How Integrated Project Delivery Impacts Electrical Contractors

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Principal, New Construction Strategies

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And 2 Contact Hours.

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ï Attend 90% of this presentation  
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Demographics of Survey Responses

- Total of 208 survey responses
  - Non-NECA Members 149
  - NECA Members 59

Responses by Country
- USA 159 (all NECA were USA, except 1 Mexico)
- Canada 3 (1 was partner, 1 a participant, 1 a non-participant)
- UK 4 (2 were partners, 2 were non-participants)
- Australia (All 3 were partners)
- Qatar 1 (Partner)
- Sweden, Malaysia, Mexico 1 each (all non-participants)

Breakdown of IPD Participation

- NECA Members
  - Partner 14/59 = 24%
  - Participant 5/59 = 8%
  - Non-Participant 40/59 = 50%

- Total Survey
  - Partner 78/208 = 38%
  - Participant 21/208 = 10%
  - Non-participant 115/208 = 55%
A Broken Industry

- AIA reports: construction industry only significant U.S. industry that hasn’t increase in productivity during the last 50 years – creating unhappy clients!
- Difficult attracting enough qualified workers and managers
  - Peter Drucker wrote: “The first sign of decline of an industry is loss of appeal to qualified, able, and ambitious people”
- Profit margins have declined for years
  - The industry’s ROI in 2005 was 9.7%, versus average of U.S. industries of 16.9% – and this in the middle of a construction boom
  - Highest turnover of businesses except for restaurants
  - Contractors fail faster than any other industry
  - In 2005 40% of U.S. contractors didn’t make a profit

What’s Needed Is Radical Change

Sir John Egan advocates “radical change in the way we build.”

- Reduce total project cost by 30%
- Reduce design/construction time by 50%
- Reduce operating expense by 50%

Construction Industry’s problems are basically self-inflicted!
Brief History of Construction

- Master Builder
- Design-Bid-Build
  - Frederick Taylor - Scientific
- Integrated Delivery Practices
  - Construction Management (1982 - CMAA)
  - Design-Build (1993 - DBIA)
  - Integrated Project Delivery (2000 - IPDC)

Commenting on the National Audit Office’s report, Modernizing Construction, former Prime Minister Tony Blair said:

“Integrating design and construction delivers better value for money as well as better buildings, particularly when attention is paid to the full cost of a building over its whole lifetime.”
What Is IPD?

- It’s a delivery method — but it’s much more
- It’s a new mindset — it’s a paradigm shift
  - Focus is project results
- It embraces Lean and Best Value
- It’s different!
  - All participants are equal

“All for one and one for all, united we stand divided we fall.”

AIA Defines Integrated Project Delivery (IPD)

“IPD is a method of project delivery distinguished by a contractual arrangement among a minimum of owner, constructor and design professional that aligns business interests of all parties. IPD motivates collaboration throughout the design and construction process, tying stakeholder success to project success.”
IPD Embodies the Following:

**Contractual Principles**
- Key participants bounded together as equals
- Share financial risk and reward based on project outcomes
- Liability waivers between key participants
- Fiscal transparency between key participants
- Jointly developed project target criteria
- Collaborative decision-making

**Behavior Principles**
- Mutual respect and trust
- Willingness to collaborate
- Open communication

Benefits of IPD for Specialty Contractors
### Benefits of IPD as Reported by Partner Specialty Contractors

