PROJECT DELIVERY METHODS DEMYSTIFIED:

DBB, CMAR, D-B and IPD for Owners

COAA W•E•B•I•N•A•R

02.25.25
1:00 - 2:00 PM (ET)

Kurt Neubek, FAIA
Principal / Director
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Sidney Sanders
Healthcare Practice Leader
Jacobs

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Description

Gain a comprehensive understanding of project delivery methods in this in-depth session designed specifically for Owners. Led by **Sidney J. Sanders and Kurt Neubek**, both esteemed industry leaders, this webinar unpacks the **nuances of Design-Bid-Build (DBB), Construction Manager at Risk (CMAR), Design-Build (D-B), and Integrated Project Delivery (IPD)**. Together, they will explore the advantages, challenges, and strategic applications of these methods, offering actionable insights to help you select the best approach based on your project's scale, type, and complexity. Whether you're navigating these methods for the first time or seeking advanced strategies, this session will equip you with the tools to make informed decisions that align with your goals.

Project Delivery Methods Demystified 2

Learning Objectives

Learn the fundamental principles, processes, and defining features of Design-Bid-Build (DBB), Construction Manager at Risk (CMAR), Design-Build (D-B), and Integrated Project Delivery (IPD).

Analyze the advantages, disadvantages, and potential challenges of each project delivery method to better align choices with project goals and organizational priorities.

Explore how factors like project type, scale, complexity, and stakeholder collaboration influence the selection of an optimal project delivery method.

Develop a framework to assess and implement the most suitable delivery method, considering risk management, budget control, and schedule adherence for Owner-led projects.

Understand the impact of the procurement environment on your choice of project delivery.

Project Delivery Methods Demystified 3

Disclaimer

Nothing in this webinar should be considered legal advice. This educational content is based on the experience and opinions of two architects, one a former facilities executive. Consult an attorney for legal advice about contracts.

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Agenda

01 Overview of Delivery Methods
Kurt Neubek

02 Nuances of Delivery Methods
Sid Sanders

03 Questions & Answers

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Project Delivery Methods – The Gamut

1. **Design-Bid-Build** (DBB)
   - Hard Bid
   - Competitive Sealed Proposals (CSP)
2. **Design + Construction Manager at Risk** (CMR, CMaR, CM@R)
   - Construction Manager as Constructor (CMc, CM/GC)
     Construction Management Multi-Prime (CMMP)
   - CMR + Design Assist (CMR-DA)
   - Construction Manager as Agent (CMA)
3. **Design-Build** (DB)
   - Design-Build Bridging
   - Progressive Design Build (PDD)
4. **Integrated Project Delivery** (IPD)
   - AIA's IPD (AIA A195, Owner-Contractor and B195, Owner-Architect)
   - Integrated Form of Agreement (IFOA) – "Pure IPD" (aka Lean IPD)

Others:
- Job Order Contracting (JOC)
- P3, Public Private Partnership
- Collaborative Project Delivery (CPD)
- Others?

Evidence-based Project Delivery

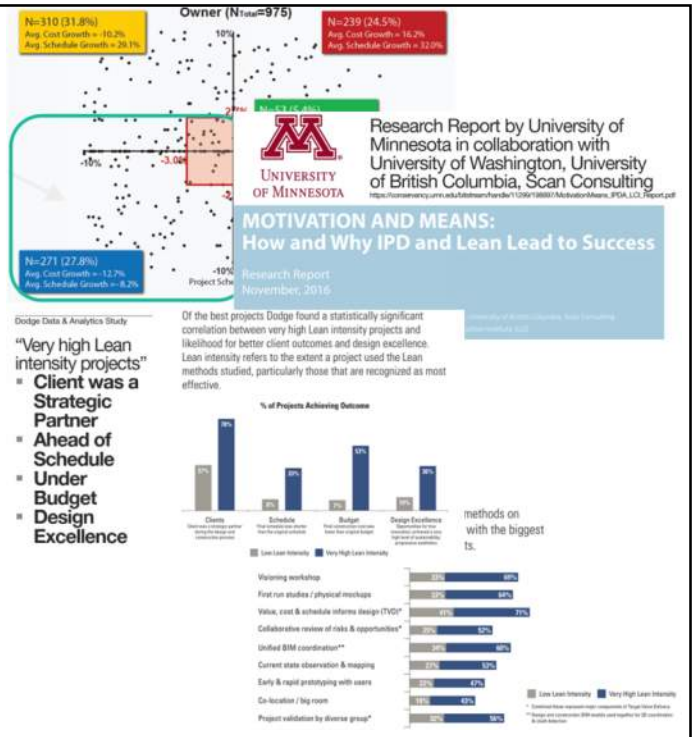
Decades of studies and thousands of case studies show:

