



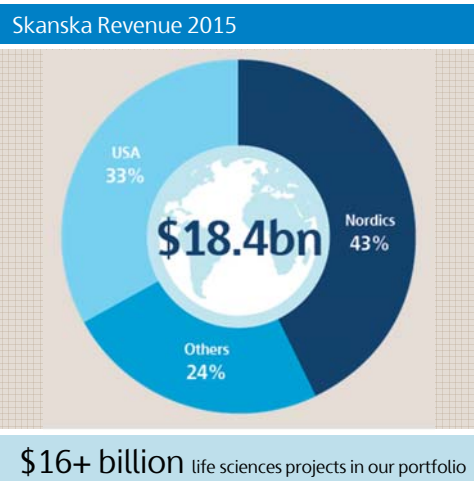
Project Delivery: Method of Contracting

Which method is best and when

Dean Poillucci

Senior Vice President
Skanska USA Building

Skanska Global



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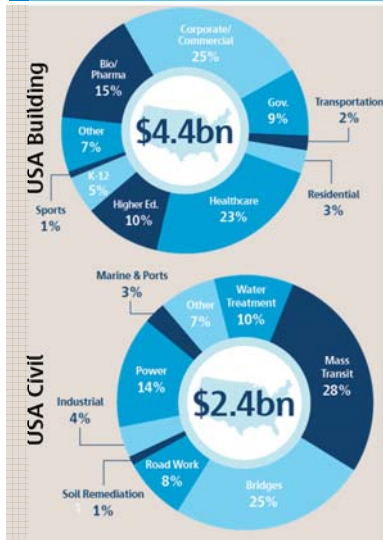
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Skanska USA

USA Revenue 2015 = \$7.1 billion



National Expertise / Local Knowledge



Consistently ranked in ENR's Top 10
Pharmaceutical Rankings
(#1 in 2015; #2 in 2014 & 2013)



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Project Delivery: Method of Contracting

Which Method is Best and When?

Design – Bid – Build (DBB)

Design – Build & EPCM (DB)

Construction Management (CM)

Integrated Project Delivery (IPD)



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Participant Experience

Comparison to Industry

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Participant Experience

Comparison to Industry – PROJECT DELIVERY

Project Basis for audience participation:

Select a recent project that was in excess of \$5 million.

Think about the drivers for the project.

- Objectives, Cost, Schedule, Complexity, Risk, etc.

Participant Experience

Comparison to Industry – PROJECT DELIVERY

For a recent project greater than \$5M. Which project delivery method was used?

- a) Design – Bid – Build 60%
- b) Design Build or EPCM 12%
- c) Construction Management 28%
- e) Integrated Project Delivery 0%



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Participant Experience

Comparison to Industry – PROJECT DELIVERY

Project Basis for audience participation:

Was the project successful when measured against the key drivers?

- Yes 68%
- No 32%



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Participant Experience

Comparison to Industry – PROJECT DELIVERY

Project Basis for audience participation:

Where there opportunities that the team could not maximize on and deliver?

Yes	78%
No	22%



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Participant Experience

Comparison to Industry – PROJECT DELIVERY

Project Basis for audience participation:

Who held the majority of the risk?

Owner	67%
Contractor	6%
Balanced	27%



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Participant Experience

Comparison to Industry – PROJECT DELIVERY

Project Basis for audience participation:

Was there good collaboration, communication and trust?

Yes 66%

No 34%



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Participant Experience

Comparison to Industry – PROJECT DELIVERY

Project Basis for audience participation:

Was decision making efficient and timely?

Yes 29%

No 33%



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Participant Experience

Comparison to Industry – PROJECT DELIVERY

Project Basis for audience participation:

Did the owner's team have adequate resources (qty & skill)?

