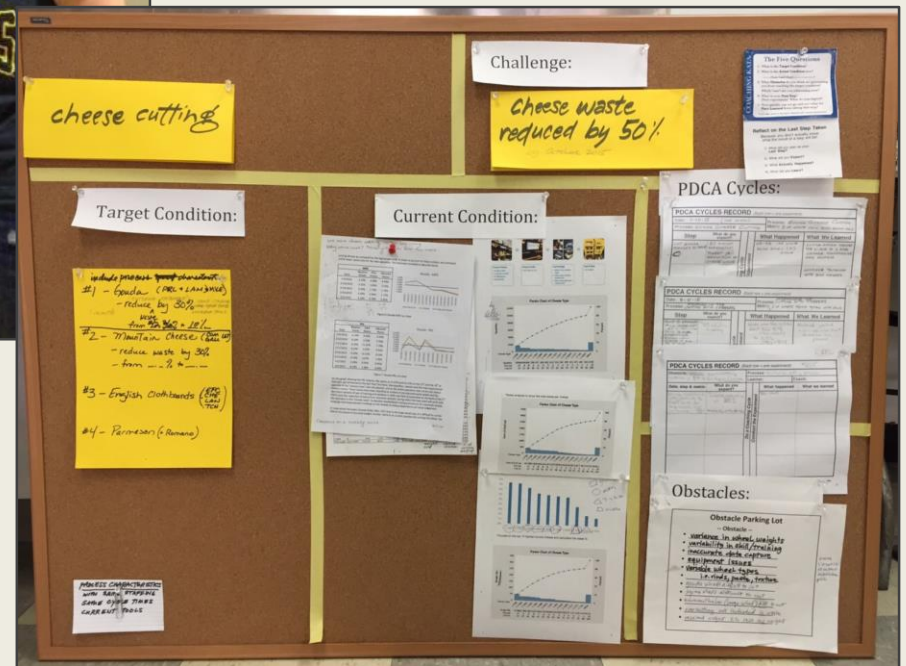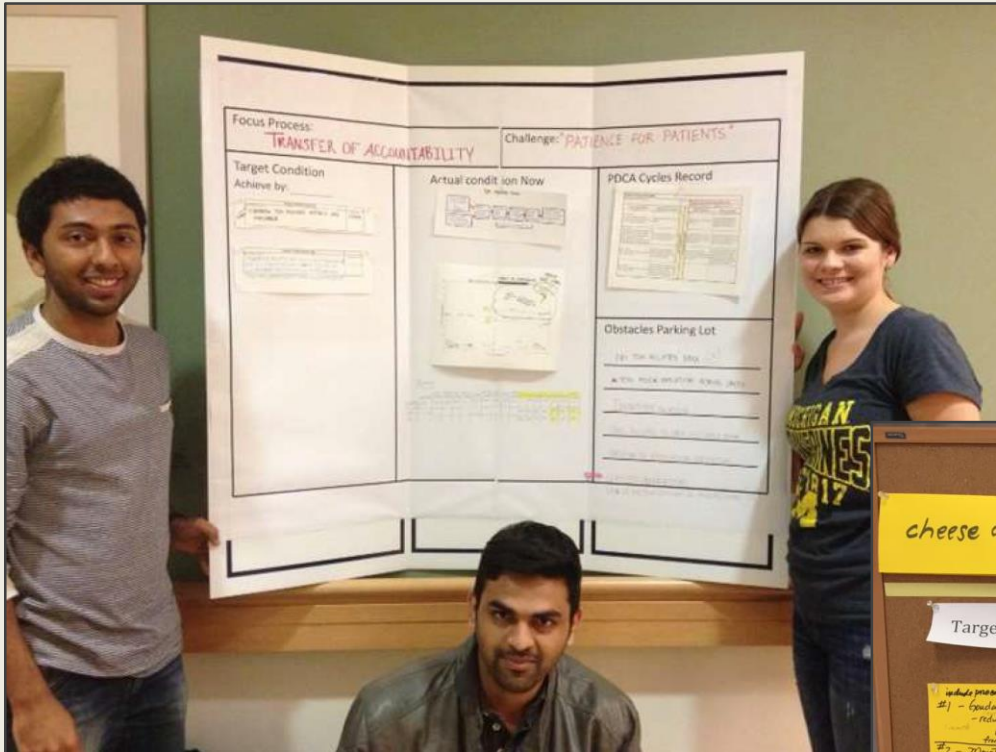# IOE 591
Group Project Requirements

Professor Liker Graduate Course: Lean Thinking Minimum Requirements for Legitimate Group Project

- The organization must be on board and willing to put time and effort into learning and using the improvement process. You will not do all the work.

