



Lean Construction Institute
Immersive Education Program

Ready, Set, Go Scrum

Felipe Engineer-Manriquez

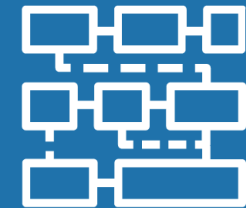


October 18, 2022

“LCI would like to acknowledge and thank Felipe Engineer-Manriquez of the Boldt Company and Stephanie Roldan of Rosendin Electric for their leadership, work, and collaboration to create this workshop. Learning opportunities like this exist because people like Felipe and Stephanie engage to create them.”

-Kristin Hill,
LCI, Director Education Programs

Workshop Learning Objectives



01.

Gain an overview understanding of the Scrum framework and terminology

02.

Understand the relationship between Scrum and Lean

03.

Experience hands-on application of Scrum

04.

See the path to use the Scrum framework individually and/or with your teammates

LCI Course:
Ready, Set, Go Scrum
4 CEU

Sign the sign-in sheet for credit

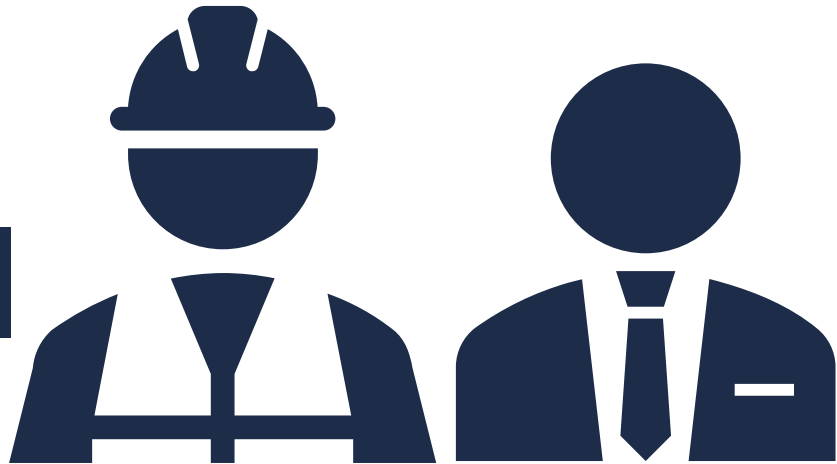


**Approved
Continuing
Education**

Introductions via Post-it notes



My name / role is...



years Lean experience

Felipe
Project Delivery
Support
10+ | 25+

_____ is the
one thing I must
learn in this
session.



years in industry

Rules of Engagement



This is a safe zone



Use E.L.M.O.



Everyone has equal status



Silence phones



Speak up and share your ideas



Be focused and engaged



Actively listen to others



Stay on time



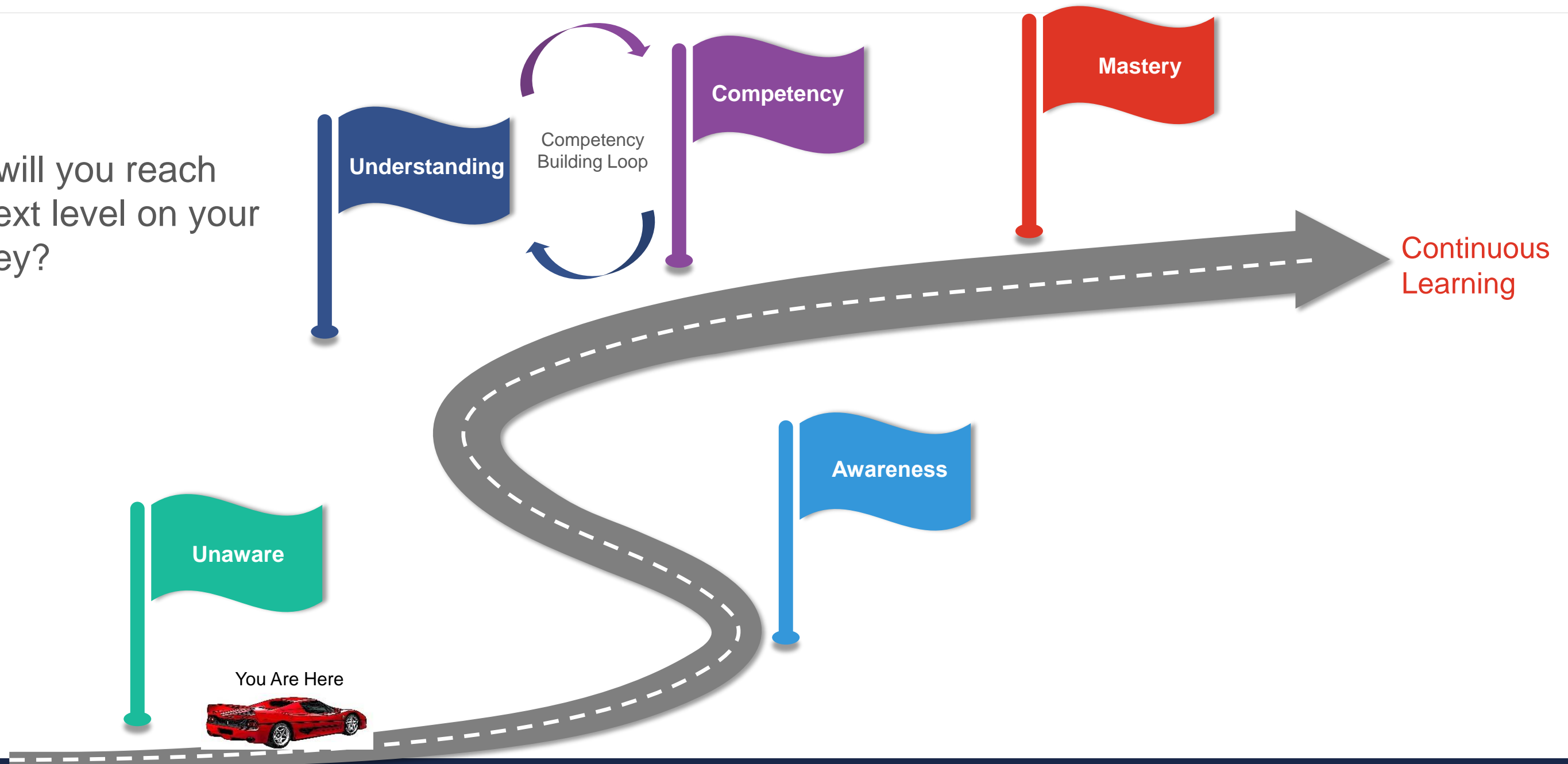
One conversation at a time



Have fun!

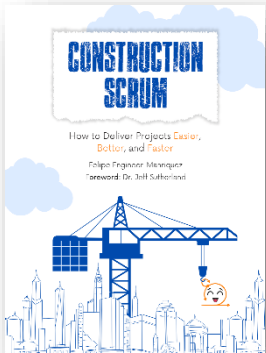
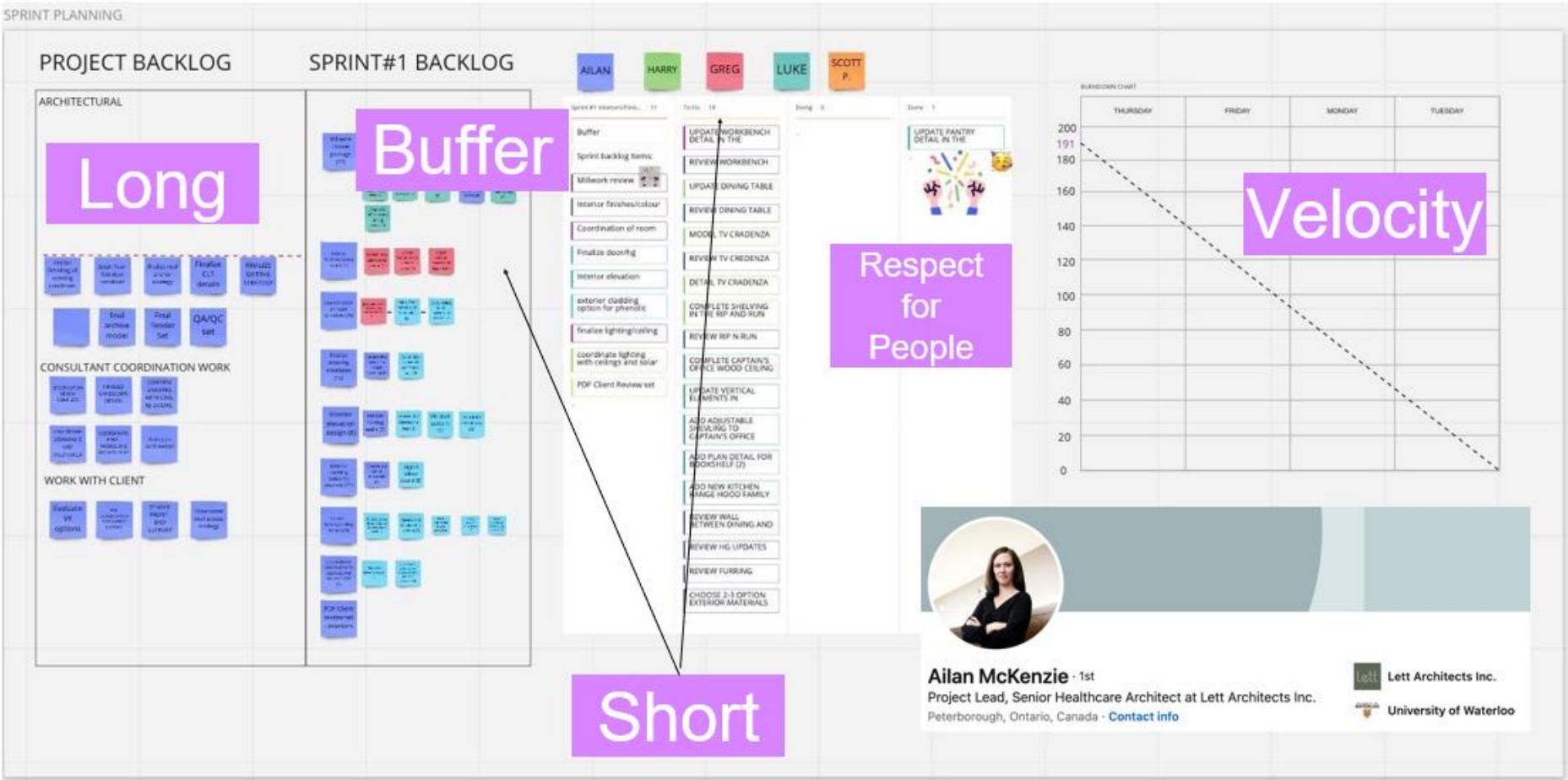
Lean Journey to Mastery

How will you reach
the next level on your
journey?



Questions?

Scrum In Design for More Creativity



<https://thefelipe.bio.link/>



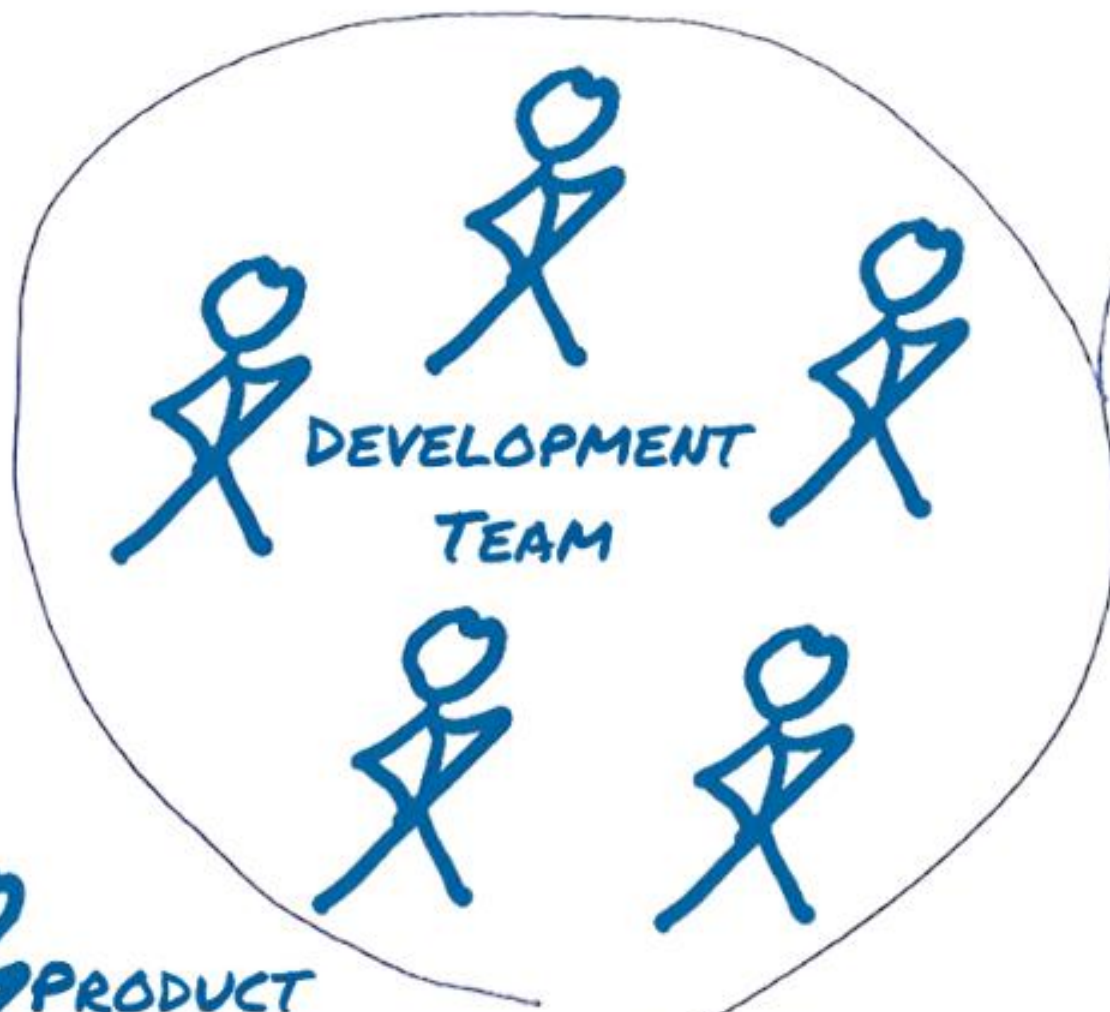
WARNING

Using Lean principles and Agile methods result in increased capacity.