70% to 75% of projects finish over schedule, over budget, or both

The most successful projects use:

- ✓ Lean (Culture of Respect for People, ↑Value, ↓Waste, Continuous Improvement,…)
- ✓ Focus on High Performing Team
- ✓ Last Planner System®
- ✓ Target Value Delivery & Validation
- ✓ Big Room Thinking for Collaboration

Regardless of the contract!



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Key Differences

	Design-Bid-Build	Design+CM	Design-Build	IPD with IFOA
Contract Relationships				
Schedule/ Contractor Involvement				
Collaboration Design Assist, Fast Track, Prefab, High-Performing Team Culture, Lean, Last Planner System®, Target Value Delivery, Takt, etc.	Limited Collaboration. No incentive to propose alternatives or innovations.	Optional (but very effective)	Optional (but very effective)	Usually Required in the Contract
Shared Risk/Reward Pool	Not Possible (?)	Optional (but very effective)	Optional (but very effective)	Fundamental to the Contract

Project Delivery Methods - Overview

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Key Differences

Opportunities for "integrated" or "collaborative" project delivery.

	Design-Bid-Build	Design+CM	Design-Build	IPD with IFOA
Contract Relationships				
Schedule/ Contractor Involvement	DESIGN / BUILD	DESIGN / PRECON & DA / BUILD	DESIGN / PRECON & DA / BUILD	DESIGN / PRECON & DA / BUILD
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Project Delivery Methods - Overview

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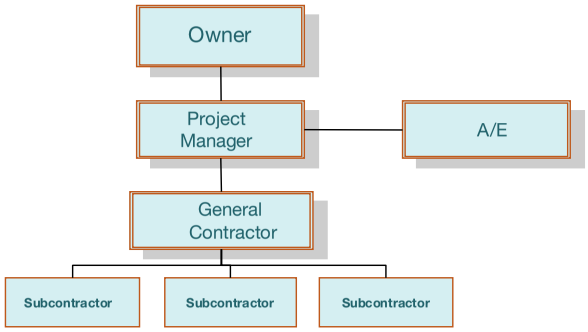
Design-Bid-Build
Competitive Sealed Proposals

- ✓ Allows selection to be qualifications influenced
- ✓ Establishes clear market price
- ✓ Simplest to administer
- ✓ Allows for negotiations with best-value contractor

- × No ability to fast track
- × Limited ability to establish early construction cost
- × Limited ability for to perform constructability and value engineer
- × Potential for adversarial relationship

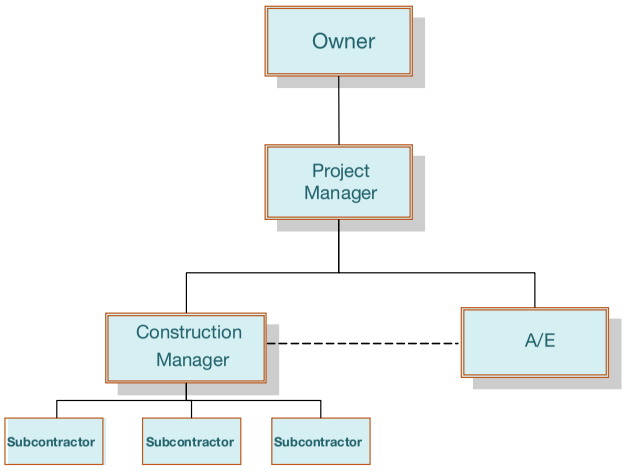


Project Delivery Methods

Construction Manager at Risk

- ✓ Allows for fast tracking and early delivery
- ✓ Allows delayed decision making on program elements
- ✓ Allows for Guarantee Max Price (GMP)
- ✓ Allows for collaboration and constructability