- The host site must have a clear challenge statement established for your focus process.

- You must follow and practice the Improvement Kata pattern.

- You must have a place to post the storyboard and hold regular meetings (at least weekly) at the storyboard. Each meeting should include at least one formal Coaching Cycle between a designated "Coach" and "Learner" within your team. During the Caoching Cycle the rest of your team should act as 2nd Coach to the Coach, and give feedback to the Coach after the Coaching Cyale.

- There must be opportunities to run a number of experiments, with actual tests following the PDCA pattern.
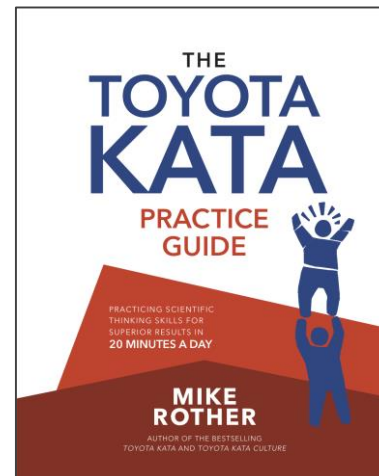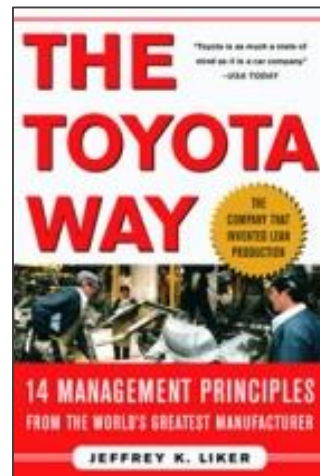
You must have a <u>challenge</u>, identify the <u>current condition</u>, and from that establish with the on-site team a <u>next target condition</u>

THE IMPROVEMENT KATA IS A DIFFERENT APPROACH

With the Improvement Kata you work iteratively toward a target condition, on the way to a challenge, learning along the way. You work on those things that you discover you *need* to work on to reach the next target condition.

CHALLENGE

Current Condition

Target Condition
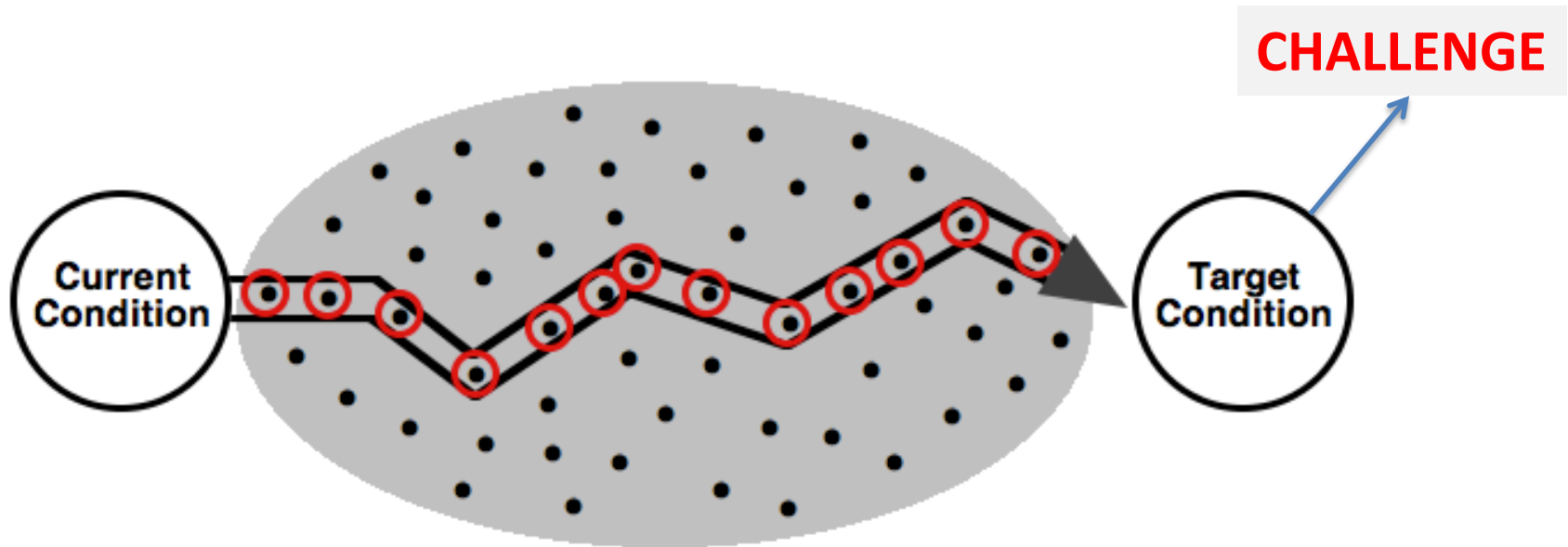
Example Challenge Statements for Student Teams

