

Learning To Learn

Does Your Agile Process Encourage Learning?

Learning is not compulsory... neither is survival.
- W. Edwards Deming



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Learning Outcomes

Learning is the Constraint!

Models
Application

- Feedback Loops
- Tacit Knowledge
- Double Loop Learning
- Learning and Culture
- Small Batches / Lean Startup
- Retrospectives
- Improvement Kata



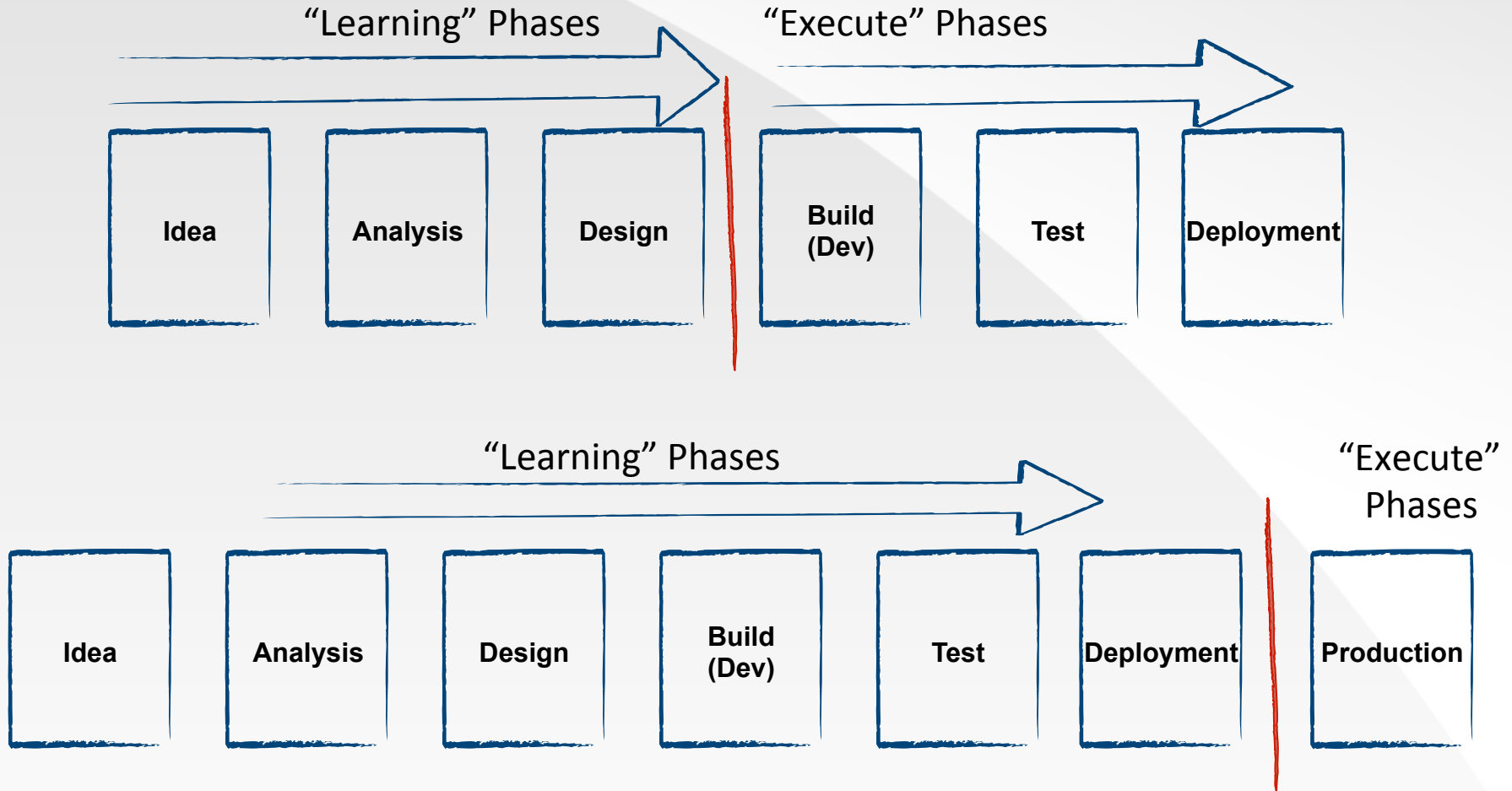
Coding is Learning

For the programmers in the room, imagine writing a relatively complex algorithm that takes about a day to complete...

