LEAN IS NOT A BANDAID

Leadership and Organizational Commitment to Improving Project Delivery

November 6, 2019 | NWCCC Annual Conference
Construction Industry Advancement?

70% of all projects are not completed within 10% of budgeted cost or schedule

(Source: CII)
The Business Case for Lean

HOW DID PROJECTS PERFORM?
Dodge benchmarked 162 projects identified by owners as best or typical vs. schedule and budget performance (what owners cited as most valuable to them). The sample represents projects using various delivery methods and contract types across the United States for owners completing more than five capital projects over three years.

<table>
<thead>
<tr>
<th>% Completed Ahead of Schedule</th>
<th>% Completed Under Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

MYTHS ABOUT LEAN
The University of Minnesota "busted" some industry myths through ten in-depth case studies in partnership with the Integrated Project Delivery Alliance. Regardless of project type, regulations or Lean/IFD experience the research found that teams are leveraging Lean and IFD to foster and cultivate "project first" behaviors to deliver "A team results" with every team.

TOP MYTHS BUSTED
1. Delivery matters less than choosing the right people – behaviors can be driven by a contract
2. IFD contracts are too complicated, lean tools are too rigid
3. IFD only works on large, complex healthcare projects – teams work to PD and Lean are at a disadvantage
4. Owners aren’t getting better value – or they are getting value but the team is not making profit
5. IFD and IFD-like are essentially the same; financial incentives and delivery method are not a deal

WHY DID PROJECTS EXCEL?
Of the best projects Dodge found a statistically significant correlation between high Lean intensity projects and likelihood to complete ahead of schedule and under budget. Lean intensity refers to the extent to which a project used the management methods studied, particularly those that are recognized as the most effective.

SO HOW DO I START?
Based on the research follow these four key steps:
1. Set Targets: Define owner’s business case and goals.
2. Build the Team: Use a best value selection process to contract key stakeholders prior to or during concept design to validate targets and unify the team.
3. Learn as a Team: Provide training and ongoing coaching for the team to increase adoption of Lean methods.
4. Support the Team: Contracts should support (not thwart) a collaborative team culture and adoption of Lean methods.

WHAT DOES THIS MEAN FOR ME?
While the research is focused on the project business case, the benefits extend to the individuals and businesses of both owners and service providers for the project including:
- Reduced costs and improved profitability
- Increased employee engagement
- Better work/life balance

HOW DO I LEARN MORE?
For more information about the research, connect with the Lean community in your area and to advance your own Lean journey, please visit:
WWW.LEANCONSTRUCTION.ORG/LEARNING
Results from Dodge Data Research

Lean projects are 3X more likely to complete ahead of schedule and 2X more likely to complete under budget.

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Typical Lean Project Delivery Benefits

► Safer work environments, fewer accidents and injuries
► Improved cost and schedule certainty
► Higher productivity
► Less waste and rework
► Team-wide reliability
► Increased stakeholder satisfaction
► Fair profits for providers
► Risk is managed collaboratively
► Less stress on participants

Source: LCI; Various Research
Results from CII RT 341

Where low or inconsistent implementation of Lean and Integrated Project Delivery practices and methods gave little indication of project success or failure, concentrated and consistent implementation resulted in project success on nearly every project.
Project Results
Construction Users Roundtable (CURT) 2018 Project Excellence Award Winners
P&G Manufacturing Plant

Team Perspective

► Pull planning was powerful in developing a network of promises to achieve critical milestones
► Team structure (with all team members including partners) was very deliberately defined, including clear roles, responsibilities and decisions owned
► Decisions were made on the spot, with the right people involved, most of which improved cost and schedule
► We started establishing a culture of openness to share and communicate risks, including brainstorming a list of initial risks/obstacles

Project Results

► **Cost:** 7% cost savings
► **Schedule:** Improved schedule performance attributed to pull planning with all key trades
► **Safety:** Strong safety performance – no lost time over 438k hours in 16 months
► **Recognition:** CURT 2018 Project Excellence Award
► **Attrition:** Dramatically reduced attrition in a very low unemployment environment
► **Certification:** LEED Silver certification
Establishing a true partnership early on to gain alignment on goals is paramount to success.
Accelerated schedule doesn't always mean unsafe. With enough planning, a SAFE sense of urgency will make the job happen on time.
Things that look impossible become possible with the right team.
Teams and individuals are the cornerstone for a successful project.
Smaller, competent project teams are very successful.