Don't be a Loaf

Learner - Hadley Whittemore - ZMO Bread Captain
Focus process: Wouldn't it be great if all bread had comparable cycle times and priority regardless of it's handling. By July 2019

Chill Out

Learner - Brandon Miller - ZMO Routes Captain
Focus process: Wouldn't it be great if ice packs had safe transport, less than 24hr freeze time, consistently frozen. By July 2019

Check Out that Cycle Time!

Learner - Mike Jarema - ZMO Bread Ambassador
Focus process: Wouldn't it be great if we could accommodate a 7 second takt with planned holiday staffing at checkout. By December 2019.

You must follow the IMPROVEMENT KATA, though coaching cycles will normally be weekly not daily

Illustration from the *Toyota Kata Practice Guide*
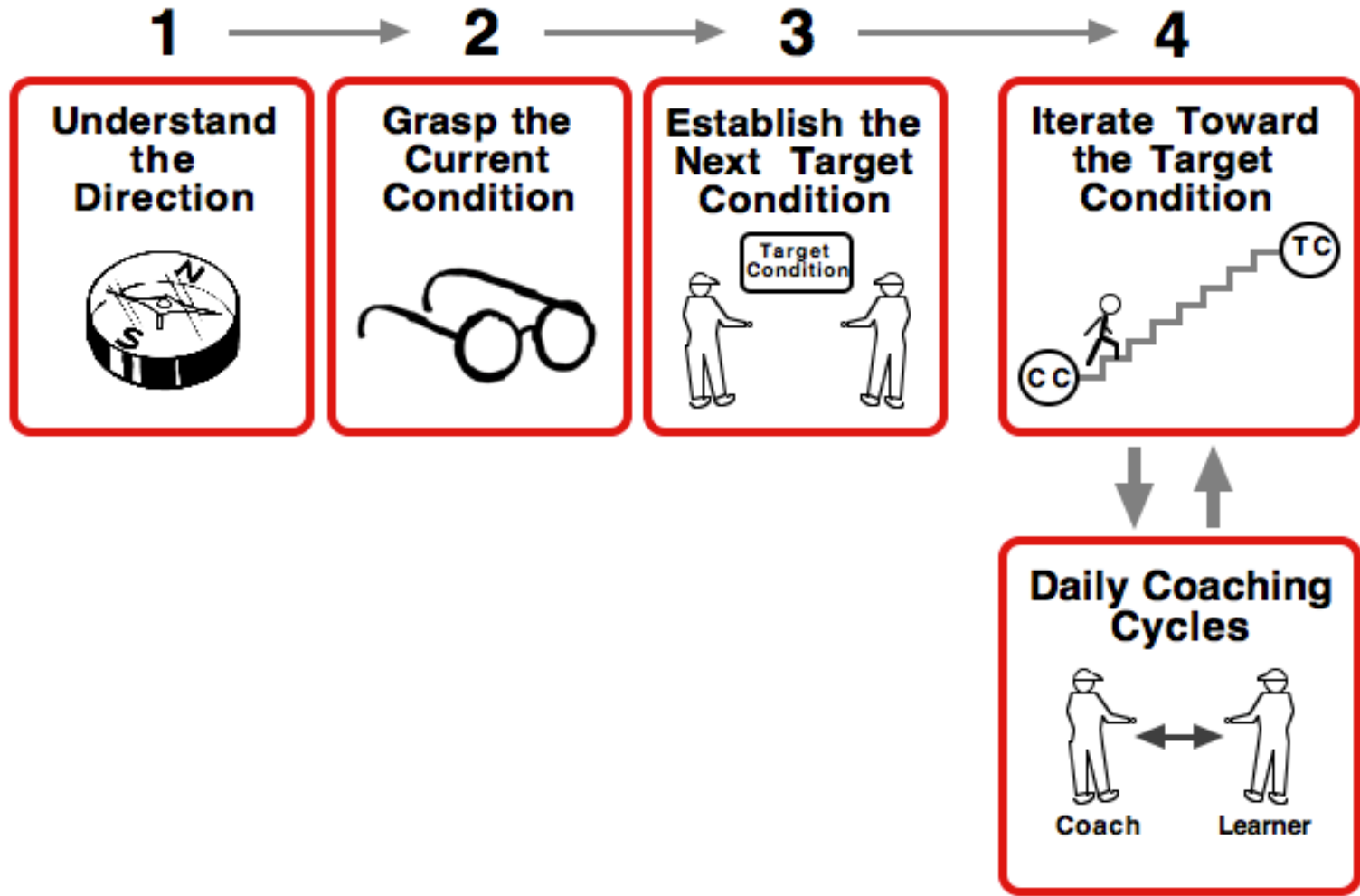
The team (internal and your group) must have the opportunity during the semester for the team to define and test ideas. You do not have to achieve the target condition.

