IPD: Performance, Expectations, and Future Use
A Report On Outcomes of a University of Minnesota Survey

September 25th, 2015
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Acknowledgements
Effective project delivery meets or exceeds owner’s expectations for schedule, cost and quality. There is an emerging body of research that shows more collaborative/integrated delivery is more likely to lead to successful outcomes and high-level team performance. Within that context, this survey takes a snapshot of current perceptions of effectiveness on projects using multiparty agreements, the most formal and contractually binding of the integrated delivery methods.

Conducted by the University of Minnesota and sponsored by Canada’s Integrated Project Delivery Alliance, the goal of this survey was to understand the current state of Integrated Project Delivery (IPD).

This goal was pursued through use of a broad-based comparative survey. Each survey response collected data for one IPD project from one respondent’s experience. If the respondent had multiple IPD project experience, they could take the survey multiple times, entering data for one project each time. Individual stakeholders on the same project could be matched by project name during the data analysis. For the purpose of this survey, IPD was defined as a multi-party agreement.

The survey was short and required no preparation. With one specific IPD project in mind, respondents began the survey by verifying the use of a multiparty agreement (those with other types of agreement were thanked and survey ended). For those who confirmed multiparty, survey gathered basic demographic data about the respondent and their project, followed by three questions:

• Comparison of this IPD experience with non-IPD project experience
• The meeting of expectations on this project
• Likelihood of future use of IPD
Key Findings

Significantly Positive
• Responses are significantly positive, strongly supportive of IPD as a superior delivery method.
• Distribution of responses is weighted heavily toward the most positive possible answers, not clustered around the neutral point.
• The overwhelmingly positive response is consistent across all demographics: stakeholder type, project type, project progress, project averages, and past respondent experience.

Owner Expectations
• Owners’ expectations were met or exceeded more than architects, contractors, or others. When owners compare their expectations of IPD at the start of the project to the project outcomes, they overwhelmingly say their expectations were met, exceeded, or significantly exceeded.

Choosing IPD
• Reasons for choosing IPD are varied but seem to be most important where there is a desire for more team integration, a challenging budget, and/or where the owner requires the use of IPD.

Diverse Data Set
• The 108 response / 59 project data set represents a broad cross-section of building type, project location, project scope, project progress, and stakeholder background. BIM and Lean tools were used to varying degrees on almost all projects.

For Consideration
• Positive survey outcomes may reflect interest, engagement, and approval of early adopter owners and AEC professionals, and may additionally be influenced by project teams constructed of skilled and motivated practitioners.
Challenges and Needs

Respondents had an opportunity to comment on their experience. Some comments reflect challenges and needs:

Challenges IPD teams face
• Unwillingness to fully embrace IPD, its hard to let go of traditional roles
• Understanding of what is IPD (and what it takes to succeed) is uneven in the industry
• Negative performance by any single stakeholder can disrupt the whole team
• Changes in personnel can have a large negative impact

IPD Teams have particular need for:
• Alignment and commitment across the team
• Strong owner involvement
• Strong leadership
• Having the right people involved at the right time
• Increased and earlier planning
• Careful attention to fees/time
• Maintaining focus on key project goals
• Accountability among team members.
### Projects | Breakdown

- **59 unique projects**
  - 48 in U.S.
  - 9 in Canada
  - 2 outside of North America

### Project Types

- **Education (K-12)**: 1
- **Education (college/university)**: 5
- **Health Care**: 28
- **Cultural**: 1
- **Recreational**: 1
- **Office**: 5
- **Industrial**: 3
- **Mixed Use**: 3
- **Government/Civic**: 3
- **Single Family Residential**: 1
- **Multi-Family Residential**: 1
- **Utilities Power/Water/Sewer**: 2
- **Other**: 5

### Project Scopes

- **Under $10M**: 15
- **$10M to $25M**: 16
- **$25M to $50M**: 7
- **Over $50M**: 21

### Project Status

- **Design**: 12
- **Construction**: 9
- **Complete**: 38
Projects | Use of BIM and Lean

**BIM tools and processes utilized on this project (n=59)**

- High – extensively used and customized
- Medium – used frequently with most of the known capacity of the tool/process
- Low – used but not extensively and with only some of the power of the tool / process
- N/A

**Lean tools and processes utilized on this project (n=59)**

- High – extensively used and customized
- Medium – used frequently with most of the known capacity of the tool/process
- Low – used but not extensively and with only some of the power of the tool / process
- N/A
Respondents | Past Experience

108 Responses

- **Owner** (n=23)
- **Architect** (n=17)
- **Contractor** (n=58)
- **Other** (n=10)

**Stakeholder experience in IPD for this project:**

- **New to IPD**
- **1 or 2 IPD projects**
- **3 or more IPD projects**

**Outside of this project, the majority of my project delivery experience is in:**

- **Design-Bid-Build**
- **Design Build**
- **CM at Risk**
- **Integrated Project Delivery**
- **Other**
The reason(s) we chose IPD were:

- Challenging program
- Challenging bldg technology
- Challenging sched. or budget
- Desire more integration
- Owner required
- Desire to repeat IPD
- Desire IPD experience
- Market forces
- Marketing/positioning
- Other
Compared to your experience on non-IPD projects, rate your impression of the performance of this project in each of the categories below.