Now delete the code and write the algorithm again.

How long does it take the second time?

The Work is Learning



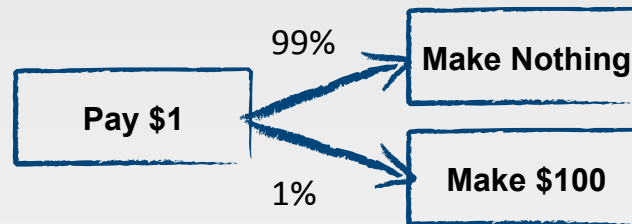
Learning Through Feedback Loops

2 digit lottery example:

We can buy a two-digit lottery ticket for \$1.

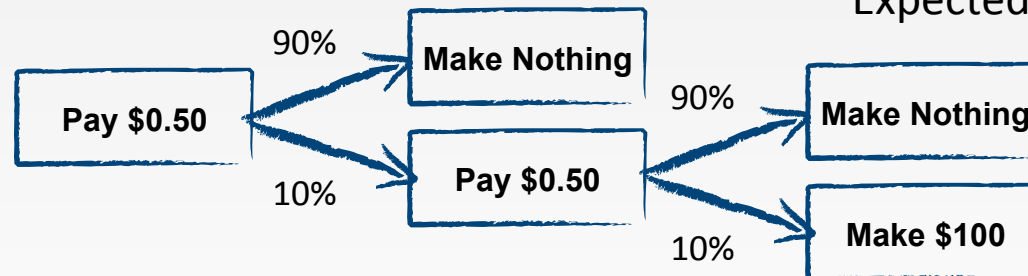
A winning number pays off \$100.

Buy Two Digits at the Same Time:

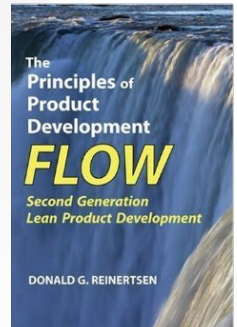


Expected Payoff: Zero

Buy Two Digits with Feedback:

