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Is Integrated Project Delivery (IPD) Right for You?

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One of the most important decisions when launching a project is defining the project delivery method, specifically how a project is designed and constructed. Design-bid-build (DBB) and Construction Management at Risk (CMAR) represent the majority of project delivery systems used today. Design-build is an alternative approach to DBB that can successfully deliver both horizontal and vertical construction projects no matter the project type. There is, however, a fourth delivery approach that has gained popularity known as integrated project delivery (IPD).

What is IPD?

IPD is 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. This approach was developed to optimize project results, increase owner value, reduce waste, and maximize efficiency through all phases of design, fabrication, and construction.

In the 1990s, various groups began focusing on project collaboration due to the declining productivity in the construction industry. On the heels of that focus, the IPD model started to gain momentum in the early 2000s. At its core, IPD consists of a tri-party agreement. This is a contractual arrangement among

an owner/project manager, constructor, and design professional that aligns business interests of all parties.

IPD is more than just a contractual vehicle, but a collaborative approach to delivery where there's mutual trust between the team members and inefficiencies are avoided. Many delivery models can create silos and messy handoffs from the various stakeholders, who can be more focused on individual goals rather than overall project goals. Instead, IPD looks to create better partnerships and foster an environment focused on shared goals.

Graph 1.0: Delivery Approach Comparison

DELIVERY	CHARACTERISTICS	PROS	CONS
Design-bid award	• Two main contracts (design team & contractor) • Best understood • Linear sequence of work (longest delivery)	• Low first cost	• Presents highest risk • Stimulates adversarial relationships • Encourages change orders • Contractor has no input in design
Design-build	• Single contract/responsibility • Faster delivery • Changes traditional roles & relationships between owner, contractor and designer	• Sols source of accountability • Increases potential for early completion • Less adversarial • Earlier knowledge of firm price	• Minimum innovative design potential • Owner less involved in design decisions • Owner pushed for earlier decisions • Not "open book" on pricing & level of quality
Construction Manager (CM at risk)	• Two main contracts (design team & contractor) • Linear sequence of work but accommodates fast track delivery • CM is selected on qualifications, not price • CM selected early in delivery process	• Collaborative environment • Tight control of pricing & schedule • Phased construction • Full disclosure of cost & schedule throughout delivery process • Reduces owner risk	• Perception that price competition is limited • Design team may not take input from CM during design • Still can foster "finger pointing" behavior
Integrated project delivery (IPD)	• One integrated form of agreement • Mutual respect & trust • Mutual benefit & reward • Early involvement of all key delivery team members • Early goal definition	• Owner, architect & contractor act as one • Owner can tailor the best aspects of Design-build & CM at risk • Shared risk & rewards • Reduction of costs by eliminating redundant efforts • Delivery relationships more collaborative • Increased potential to deliver project within budget & schedule • Ability to deliver a more operationally efficient facility	• Perception that cost competition is limited • Complex to administer • Requires major culture change on part of owner, CM & design team

Is IPD right for you?

While owners may desire a collaborative team focused on project-level goals over individual ones, a full IPD model is not right for every project. This system is best aligned to complex projects that last over 12 months and carry multi-million dollar budgets. Historically, IPD is successfully implemented in healthcare, higher education, manufacturing, and mission-critical and infrastructure project sectors.

Current trends include organizations looking for ways to align process improvement and team health with capital improvement projects. IPD enables organizations to use collaborative delivery methods to drive value through innovative approaches and improvement measures driven by teamwork with risk and reward sharing for successful delivery. IPD is focused on creative ways for the project teams to become a central core with tools to operate and deliver a steady model for decisions and management.

IPD can:

- Eliminate waste in project design
- Establish the correct point of contact for each project task
- Improve job productivity
- Increase project value
- Improve construction methods
- Establish innovative tactics for approaching field work
- Create cost savings
- Produce innovative ways to reach goals
- Improve production techniques that will in turn improve the client's bottom line project cost

IPD Pros and Cons

IPD projects share a common theme around collaboration, focused on a team mentality backed by an agreement. IPD contracts are built to bring teams together through the challenges they face. Although there are ways to be successful through trials in a collaborative delivery model, the IPD contract is built to prevent a team from sliding off track.

