

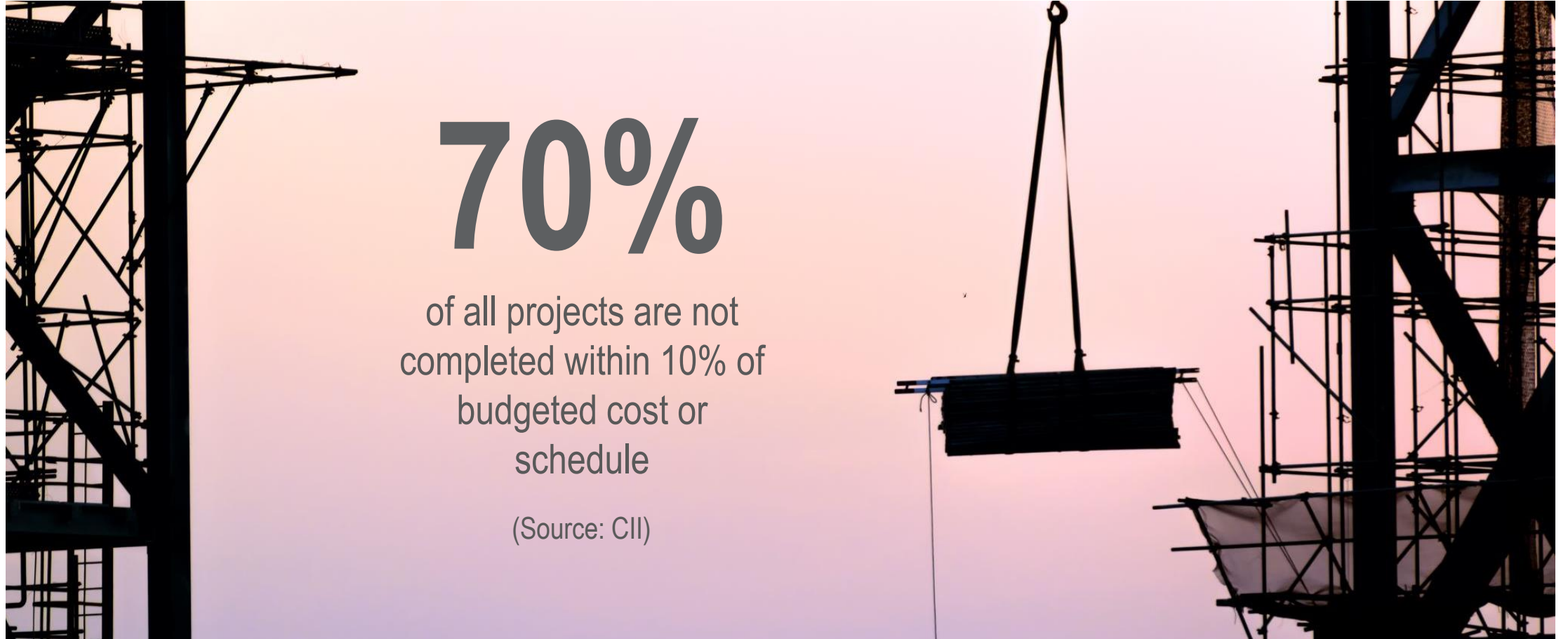


LEAN IS NOT A BANDAID

Leadership and Organizational
Commitment to Improving Project Delivery

November 6, 2019 | NWCCC Annual Conference

Construction Industry Advancement?



70%

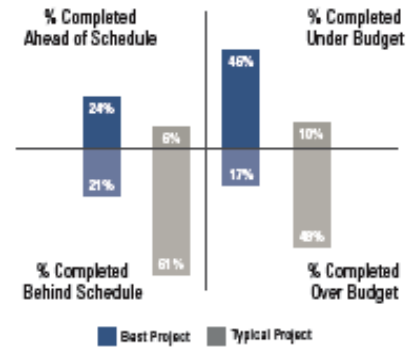
of all projects are not
completed within 10% of
budgeted cost or
schedule

(Source: CII)

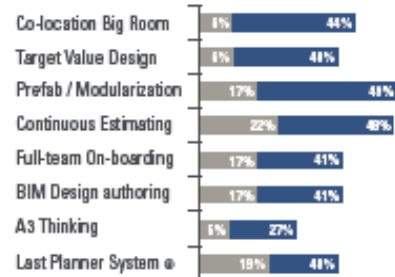
The Business Case for Lean

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.

