Session B1: INTEGRATED PROJECT DELIVERY (IPD): IS IT THE ANSWER TO OUR HIGH CONSTRUCTION COSTS?

Moderator:
Thomas Redl, President, Chandos Construction Ltd.

Panel:
Jason Collins, President, Collins Steel
Dennis Cuku, President, Mosaic Family of Companies
Matt Knight, Managing Director Productivity and Growth Services, GO Productivity
Craig Webber, Architect, Group2 Architecture Interior Design
CONSTRUCTION VS ALL OTHER INDUSTRIES LABOUR PRODUCTIVITY SINCE 1964

![Graph showing construction vs all other industries labor productivity since 1964](image_url)

Owner’s Cost
Owner’s Cost

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IPD APPLIES LEAN PRINCIPLES TO
- Design
- Contracting
- Execution

"BUSINESS AS USUAL"
IN PRACTICE

- Contract Relationships
- Finance Model
- Means and Methods
METHODS – DESIGN

- Big Room
- Project Implementation Teams (PITS)
METHODS - ON SITE

- Pull Scheduling
- Personal Commitments
- Knowledge Sharing
THE DATA IS CONCLUSIVE
...the owner had already **achieved a 200% return on investment (ROI)** for the additional cost of IPD pre-construction services...

...the initial target cost developed by the team early in the project was approximately 14% or $80 million below market average. At the time of this report, the team estimates **an additional $22 million dollars will be saved** below the market average...

...the team primarily focused on maximizing the value of the design, however information gained through the involvement of the trade partners brought a level of detail to the BIM model that the team believes will reduce material waste and construction time. The **team cited a $400,000 savings** gained by eliminating continuous backing for handrails. The BIM model accurately located each metal stud, so that backing was made redundant...
MARKET ADOPTION

Rogers' bell curve

- **Innovators**: 2.5%
- **Early Adopters**: 13.5%
- **Early Majority**: 34%
- **Late Majority**: 34%
- **Laggards**: 16%

Source: Everett Rogers & Diffusion of Innovations, 1995

Profit Opportunity vs. Mass Market

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DESIGNER’S PERSPECTIVE

complexity

Markku Allison AIA

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DESIGNER’S PERSPECTIVE

source: Dave Snowden, Cognitive Edge

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DESIGNER’S PERSPECTIVE

connections = 6

source: Dave Snowden, Cognitive Edge

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DESIGNER’S PERSPECTIVE

patterns = 64

source: Dave Snowden, Cognitive Edge
DESIGNER’S PERSPECTIVE

source: Dave Snowden, Cognitive Edge
DESIGNER’S PERSPECTIVE

connections = 45

source: Dave Snowden, Cognitive Edge
DESIGNER’S PERSPECTIVE

patterns = 3,500,000,000,000
DESIGNER’S PERSPECTIVE

buildings are decisions

scan

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DESIGNER’S PERSPECTIVE

Value: Coordinated, Predictable, Considered
Require: Variation (3 Bidders)

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DESIGNER’S PERSPECTIVE

CHALLENGE is often we don’t know what we don’t know

• Open to New Ideas
• Actively Participate
• Focus
LESSONS: FROM THE BIG ROOM

• Windows
• Handrails
• Overhead Work
• Mechanical System
LESSONS: FROM THE BIG ROOM

• Windows: Replicated
• Handrails: Unique
• Overhead Work: Trust
• Mechanical System: Contract

Not One Size Fits All
KEY POINTS

Engage – Hard Work
Open – Different Style of Collaboration
Leverage the Team Solutions – Predictable Innovation
Rewarding
  – Remove Waste
  – Fun
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