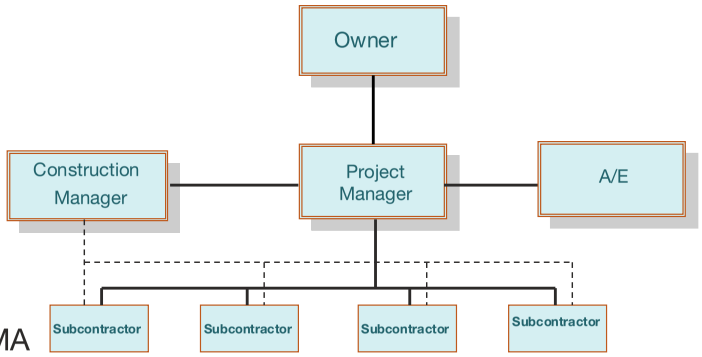
- × Complex buy-out process
- × Requires significant fiduciary oversight
- × Risk of early start must be mitigated with contingency in GMP



Project Delivery Methods

Construction Manager as Agent

- ✓ Gives Owner considerable flexibility and professional expertise
- ✓ Best used in large projects with clear divisions of subcontractor responsibility either by phase or scope

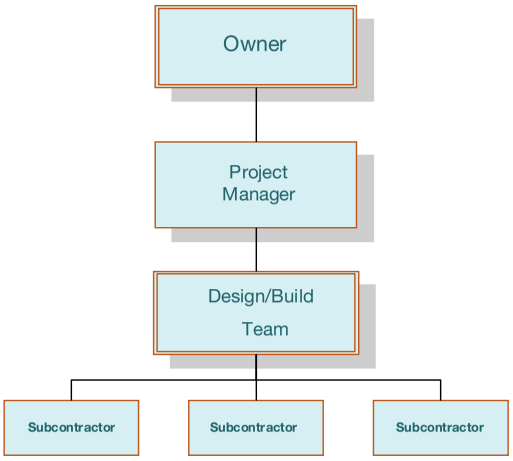


- × Owner does not have a GMP with the CMA
- × Lack of budgetary accountability can be disastrous on projects requiring high level of subcontractor coordination

Project Delivery Methods

Design/Build

- ✓ Single source of all project delivery
- ✓ Allows for extreme fast tracking
- ✓ Industry has developed a number of product type specialists
- ✓ Allows for high degree of collaboration



- × No independent contract with design team
- × Requires rapid decisions by owner — "Collapsed Decision Making"
- × Early starts can result in unclear quality/scope expectations

