Study Action Team Guide

What is a Study Action Team?

It is a group of people who come together on a regular basis to discuss ideas they are *Studying*, typically as they read the same book together, chapter by chapter. The intent is to put what you are learning into *Action*, and discuss those things as a group to inspire each other, but also to share good ideas and help each other when you get "stuck".

How to use this guide

This guide has a one-page discussion guide for each chapter in the book (BuyLeanBook.com). If you also have a subscription to the *Construction Accelerator®* platform (TryCAnow.com), or have purchased some of the courses, you can supplement the readings with videos, as identified for each chapter.

The opening round robin is a general query to the group to get the conversation going and bring out the thoughts that are top of mind. There are a selection of discussion questions that follow, but don't feel like you need to go through all of them! Use them to branch out from the Round Robin discussion or lead the group to explore other ideas in the chapter.

The overall goal of the discussions is to give the group good answers to the second Action Round Robin: "What action can you personally take immediately…"

Tips

- **Switch it up!** Swap who leads the discussion each time you meet. A big part of a lot of Lean practices involves leading a group through thoughtful discussion to fruitful action. Get some practice here!
- **Stick to a regular schedule!** If you intend to meet once a week and that keeps not happening, then consider shifting to every other week if that helps. Try to avoid continually shifting or cancelling meetings because things get "busy". Consistency is key for morale *and* for motivation!
- **Follow your interests!** The first 4 chapters lay a good foundation for the later chapters, but don't feel like you have to go in order. If you're super excited about a certain chapter, do that one next!

Study Action Team Guide
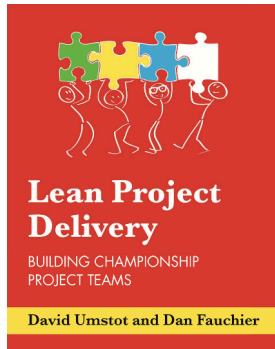
Chapter 1: What is Lean? Going with the Flow.

PREPARATION
READ: Chapter 1
WATCH 4 Videos: "Value", "Waste", "Flow" and "Stories from the Field: Flow to go Fast" *(from the Course: Value, Waste & Flow).*

OPENING ROUND ROBIN
- What was the most important or interesting point in chapter 1 from your perspective?
- Was there something you didn't understand or didn't agree with?

DISCUSSION QUESTIONS
- How is the project team like a sports team?
- What is "Lean"?
- Complete Ohno's description of Lean as a production system that produces only what you _____, only as much _____, and when _____.
- Who defines value?
- Describe value stream as it applies to your group.
- What interrupts the flow of your value stream?
- What is pull? How does it apply to your value stream?
- How are you continuously improving? What is an example of a recent small improvement you have made?
- What is the difference between efficiency and productivity?
- What is the impact of waste on productivity?
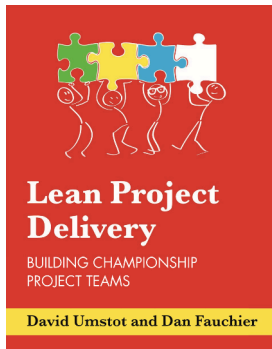
ACTION ROUND ROBIN
- What action can you personally take immediately from what you learned in this chapter?
- What action can your team take to make at least one slight improvement tomorrow?

PLUS/DELTA
- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN
In two words what is your big Takeaway today?

Chapter 2 – The Compelling Case and Need for Lean Project Delivery
Chapter 3 – The Origins of Lean Project Delivery
PREPARATION
READ: Chapters 2 & 3.
WATCH 2 Videos: "8 Wastes: Overview" and "Waste Walk" (from the Course: The 8 Wastes in Construction)
THEN: If you can take the time, WATCH the other 6 Waste videos explaining the individual 8 wastes.

OPENING ROUND ROBIN
- What was the most important or interesting point in chapter 2 from your perspective? In Chapter 3?
- Was there something you didn't understand or didn't agree with?

DISCUSSION QUESTIONS
- Why has Construction productivity been flat for over 50 years?
- What impacts your own personal productivity?
- What productivity impacts do you see around you on this team?
- Why do you think Manufacturing has only 12% waste and Construction has 57%? Do you challenge that statistic?
- What are the most wasteful processes you encounter every week?
- Why would a Lean team be safer?
- How many of the 8 Wastes can you name?
- Give an example in your own work of one of the 8 Wastes.
- Why would Lean practitioners think that this industry is 4.5 times less inefficient and that people who do not practice Lean?
- When engineer Ohno says "moving about quite a bit does not mean working," what does he mean and what examples of this can you see around you?
- What is an example of "pull" versus "push" in your own work?
- Why would engineer Ohno say "Let the flow manage the process, and let not the management manage the flow,"?
- What word would you use to describe the culture of your group? How can you improve this culture? How would improving this culture make your job easier and your work more productive?