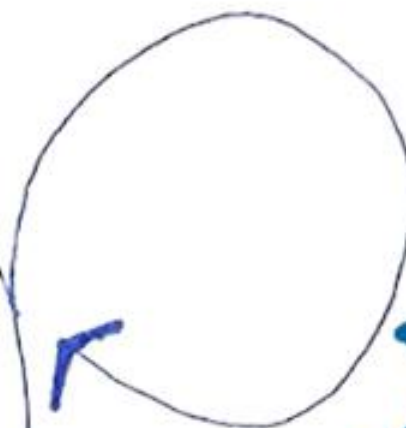
More time to improve, optimize, and coach others will be YOUR problem.



GOAL



DEVELOPMENT
TEAM



SCRUM
MASTER

DAILY
SCRUM



<https://thefelipe.bio.link/>

SPRINT
PLANNING



PRODUCT
OWNER

BACKLOG

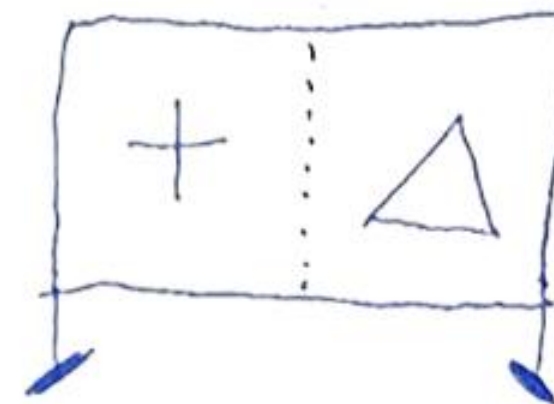


SPRINT TIME BOX

SPRINT
REVIEW



SPRINT
RETROSPECTIVE



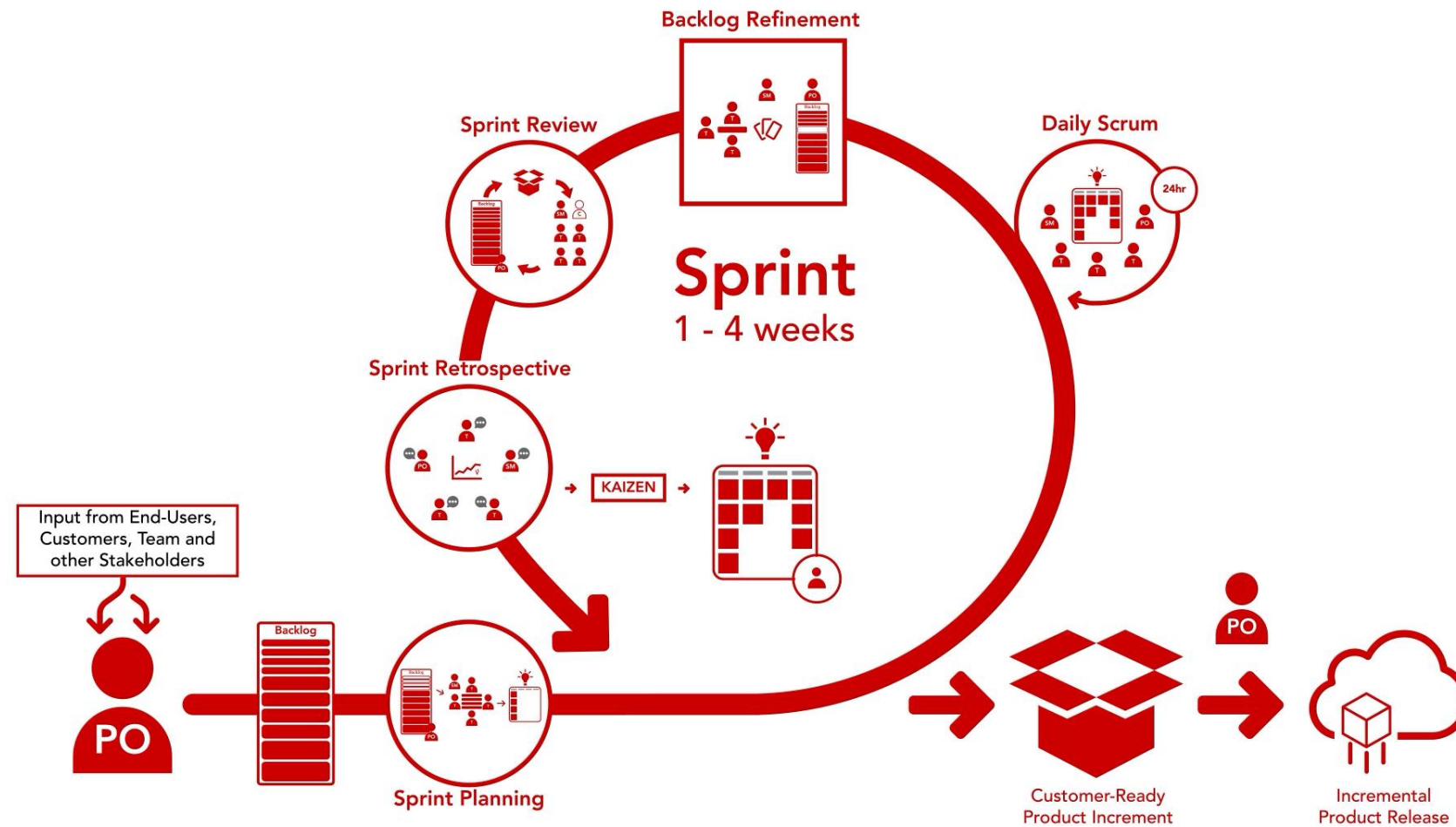
What is Scrum?



What is Scrum

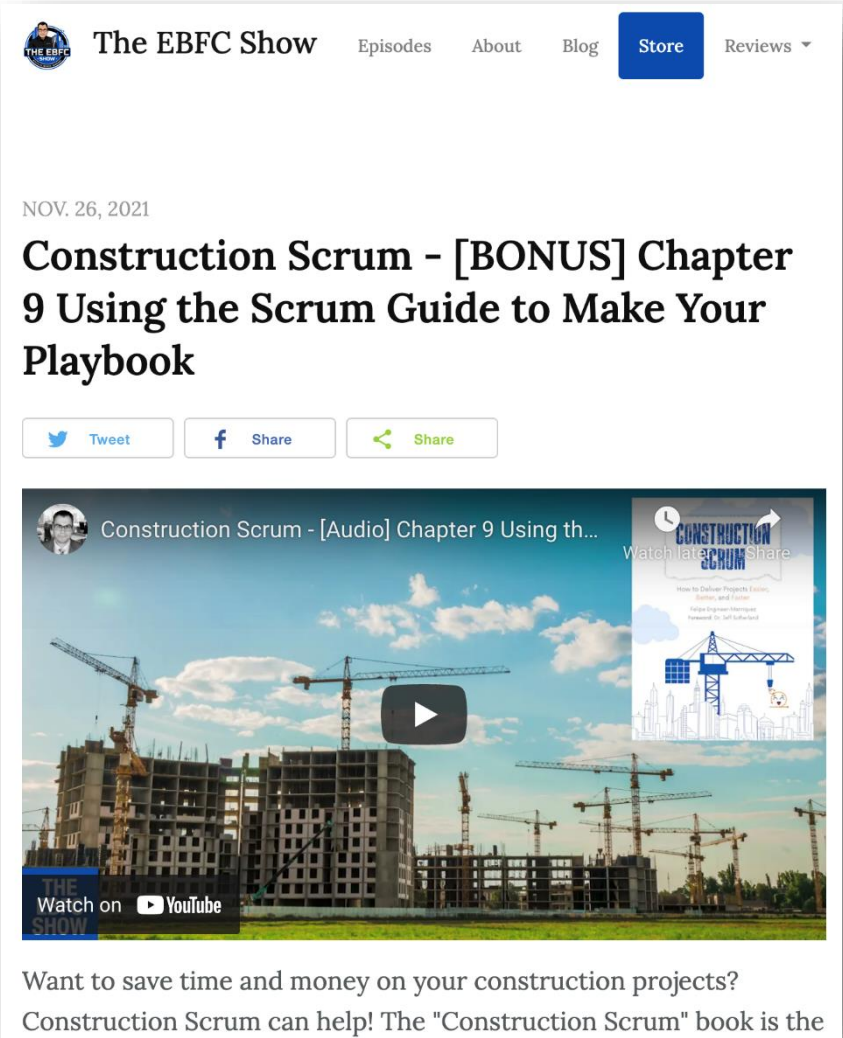
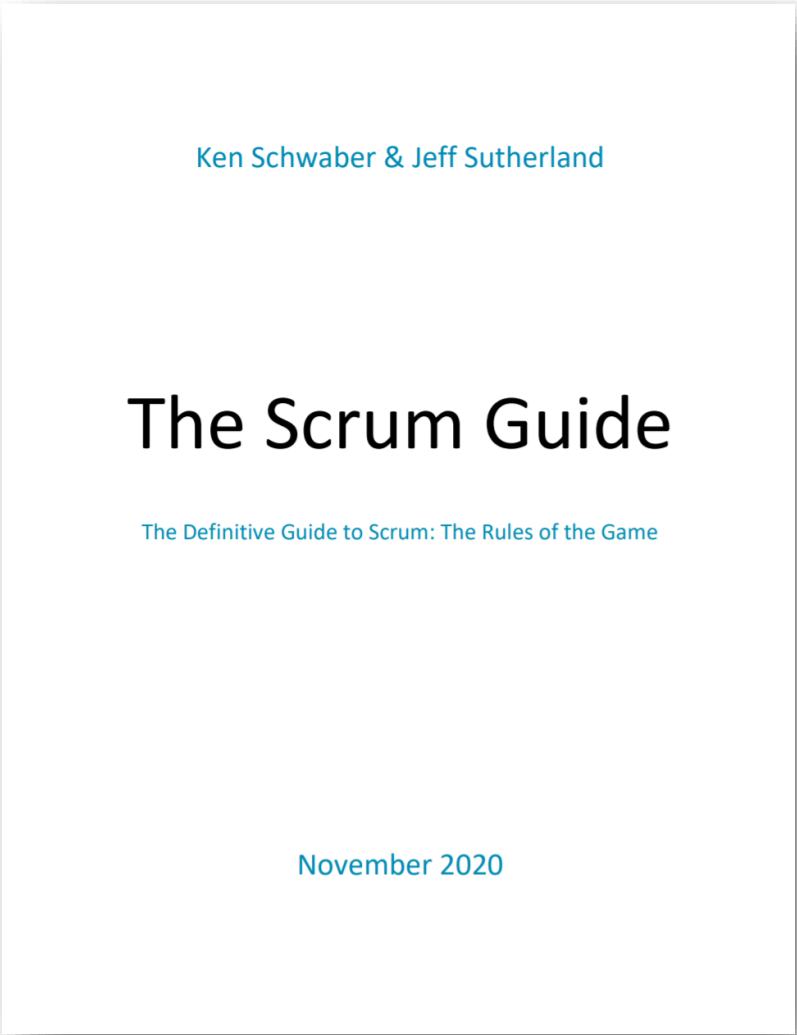
<https://youtu.be/TRcReyRYIMg>

What is Scrum?



[Updated] Scrum Framework: How Scrum Works Today

https://youtu.be/zVNnElf_PLY



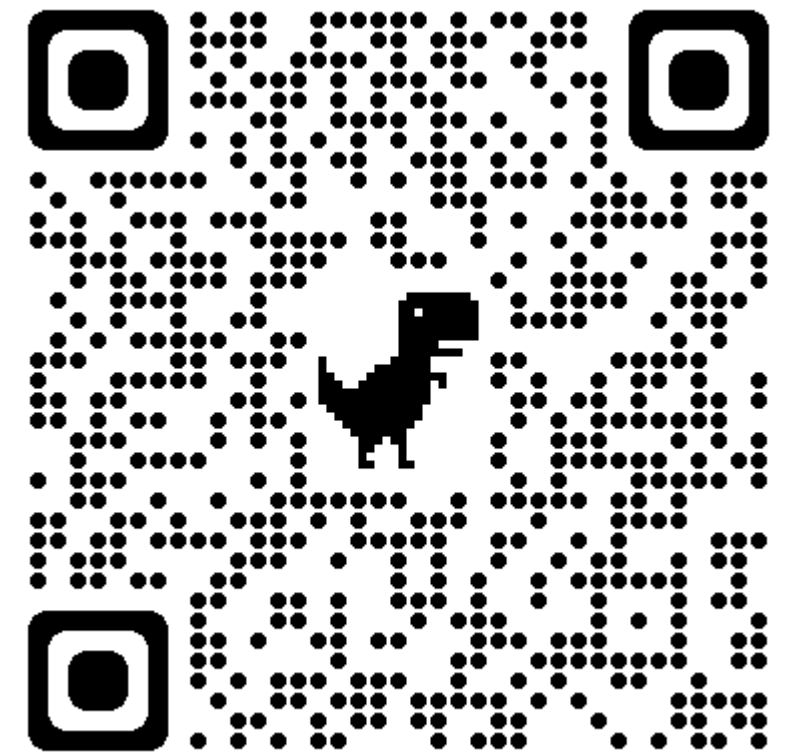
<https://www.theebfcshow.com/construction-scrum-bonus-chapter-9-using-the-scrum-guide-to-make-your-playbook/>



Basics for getting started include:

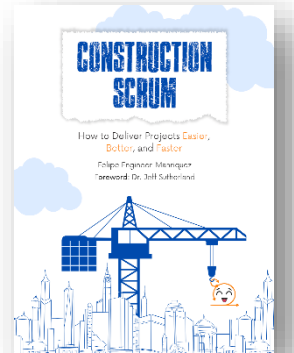
- Understanding the essential Scrum Framework
- Courage
- Scrum Board
 - Makers
 - Post-Its
 - Scrum Board

<https://store.theebfcshow.com/lci2022-scrum>



Questions?

