How satisfied, really satisfied, are Owners?

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Objectives for Today

1. Understand research purpose

2. Share preliminary findings

3. Call to action – PARTICIPATE!
Why? Research Objectives

1. Create baseline of owner satisfaction/project performance

2. Explore the influence of LCI framework on project performance
Industry Effort/ Partnership

- CURT
- COAA
- AGC – Private Industry Council
- DBIA
- Dodge Owner Group
- e-Builder
Satisfaction

Fulfillment of one's wishes, expectations, or needs, or the pleasure derived from this.

How satisfied are you with the delivery of capital projects?

– Always
– Frequently
– Sometimes
– Infrequently/ Never
Owner Satisfaction

analyticsstore.construction.com
Industry Efficiency

Most who never heard of Lean think the industry is Efficient.
Methodology

1. Identify metrics to measure satisfaction/project performance

2. Identify factors to understand project environment

3. Explore variance of “Best” vs “Typical”
Performance Metrics

• **Cost & Schedule (Quantitative)**
  – % Actual vs **Approval of Capital Project**
  – % Actual vs Start of Construction

• **Quality (Qualitative)**
  – Features incorporated in design
  – Craftsmanship during construction
  – Performance during occupancy

• **Safety (Qualitative)**
  – Safety during construction
  – Safety during maintenance
Framework Assessment

• **Organizational**
  – Team chemistry/ alignment
  – Relatedness
  – Decision making

• **Commercial**
  – Time of engagement
  – Procurement/ selection method
  – Delivery method & contract type

• **Operating System**
  – Traditional methods
  – Lean methods
Early Engagement

How do you define early engagement?

Key stakeholders are engaged...

- During construction documentation
- During design development
- During schematic design
- Before or during conceptualization
Performance: Owner Value

- Adherence to **Project Schedule** most highly valued

### How Owners Define Value

<table>
<thead>
<tr>
<th>Performance Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Schedule</td>
<td>75%</td>
</tr>
<tr>
<td>Cost/Budget Control</td>
<td>68%</td>
</tr>
<tr>
<td>Quality</td>
<td>61%</td>
</tr>
<tr>
<td>Safety</td>
<td>54%</td>
</tr>
<tr>
<td>Project Design/Service Provided</td>
<td>25%</td>
</tr>
<tr>
<td>End User Experience</td>
<td>4%</td>
</tr>
</tbody>
</table>
Most Typical Projects complete behind schedule, over budget

Cost is improved more than schedule on Best Performing Projects
Performance: Schedule

- 28% of best projects finish early vs. only 9% of typical

Amount of Variance of ‘Original Schedule When Budget Allocated’ vs ‘Final Schedule’

**Best Performing Projects:**
- 28% complete ahead of schedule (vs 9% of typical)

**Typical Projects:**
- 28% complete more than 11% behind schedule (vs 9% of best)
63% of best projects under budget vs. only 9% of typical
Typical Projects’ quality and safety performance is already better than cost and schedule.

Best Projects are 13-20 percentage points better, but overall impact is not as dramatic as cost.
Organizational Aspects

- Owners identify **Project Team** as the single most important contributing factor to performance.
Early engagement is key aspect of best projects

**Best Performing Projects:**
75% engage key stakeholders before Schematic Design

**Typical Projects:**
56% don’t engage key stakeholders until after Schematic Design

**Timing of Key Stakeholder Engagement (Typical/Best)**

- Pre-business case: 9% (Typical), 6% (Best Performing)
- Business case validation (pre-design): 6% (Typical), 19% (Best Performing)
- During conceptualization (0-15% design): 16% (Typical), 16% (Best Performing)
- During schematic design (15-30%): 47% (Best Performing)
- During design development (30-60%): 31% (Typical), 9% (Best Performing)
- During construction documents (60-90%): 19% (Typical)
- End of construction documents or later (100% CD): 6% (Typical), 0% (Best Performing)
Organizational Aspects