Cost: Came in 15% under budget, resulting in shared savings for the owner and CM
Schedule: Certified for use 5 weeks ahead of a very aggressive schedule
Safety: Excellent safety performance – no lost time or recordables over 300k hours
Recognition: CURT 2018 Project Excellence Award
Product Delivery: Met stretch goal of shipping product one year from the date of the disaster
When Lean Fails

**Project Anonymous**

- Partners all had some Lean experience
- Owner mandated use of LPS® and other Lean tools
- IPD Agreement with shared savings
- Conducted a project kickoff with all team members present, but no end-users were engaged in the planning process
- Established a Big Room, but it was rarely used by more than one partner at a time
- Poor owner involvement:
  - PM not onsite full time
  - Owner team rarely attended meetings
  - Owner didn’t engage in the design process and failed to provide timely input into the budget process

**Project Results**

- **Schedule:** Came in months (over 30%) behind schedule
- **Cost:** Significant overruns, but there had never really been alignment on scope and budget during planning
- **Project Delivery:** All of the traditional construction challenges that Lean is supposed to “solve for” were amplified due to lack of commitment and very limited owner involvement
- **PM Takeaway:** Never use this contracting method (nor this MEP firm) again
“Technology is an accelerator of greatness already in place, never the principal cause of greatness or decline.”

– Jim Collins, Good to Great
Differentiating Factors: Most and Least Effective Teams

Source: Knowledge Teams International Pty Ltd

www.ContinuumAG.com
Effective Leadership is the Driver

- **Dynamics** are the big differentiators, but they’re difficult to address directly
- Putting the right **processes** in place helps considerably to improve the high-differentiating dynamic factors
- Good processes are easy to implement with effective **leadership**
Organizational Commitment is a Must

**Transition Phase**
- Connect to ELT Common Priorities
- Expand Pilots x-BU and Regions
- Develop Capability via Boot Camps and Global Cap Mgmt GoP
- Define 7 Essential Practices & Key Metrics
- Integrate with Digital Platforms
- Integrate into EWP and Cap Mgmt training
- Establish Board of Directors

**Full Adoption**
- Fully integrated with Engineering, Purchases, and our EBPs
- Master IFOA with Strategic Partners
- Achieving 15% savings & 30% faster schedules vs. traditional delivery approaches

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<thead>
<tr>
<th>Capability</th>
<th>Mostly external</th>
<th>Developing Internal capability</th>
<th>P&amp;G and EBPs fully capable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>CMLT</td>
<td>Capital Mgmt &amp; Purchases</td>
<td>Engineering &amp; Capital Purchases</td>
</tr>
<tr>
<td>Pilot Projects</td>
<td>Pilots identified</td>
<td>Pilots in all BUs &amp; Regions</td>
<td>Pilot bundling small projects</td>
</tr>
<tr>
<td>Pilot Sites</td>
<td>None</td>
<td>Lima – Center of Excellence</td>
<td>Expand based on workload</td>
</tr>
<tr>
<td>IFOA</td>
<td>No IFOA</td>
<td>1st Full IFOA</td>
<td>Master IFOA</td>
</tr>
<tr>
<td>Capital in Lean IPD</td>
<td>$0.38</td>
<td>$0.58 to $1.58 (5% to 70% of projects)</td>
<td>$1.88 (75% of projects)</td>
</tr>
<tr>
<td>% of NOS</td>
<td>5.0%</td>
<td>5.0% to 4.0%</td>
<td>3.2%</td>
</tr>
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</table>
Building High Performing Teams
Organizational Commitment Drives Real Benefits

1. **Assess** the current knowledge and application of Lean IPD processes and practices; assess organizational culture and processes – what needs to change?
2. Establish **Conditions of Satisfaction** for implementation
3. Identify specific **tools, processes and practices** to be implemented
4. Develop a **roadmap** or charter for implementation including milestones and measurements of success
5. Identify **pilot** projects and establish a program for piloting, measuring performance and improving the approach
6. Identify Lean **champions** and establish a training program for champions, the broader team, and executives
7. **Roll out** to the broader organization; phased approach
Thank You

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We help architects, engineers and contractors position their services as high-value to owners.
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- Change Management and Organization Transformation
- Building High Performing Teams
- Market Research and Analysis
- Acquisition Research and Growth Analysis
- Process Streamlining and Improvement