Scrum In Construction for Pursuits & More

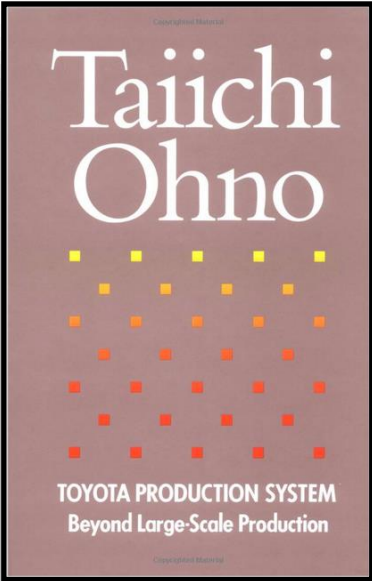


<https://thefelipe.bio.link/>

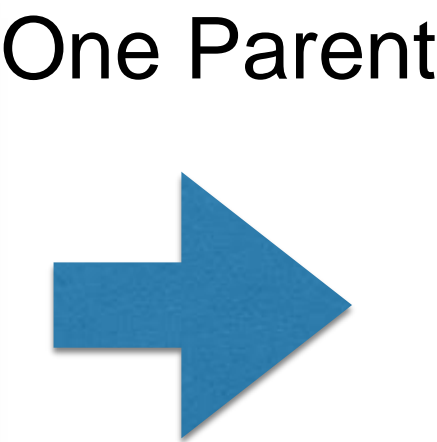
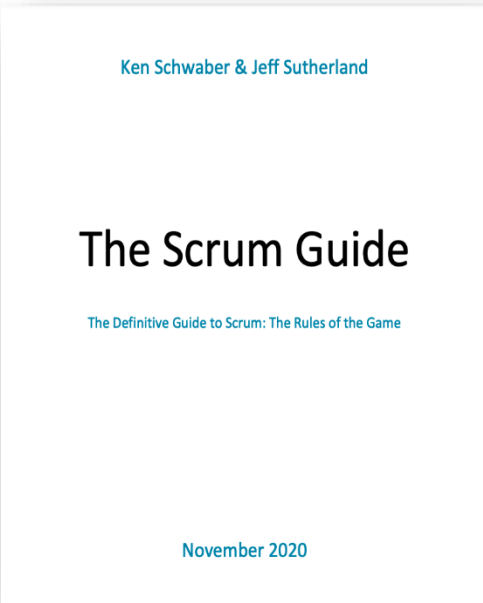


Scrum and Lean Connection

TPS
1950s



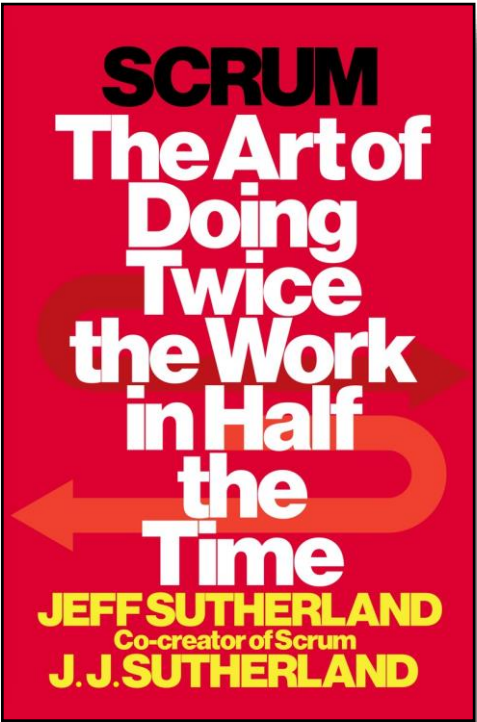
Scrum Guide
1990s - Today



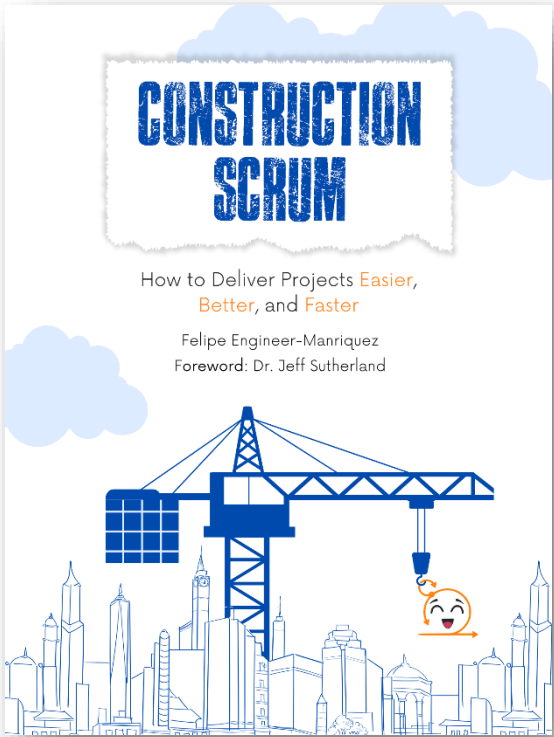
Agile
2001



Scrum
Red Book
2014



Construction
Scrum
2021



Six Tenets of Lean

- 1 Respect for people
- 2 Generate Value
- 3 Focus on Flow
- 4 Eliminate Waste
- 5 Continuous Improvement
- 6 Optimize the Whole



Value-Added Work 2 Generate Value



***20% - 40%**
of design and construction
work is value-added from
the perspective of the
customer



Does waste impact my work?

4

Eliminate Waste



What are the different types of waste in LEAN?

https://youtu.be/NJN-lsk_DLU

Non-Value Adding Activities

Defect

Effort involved in inspecting for and fixing defects such as data entry errors

Overproduction

Unnecessary efforts producing work in excess or ahead of customer requirements like processing items before they're required for the next process

Waiting

Waste through delays or stoppages such as waiting for instructions, waiting for the next production step, or simply running slow computers

Non Utilized Talent

Aspects such as ignoring improvement ideas from people on the floor or restricting employees' responsibilities to make routine decisions

Travel / Transportation

Unnecessary movement of work, for example sequential process steps are not co-located or files are being transported from one location to the other

Inventory

Holding information and material longer than required such as piles of unprocessed work, unread emails or overstocked marketing materials

Motion

Non-value-added movements of people such as unnecessary meetings or walking to the copier and printer

Excess Processing

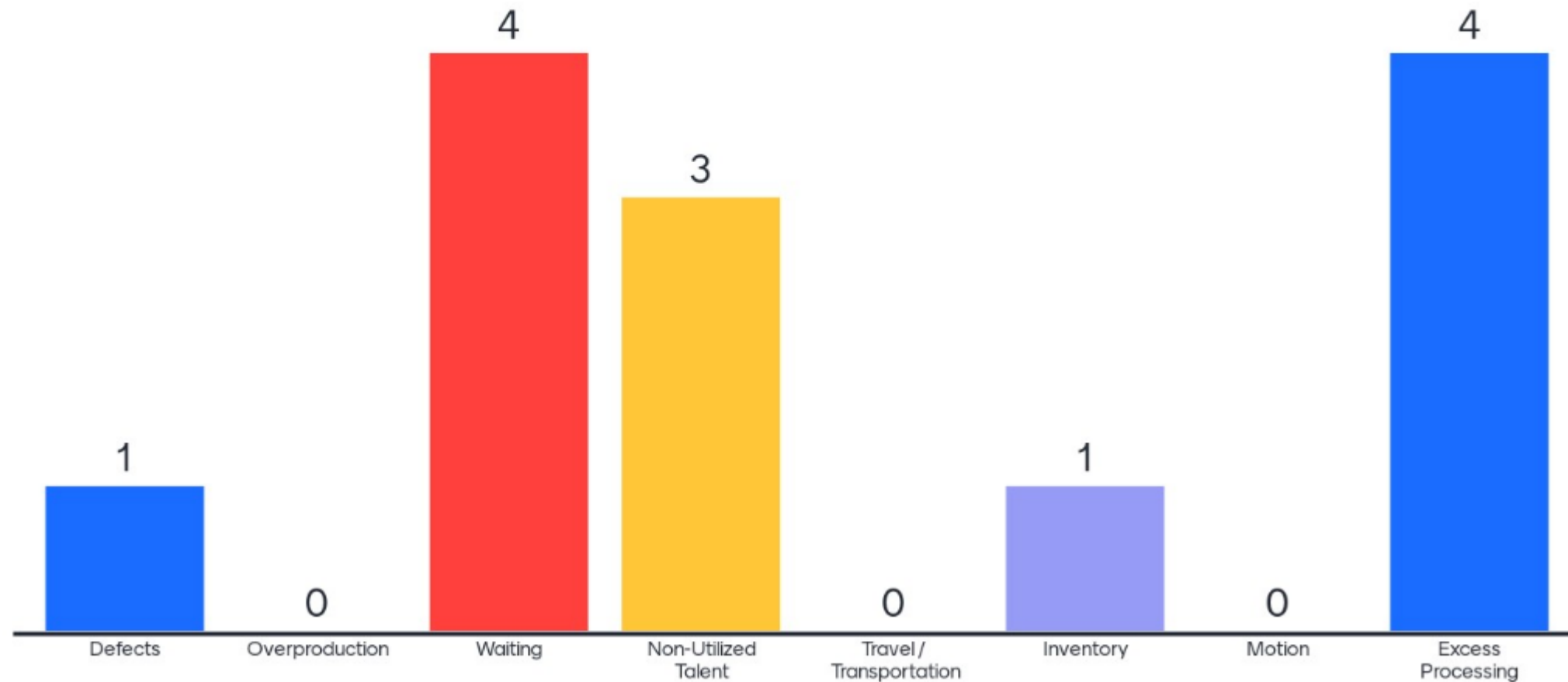
Unnecessary activity due to complex processes and systems such as too many approvals or an application form where the same data is needed in different places

_____ is one type of waste that impacted me last week.

2022
LCI Design
Forum Results

Which impacted you most this week?

DOWNTIME

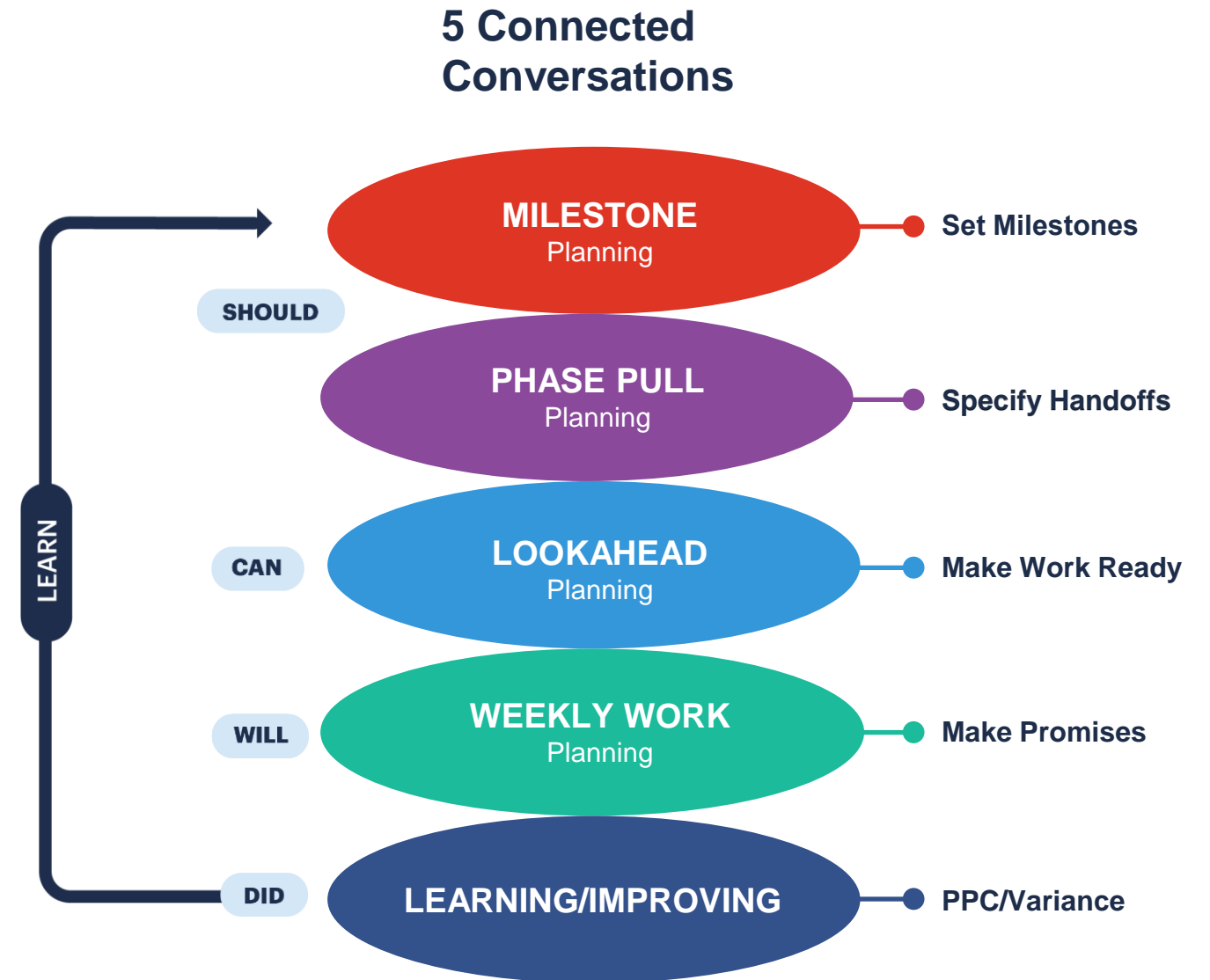


5 Connected Conversations Of LPS®

The LPS is a commitment-based system integrating 5 connected planning conversations at 5 levels:

1. Milestone Planning (Should)
2. Phase Pull Planning (Should)
3. Lookahead Planning (Can)
4. Weekly Work Planning (Will)
5. Learning & Improving (Did/Learn)