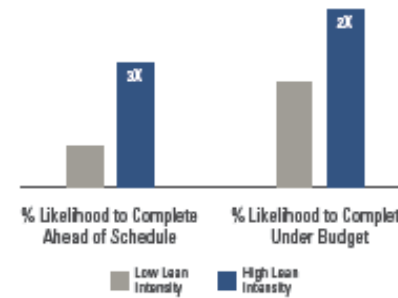


Dodge also inquired about the use of 27 project management methods on each project. The research found the following methods with the biggest gap between use on best and typical projects.



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 or under budget. Lean intensity refers to the extent a project used the management methods studied, particularly those that are recognized as the most effective.



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/IPD experience the research found that teams are leveraging Lean and IPD 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't be dictated by a contract
2. IPD contracts are too complicated, Lean tools are too rigid
3. IPD only works on large, complex healthcare projects – Teams new to IPD and Lean are at a disadvantage
4. Owners aren't getting best value – or – Owners are getting value but the team is not making profit
5. IPD and IPD-lite are essentially the same; financial incentives and release of liability are no big deal

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

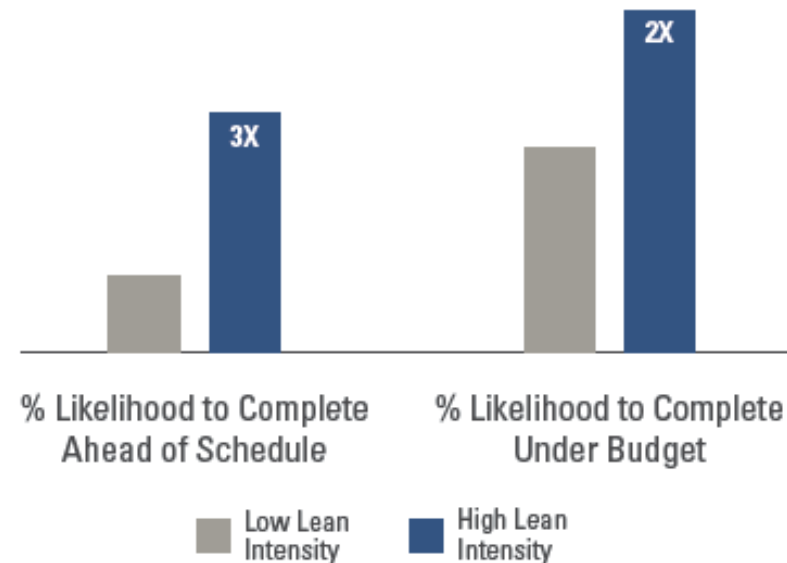


Results from Dodge Data Research

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

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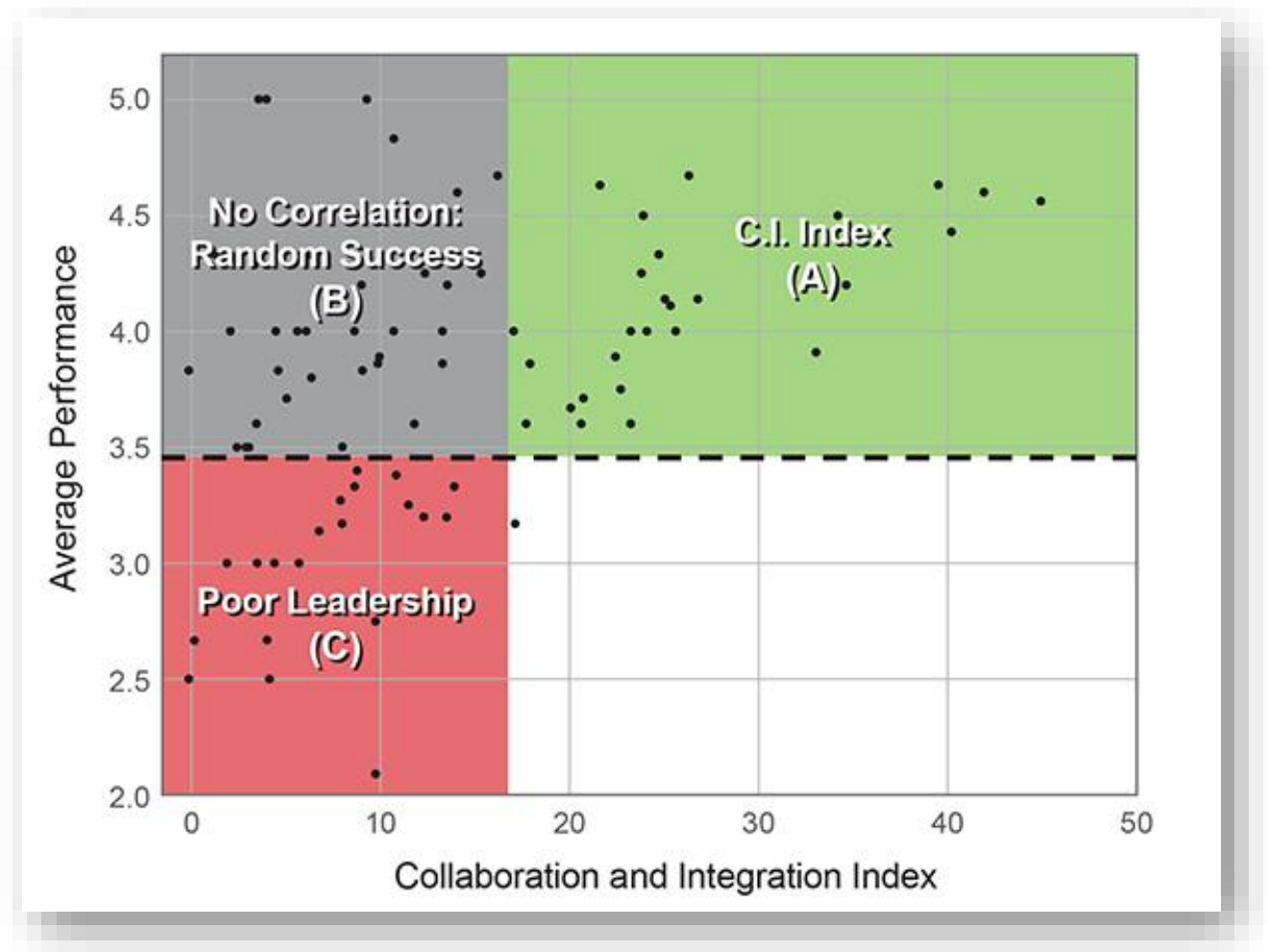
Typical Lean Project Delivery Benefits

- ▶ 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

P&G Warehouse



Team Perspective

- ▶ 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.