Yes	24%
No	76%

Participant Experience

Comparison to Industry - COST

What is more important for project delivery

- a) Achieve lowest possible cost 34%
- b) Cost certainty 66%

Participant Experience

Comparison to Industry - SCHEDULE

What is more important for project delivery

- a) Fastest possible schedule 33%
- b) Completing on time – Schedule Certainty 67%

Participant Experience

Comparison to Industry – RISK TRANSFER

What is more important for project delivery

- a) Transfer risk as early as possible 29%
- b) Transfer risk when developed and understood 26%
- c) Balanced approach with risk sharing 45%

Key Factors

Setting Priorities

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Project Delivery: Method of Contracting

Factors

External

economic, technological, political, social, legal

Owner Resources

knowledge, experience of organization

Project Characteristics

size, complexity, location, uniqueness

Project Delivery: Method of Contracting

Factors

Ability to Make Changes

- technology driven, business change

Cost Issues

- Cost certainty, when

Timing

- Planning, design , construction, CQV, need date

Risk

- Owner tolerance, who owns, when does it transfer



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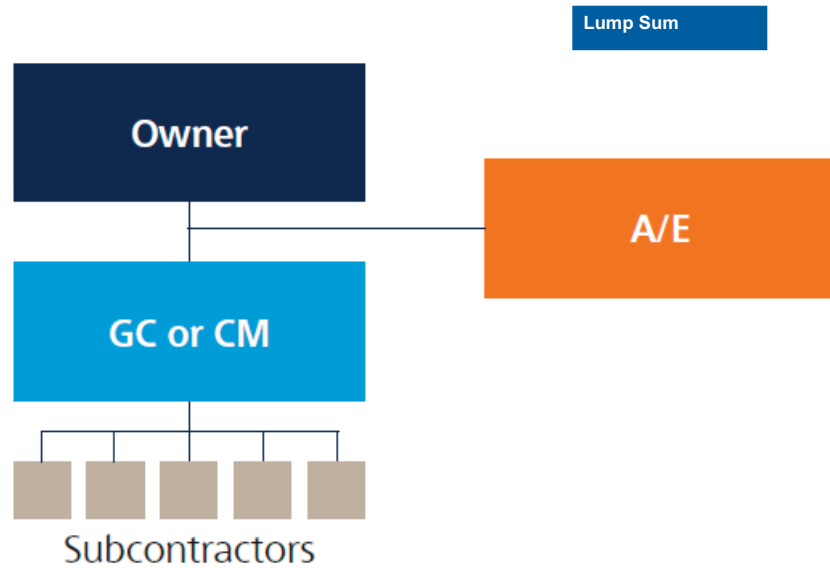
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Contracting Methods

Design-Bid-Build



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Design-Bid-Build

Overview

- Most commonly used method in the U.S.**
- Does not require a high degree of owner knowledge or involvement**
- Keeps design and construction as separate entities**
- Provides a high degree of competition**
- Less issues with insurance and bonding**
- Less issues with setting up agreements**



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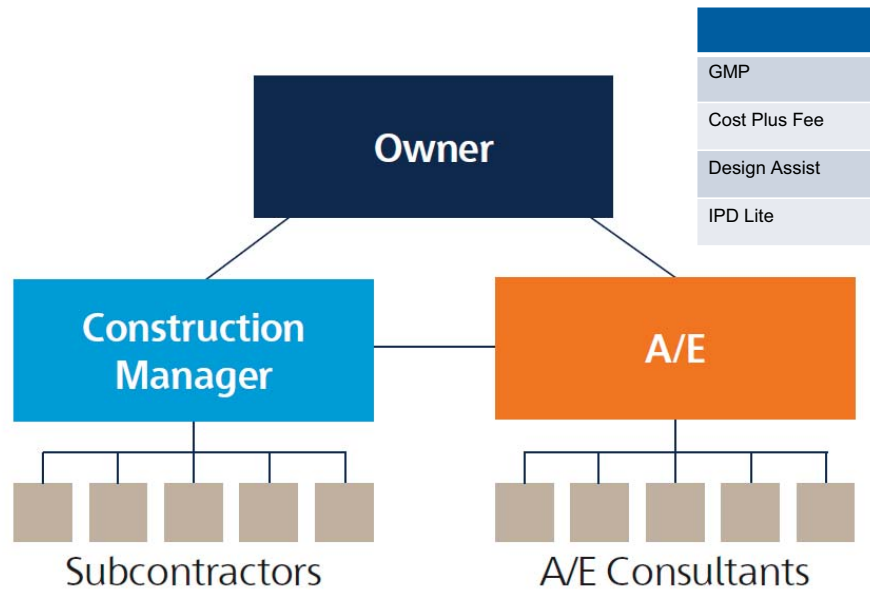
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Construction Management