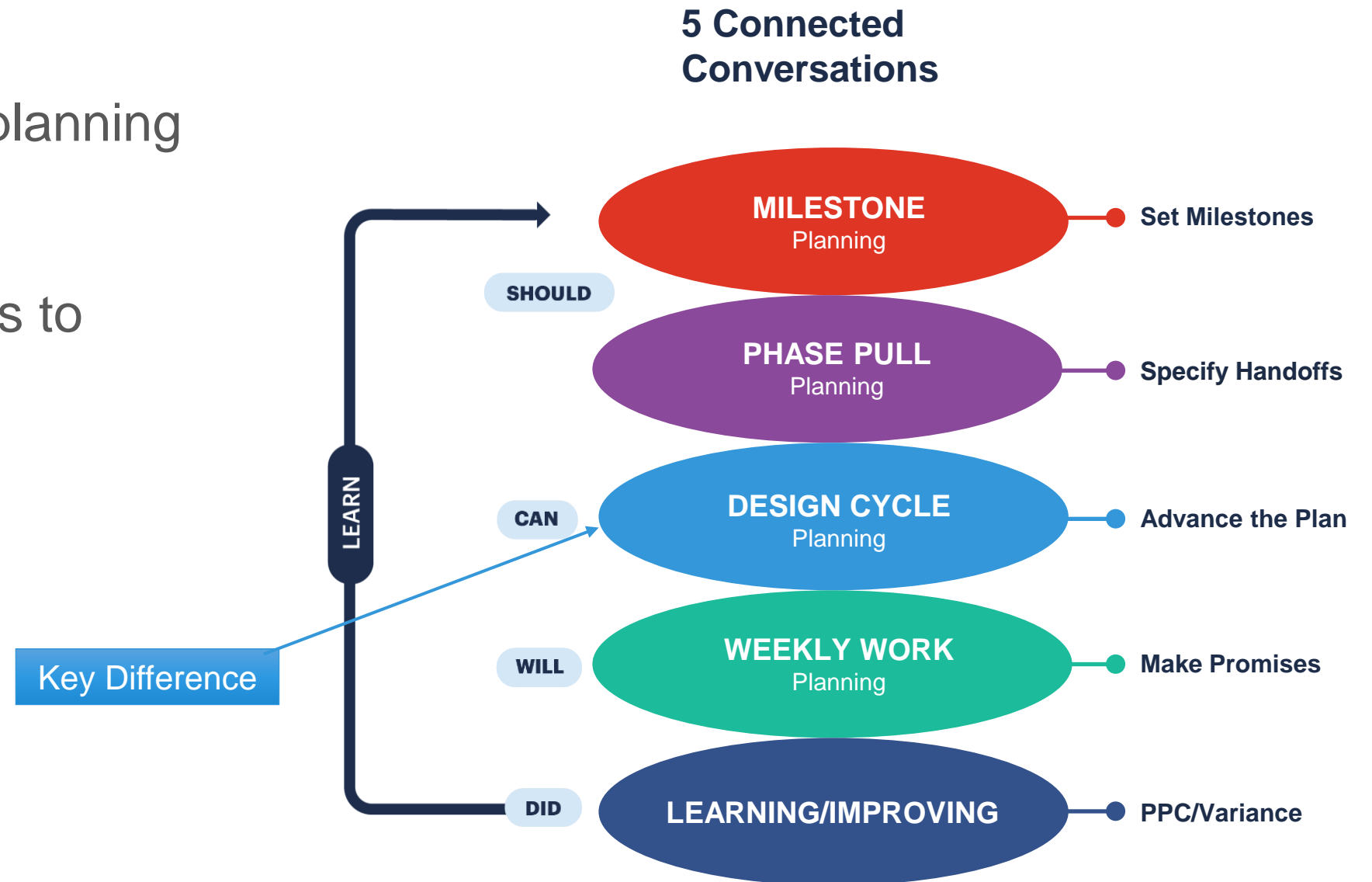
The Last Planner System® (LPS®) is a registered trademark of the Lean Construction Institute.



LPS® Modified For Design

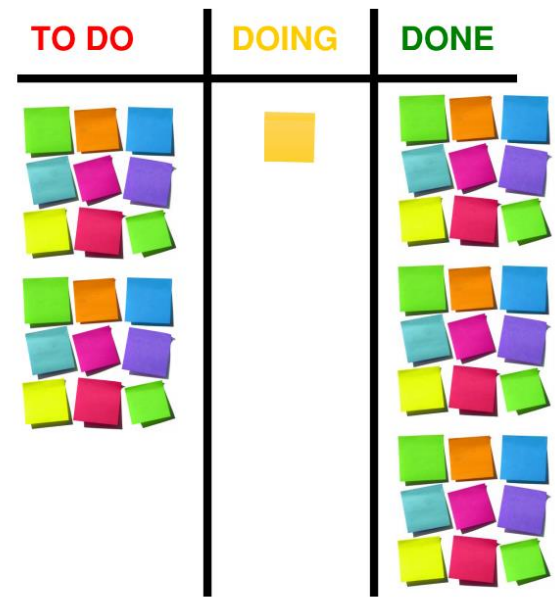
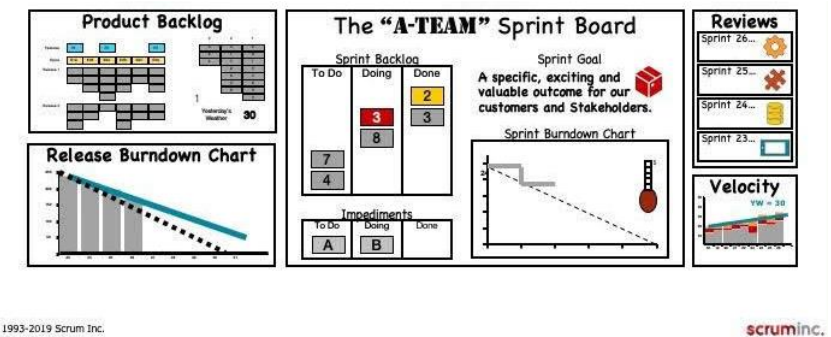
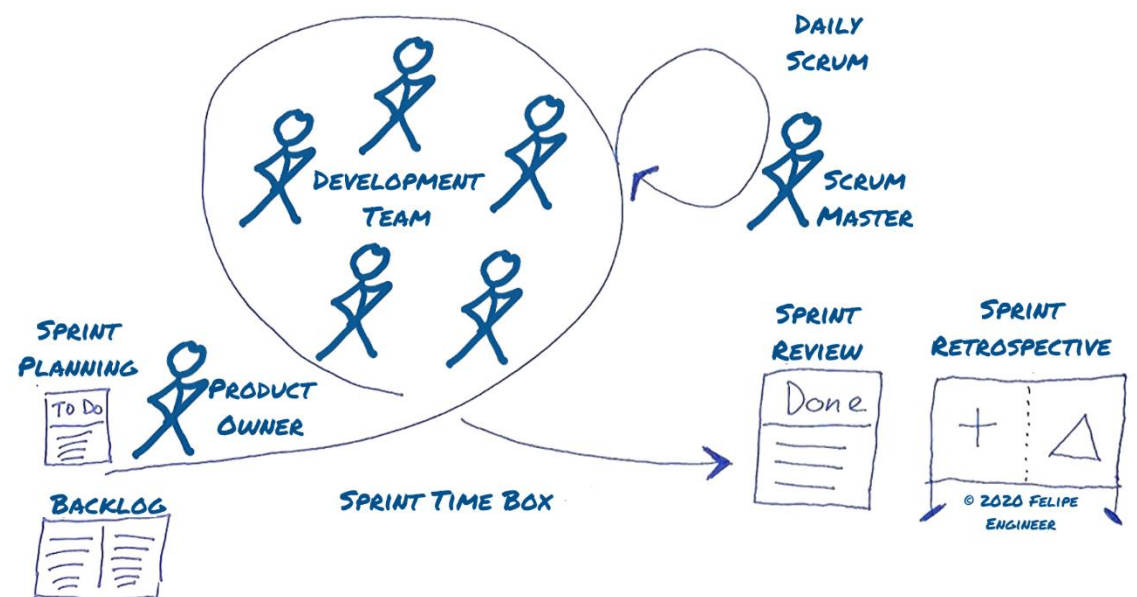
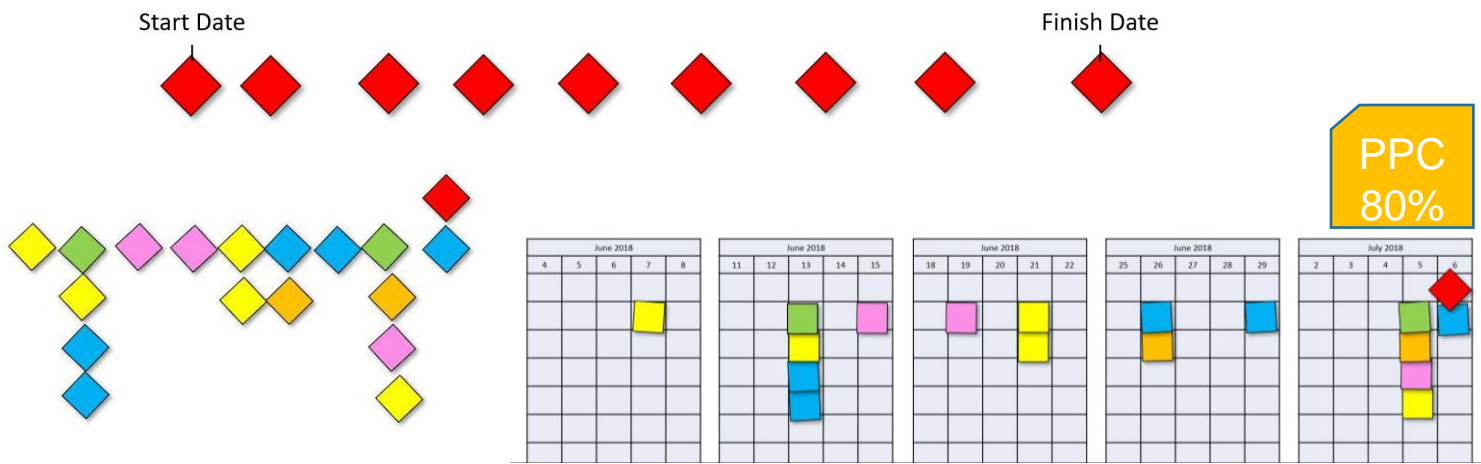
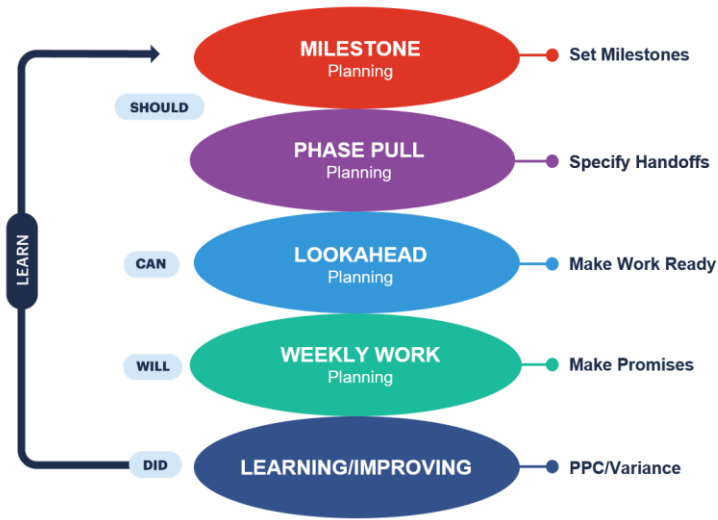
In modifying LPS for design, the 5 planning conversations remain the same.

The *Lookahead Planning* level shifts to *Design Cycle Planning*.