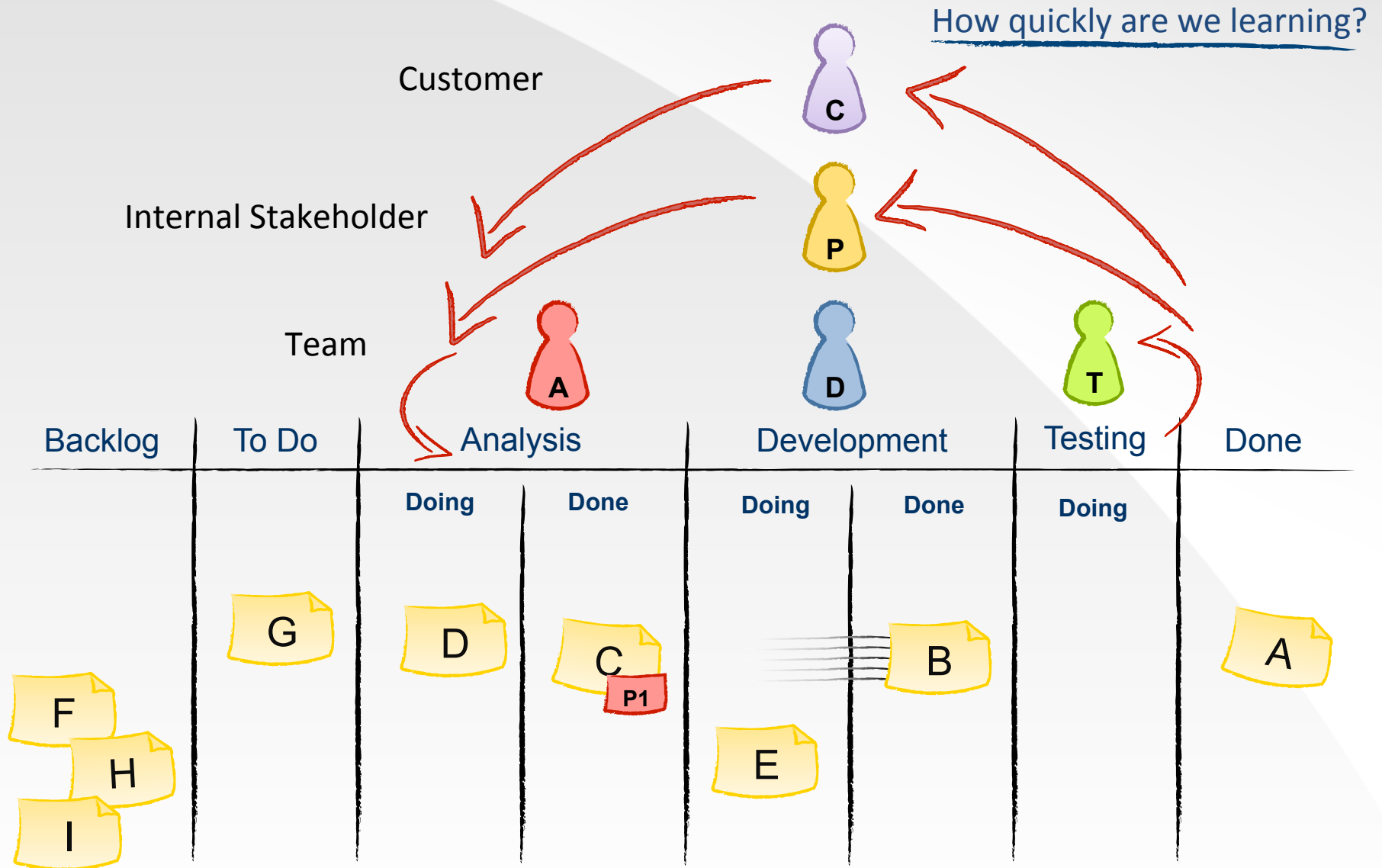


Expected Payoff: \$0.45



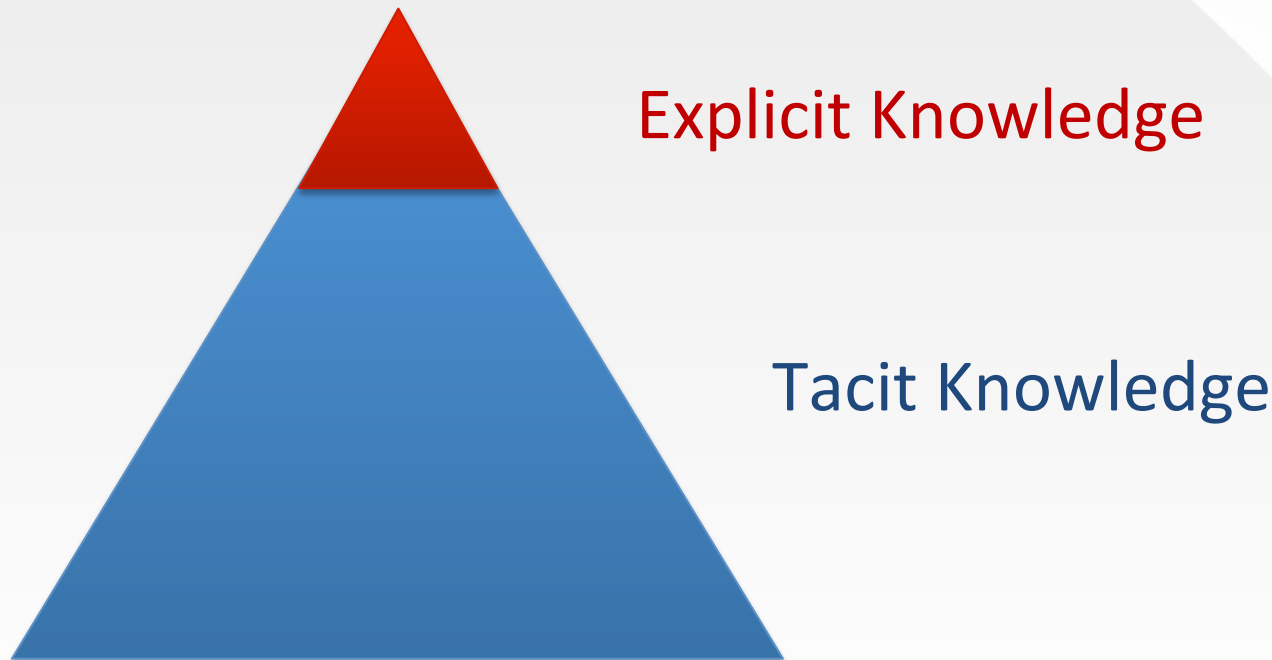
Learning Through Feedback Loops

How quickly are we learning?



“We can know more than we can tell.”

Tacit Knowledge: Learning and knowledge that cannot be written down, and is difficult to express through language. It requires a shared experience to understand.



Tacit Knowledge

Tacit Knowledge Examples:

- Playing an instrument
- Speaking a language
- Innovation skills
- Leadership social skills