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Construction Management

Overview

Delivery method that fosters collaboration between design team and construction manager

Owner retains the design professional ahead of CM

CM determined with qualification package or bid CM services

Creates close working relationship with client

Owner gets early cost certainty during preconstruction

CM handles all of the bidding, trade coordination, quality, and safety

Design assist with key subcontractors and suppliers



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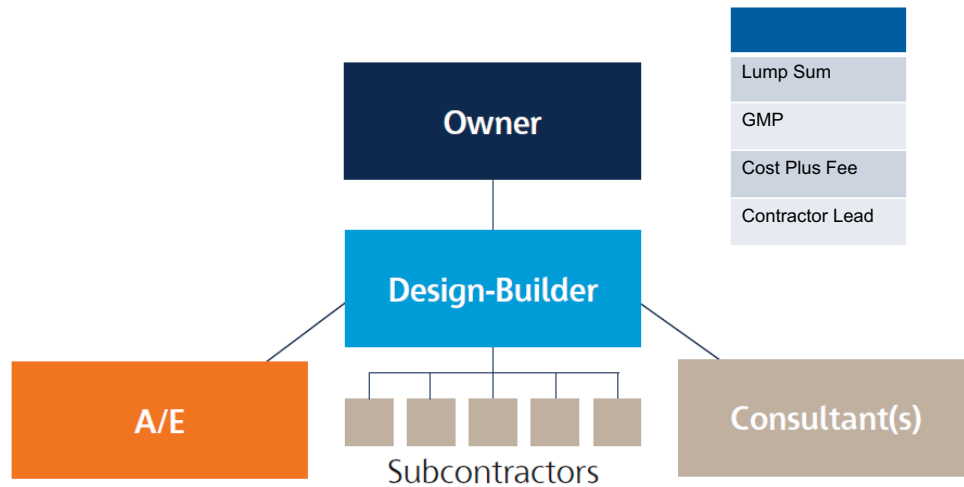
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Design-Build & EPCM



Design-Build & EPCM

Overview

Single contract – A/E and Construction

Could be single entity or contractor lead

Owner input of design criteria up front

Integration of design and construction team at the start

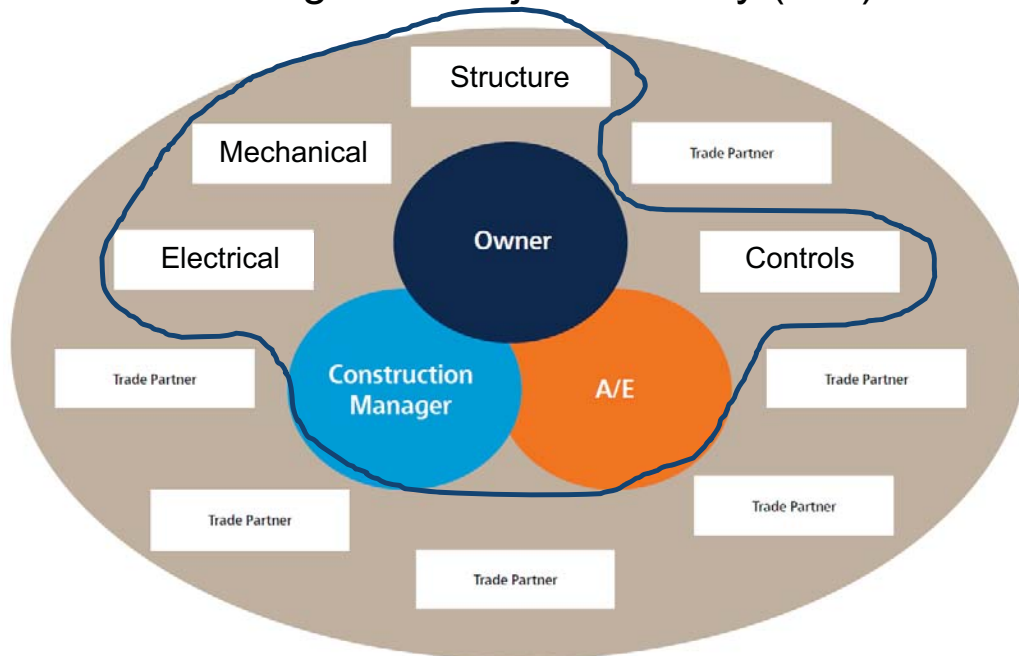
DB selected on qualifications, pricing or combination