SMALL, RAPID EXPERIMENTS ADVANCE YOUR KNOWLEDGE QUICKLY

Current Condition
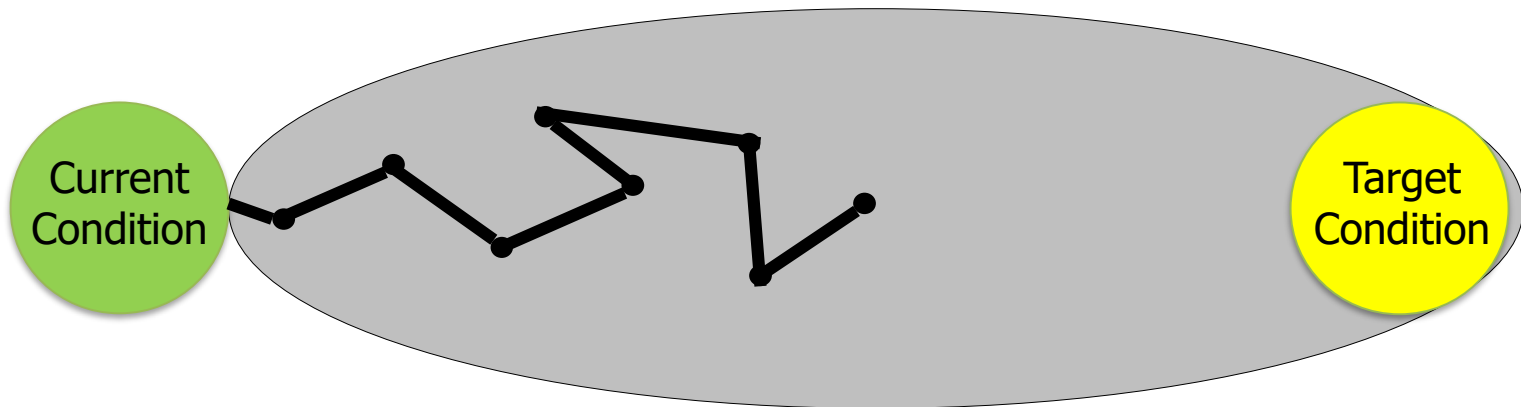
Target Condition

The team must have a posted storyboard and make your experimenting cycles visual

Learner's Storyboard

EXPERIMENTING RECORD	(Each row = one experiment)			
Obstacle:		Process:		
		Learner:		Coach:
Date & step	What do you expect + metric	Do a Coaching Cycle / Conduct the Experiment	What happened	What we learned

Obstacle Parking Lot

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

Forms are available on the Toyota Kata Website and in the *Toyota Kata Practice Guide*

Kata Example at HP Tronic
(contract electronics manufacturer in Sweden)

- 3-year Challenge: *Production volume 50% higher with the same personnel and floor space*.