"The IPD structure creates an environment of open communication and chain of command. The process removes waste using a format that moves decisions and conversations through a defined reporting structure of core teams."

The IPD structure creates an environment of open communication and establishes chain of command. The process removes waste using a format that moves decisions and conversations through a defined reporting structure of core teams. Core teams provide opportunities for barriers to be removed between traditional roles and team member expectations. Varying groups in this delivery model may build strong relationships and want to work together again to nurture their partnership and success.

Studies have shown project outcomes are more successful using an IPD model versus others. Based on the University of Minnesota School of Architecture IPD Case Study, it realized IPD created a "striking uniformity of success for all the teams in this study, regardless of project type, scope, geographic location, or previous experience with IPD." This is a testament to the nature of expectations set using this team approach with a contractual model that reiterates the value created with the enhanced team environment.

Although there are quite a few pros to using IPD, there are a handful of cons. This delivery method requires teams to give (and take) to improve the overall project. This sort of ebb and flow can result in challenges being presented to teams that will take the brunt of the workload to assist in overall project success. It's imperative each team member understand their results in the greater good of the project, even when they may be required to pass normal tasks to other responsible parties on the team.

When striving for innovative ideas, high functioning teams need strong partners. This will require team members to be flexible, knowledgeable, and always available. This process will show strengths and weaknesses of team members, pushing the stronger members to work harder.

Unfortunately, IPD is not always considered a lean delivery model in terms of personnel time. Ensuring documentation and information is readily available through an open environment can require some additional work and time from key parties. As an example, given the decrease in change orders due to open communication, the team is likely to be fully engaged in development, conversation, and documentation versus a traditional delivery method where it's tossed back and forth for design and pricing exercises.

Lastly, IPD works well with three project types:

- Repetitive projects
- Complex projects
- Large projects

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A repetitive project resembles an assembly line in the way it garners improved results by maintaining a consistent team with incentives to increase outcomes from project to project. Complex projects harbor a very focused team effort, regardless of size, focused on proper planning, innovation, and results. The final project type that has been successful using IPD is large projects. Large projects benefit from strong team alliances and processes because the teams work together over a long period of time.

Conclusion

IPD will continue to gain momentum in the world of complex projects, but trying to implement a full IPD model across projects with budgets less than $5 million may create more administrative burden than desired. The procurement issues alone may be a stumbling block for many organizations. IPD projects require intense time and work investments from team members, particularly in the early stages of the project. Owners should look first to engage a professional project management team to help determine the appropriate delivery system for their projects.

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About the Authors

Clint Stancil works on the Global Project Management Platform team supporting account and local market teams in areas of operational risk assessments, new account and program transitions, and developing best-in-class team structures that provide client-focused processes and deliverables aimed at providing quantitative value while maintaining overall consistency. Clint has over 20 years of experience in projects including ground-up industrial, retail, and mixed-use developments; corporate restacks; and data center, retail, and office upfits. He is a licensed general contractor in Arizona and Nevada, a certified construction manager and a LEED® Accredited Professional. He also holds a Bachelor of Science in Management and Master of Science in Building Construction and Facility Management from Georgia Institute of Technology. Connect with Clint on LinkedIn.

Stephen Powell brings over 10 years of experience to CBRE, using his construction background to assist in all aspects of healthcare projects. At CBRE, his responsibilities include project scheduling; budget development and management; contract negotiation; proposal development and review; and overall client coordination. Stephen's strengths lie in his understanding of collaborative measures necessary to create efficiency in project delivery that greatly benefit the success of any healthcare facilities project. Stephen holds a Bachelor of Science in Building Construction from Auburn University and is a LEED APP BD+C professional. Connect with Stephen on LinkedIn.

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