Project Delivery Methods

Design/Build - Bridging

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- ✓ Allows for extreme fast tracking
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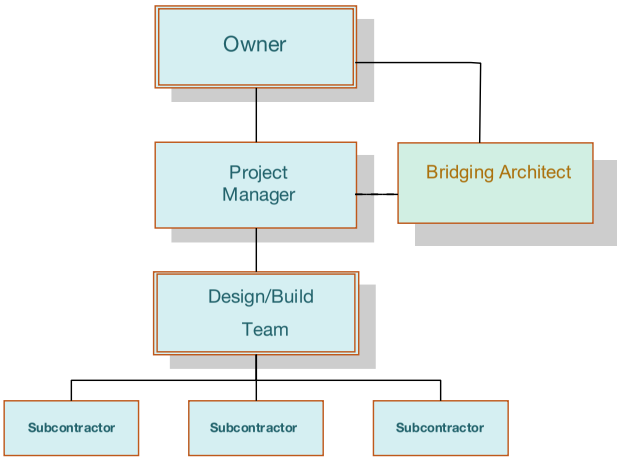
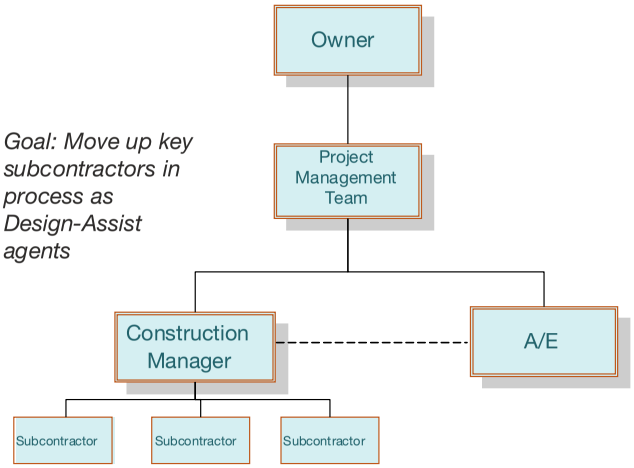


Project Delivery Methods

CMR w/ Design Assist Subcontractors

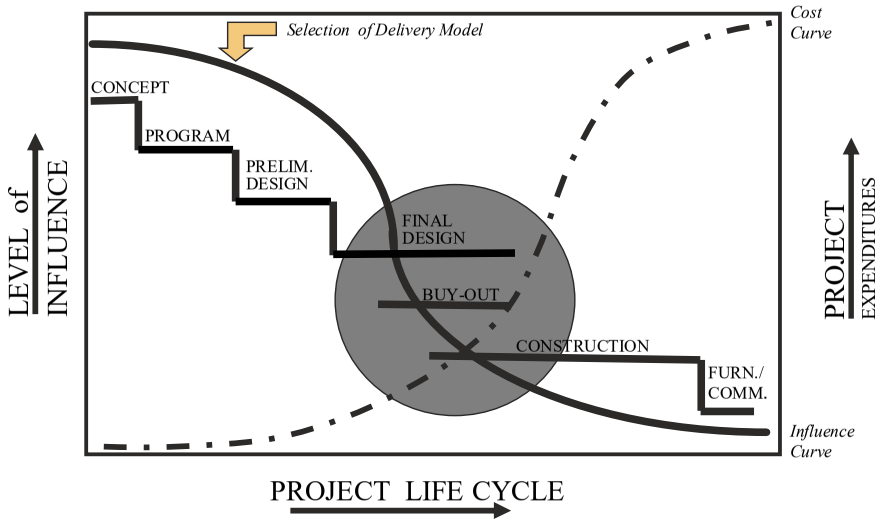
Goal: Move up key subcontractors in process as Design-Assist agents



Project Delivery Methods

Project Delivery Selection

Project Life Cycle



Problems with typical CM at Risk integration

More information is needed earlier in project conceptualization

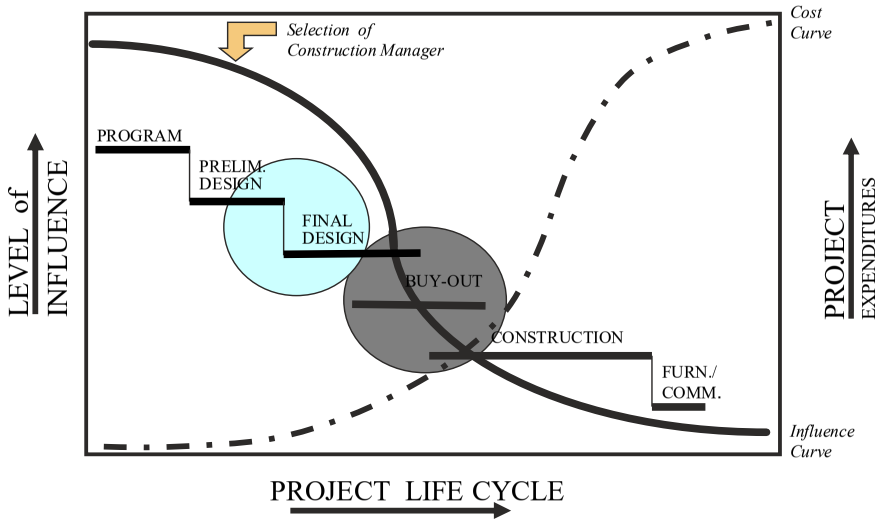
Critical technical knowledge, cost and creativity exist in the Sub-contractor and Manufacturing firms