- Sales
- Humor
- Delivering Software Value

All require a *Shared Experience* to learn.

Single and Double Loop Learning

Single Loop Learning

The most common style of learning is just problem solving—improving the system as it exists.

Double Loop Learning

More than just fixing the problem, this style of learning questions the underlying assumptions, values, and beliefs behind what we do.

Single and Double Loop Learning



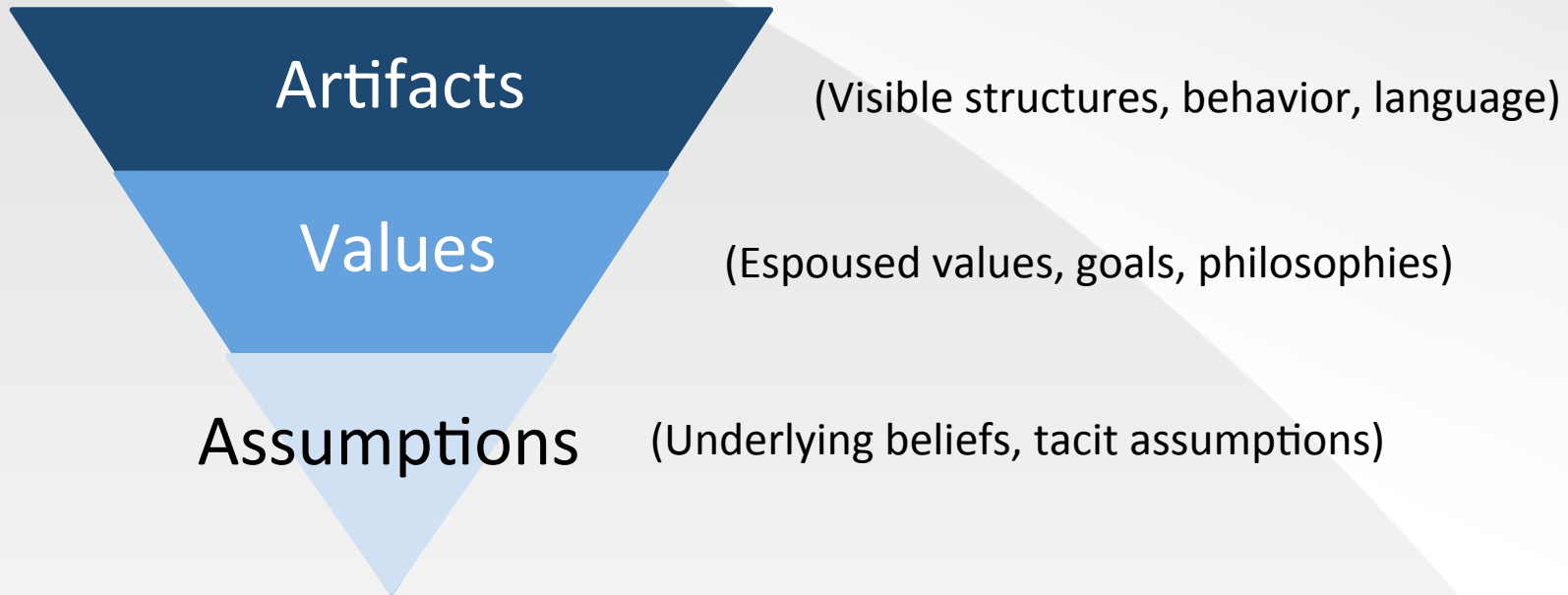
What is Culture?