- Team dynamics gaps between best and typical

**Percentage Reporting the Highest (4/4) Team Dynamics Ratings** (Typical/Best)

- Perception of Team Chemistry: 9% Typical, 72% Best
- Commitment of Team Members to Same Project Goals: 16% Typical, 63% Best
- Integration of Project Team Members: 9% Typical, 59% Best
- Timeliness of Decision Making Related to Issue Resolution: 9% Typical, 34% Best
Commercial Aspects

- **GMP** is most frequent contract type on best performing projects
- **Cost Reimbursable with Target and Shared Risk/Reward** is only used on best performing projects

(* with or without shared savings)
Operating System Aspects

- 10/27 biggest gaps between typical and best projects

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<th>Typical Projects</th>
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<td>Co-location Big Room</td>
<td>53%</td>
<td>0</td>
</tr>
<tr>
<td>Target Value Design</td>
<td>47%</td>
<td>3%</td>
</tr>
<tr>
<td>A3 Thinking</td>
<td>38%</td>
<td>0</td>
</tr>
<tr>
<td>Visual Management</td>
<td>47%</td>
<td>13%</td>
</tr>
<tr>
<td>Last Planner System®</td>
<td>47%</td>
<td>13%</td>
</tr>
<tr>
<td>BIM Execution Plan</td>
<td>38%</td>
<td>6%</td>
</tr>
<tr>
<td>Conceptual/Continuous Estimating</td>
<td>53%</td>
<td>22%</td>
</tr>
<tr>
<td>Full-team On-boarding</td>
<td>44%</td>
<td>16%</td>
</tr>
<tr>
<td>PDCA</td>
<td>28%</td>
<td>0</td>
</tr>
<tr>
<td>Prefab/Modularization</td>
<td>50%</td>
<td>25%</td>
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• Top 5/27 Methods Focused on Team Dynamics

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Most Impactful on Performance

- **Timing**: Engage key stakeholders as early as possible (prior to schematic design)
- **Team selection**: Best Value
- **Form of agreement**: IPD
- **Contract type/ compensation method for key stakeholders that are contracted to the owner**: Guaranteed Maximum Price* - or - Cost Reimbursable with Target and Shared Risk/ Reward

(* with or without shared savings)
Most Impactful on Performance

- Use (at least) these six highly-rated project/ team management and operational methods
  - Co-location Big Room
  - Target Value Design
  - 3D BIM Coordination
  - Conceptual/Continuous Estimating
  - Visual Management
  - Last Planner System ®
Takeaways

1. **Organizational transformations** enable project transformations

2. Earlier engagement requires different operating skills

3. Project operating system informs commercial (contract)
What impact do you think lean practices have on satisfaction?

- Significant
- Moderate
- Some
- None
- Unable to determine
What’s next?

We need you.
Goal: Over 150 responses!

Call for Your Participation!

The Lean Construction Institute and Dodge Data & Analytics are conducting an important research study with owners:

- Compare performance on Best Recent Project vs. a Typical Project
  - Owner Satisfaction with cost, safety, schedule, quality
- Compare commercial, organizational and operational aspects:
  - Team formation, organization and collaboration processes
  - Project contracting, delivery, operating and management practices

Value of the Research Findings:

* Determine which factors have the most impact on project performance.*
* Provide useful guidance to owners to improve project performance.*
* Distribute findings for free to the global construction industry.*

OWNERS: Please complete the survey

A/E/C FIRMS: Please recruit your owners to complete

*All respondents will receive a report of the total responses*

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Help to Improve Project Performance with this Research
Minimum Requirements

Respondent Profile
• Must be an Owner
• Knowledgeable about construction projects at their organization
• In last 3 years completed more than 5 capital projects
• Total capital expenditures more than $10M

Best & Typical Projects
• Construction cost of $10M or more
• New Construction or Major Renovation
• Completed at least one year, but no more than five years ago
• In North America
Recruiting Owners:

• Survey Link:
  – tinyurl.com/LeanConstruction2
• Call for Participation
  – Quick overview to be shared with owners
• Talking Points
  – For your use in advance of client interactions to prepare you to address key issues and potential questions (e.g., benefits, confidentiality of data)
• Offline version of Survey
  – To share with owners to collect project information in advance of taking the survey

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