The procurement “below” the CM-R tends to become design-bid-build (slowest & least innovative procurement)

Key parts of project are redrawn in shop drawing process by selected Sub-contractor & Manufacturers

Desired Point of Project Integration

Project Life Cycle



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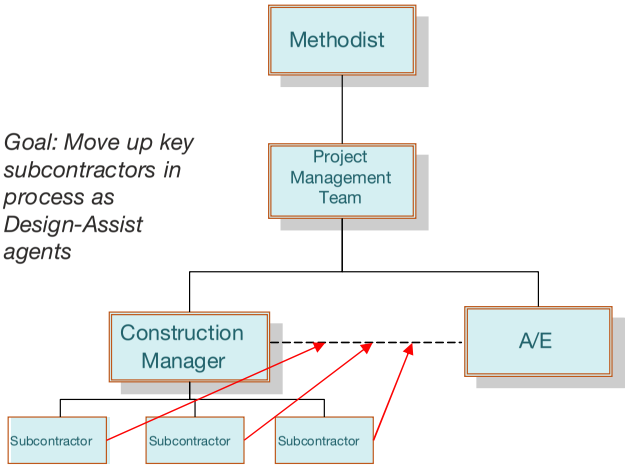
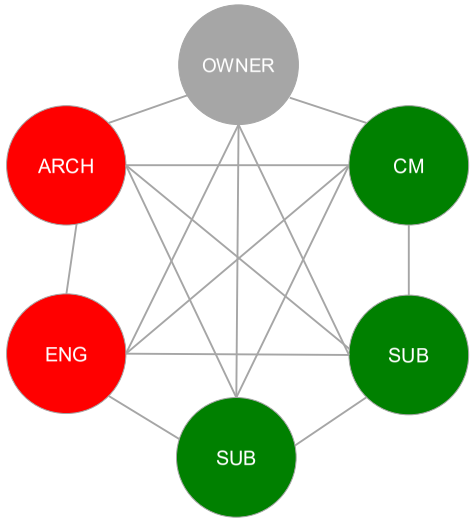


Project Delivery Method

Collaborative team selection

Design-Assist Agents

HVAC
Plumbing
Electrical
Glazing/curtain-wall
Elevator
Medical Equipment
Fire Protection
Kitchen Equipment
Specialty



Design / Assist Process For NCE Project

Develop a more detailed methodology of collaboration with the design team and the construction team