<table>
<thead>
<tr>
<th>#</th>
<th>Description of Benefit</th>
<th>Number of Responses</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>More Profitable</td>
<td>19/33</td>
<td>57%</td>
</tr>
<tr>
<td>2)</td>
<td>Faster Schedule</td>
<td>24/33</td>
<td>73%</td>
</tr>
<tr>
<td>3)</td>
<td>Less Problems</td>
<td>27/33</td>
<td>82%</td>
</tr>
<tr>
<td>4)</td>
<td>Greater Collaboration</td>
<td>28/33</td>
<td>85%</td>
</tr>
<tr>
<td>5)</td>
<td>More Enjoyable Work Environment</td>
<td>27/33</td>
<td>82%</td>
</tr>
<tr>
<td>6)</td>
<td>Get to Use Our Experience &amp; Knowledge to Help Design a Better Project</td>
<td>31/33</td>
<td>94%</td>
</tr>
<tr>
<td>7)</td>
<td>Shared Risk</td>
<td>1/33</td>
<td>3%</td>
</tr>
<tr>
<td>8)</td>
<td>Safer</td>
<td>1/33</td>
<td>3%</td>
</tr>
<tr>
<td>9)</td>
<td>Greater Efficiency/Less Waste</td>
<td>2/33</td>
<td>6%</td>
</tr>
<tr>
<td>10)</td>
<td>Better Quality</td>
<td>1/33</td>
<td>3%</td>
</tr>
<tr>
<td>11)</td>
<td>Other Benefits</td>
<td>1/33</td>
<td>3%</td>
</tr>
</tbody>
</table>

In an ENR article – one firm that has participated in 77 IPD reported that **75% exceeded contract expectations**

### What Are the Risks of IPD for Specialty Contractors?

**RISK ASSESSMENT**
Risks of IPD Identified by Specialty Contractor Partners

<table>
<thead>
<tr>
<th></th>
<th>No risks created by IPD</th>
<th>Risk caused by other partners</th>
<th>Normal risks</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10/33</td>
<td>15/33</td>
<td>2/33</td>
<td>6/23</td>
</tr>
<tr>
<td></td>
<td>30.30%</td>
<td>45%</td>
<td>6%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Challenges Facing IPD

- IPD versus IPDish: many problems associated with IPD are really IPDish issues
  - Process requires practice
  - IPD is more than a delivery method: it combines methodologies of Lean and Best Value
- Finding the right partners
  - Skills: experience (understand client’s needs)
  - Collaborative mentality
    - Emotional Intelligence
    - Brent Darnell reports that many of those managing projects are BELOW AVERAGE in interpersonal skills necessary for a collaborative culture (see appendix for brief list of traits)
  - Issues of trust, openness, and confidence
  - The consequences is that IPD might not be right delivery method for everyone
Sir John Egan

“Clients should require the use of integrated teams and long-term supply chains and actively participate in their creation.”

From a Founder of IPD

One of the key elements to our IPD success is that our team is intact and has worked together for years. We have familiar systems in place for estimating and accounting that we have developed over YEARS. We know each other and TRUST each other. This is a critical component when you offer to accept full responsibility for the entire project. It is also essential to our ability to share costs and share profit. Information and ideas can flow freely knowing we have each other’s back. I don’t know how effectively you can accomplish these things with a pick-up team.

Joe Territo, President of Territo Electric
Co-Founder of Integrated Project Delivery Collaborative
The owners of the trademark on the term Integrated Project Delivery
## Integrated Project Delivery

![GREAT OPPORTUNITY AHEAD](image)

## Opportunities from IPD as Described by Partner Specialty Contractors

<table>
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<th>Description of Benefit</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>No opportunities</td>
<td>5/34</td>
<td>15%</td>
</tr>
<tr>
<td>2)</td>
<td>Differentiate our business</td>
<td>3/34</td>
<td>9%</td>
</tr>
<tr>
<td>3)</td>
<td>Ability to innovate</td>
<td>2/34</td>
<td>6%</td>
</tr>
<tr>
<td>4)</td>
<td>Tap sophisticated owners</td>
<td>1/34</td>
<td>3%</td>
</tr>
<tr>
<td>5)</td>
<td>Improve project performance</td>
<td>7/34</td>
<td>21%</td>
</tr>
<tr>
<td>6)</td>
<td>Opportunities to Qualify for other IPD prj.</td>
<td>4/34</td>
<td>12%</td>
</tr>
<tr>
<td>7)</td>
<td>Expanding marketing</td>
<td>4/34</td>
<td>12%</td>
</tr>
<tr>
<td>8)</td>
<td>Takes design/build to next step</td>
<td>1/34</td>
<td>3%</td>
</tr>
<tr>
<td>9)</td>
<td>Strengthen relationships</td>
<td>2/34</td>
<td>6%</td>
</tr>
<tr>
<td>10)</td>
<td>Other</td>
<td>4/34</td>
<td>12%</td>
</tr>
</tbody>
</table>
Potential of IPD from other Sources