ACTION ROUND ROBIN
- Does Lean Project Delivery have a place in your current project? If yes, where is the "burning platform" (the most critical area needing improvement)?
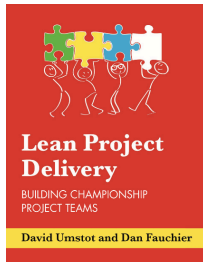
PLUS/DELTA
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TAKEAWAY ROUND ROBIN
In two words what is your big Takeaway today?

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The ReAlignment Group
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Chapter 4 – Keys to Success
PREPARATION
READ: Chapter 4.

WATCH 2 Videos: "What is Continuous Improvement?", "Stories from the Field: One Improvement Changed my Life" (from the Course "Continuous Improvement – You and Your Team")

OPENING ROUND ROBIN
- What was the most important or interesting point in chapter 4 from your perspective?
- Was there something you didn't understand or didn't agree with?

DISCUSSION QUESTIONS
- To better understand Value, can you name whose customer you are? Who is your customer?
  - Where does the value lay in each of these relationships?
  - Does your Customer understand that you have other customers?
    - Are they willing to pay for/listen to issues of these other customers?
- What is something you Customers don't understand about the value you offer them?
- If the initial capital cost is 10-20% of the life cost of a building, should that change how you solve issues in its design or construction?
- What other ways (besides LEED and Envision) do your companies/clients rate projects?
- How you ever inquired about "value" on your Project?
- Would you want to be in/patronize/work in any of the projects you have helped build?
- Are there any questions you would love to be asked by your customer? Any you'd love to ask them?
- Do you agree there is a difference between value & price?
  - Can you share an instance from one of your projects?
- Do you agree with Deming when he states "Focus on quality, and costs will go down. Focus on cost reduction and quality will diminish"?
  - Why or why not?
- Do you feel expectations of Owners/Builders/Designers are usually aligned? Why?
- If you have ever been in the Military, does the phrase "optimize the whole, not the piece" resonate with you?
- Could your Projects benefit from a change in information flow?
  - Generally, how does information flow within your Projects?
  - What initial challenges would you expect to run into if you wanted to improve upon the communication process?

ACTION ROUND ROBIN
- What action can you personally take immediately from what you learned in this chapter?
- What action can your team take to make one slight improvement tomorrow?

PLUS/DELTA
- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN
In two words what is your big Takeaway today?

Study Action Team Guide

Chapter 5 – Collaboration

PREPARATION

READ: Chapter 5
WATCH 1 Video: "What is Big Room?"
(from the Course: Target Value Delivery and Set Based Design)

OPENING ROUND ROBIN

- What was the most important point in chapter 5 from your perspective?
- Was there something you didn't understand or didn't agree with?

DISCUSSION QUESTIONS

- What other "Do's" and "Don'ts" of Big Room Planning have you experienced?
  - If you have never experienced a Big Room, how would you set up a collaborative, multi-use room for a Project Team?
- Have you experienced The Last Planner System in a collaborative space?
  - What made it successful?
  - What room factors worked against the LPS efforts?
- Collaboration aligns perspectives & Values
  - In your experience, do you feel the Designer, Builder and Owners have 100% aligned values on a project?
    - What factors kept this from happening?
    - Do you feel IPD or IPD-like contracts truly incentivize Project Teams to have aligned values?
      - If so, do others in your Company agree? How many new IPD Projects are in the works, compared to past Projects?
      - If not, what aspects of collaboration does IPD miss?
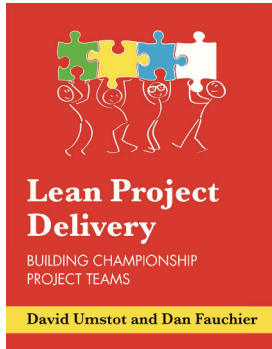
ACTION ROUND ROBIN

- What action can you personally take immediately from what you learned in this chapter?
- What action can your team take to make one slight improvement in collaboration tomorrow?

PLUS/DELTA

- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN

In two words what is your big Takeaway today?

Study Action Team Guide

Chapter 6 – 5S – The Fundamental Building Block of Lean

PREPARATION

READ: Chapter 6

WATCH 3 Videos: "Introduction to 5S", "5S Number Simulation" and "The 5S Process" (from the Course: "5S – Getting to a Stable State")

OPENING ROUND ROBIN

- What was the most important point in chapter 6 from your perspective?
- Was there something you didn't understand or didn't agree with?