Develop detailed process maps to document the collaboration methodology

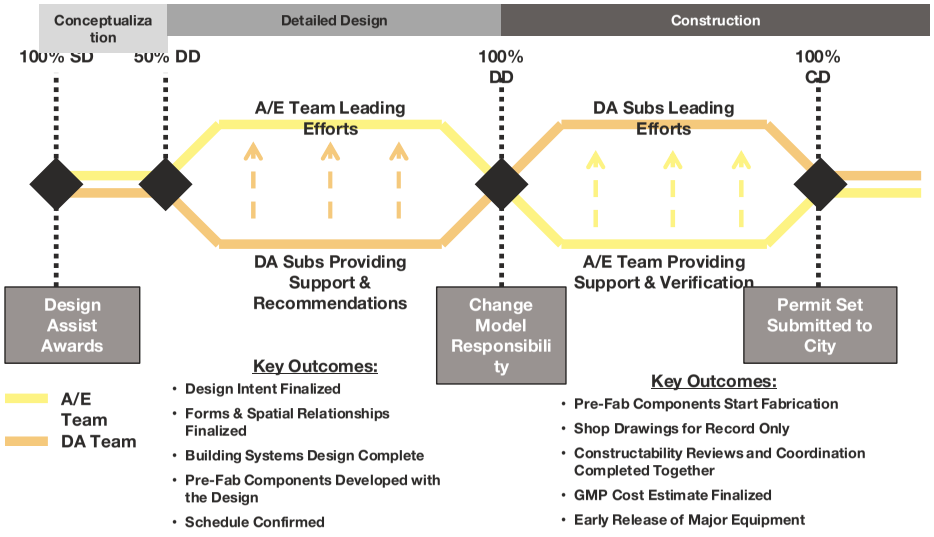
Develop and document the project BIM/VDC strategy

Publish BIM/VDC protocol manual

Engage the permitting authority in pre-schematic design

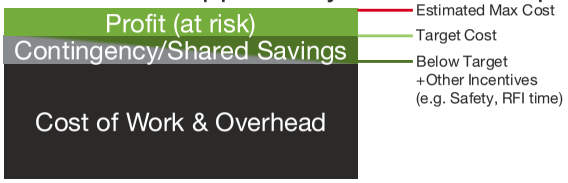
Exploit improvement in collaboration technology

Standard Process for each Permit Package

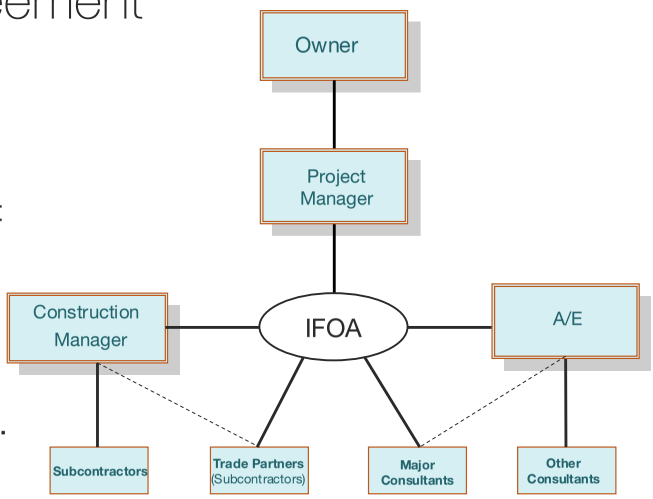


Integrated Project Delivery with Integrated Form of Agreement

- Major participants sign one agreement ("a virtual company") with shared risk/reward
- All participants put 100% of their profit at risk with the opportunity for enhanced profit



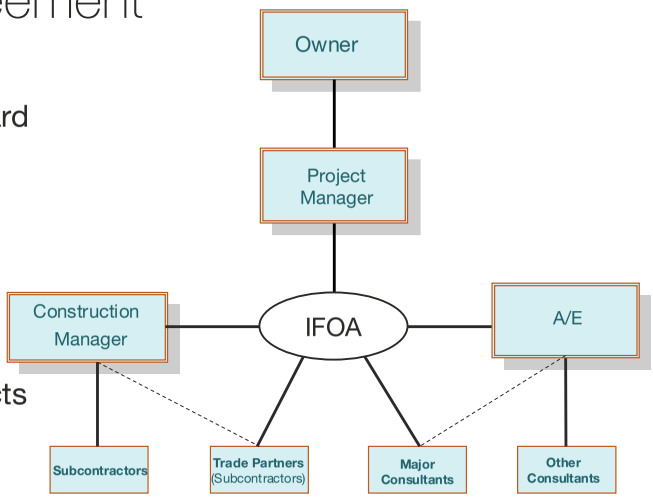
- Lean processes are required in the contract.
  Last Planner System®, Target Value Delivery with Validation, Risk & Opportunity Tracking, Dashboard/Visual Management, Continuous Improvement, etc.
- Very popular in Canada for public projects; mostly private companies in the US