Project Results

- ▶ **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

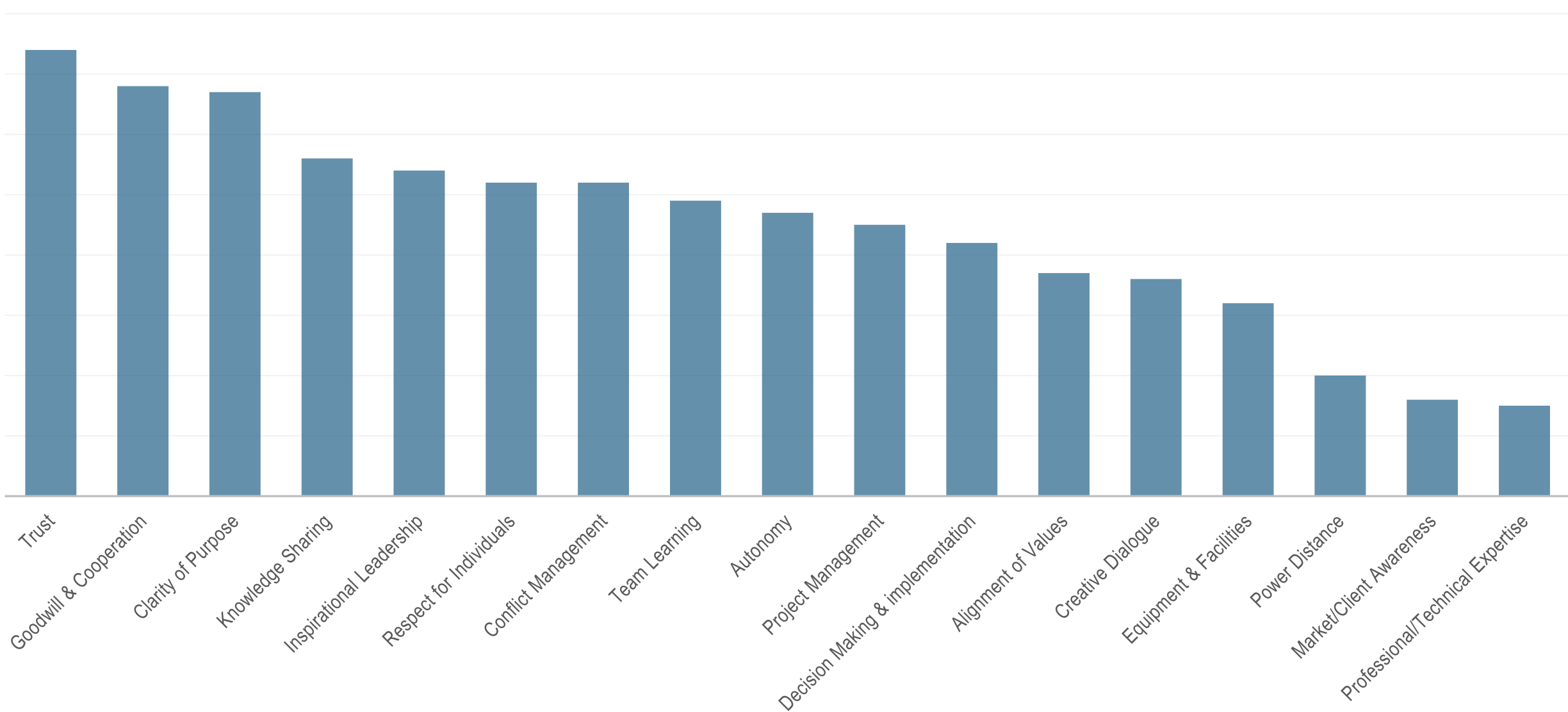
Project Results

- ▶ **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

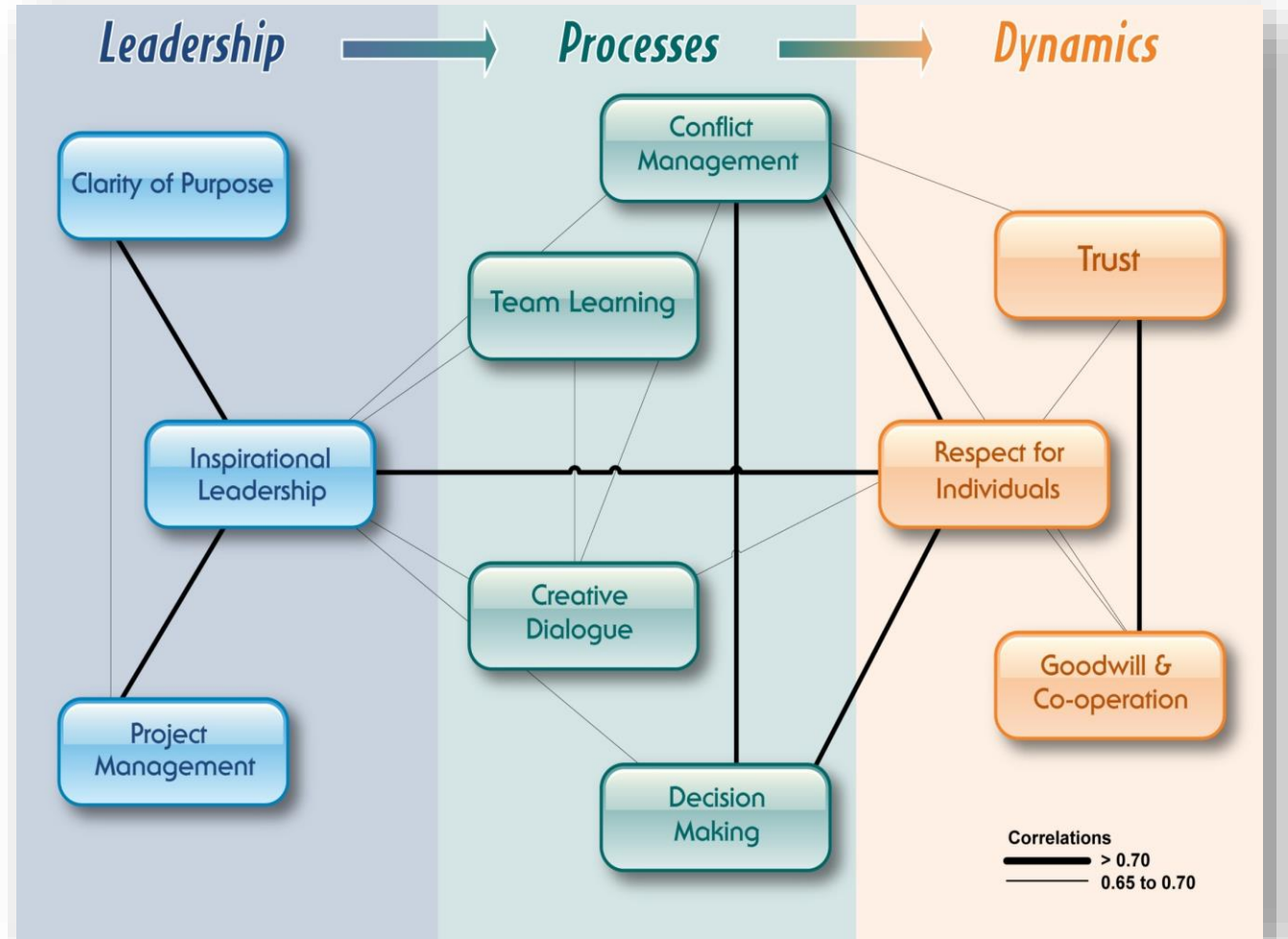
Differentiating Factors: Most and Least Effective Teams



Source: Knowledge Teams International Pty Ltd

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**



Source: Knowledge Teams International Pty Ltd

Organizational Commitment is a Must



Capability	Mostly external	Developing internal capability	P&G and EBPs fully capable
Organization	CMLT	Capital Mgmt & Purchases	Engineering & Capital Purchases
Pilot Projects	Pilots identified	Pilots in all BUs & Regions	Pilot bundling small projects
Pilot Sites	None	Lima – Center of Excellence	Expand based on workload
IFOA	No IFOA	1 st Full IFOA	Master IFOA
Capital in Lean IPD	\$0.3B	\$0.5B to \$1.5B (5% to 70% of projects)	\$1.8B (75% of projects)
% of NOS	5.0%	5.0% to 4.0%	3.2%



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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About CAG

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Continuum Advisory Group



We are a management consulting firm working exclusively with the stakeholders of the construction industry to ensure that organizational and relational strategies are in place to achieve success.



We help owners plan, manage, buy and deliver capital construction programs to optimize program delivery and the value received for capital spending.

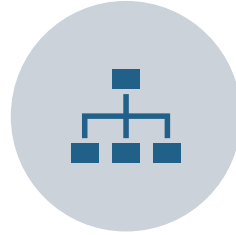


We help architects, engineers and contractors position their services as high-value to owners.

Service Offerings



STRATEGIC PLANNING



CHANGE MANAGEMENT
AND ORGANIZATION
TRANSFORMATION



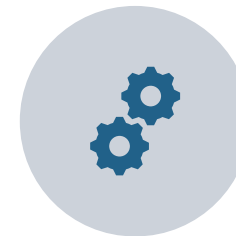
BUILDING HIGH
PERFORMING TEAMS



MARKET RESEARCH AND
ANALYSIS



ACQUISITION RESEARCH
AND GROWTH ANALYSIS



PROCESS
STREAMLINING AND
IMPROVEMENT