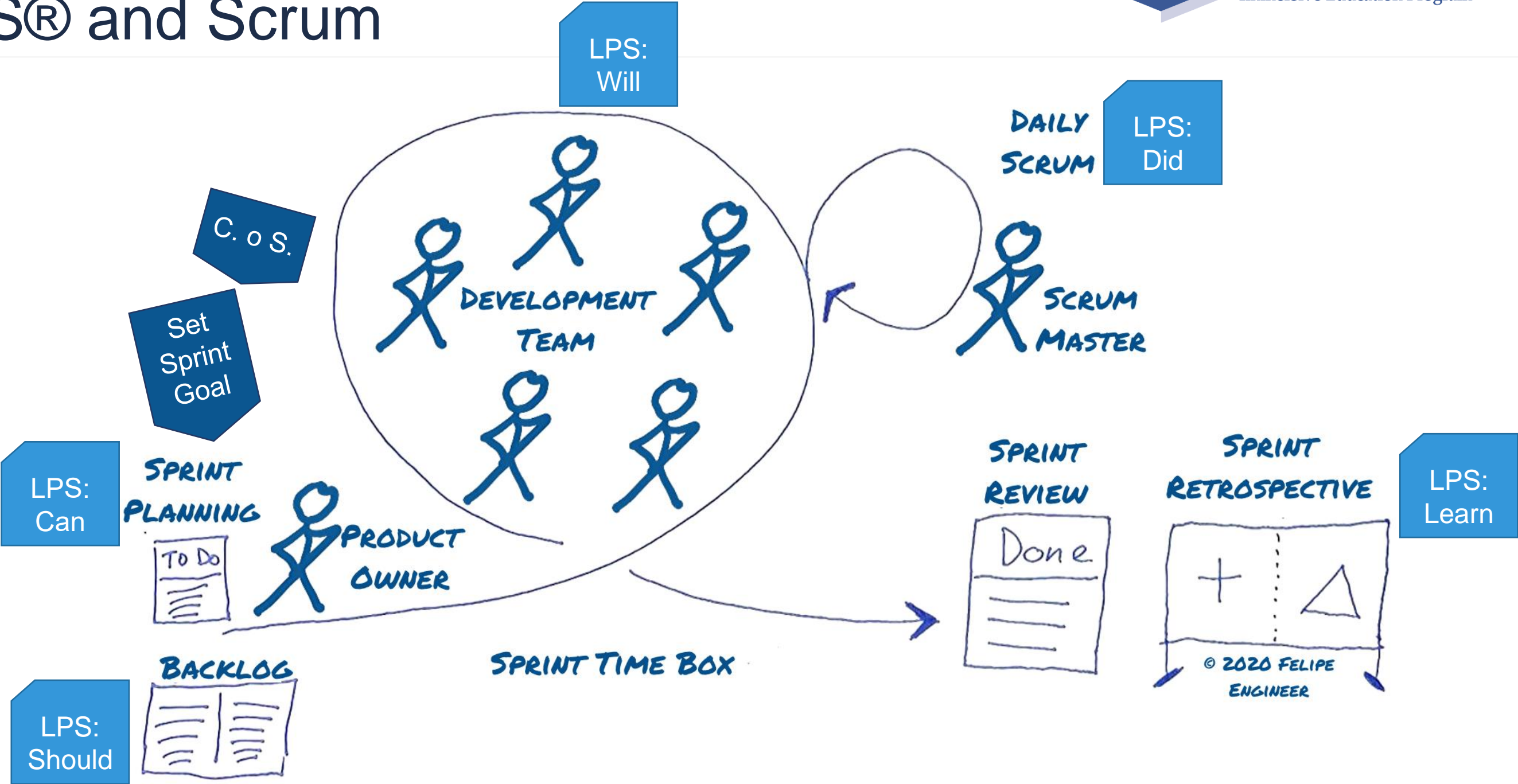


LPS® and Scrum

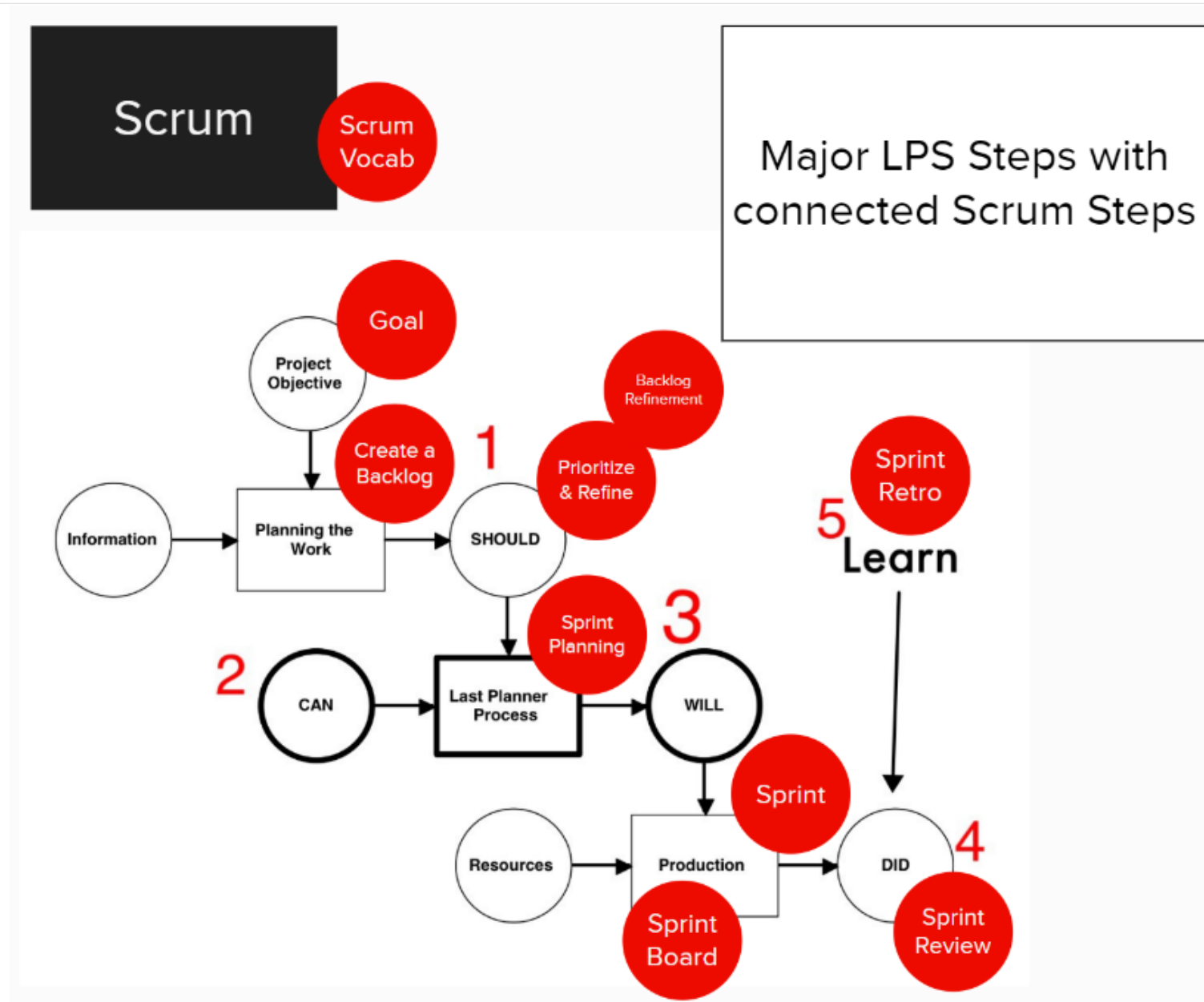
5 Connected Conversations



LPS® and Scrum



LPS® and Scrum



LPS® and Scrum

Milestones

Milestone Pull



Production Strategy

Why? To collaboratively develop an execution plan to meet or beat the milestones in the Master Schedule with the project managers and superintendents who are responsible for overseeing performance of the work ("Last Planners") resulting in stable & predictable workflow.

Schedule Milestone

A significant event in the project schedule, such as an event restraining future work or marking the completion of a phase/deliverable.

Phase

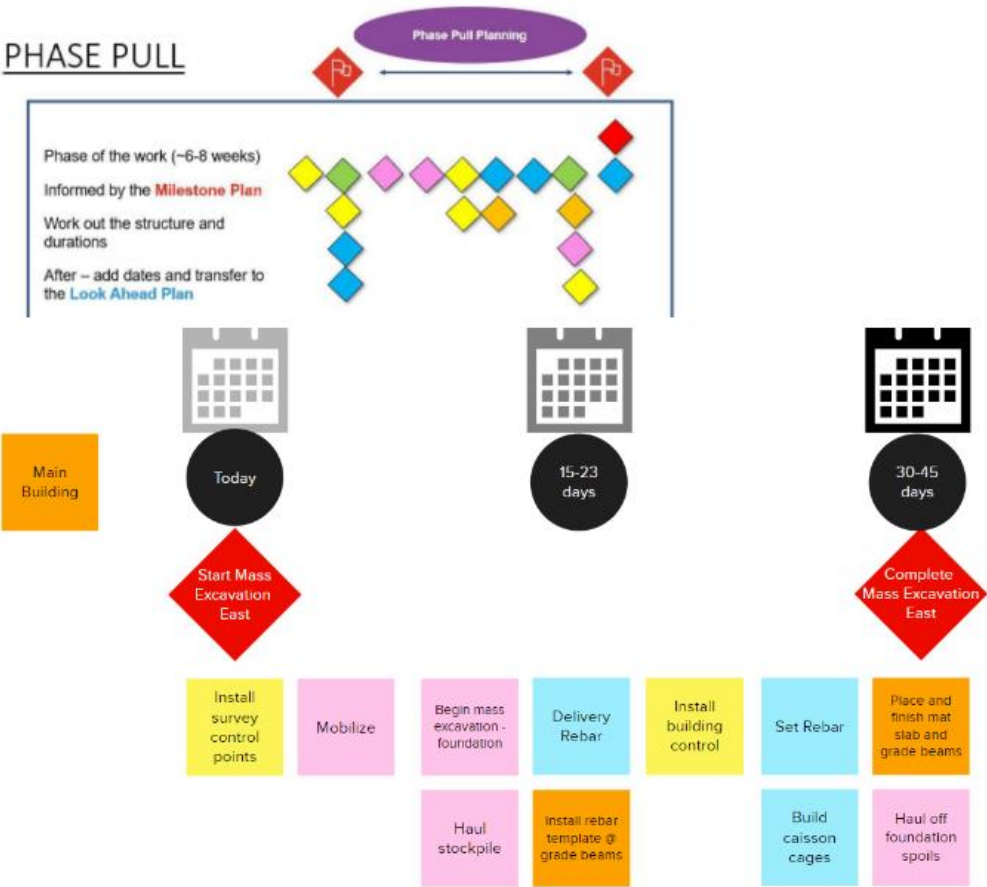
Schedule Phase

A collection of logically related project activities that culminates in the completion of one or more deliverables.

Production Strategies

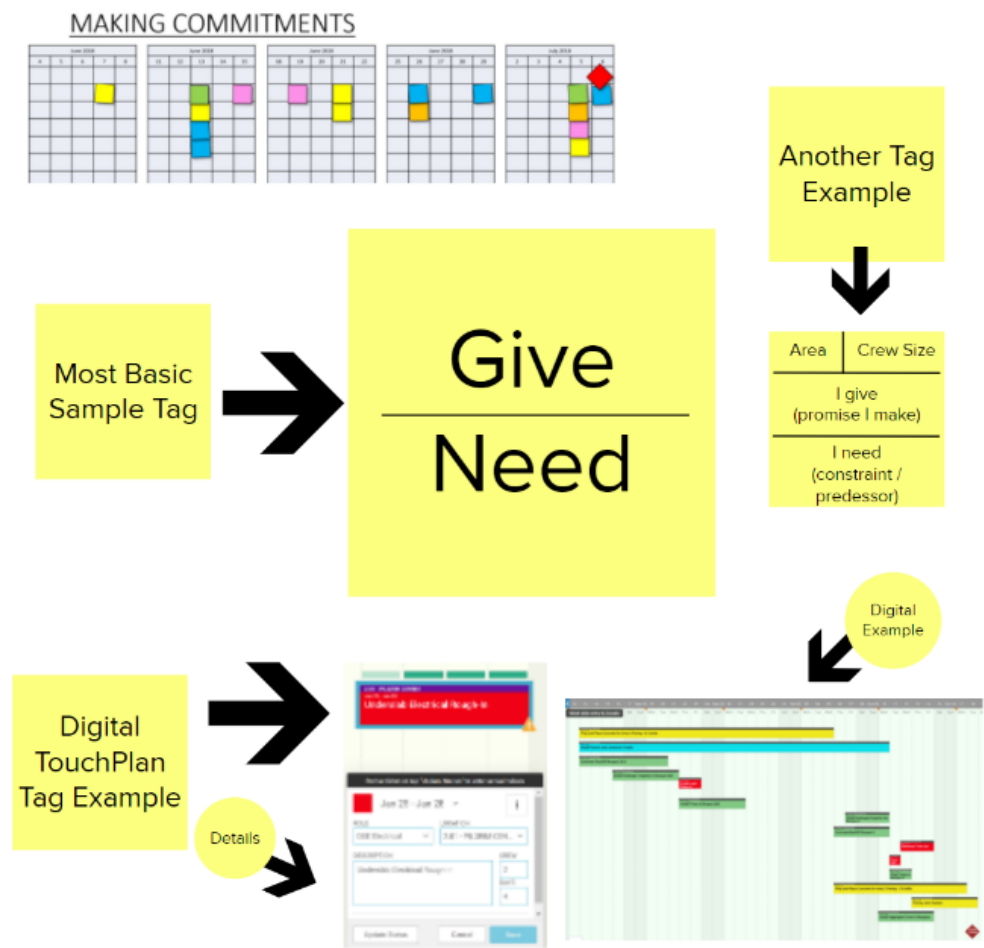
- Establish major phases of work between milestones with project team's input
- Establish Flow (Takt) planning for repeatable areas identified
- Develop pull plans
- Align resources (supply chain, material handling) to plan and production rules
- Identify crew/team sizes and develop labor plans

PHASE PULL



LPS® and Scrum

Look Ahead & Weekly Work Planning



Weekly Agenda

Before meeting:
Assign status to your tags:
☒ I am done: ☐ I'm not done:
Make New Sticky Notes:
(Add to bottom of Look Ahead)


Task / Constraint

What did we do?
Confirm completed tasks
Percent Plan Complete

Learn
Assess Variances

- Over committed
- Miscommunication
- Dependent on task not completed
- New information / Change in Plan

What will we do?
Make tasks ready.
Identify constraints/needs.
Commit to remove constraints.
Make reliable promises.
Commit in 1-2 week batches only.

Etiquette
 **Sticky Note Etiquette:**
1. Make your own tags.
2. Do not move others' tags without asking.
3. Do not move tags outside of the meeting.

Weeks 1 - 3

Monday	Tuesday	Wednesday	Thursday	Friday
Start Mass Excavation East Road			PPC: 5 actual / 6 planned = 83%	
Install survey control points	Install survey control points	Mobilize	Begin mass excavation - foundation	Begin mass excavation - foundation
		Begin mass excavation - foundation / Building Pad Survey		

Week 2

Monday	Tuesday	Wednesday	Thursday	Friday
Begin mass excavation - foundation	Delivery Rebar	Install rebar template @ grade beams	Set Rebar / Building Survey Control Points	Set Rebar
Haul stockpile	Install rebar template @ grade beams / survey	Install building control		

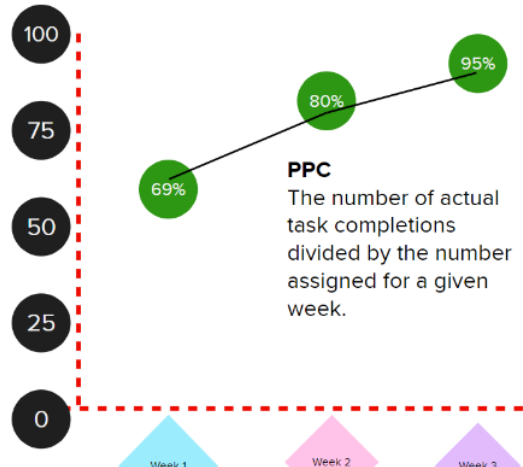
Week 3

Monday	Tuesday	Wednesday	Thursday	Friday
Set Rebar	Place and finish mat slab and grade beams / Rebar and Caisson Cages	Place and finish mat slab and grade beams / Rebar and Caisson Cages	Place and finish mat slab and grade beams	Haul off foundation spoils
Build caisson cages		Constraint: Meet up Approval		

PPC actual / planned %

Complete Mass Excavation East

Plan Percent Complete (PPC)

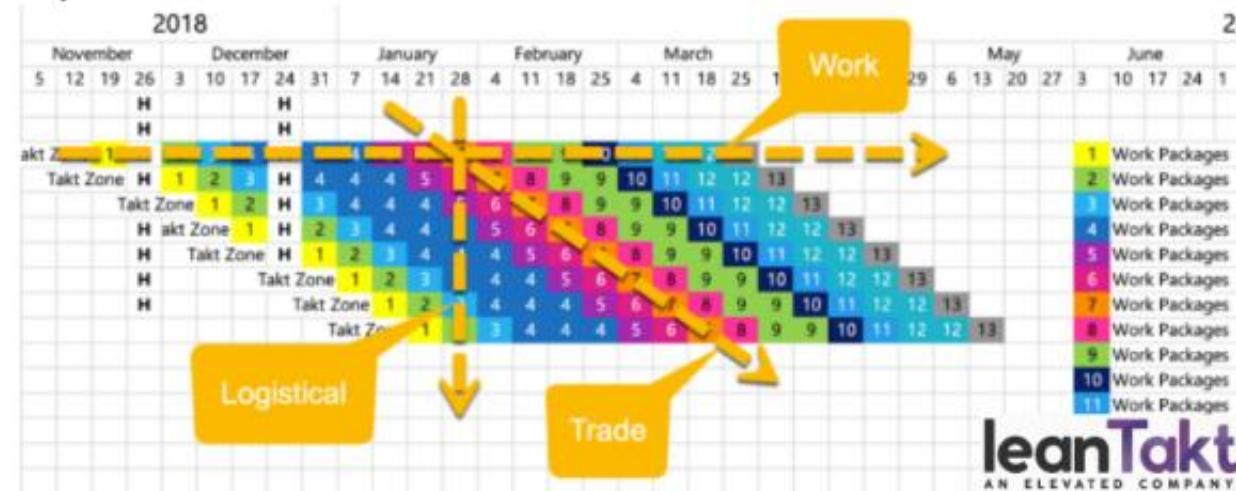


PPC
The number of actual task completions divided by the number assigned for a given week.