Reduced client input after design criteria established

DB contractor handles all site mobilization and subcontractor selection



Integrated Project Delivery (IPD)



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Integrated Project Delivery (IPD)

Overview

Highly collaborative teams consisting of ALL stakeholders

Multi-party agreement

Owner interaction critical

Firms selected on qualifications basis

Team is assembled early in the project development

Colocation of the team

Agreement could include key subcontractors and suppliers



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Attributes of Delivery Methods

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Contracting Method Performance (1 = Best)

(CII Project Delivery Systems, CM at Risk, Design-Build, Design-Bid-Build, 1998)

Project Factor	Contracting Method			
	Design - Bid - Build	Design Build & EPCM	Construction Management	Integrated Project Delivery
Cost	3	1	2	?
Cost Growth	3	1	2	?
Project Delivery Speed	3	1	2	?
Construction Speed	3	1	2	?

Represents data from 351 projects building projects

Understanding Perspectives is Important

(McGraw Hill Smart Market Report, Project Delivery Systems, 2014))

Factor	According to Contractors			According to Architects			Owner's Drivers		
	DBB	DB	CM	DBB	DB	CM	DBB	DB	CM
Reduced Project Costs							86%	63%	73%
Reduced Project Schedule							57%	68%	53%
Improved Construction Quality							71%	47%	80%
Customer Satisfaction									
Improved Communications Between Team Members									
Improved Process Efficiency									
Reduced Risk of Litigation							29%	79%	60%
Fewer Change Orders									

>30%
 > 20% < 29%
 < 20%



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Preferred Contract Timing

Delivery Type	Design Stage				
	Program Development	Concept	Schematic	Design Development	Construction Documents
Design Bid Build					
Design Build & EPCM					
Construction Management					
Integrated Project Delivery					



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Project Delivery

(CMAA An Owner's Guide to Project Delivery Methods, 2012)

Project Delivery System	Procurement Method	Form of Contract
Design-Bid-Build ▲	Low Bid ▲	Lump Sum ▲ ▲
Design-Build/EPCM ▲	Best Value ▲ ▲	Unit Price
Construction Management ▲	Negotiated	Guaranteed Maximum Price ▲ ▲
Integrated Project Delivery ▲	Qualification ▲ ▲	Target Price ▲
	Sole Sourced	Cost Plus Fee ▲

Opportunity for Collaboration w/ Owner Team Increases



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Project Delivery

Risk and Control

Design Build/EPCM	Design-Bid-Build	Construction Management
RISK		
Least	Owner's Risk	Greatest
Greatest	Contractor's Risk	Least
CONTROL		
Least	Owner's Control	Greatest
Greatest	Contractor's Control	Least

**Shared Risk
& Distributed Control**



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Questions?

Please use the microphone indicated so our recording includes audio of your question

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Participant Experience

Comparison to Industry – PROJECT DELIVERY

Project Basis for audience participation:

Based on the discussion today, would you consider changing the PROCUREMENT METHOD or FORM of CONTRACT for your Basis Project?

Yes	77%
No	23%

Further Information

References

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CII Characteristics of Integrated Project Delivery and Contract Strategies, Research Report 165-11, 2003

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AIA Integrated Project Delivery: A Guide, 2007

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