Project Delivery Methods

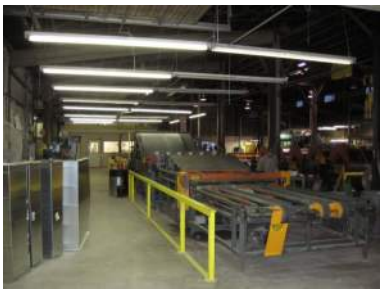
Integrated Project Delivery with Integrated Form of Agreement

- ✓ Multi-party agreement and shared risk/reward pool foster greater collaboration and innovation because major participants have "skin in the game."
- ✓ Owners who have it figured out love it. Projects almost always finish on time, under budget.
- ✓ Most common for large and complex projects
- × Owners new to IPD often face internal legal and insurance hurdles to put in place
- × May require the most Owner involvement



Project Delivery Methods

Duct Prefabrication from 3D Model




Prefabricated Headwalls




Headwalls waiting to be delivered at the warehouse

Medgas pipes and MEP rough-in

Electrical connections

Prefabricated Headwall Assemblies




Prefabricated plumbing fixtures




Prefabricated Window Assemblies



Prefabricated Bathroom Pods




Challenges of Design Assist Process

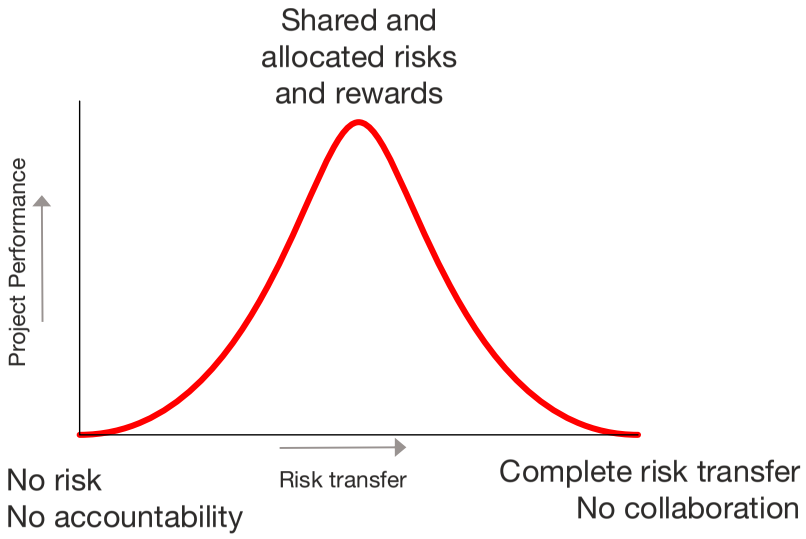
- How to keep early selection Sub-contractor competitive in final pricing
- Design team and construction team naturally revert to traditional roles
- Reluctance to step out of traditional roles due to unknown risk issues
- Many Subcontractors do not have design assist capability
- Many CMRs and Subcontractors are reluctant to commit to GMPs until construction documents are well developed
- How to define the appropriate Design Assist hand-off point

Applicability

○ Sometimes Applicable ◒ Applicable ● Very Applicable

	Design-Bid-Build	Design+CM	Design-Build	IPD with IFOA
Project Size - Small	○	◒	◒	○
- Large	○	●	●	●
Owner Complexity - Simple	○	◒	◒	○
- Complex	○	●	●	●
Project Complexity - Simple	○	◒	◒	○
- Complex	○	●	●	●
Project Speed - Time Not Critical	○	◒	◒	○
- Time Is Critical	○	●	●	●

Risk transfer



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COAA's "Position Paper on Project Delivery Methods: *Empowering Owners With the Ability to Choose"*
www.coaa.org/resources/pdm-freedom-of-choice

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