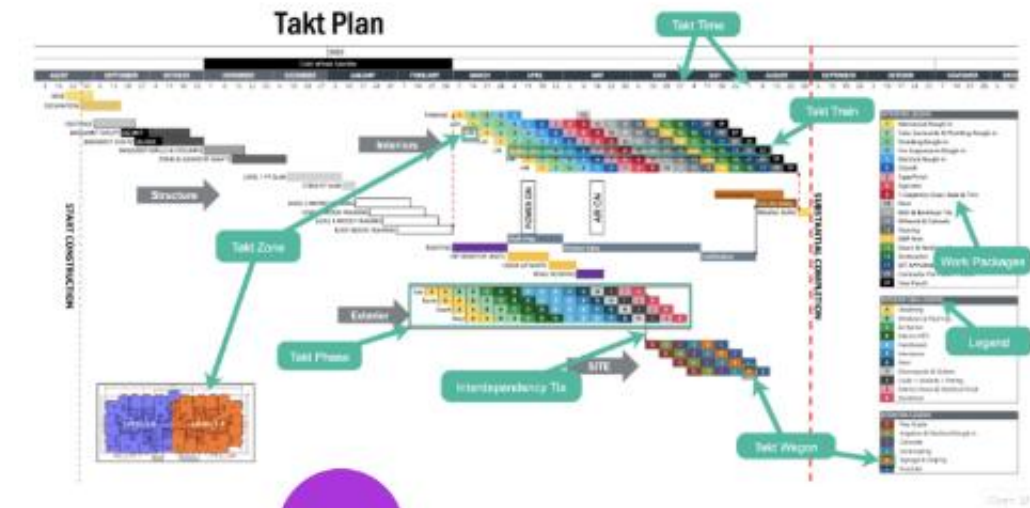
LPS® and Scrum (*and Takt*)

"Takt is Scrum." Jason Schroeder, President of Elevate Construction & leanTakt

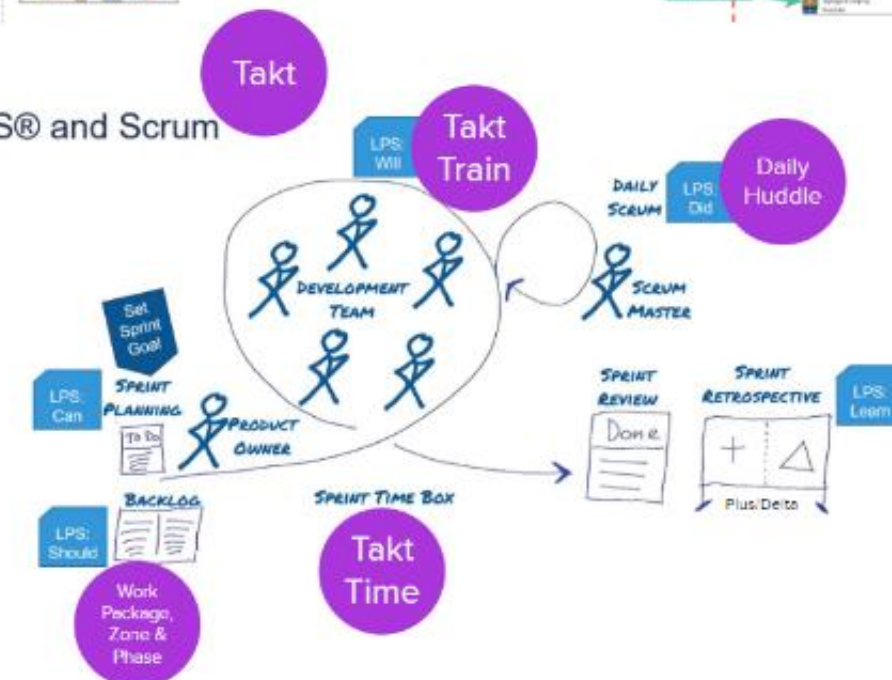
Takt planning makes work happen on a beat frequency or cycle. In Scrum we call this the Sprint.



These frameworks enable Critical Flow schedules that focuses on information and work throughput and bottlenecks (constraints), to enable flow (work, trades, logistics).

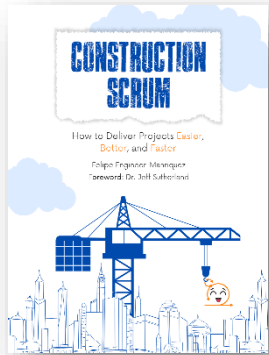
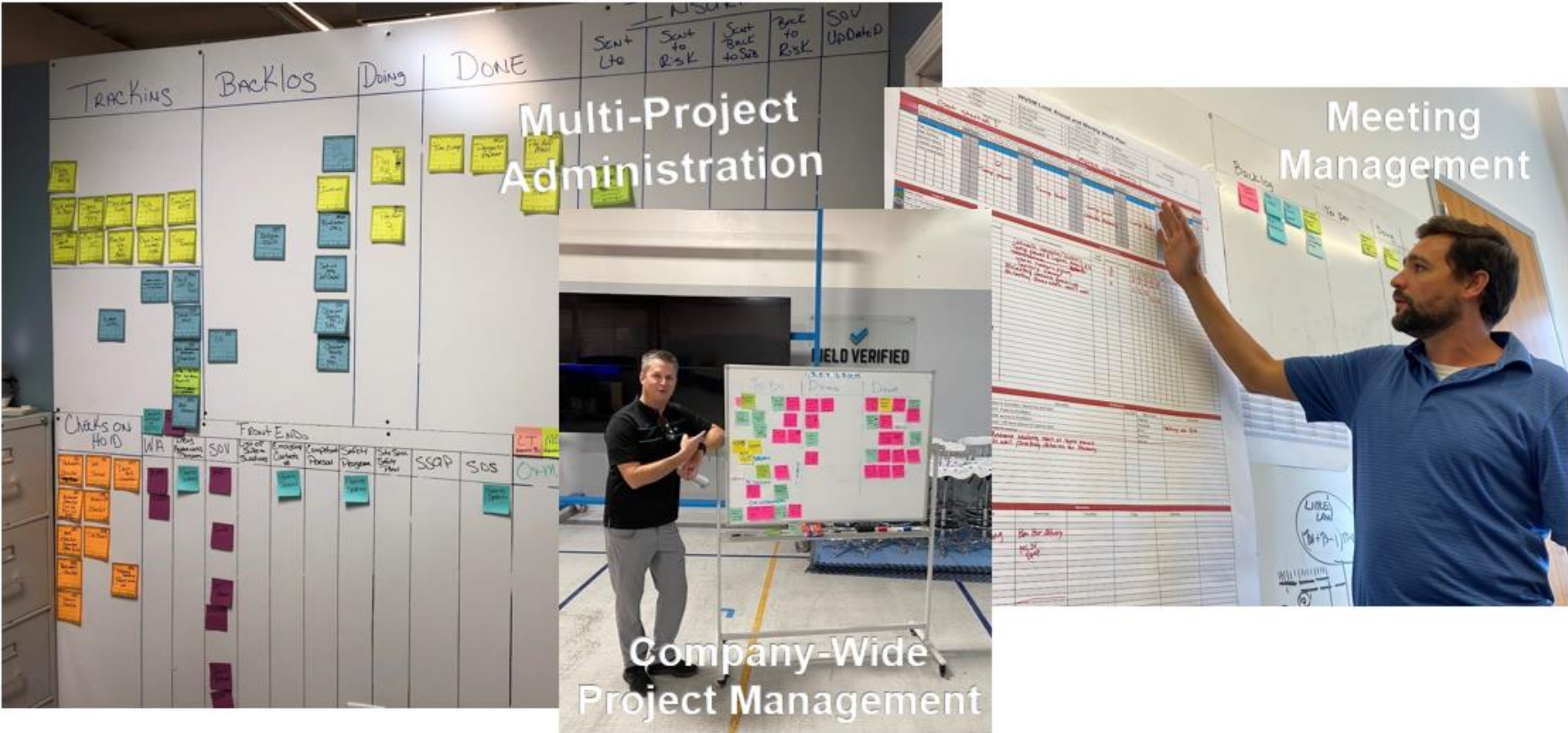


LPS® and Scrum



Questions?

Even More Scrum In Construction



<https://thefelipe.bio.link/>



Fundamental Scrum Board

TO DO		DOING	DONE
<div>Play Scrum Game</div>	<div>Watch Scrum video</div>		
<div>Task Note (action-oriented descriptions)</div>	<div>Understand Scrum board basics</div>		

Fundamental Scrum Board

TO DO		DOING	DONE
<div>Play Scrum Game</div> <div>Task Note (action-oriented descriptions)</div> <div>Understand Scrum board basics</div>		<div>Watch Scrum video</div>	

Fundamental Scrum Board

TO DO	DOING	DONE
<div data-bbox="117 616 597 1098"><p data-bbox="147 777 566 937">Play Scrum Game</p></div>	<div data-bbox="1222 581 1703 1064"><p data-bbox="1253 656 1672 989">Understand Scrum board basics</p></div>	<div data-bbox="1798 572 2279 1055"><p data-bbox="1921 690 2156 937">Watch Scrum video</p></div>
<div data-bbox="117 1137 597 1619"><p data-bbox="147 1229 566 1527">Task Note (action-oriented descriptions)</p></div>		

Another Fundamental Scrum Board Example



Fundamental Scrum Board

TO DO	DOING	DONE
<div>Play Scrum Game</div> <div>Task Note (action-oriented descriptions)</div>	<div>Understand Scrum board basics</div>	<div>Watch Scrum video</div>

Fundamental Scrum Board

TO DO	DOING	DONE
<div>Task Note (action-oriented descriptions)</div>	<div>Play Scrum Game</div>	<div>Watch Scrum video</div> <div>Understand Scrum board basics</div>

Sprint Goal “Learning Done Right”



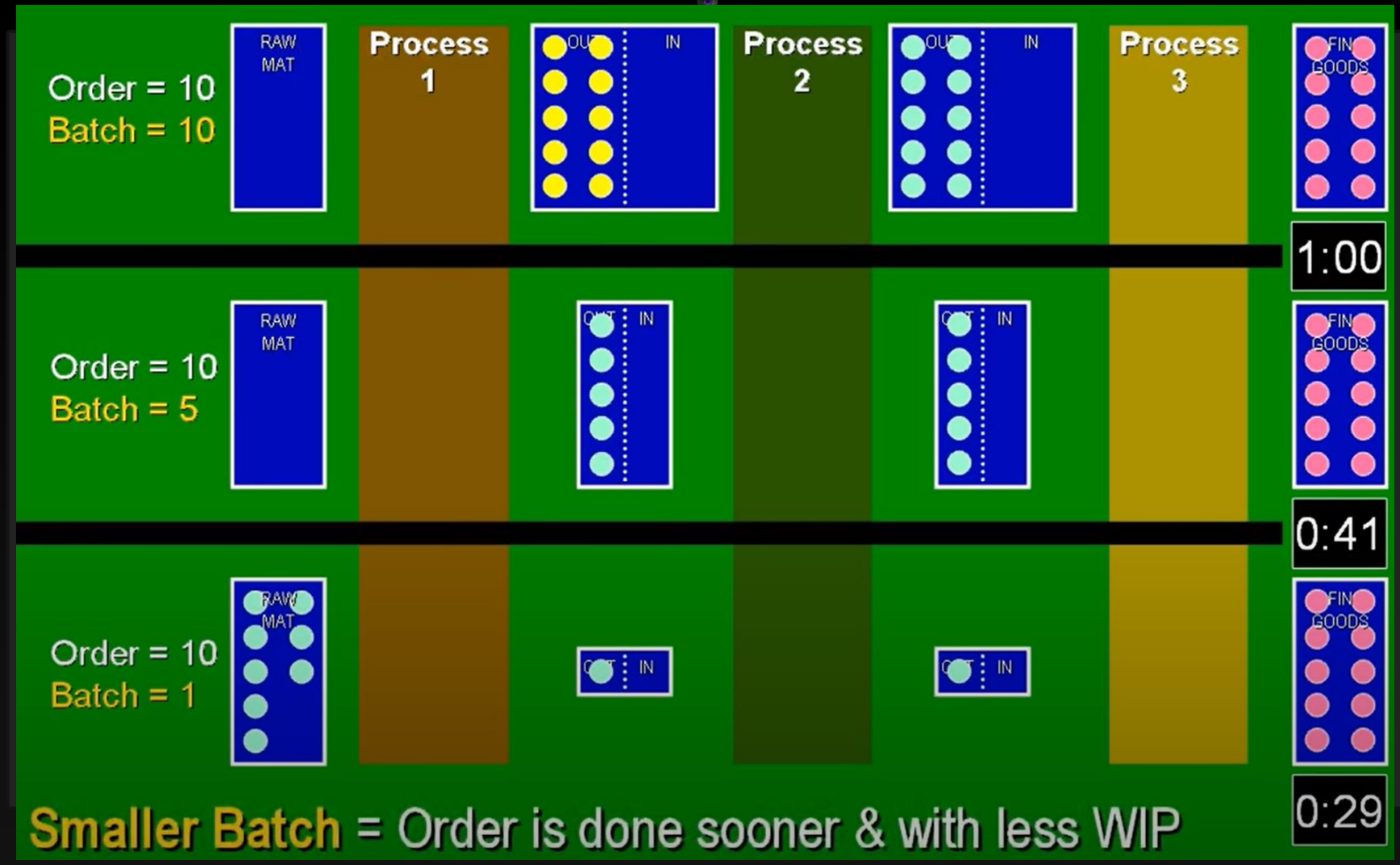
Let's move as
ONE



fast and furious 8 Dwayne Johnson entry| Haka dance by the rock|

<https://youtu.be/2BPvFnyWAG0>

**Batch size matters...,
What about
Multi-tasking?**



ONE PIECE FLOW versus BATCH PRODUCTION - Lean Manufacturing

<https://youtu.be/JoLHKSE8sfU>

TO DO

DOING

DONE

1

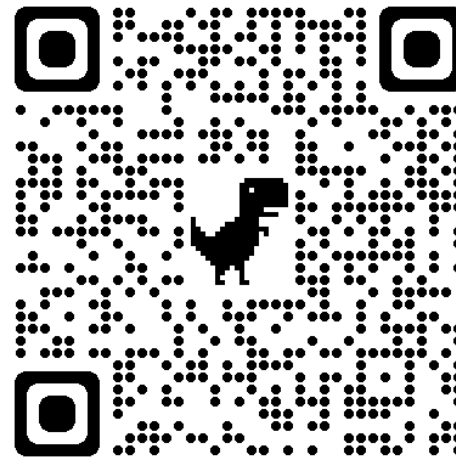
2

3

4

Read the
Scrum
Guide

<https://scrumguides.org/>



TO DO

DOING

DONE

1

2

3

4

Make this
Scrum
Board

TO DO

DOING

DONE

1

2

3

4

Can Scrum
boards
have more
than 3
columns?

