Moore, Project Management Institute Annual Seminars & Symposium; 2000)*