- Predictable costs
- Confidence to control costs in order to make value judgements
- Predictable schedules
- High performance of program, quality, and life-cycle costs
- Fair price for client
- Safer construction
- Flexibility to change as required
- More collaborative environment with no fighting, finger pointing, claims or delays
- Stable, predictable, reliable long-term partnerships

Organizational Structure of IPD Projects
IPD Structure

- Numerous approaches
  - Long-standing team
  - Owner established
  - Large general contractor
  - Individual projects

- Practitioners should have their own partnership agreement then enter into another agreement as the partnership with the client

Selecting the IPD Participants

- Pre-qualification Phase
  - Subcontractor
    - Invite to be a partner on one project
    - Core partners

- Selection Phase
  - Subcontractor
    - Invite to be a partner on one project
    - Core Partners
Managing the IPD Project

The Emotional Intelligence of the average construction participant can be an obstacle to the collaborative nature of IPD. Construction people typically score high in: self-regard, independence, assertiveness, stress tolerance, and reality testing (black/white thinkers). They score low in: impulse control, flexibility, emotional self-awareness, empathy, and interpersonal relationships, and social responsibility (the ability to work in groups and teams). These traits are opposite of what's needed in the collaborative IPD environment.

Emotional Intelligence

- The Emotional Intelligence of the average construction participant can be an obstacle to the collaborative nature of IPD.
- Construction people typically score high in: self-regard, independence, assertiveness, stress tolerance, and reality testing (black/white thinkers).
- They score low in: impulse control, flexibility, emotional self-awareness, empathy, and interpersonal relationships, and social responsibility (the ability to work in groups and teams).
- These traits are opposite of what's needed in the collaborative IPD environment.
Managing the IPD Project

**Â Learning How to Implement IPD**
- Start small with what you know
- Train the people
- Emotional intelligence
- Dealing with those that don't fit

**Â Define the Project**
- Define the project from the client's perspective, not from what the contractor must do
- Establish priorities

**Â Clarification Phase**
- Clarify "what's in" and "what's out"
- Simple clear proposal of the project
- Determine if the proposal is acceptable
- Obtain clear definition of client's expectations
- Finalize the proposal

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Manage the IPD Project

**Â Execution Phase**
- Establish systems
- Risk management
  - Determine sources of risk
  - Minimizing decision making
  - Hold IPD accountable for results
  - Expert vendors use metrics & simplicity to create transparency to force the client to optimize their behavior
The Owner’s Role

- Find & select the IPD team
- Select a visionary internal executive to oversee the project
- Define the owner’s requirements — including prioritizing them
- Participate in the clarification phase of the project to ensure proposal is acceptable
- Avoid directing the IPD team’s activities — instead ensure they are delivering the agreed upon deliverables
- The owner must be committed to a collaborative approach — not a command & control approach
Getting Started

• Need to start the process now!
• Seek small projects
• Go to your past clients
• Stick to what you know
• Need to learn and develop your IPD skills
• Need to start building your IPD credentials
A Few Words About Getting IPD Work

Need to understand that because IPD is a relatively new concept it has limited appeal.

According to the Rogers Curve, only about 16% (1 of 6) of people are what are called early adopters. Need to understand it’s virtually impossible to change someone’s mind, so stop trying and find the right people. You need to find that one and not waste time on the other 5 at this point.

Need to look for people that are unhappy with other options and are looking for something different; in essence, they want to change. That includes government agencies.

A Few Words About Getting IPD Work

What it takes to get people to believe in something they aren’t familiar with is dominant proof.

Dominant proof is information that when anyone reads it they understand and believe it.

Contractors need to track their projects so they can prove their success with regard to their claims about IPD benefits.
Final Thoughts

- IPD has the potential to revolutionize the construction industry
- IPD requires contractors to stop thinking of themselves as just builders
- The goal is to maximize client value
- The emphasis is on design
- When IPD is done correctly, everyone wins
What Are Your Thoughts or Questions?

Don’t forget...
10:15 -11:30 am Special Session: Life on the Rock
11:30 am-4:00 pm NECA Show Hours