2

1

2+

In Scrum, how many tasks can be in the “Doing” Column?

**It
Depends**

0

TO DO

DOING

DONE

2

1

3

4

TO DO

DOING

DONE

3

1

2

4

3

**Tasks that take
longer than a
week to
complete**

**Tasks I can't
complete this
Sprint**

What tasks are on my Backlog?

**Value-added
tasks**

**What's a
Backlog?**

TO DO

DOING

DONE

4

1

2

3

4

**Any Assigned
Work by Your
Boss**

**All Items From
My Email**

What kind of tasks belong on my board?

**Any Work Task
That Takes More
Than 15 Minutes**

**Everything
Known To Be
Needed For This
Work Increment**

**Share some
examples**

TO DO

DOING

DONE

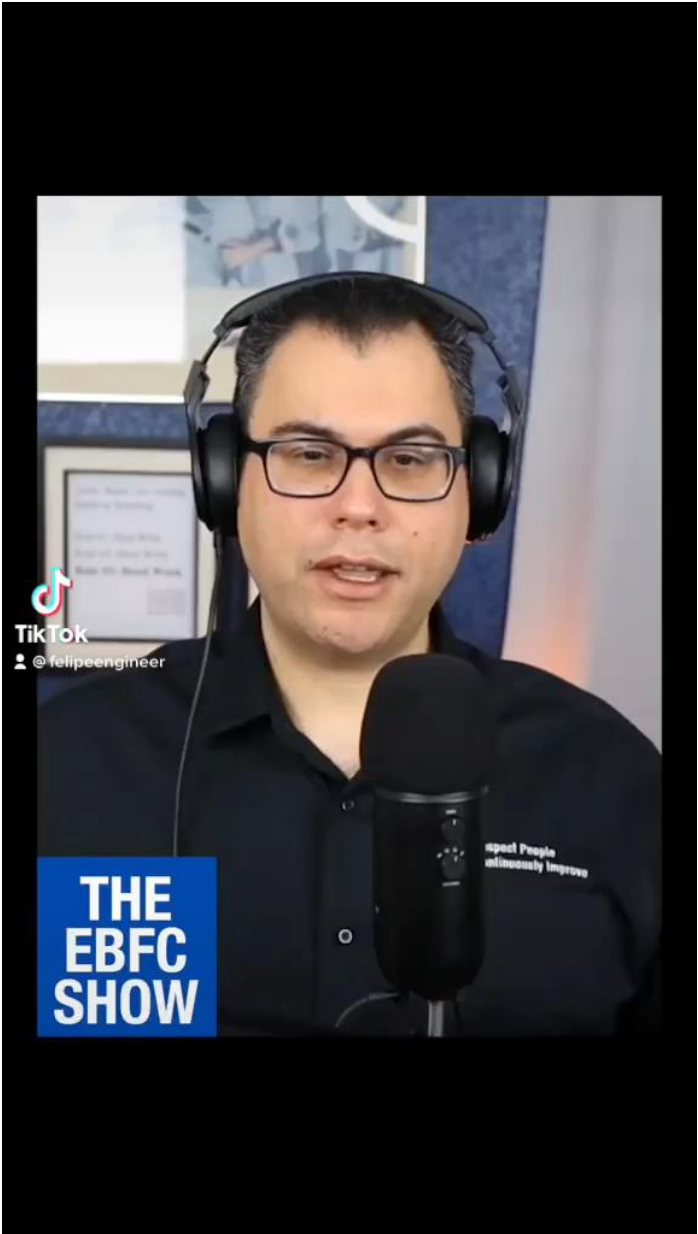
1

2

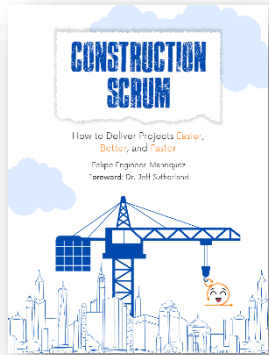
3

4

Questions?



JJ Sutherland
CEO **scruminc.**

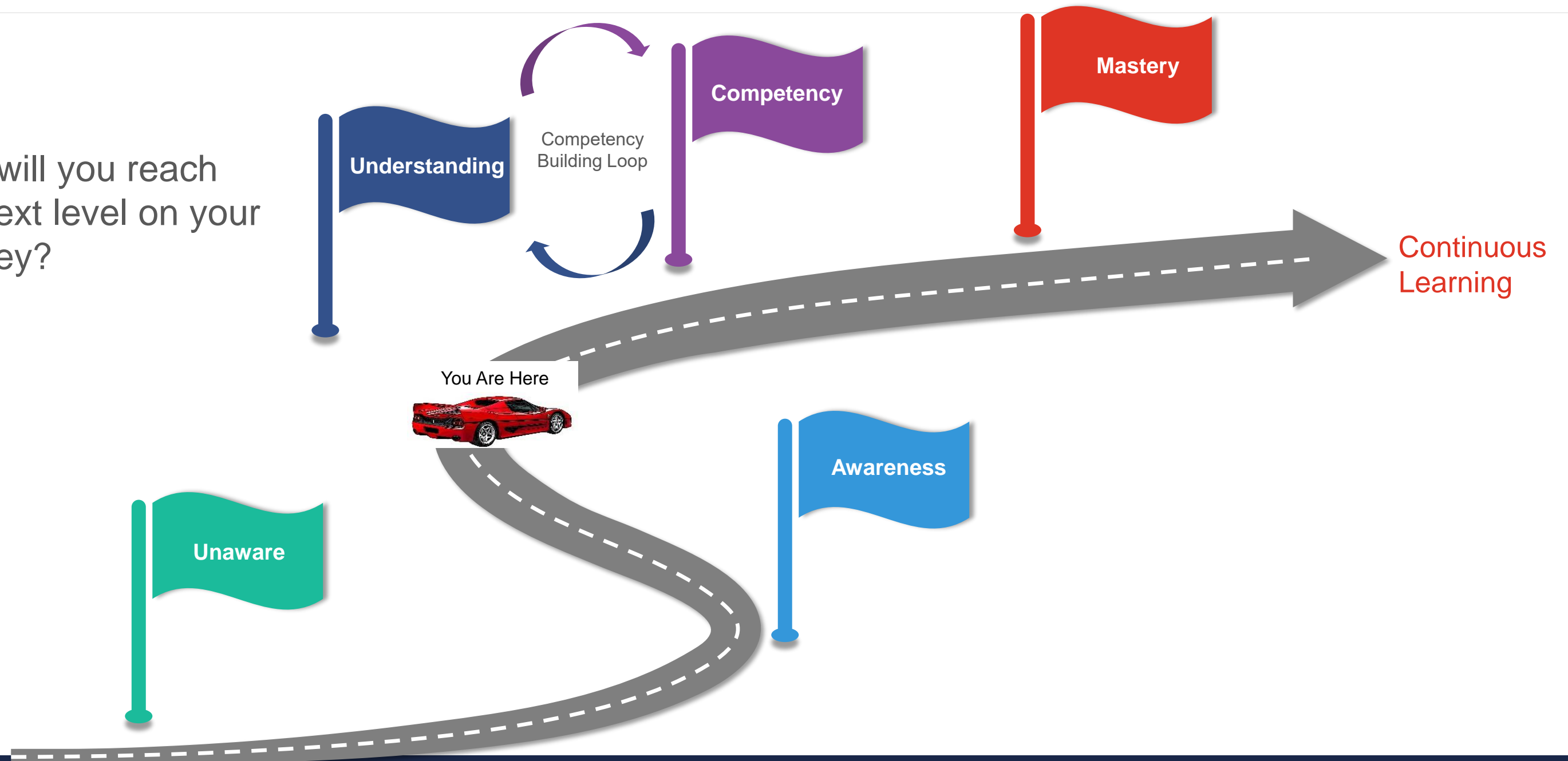


<https://thefelipe.bio.link/>




Lean Journey to Mastery

How will you reach
the next level on your
journey?




The adventure begins with you!

The EBFC Show


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OCT. 10, 2021

Since Scrum is free, why should I invest in learning it?

 Tweet

 Share

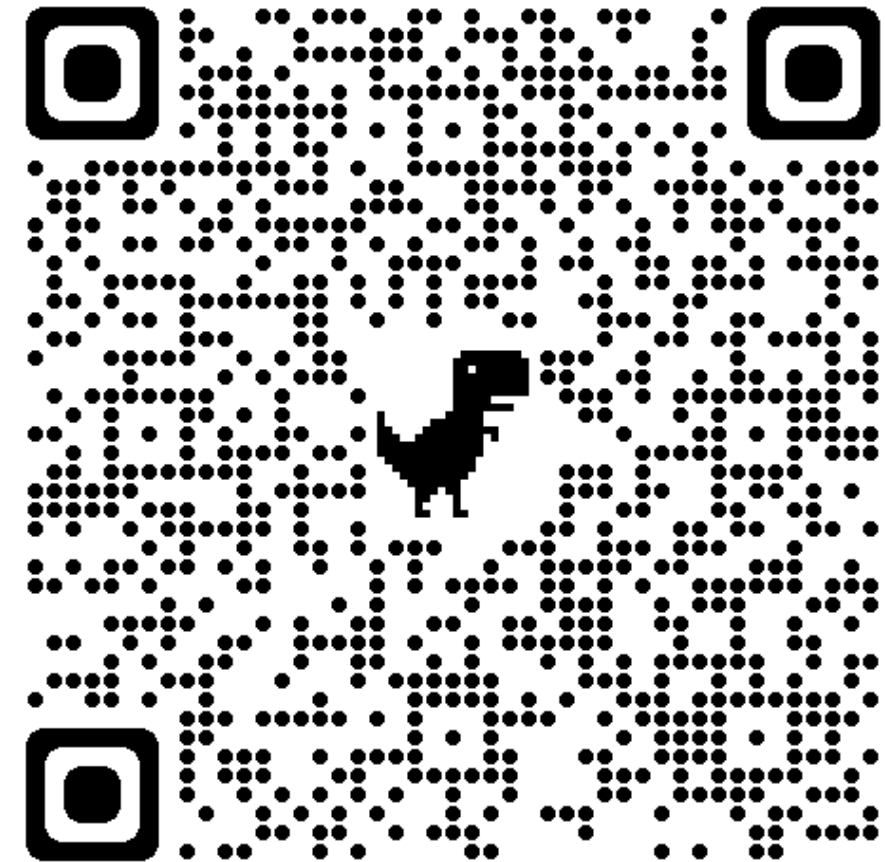
 Share

“

My mission is and has **always** been to share Scrum with the world and free people from the oppressive ways of working that have become entrenched. Today, more and more companies see the benefits of Agile and need people that both understand the mindset and can actually deliver results.”



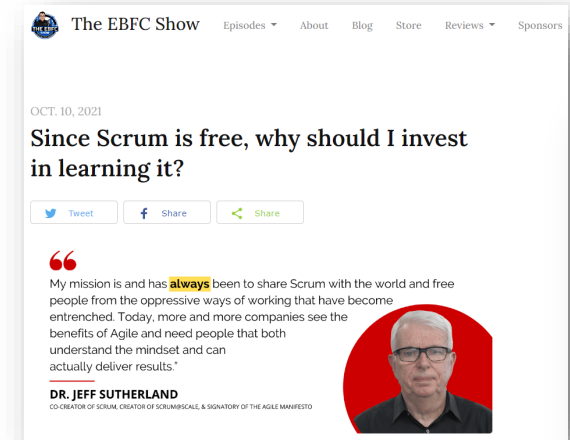
DR. JEFF SUTHERLAND
CO-CREATOR OF SCRUM, CREATOR OF SCRUM@SCALE, & SIGNATORY OF THE AGILE MANIFESTO



<https://www.theebfcshow.com/blog/since-scrum-is-free-why-should-i-invest-in-learning-it/>

The adventure begins with you!

Work Categories	
Value-Added	● Work that clients and supply chain partners want, appreciate, or pay for.
Non-Value-Added but Necessary	● Work that does not add value to a product or service from the client's perspective, but occurs for a reason such as following a policy.
Non-Value-Added, Pure Waste	● Work that consumes resources, but does not add value to the product or service.



1. categorize your work

The adventure begins with you!

Sprint #1

To Do		Doing	Done
Team size, finding "just right"	Prioritizing our work	Create a 1 Week Sprint Goal Example: This week I will practice Scrum daily using my Scrum Board and ask Felipe no less than 2 questions.	Read the Scrum Guide
	Work cycle size matters		Make this Scrum Board
	Why are we doing this work?		