- 2014 started four areas: Sales, Purchasing, Engineering and Quotation Group

- Conducted 150 PDCA experiments so far

- Daily activity in each area with coaching cycles

Storyboard: Swedish Sales Organization
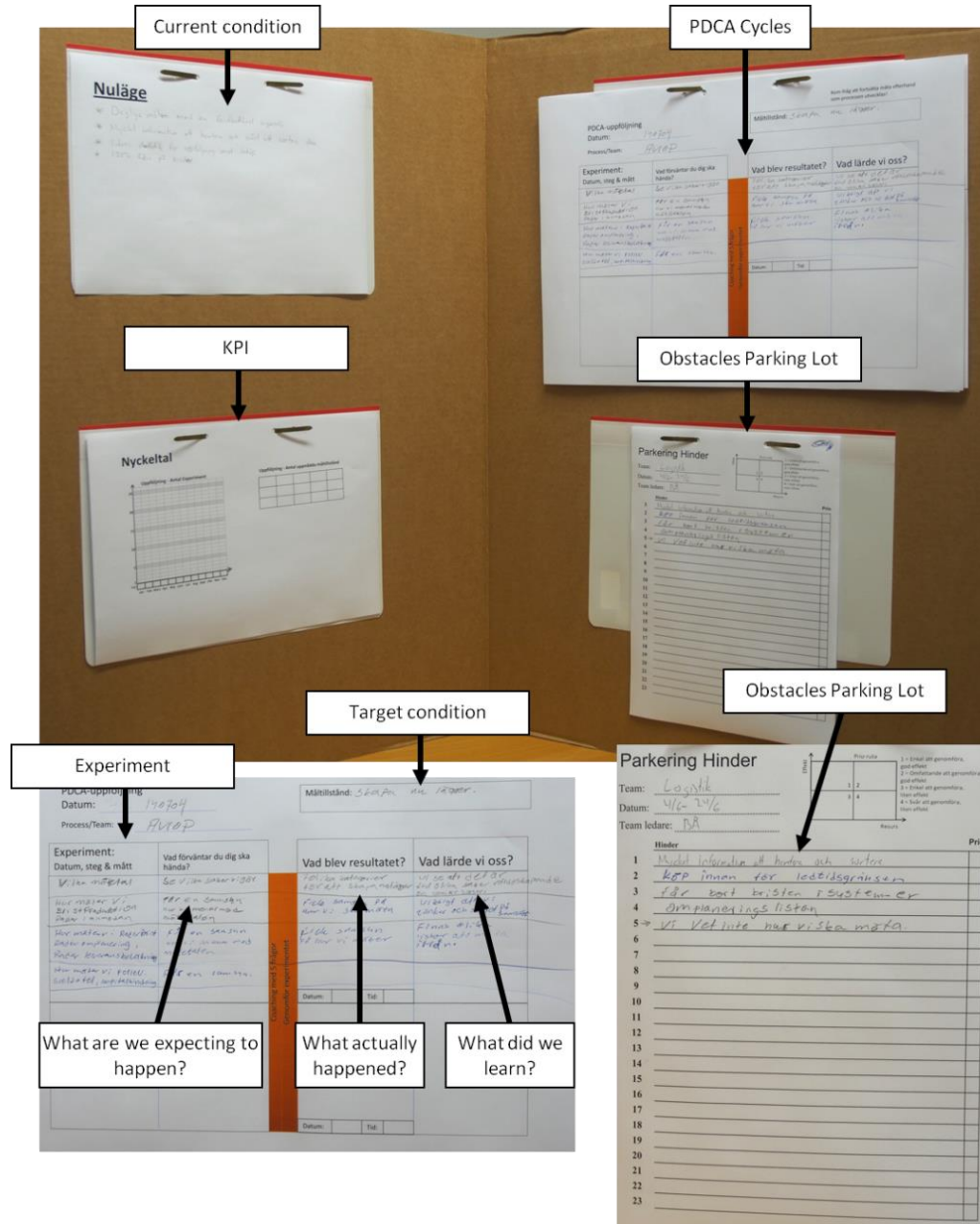
Using the Toyota Kata Learner's Storyboard

EXPERIMENTING RECORD

One Example Target Condition

- Quotation Process
  - Defined work process for better integration sales, purchasing engineering
  - 85% Requests for Quote complete within standard time

Results of Experiments

- Daily seven-minute meeting, a whiteboard that visualizes the flow, and a set meeting agenda

- Participants feel more control and far better communication

- Achieving standard lead time increased from 60 % to 85% (May 2014) and 90% (June 2014)

Visualization of Quotation Process