DISCUSSION QUESTIONS

- Is order necessary to see waste? – Is it true that by looking at thy physical state of a Project you can glean insight to the state of the Project?
    - Have you experienced a messy project that was on schedule and on budget?
- WEBLINK – TAKE THE 5S QUIZ
- Are the current file-naming conventions on your Project working as well as they can?
    - Does is influence how you think about who creates files and how you interact with them?
    - How many people participated in the creation of the file-naming convention?
- Where do you believe 5S practices will give you immediate benefit (at home or at work)?
- What do Project Sites mean to you when they are in states like these photos?
    - In terms of Safety, wasted worker effort and time in looking for material etc.?

ACTION ROUND ROBIN

- Part of using 5S is realizing you can "take control" and make things better. Where can you start?

PLUS/DELTA

- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN

In two words what is your big Takeaway today?

The ReAlignment Group
of California

Chapter 7 – Last Planner® System

(This Chapter may need 2 sessions.)

PREPARATION

READ: Chapter 7.

WATCH 7 Videos: Everything from the Course: 1A "Foundations: Levels of the Last Planner®"

OPENING ROUND ROBIN

- What was the most important point in chapter 7 from your perspective?
- Was there something you didn't understand or didn't agree with?

DISCUSSION QUESTIONS

- Why is the process called "Last Planner®"? Who are the Last Planners: in construction? In design?
- Why are Foremen or designers sometimes reluctant to make promises?
- How might the GC's Superintendent be concerned about losing control when Foremen have equal voices in planning? Why is this an unnecessary concern? Is this true of Architects, too?
- In your mind, what would be the difference between a contractual milestone vs a Superintendent's/Architect's Milestone? (Give Examples)
  - What story do they tell in terms of detail?
- If you were going to pull plan a portion of your project today, what materials would you use to make it as visual as possible?
- Describe what "Should, Can, Will, Do Phases of LPS" actually mean in planning?
- What is PPC? Why do we measure it? Why do we emphasize the Team's PPC rather than individual trade/designer PPC?
- What other standard reasons for missed commitments have you encountered?
- What is the best way to train the team in Last Planner® and their roles in making it successful?
  - Has this been your experience?
  - What have you done to pull those along who didn't initially want to do it?
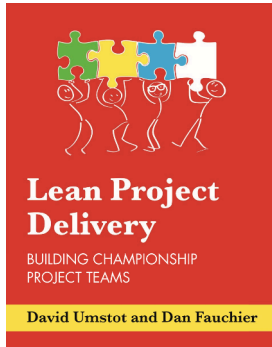   - Would you take this approach again?

ACTION ROUND ROBIN

- How could your planning be improved using Last Planner®?
- What's your next step in implementing it or improving it?

PLUS/DELTA

- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN

In two words what is your big Takeaway today?

Chapter 8 – The Visual Work Place

PREPARATION

READ: Chapter 8.

WATCH 1 Video: "Design Stages" (from the Course 1D – Last Planner® in Design")

THEN: Walk around your work spaces specifically looking for the use of visual aids. Think about: Where are they? How are they used? Are they up to date?

OPENING ROUND ROBIN

- What was the most important point in chapter 8 from your perspective?
- Was there something you didn't understand or didn't agree with?

DISCUSSION QUESTIONS

- What two questions is the Visual Work Place designed to answer?
- What examples of visual aids do you have in your workplace?
    a. Do you find them useful? Why or why not?
- What information do you need to know to do your work that could be visually displayed?
- If you have used visual sequencing/labeled work zones on your project, what made them effective? What could have made them better?
- What visual tool can be used to allow everyone to understand where the project is relative to project goals?
- In the video, how did the use of Visuals contribute to more people understanding the progress and needs of the designers?
- What project goals, issues, or work items would helpful to communicate to the project team via a Visual Dashboard?
- What critical information should be shared and known by all on your project, but isn't?
- What should be the Visual standard on your projects?
    a. (i.e. Shared space for common, up-to-date understanding vs. 1 person who controls information etc.)
- Think about how these will inform your LPS /BIM Modeling efforts. You want to avoid conversations like this:
    i. **Superintendent**: "Today we are going to Pull Plan Area 1B"
    ii. **Foreman**: "Is that the same as Phase 1, Zone B?"
    b. Share with the group any horror stories about mismatched naming conventions you would avoid in the future.
    c. What is the best naming/numbering convention you came across on a Project so far?

ACTION ROUND ROBIN

- What information do you personally manage or interact with today that could be better communicated and acted upon using the Visual Work Place approach?
- What visuals will you implement today?

