01_What is Lean?

LCI Lean Learning Series
Conditions of Satisfaction

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The presentation may be shared in PDF format only with the participants.
This LCI Lean Learning Series is a facilitated discussion on a particular subject matter, having to do with Lean Project Delivery, ideally leading the participants into new action.

Conducting the Discussion:

- The Facilitator shares the presentation allowing discussion along the way.
- Consider arranging the seating in a circle or other manner to support cross discussion among participants.
- Discussion questions are included to trigger a conversation.
- The Facilitator should ensure that all participants engage.
- The wrap up should include each participant sharing something new they learned.
1_What is Lean?

This topic introduces Lean Project Delivery as relevant to the design and construction industry, compares conventional delivery with Lean delivery outcomes and describes the goals and benefits of Lean.

Participants will learn the key principles that are foundational to Lean as the LCI 6 Tenets of Lean in detail.

Note: For AIA or other Continuing Education Credits, participants will need to self-report attendance and learning.
How will you reach the next level on your journey?

Going from less aware to awareness

Unaware

Awareness

Understanding

Competency

Mastery

Continuous Learning Cycle(s)
What are your dissatisfactions with the way projects currently go?
Lean:
A culture of respect and continuous improvement aimed at creating more value for the customer while identifying and eliminating waste.

Lean Project Delivery System:
An organized implementation of Lean Principles and Tools combined to allow a team to operate in unison to create flow.
Conventional Project Delivery Outcomes

- Risk is high.
- 70% of projects are delivered late.
- 73% of projects are over budget.
- Rework and waste is high.
- Teamwork is unreliable.
- Customers are not satisfied.
- Profit margins are shrinking.

Has this been the participants’ experience?
Lean Project Delivery Enables

- Risk to be collaboratively managed.
- Projects to be delivered on time.
- Projects to be delivered within the budget.
- Minimizing waste and rework.
- Team-wide reliability.
- Higher customer satisfaction.
- Fair profits for providers.
Goals of Lean Design & Construction

1. Achieve reliable workflow
2. Maximize value to the customer
3. Minimize waste
4. Optimize the whole, not the parts
5. Develop a discipline of learning and continuous improvement.
Benefits of Lean

1. Safer Working Environment
2. Fewer incidents and injuries
3. Projects being completed more effectively
4. Increased productivity
5. Satisfied stakeholders
In what ways do the goals and benefits of Lean address the dissatisfactions shared earlier?
Six Tenets of Lean

1. Respect for people
2. Optimize the Whole
3. Generate Value
4. Eliminate Waste
5. Focus on Flow
6. Continuous Improvement
1. **Respect for People**: People transform ideas and materials into value. People are essential to Lean project delivery so they must collaborate within and across teams using foundational Lean principles with the goal of optimizing overall value.

2. **Optimize the whole**, not just the parts: Most conversation about Lean focuses on the use of Lean tools, which lead to tactical implementation of Lean approaches. Beneath the tools, however, is a shift in how people and teams view processes. It requires that teams continuously learn, identify value and eliminate waste for the betterment of the overall project.

3. **Focus on customer-defined value**: Team members have the ability to understand and refine the definition of value from the customer’s point of view, and this definition becomes increasingly clear through the life of the project.
Tenets 4-6 Described

4. **Eliminating waste**: If we focus on what is of value, we can then stop doing the things that are not adding value, the waste. There are 8 categories of waste including: defects, waiting, transportation of goods, motion, inventory, overproduction, and unnecessary process steps. You can not remove waste until you know what is of value.

5. **Focus on process and flow**: Project team members collaboratively find ways to eliminate non-value adding steps, which shortens the process, all while focusing on flow efficiency.

6. **Mindset of continuous improvement**: Leaders must create an environment where experimentation is encouraged within project constraints and small, manageable failure is acceptable if the goal is to continuously improve. This atmosphere can drive innovation that will benefit the entire value stream. Lean is a focus on continual learning. If you are striving towards a specific end where the learning is done, you will lose a key component of Lean. It’s about collaborating, sharing ideas, evolving and refining approaches.
Value optimization encourages looking beyond the local and individual efforts to study the overall outcome in determining where value is added or waste can be eliminated.

Discuss how traditional contracting methods break down optimizing the whole by the inherent nature of the contract: forcing all to optimize their piece of it at the expense of the whole.
If it is not something the **client is willing to pay for**, it is **non-value added**. Everything else is **waste**, and therefore should be **eliminated, simplified or reduced**.

— “The Toyota Way” by J. Liker

Discuss this description of value. How does it differ from how we usually determine about value? It is just in regards to what is being produced (the output of the project) or the process during the project?
The goal is “To produce the right product at the right time in the right quantity for the customer and to produce exactly what you need and nothing more.”

- Taiichi Ohno, creator of the Toyota Production System
Continuous Improvement (PDCA)

Lean thinking demands a mindset of continuous improvement.

**Plan** – identify the opportunity and plan a change

**Do** – test the change at a small scale

**Check** – review the outcome, analyze the results, identify what was learned

**Act** – take action based on the learning of the check step: if satisfied with the results - continue to implement the change, if not satisfied - begin the cycle again identifying a new plan to test
How is PDCA different than a conventional mindset?
PDCA in Action

**Plus/Delta:**
A continuous improvement discussion performed at the end of a meeting, project or event used to evaluate the session or activity. Two questions are asked and discussed.

**Plus:** What produced **value** during the session?

**Delta:** What could we **change to improve** the process or outcome?

Courtesy of Jacobs
This depicts how “simple” Lean thinking really is; how it is logical. But we have lost our logic due to many reasons in the industry, including how contracts effect project teams performing together.
Discussion Question

How to Implement Lean?

What new actions or ideas that you learned today, can you take back to your work?
How will you reach the next level on your journey?

Target Value Delivery: Classroom & eLearning (release 2019)
Lean in the Design Phase: Classroom & eLearning
Mindset of an Effective Big Room: Classroom & eLearning (release May 2019)
Last Planner® System in Design: Classroom & eLearning (release 2019)
Conducting Gemba Walks: Classroom

Introduction to Lean Project Delivery: Classroom, eLearning & Webinar
Introduction to Last Planner® System: Classroom & eLearning
Lean in the Design Phase: Classroom & eLearning
Introduction to Lean in Design-Build: Classroom
The Business Case for Learn: Classroom
More on Learning

Books:

Events:
- Local Community of Practice
- Congress (October)
- Design Forum (May)

LCI Instructor Program:
- Apply to be a LCI Instructor through LCI website
- Provides access to teach LCI full courses
- Provides access to LCI materials for use
- Great to continue the Lean Journey of your company or team

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eLearning

• **Learn on your own time** without taking time off project work

• **Increase knowledge retention by up to 60%** with interactive, small-batch learning

• **Access field resources** to use with teams

• **Earn 1.5 CEUs** (self report to AGC CM-Lean and/or AIA)

• **Incentivize with LCI badging credentials** for email signatures and a certificate of completion

• **Save money** by eliminating instructor and travel expenses
  
  • *LCI corporate member volume discounts of up to 75% off*
  
  • *Reduced member pricing is available in addition to standard non-member pricing*
eLearning Courses

Available now:
• Introduction to the Last Planner® System
• Introduction to Lean Project Delivery
• Lean in the Design Phase
• Effective Big Room

Coming soon:
• Target Value Delivery (Fall 2019)
Conduct Plus/Delta

Capture on a flip pad or white board:

**Plus:** What produced *value* during the session?

**Delta:** What could we *change to improve* the process or outcome?