- Schedule predictability
- Cost and budget control
- Quality of building outcome (design goals)
- Quality of building outcome (technical performance goals)
- Changes (quantity)
- Changes (handling)
- Morale of stakeholders
- Overall value delivered

![Bar chart showing responses]

**Performance | All Responses**

*significantly better*

*better*

*same*

*worse*

*significantly worse*
Considering your expectations at the start of this project, rate the outcomes of this project in each of the categories below.

- Schedule predictability
- Cost and budget control
- Quality of building outcome (design goals)
- Quality of building outcome (technical performance goals)
- Changes (quantity)
- Changes (handling)
- Morale of stakeholders
- Overall value delivered

- met
- exceeded
- significantly exceeded
- not met
- significantly not met

- Schedule predictability: n = 102
- Cost and budget control: n = 103
- Quality of building outcome (design goals): n = 101
- Quality of building outcome (technical performance goals): n = 97
- Changes (quantity): n = 96
- Changes (handling): n = 97
- Morale of stakeholders: n = 103
- Overall value delivered: n = 100
Identify the likelihood for each of the following statements:

- On a project of similar type and scope, the likelihood I would want to use IPD again
- The likelihood of me wanting to use IPD in general on other projects
- The likelihood of me recommending IPD as a delivery methodology to others
Compared to your experience on non-IPD projects, rate your impression of the performance of this project in each of the categories below.

**Owner**
- Schedule predictability
- Cost and budget control
- Quality of building outcome – design goals
- Quality of building outcome – technical performance goals
- Changes (quantity)
- Changes (handling)
- Morale of stakeholders
- Overall value delivered

**Architect**
- Schedule predictability
- Cost and budget control
- Quality of building outcome – design goals
- Quality of building outcome – technical performance goals
- Changes (quantity)
- Changes (handling)
- Morale of stakeholders
- Overall value delivered

**Contractor**
- Schedule predictability
- Cost and budget control
- Quality of building outcome – design goals
- Quality of building outcome – technical performance goals
- Changes (quantity)
- Changes (handling)
- Morale of stakeholders
- Overall value delivered

**Other**
- Schedule predictability
- Cost and budget control
- Quality of building outcome – design goals
- Quality of building outcome – technical performance goals
- Changes (quantity)
- Changes (handling)
- Morale of stakeholders
- Overall value delivered
Considering your expectations at the start of this project, rate the outcomes of this project in each of the categories below.

- Schedule predictability
- Cost and budget control
- Quality of building outcome – design goals
- Quality of building outcome – technical performance goals
- Changes (quantity)
- Changes (handling)
- Morale of stakeholders
- Overall value delivered

### Owner

- Schedule predictability: met
- Cost and budget control: exceeded
- Quality of building outcome – design goals: significantly exceeded
- Quality of building outcome – technical performance goals: significantly exceeded
- Changes (quantity): met
- Changes (handling): exceeded
- Morale of stakeholders: met
- Overall value delivered: exceeded

### Architect

- Schedule predictability: significantly exceeded
- Cost and budget control: met
- Quality of building outcome – design goals: significantly exceeded
- Quality of building outcome – technical performance goals: significantly exceeded
- Changes (quantity): met
- Changes (handling): exceeded
- Morale of stakeholders: met
- Overall value delivered: exceeded

### Contractor

- Schedule predictability: significantly not met
- Cost and budget control: not met
- Quality of building outcome – design goals: not met
- Quality of building outcome – technical performance goals: not met
- Changes (quantity): not met
- Changes (handling): not met
- Morale of stakeholders: not met
- Overall value delivered: not met

### Other

- Schedule predictability: significantly not met
- Cost and budget control: not met
- Quality of building outcome – design goals: not met
- Quality of building outcome – technical performance goals: not met
- Changes (quantity): not met
- Changes (handling): not met
- Morale of stakeholders: not met
- Overall value delivered: not met
Identify the likelihood for each of the following statements:

- On a project of similar type and scope, the likelihood I would want to use IPD again
- The likelihood of me wanting to use IPD in general on other projects
- The likelihood of me recommending IPD as a delivery methodology to others

**Likelihood | Stakeholder**

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<th>Owner</th>
<th>Architect</th>
<th>Contractor</th>
<th>Other</th>
</tr>
</thead>
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<tr>
<td>likely</td>
<td>significantly likely</td>
<td>n = 23</td>
<td>n = 17</td>
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<td>neutral</td>
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Survey Open Through September 2016!

The data in this report was collected between July 9\textsuperscript{th} and September 15\textsuperscript{th} 2015. We recognize that many stakeholders on past or current projects did not have the chance to participate and as such their experiences are not represented in this data set.

To increase the robustness of the report, the survey will remain open until September 15\textsuperscript{th} 2016, followed by a revised report.

If you are have worked on or are currently working on an IPD project, please take the survey here:

http://survey.az1.qualtrics.com/jfe/form/SV_5uPcumvO8xJu9CZ
This work was funded by the Integrated Project Delivery Alliance.

The Integrated Project Delivery Alliance (IPDA) is a group of organizations that seek to advance integrated project delivery (IPD) as a delivery method in Canada. The mission of the IPDA is to promote best practices that enhance IPD.

www.ipda.ca

Special thanks to the following individuals and organizations for promoting participation in the survey:

Associated General Contractors (AGC)
Construction Owner’s Association of America (COAA)
Dan Fauchier | ReAlignment Group
David Umstot | Umstot Project and Facilities Solutions, LLC
Howard Ashcraft | Hanson Bridgett
Randy Deutsch AIA
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