PLUS/DELTA

- What did you like about today's session and what would you change for the next time?
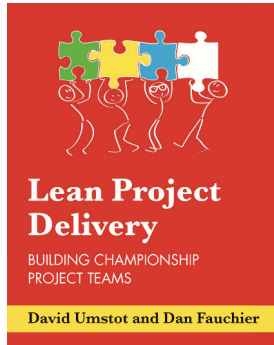
TAKEAWAY ROUND ROBIN

Chapter 9 – Root Cause Analysis

PREPARATION

READ: Chapter 9.
WATCH 2 Videos: "Problem Solving and 5 Why" and "Root Cause Analysis" (from the Course "A3 Problem Solving and Decision Making")
THEN: Think about one or two problems that have recently occurred on your project. Do you feel like you understand the root cause? Do others?

OPENING ROUND ROBIN

- What was the most important point in chapter 9 from your perspective?
- Was there something you didn't understand or didn't agree with?

DISCUSSION QUESTIONS

- When an issue pops up, why is it problematic to latch onto the obvious cause to immediately fix?
- Which causes more problems, people or processes?
    a. Does this feel true in your organization?
- When beginning the root cause analysis process, why should you make sure to deliberately spend time "gathering facts" and deciding on what the true problem statement is?
    a. Do you ever see those in your organization skip these initial steps when problem solving?
- If you have a complicated problem with many potential root causes, what tool helps you make sure you have identified all of them?
- Can you name 3 of the 6 major factors that most root causes are associated with? Do you or any of your teams tend to overlook some of these factors?
- What are the next steps that you should take after clouding the identifying root causes for a problem?

ACTION ROUND ROBIN

- What problems exist for you today that you can take immediate action on using the Root Cause Analysis process? Which one will you start doing first, today?

PLUS/DELTA

- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN

In two words what is your big Takeaway today?

The ReAlignment Group
of California

Chapter 10 – A3 Problem Solving and Reporting

PREPARATION

READ: **Chapter 10.**
*WATCH 2 Videos***:** "Why Use A3 and What is It?" and "When Do You Use A3 & Learn by Doing"
(from the Course "A3 Problem Solving and Decision Making")
*THEN***:** Think about how decisions and problems are solved on your team. Are they communicated thoroughly? Do the right people get the right information?

OPENING ROUND ROBIN

- Do you think your team takes enough time for planning? If not, why not?

DISCUSSION QUESTIONS

- What process are the 7 elements of the A3 problem solving and reporting process tied to or analogous to?
- Is it more effective to have one person draft the A3, or have multiple collaborators perform multiple drafts?
- Why is it so important to make sure the "Current State" is properly identified?
- After identifying the planning and implementation steps, what else needs to be thought out?
- What role do charts, photos, and other graphics play on an A3?
- If using for problem solving, what is the danger of not tying countermeasures to each root cause?
- If using for reporting or decision making, what is the danger of not articulating the current state and thought process used?
- Do you or other team members ever need to understand decisions that were made weeks or months ago but it is difficult to find how or why the decision was made?

ACTION ROUND ROBIN

- What type of decisions does your team make that would be helpful to have analyzed and documented on an A3?
- What decision, problem, or process can you now use an A3 to document and communicate to your team?

PLUS/DELTA

- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN

In two words what is your big Takeaway today?

11

Study Action Team Guide

Chapter 11 – Understanding Value Stream Mapping and Process Mapping

PREPARATION
READ: Chapter 11.
WATCH 1 Video: "Value Stream Mapping: Introduction & Charter" (from the Course "Process Mapping / Value Stream Mapping")
THEN: Identify 1 or more value streams you are a part of.

OPENING ROUND ROBIN
- How do you define customer value?

DISCUSSION QUESTIONS
- What is the difference between value stream mapping and process mapping?
- What value streams are you a part of?
- What is the difference between internal and external customers?
    a. Why is it useful to identify handoffs to internal customers?
- From who's perspective is Percent Complete and Accurate (%C&A) determined?
- What is the difference between Process Time (PT) and Lead Time (LT)?
    a. What does the difference between PT and LT indicate?
- What role does batch sizing play in helping promote flow in the value stream?
- Why is important to understand the difference between Value Added Processes, Value Enabling Processes, and Non-Value Adding Processes before creating the future state map?
- What are some of the benefits of processing mapping, other than process improvement?

ACTION ROUND ROBIN
- What important processes on your team are not fully understood by all or most, or are too complicated and take too long?
- When will you meet to map them out "Current State" and "Future State"?

PLUS/DELTA
- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN
In two words what is your big Takeaway today?