Create a 1 Week Sprint Goal

Example: This week I will practice Scrum daily using my Scrum Board and ask Felipe no less than 2 questions.

The EBFC Show

OCT. 10, 2021

Since Scrum is free, why should I invest in learning it?

My mission is and has **always** been to share Scrum with the world and free people from the oppressive ways of working that have become entrenched. Today, more and more companies see the benefits of Agile and need people that both understand the mindset and can actually deliver results.

DR. JEFF SUTHERLAND

CO-CREATOR OF SCRUM, CO-CREATOR OF SCRUMSCALE, & SIGNATORY OF THE AGILE MANIFESTO

The adventure begins with you!

Sprint #1

To Do	Doing	Done
<div>Team size, finding "just right"</div> <div>Work cycle size matters</div> <div>Why are we doing this work?</div>	<div>Prioritizing our work</div> <div>Give yourself grace during this experiment.</div>	<div>Read the Scrum Guide</div> <div>Make this Scrum Board</div>

Create a 1 Week Sprint Goal

Example: This week I will practice Scrum daily using my Scrum Board and ask Felipe no less than 2 questions.

The EBFC Show

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OCT. 10, 2021

Since Scrum is free, why should I invest in learning it?

Tweet

Share


Share

“

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DR. JEFF SUTHERLAND

CO-CREATOR OF SCRUM, CREATOR OF SCRUMSCALE, & SIGNATORY OF THE AGILE MANIFESTO



2. List 5 or less tasks that will help you achieve your goal.

The adventure begins with you!

Sprint #1

To Do	Doing	Done
<div>Team size, finding "just right"</div> <div>Work cycle size matters</div> <div>Why are we doing this work?</div>	<div>Prioritizing our work</div> <div>Put first things first, then OODA</div>	<div>Read the Scrum Guide</div> <div>Make this Scrum Board</div>

Create a 1 Week Sprint Goal

Example: This week I will practice Scrum daily using my Scrum Board and ask Felipe no less than 2 questions.

The EBFC Show

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OCT. 10, 2021

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DR. JEFF SUTHERLAND

CO-CREATOR OF SCRUM, CREATOR OF SCRUMSCALE, & SIGNATORY OF THE AGILE MANIFESTO



3. Prioritize & Check-In using your board daily

The adventure begins with you!

Sprint #1

To Do	Doing	Done
<div>Team size, finding "just right"</div> <div>Work cycle size matters</div> <div>Why are we doing this work?</div>	<div>Prioritizing our work</div> <div>One-piece flow, do one thing at a time.</div>	<div>Read the Scrum Guide</div> <div>Make this Scrum Board</div>

Create a 1 Week Sprint Goal
Example: This week I will practice Scrum daily using my Scrum Board and ask Felipe no less than 2 questions.

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OCT. 10, 2021

Since Scrum is free, why should I invest in learning it?

Tweet

Share


Share

“

My mission is and has **always** been to share Scrum with the world and free people from the oppressive ways of working that have become entrenched. Today, more and more companies see the benefits of Agile and need people that both understand the mindset and can actually deliver results.”

DR. JEFF SUTHERLAND

CO-CREATOR OF SCRUM, CREATOR OF SCRUMSCALE, & SIGNATORY OF THE AGILE MANIFESTO



4. Learn by doing and sharing with others.

The adventure begins with you!

Sprint #1

To Do	Doing	Done
	<div>Team size, finding "just right"</div> <div>Who will you share Scrum with?</div>	<div>Read the Scrum Guide</div> <div>Work cycle size matters</div> <div>Make this Scrum Board</div> <div>Why are we doing this work?</div> <div>Prioritizing our work</div>

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5. Repeat and bring along others to join you.

What could stop you from trying Scrum?



THE CHOICE (Short Animated Movie)

https://youtu.be/_HEnohs6yYw

What could stop you from trying Scrum?

Habits

noun | acquired modes of behavior that become nearly or completely involuntary

Just Start



THE CHOICE (Short Animated Movie)

https://youtu.be/_HENohs6yYw

Learning Objectives Review



Gain an overview understanding of the Scrum framework and terminology.



Understand the relationship between Scrum and Lean.

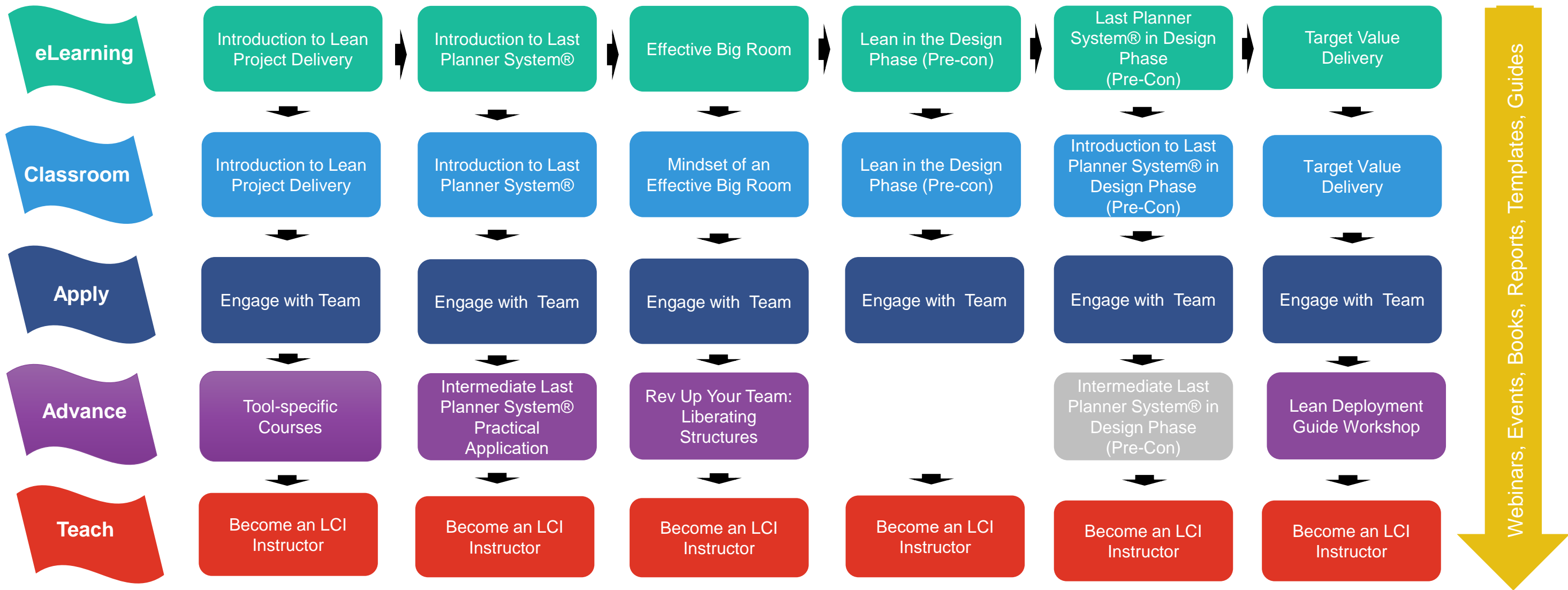


Experience hands-on application of Scrum.




Be ready to use the Scrum framework individually or with your teammates.

Define Your Journey



eLearning Courses

- Introduction to the Last Planner System®
- Introduction to Lean Project Delivery
- Lean in the Design Phase
- Effective Big Room
- Target Value Delivery
- Last Planner System® in Design




Introduction to the
Last Planner® System

Please enter your first name below
then click the button to begin.

type your text here

BEGIN



WELCOME

This course will allow you to gain in-depth insight to the practical application of the Last Planner® System (LPS) through multimedia, hands-on interactions, diagrams, worksheets, and more. The key achievable goal of this course is to learn how to engage at all five levels of LPS effectively on a day-to-day basis with a team implementing the system.



INTRODUCTION TO LEAN PROJECT DELIVERY


The key achievable goal of this course is to prepare and enable team members with a foundational understanding of Lean approaches for daily use within a project environment.

1	2	3	4
LPD OVERVIEW	CONNECTING PEOPLE	CONNECTING PRINCIPLES	CONNECTING PRACTICES
LESSON 1: Foundations of LPD LESSON 2: Lean Project Delivery System LESSON 3: Eight Wastes	LESSON 1: High Performing Team Behavior LESSON 2: Project Promise LESSON 3: Conditions of Satisfaction (CoS)	LESSON 1: Big Room LESSON 2: Problem Solving LESSON 3: Last Planner® System	LESSON 1: Integrated Project Delivery LESSON 2: LPD in Action LESSON 3: Target Value Delivery

eLearning Courses

Available now:


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Introduction to the Last Planner® System

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BEGIN



WELCOME

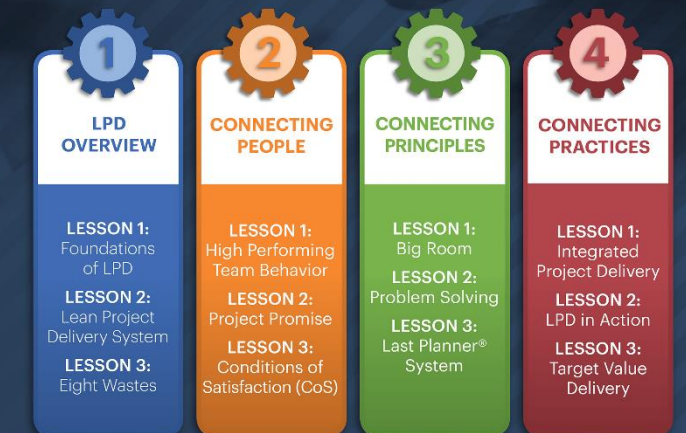
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Lean Construction Institute
Immersive Education Program

INTRODUCTION TO LEAN PROJECT DELIVERY

The key achievable goal of this course is to prepare and enable team members with a foundational understanding of Lean approaches for daily use within a project environment.



Plus/Delta via the Congress App


Questions?

< Schedule LCI Ready, Set, Go Scrum

Description

Are you ready to make your work exponentially easier and valuable for your organization? Scrum harnesses the power of individuals working together as a team. Double your productivity using this framework with less effort. This tactical course is geared for individuals and teams with Lea...
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Speakers





Felipe Engineer-Manriquez

Director, Project Delivery Services, The Boldt Company


Instructor


Surveys

 Learning Course Evaluation

 Plus/Delta Learning Course

Photos

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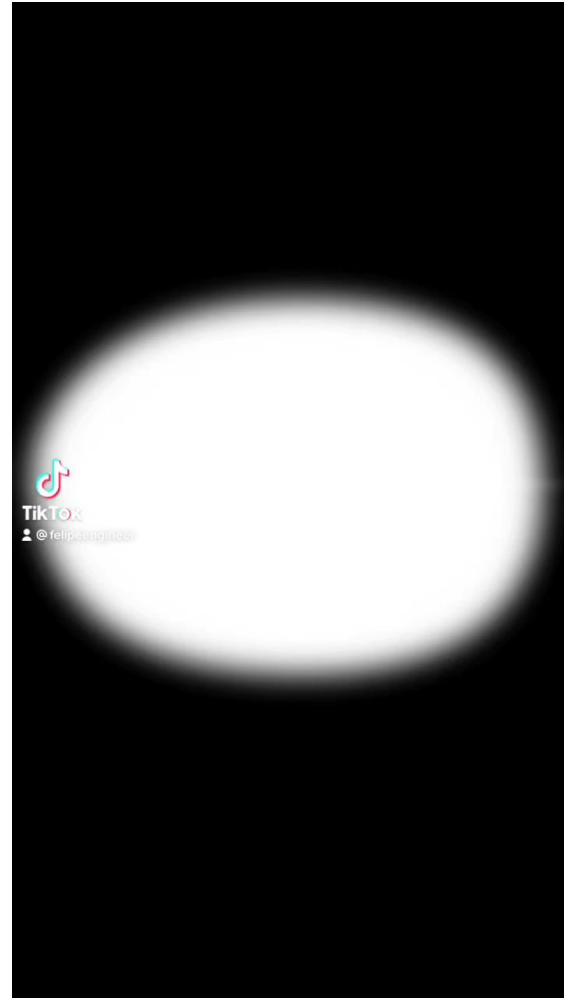
Tags

Learning Course



Thank You

 Stay Connected

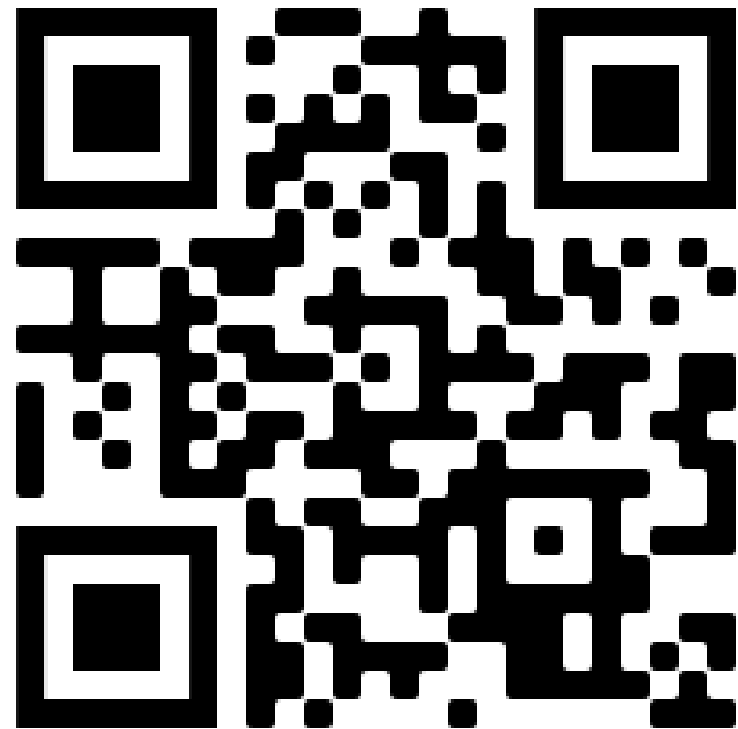


Felipe Engineer-Manriquez

<https://thefelipe.bio.link/>



LCI Website Information



www.LeanConstruction.org