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Chapter 12 – Target Value Design

PREPARATION

READ: chapter 12.

WATCH 4 Videos: "What is Set Based Design?", "Why We Use Set Based Design", "Set Based Design – How to Do It" and "TVD Overview"
(from the Course "Target Value Delivery and Set Based Design")

Lean Project Delivery
BUILDING CHAMPIONSHIP PROJECT TEAMS
David Umstot and Dan Fauchier

OPENING ROUND ROBIN

- Have you seen traditional design cause cost increases on any projects you've worked on?

DISCUSSION QUESTIONS

- What is value alignment and what can go wrong if it isn't performed at the beginning of the TVD process?
- Why is the expected cost sometimes higher than the target cost, at least initially?
- Why is it important for cross functional teams/design cluster to meet regularly to discuss their progress, with respect to the expected cost?
- Why is "Design, then estimate" problematic? How does TVD estimate differently?
- How does Set-Based Design fit neatly into TVD and continuous estimating?
- What does it mean to make decisions at "The Last Responsible Moment"?
- When using the Choosing by Advantages decision making process, why aren't disadvantages considered, along with advantages?
- Why would A3 reporting be particularly helpful during the TVD process?
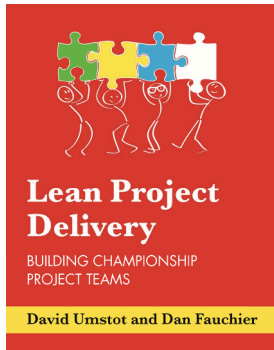
ACTION ROUND ROBIN

- What design issues have you seen on your projects that would have benefited from earlier construction team involvement?

PLUS/DELTA

- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN

In two words what is your big Takeaway today?

Study Action Team Guide

Chapter 13 – Just-in-Time

PREPARATION

READ: Chapter 13.
WATCH 2 Videos: "The 3 Levels of Thinking" and "Small Batching"
(from the Course "Process Mapping and Value Stream Mapping")

OPENING ROUND ROBIN

- Describe a time you had a problem on a job due to material arriving before it was needed.

DISCUSSION QUESTIONS

- In what industry did Just-in-Time originate?
- How is Just-in-Time related to "pull"?
- How could you better link Just-in-Time and "pull" on your project site?
- A location based management system breaks the work into small chunks by location, and the work is planned so that different trades flow through the different locations. What obstacles would you need to overcome on your project to plan and implement such a system?
- Do you and people you work with tend to think in in terms of batch size?
- How do you see the connection between batch sizing and just-in-time?
- What building components have you seen pre-fabricated on this or other jobs?
- How does pre-fabrication increase on-site project safety?

ACTION ROUND ROBIN

- What components do you have on your project that could be pre-fabricated pre-assembled off site?

PLUS/DELTA

- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN

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Chapter 14 – Learning and Teaching Lean: Making Lean fun!
Chapter 15 - Pulling it All Together – How to Create and Sustain Lean Organizations

PREPARATION

READ: Chapters 14 and 15.
WATCH 4 Videos: "What Creates Your Culture?", "Using Continuous Improvement to Shape Your Culture", "Stories from the Field: One Improvement Changed my Life", "Daily Improvement (Kaizen) Examples" and "Problems & Tips"
(from the Course "Continuous Improvement – You and Your Team")
THEN: Review and answer the 15 questions at the end of chapter 15 to help you assess where your team is on their Lean journey.

OPENING ROUND ROBIN

- What challenges have you encountered in create or sustain a Lean Culture?

DISCUSSION QUESTIONS

- It is possible to learn through a variety of ways, but what are the two engaging methods with the highest rate of learning retention? Does this align with your experiences?
- Have any of the team members taken part in a game based simulation? What do you remember being effective about the training?
- Plus/Delta and Takeaway are simple feedback tools used, including in this Study Action Team.
    a. How has your groups use of them improved your sessions?
    b. Could they be used in other parts of your work?
- What are some of the reasons people you have worked with have been resistant to change? Was there anything that helped them overcome that resistance?
- Why does your organization need to adopt and increase their use of Lean practices? Why do you personally?
- How does your team respond to those who make mistakes? How do you personally?
    a. Is there a better way you or they could respond?
- What is the difference between the "growth mindset" and the "fixed mindset"?
- Does your team value learning and growth?
- How can a bias for action be counterproductive?

ACTION ROUND ROBIN

- What do you think you can do today to help other members of your team learn or grow either professionally or in their Lean journey?

PLUS/DELTA

- What did you like about today's session and what would you change for the next time?

TAKEAWAY ROUND ROBIN

In two words what is your big Takeaway today?