Culture is a pattern of shared tacit assumptions that was learned by a group ... that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel ...

--Schein, Edgar H.

The Corporate Culture Survival Guide

Schein's Three Levels of Culture



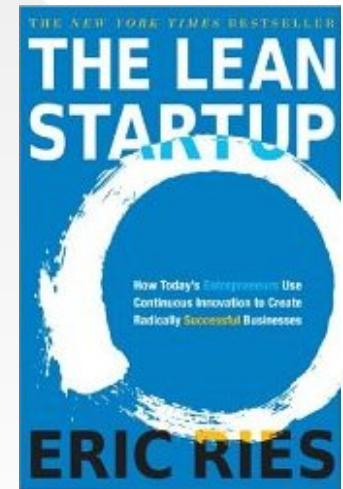
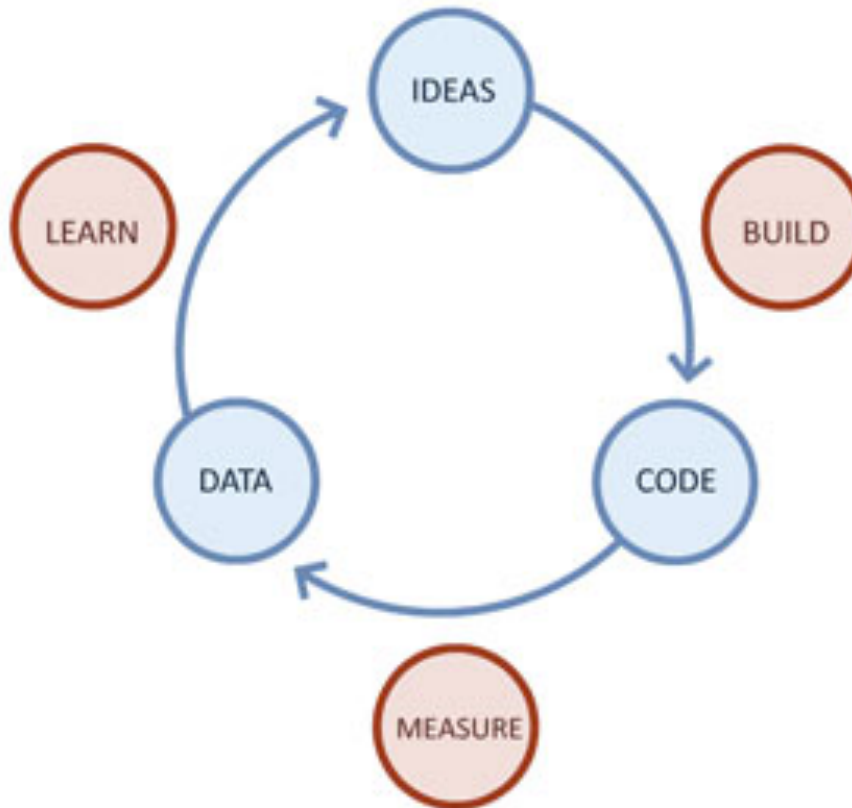
Changing culture is fundamentally a
challenge of *learning*

Application of Learning Models

- ✓ Feedback loops enable learning
- ✓ Small batches allow us to accelerate feedback loops
- ✓ Much of our Knowledge is Tacit, so we must act on it before it evaporates.
- ✓ Reflection tools like retrospectives enable double loop learning
- ✓ Improvement Kata provides structure for single and double loop learning

Feedback Loops

Minimize *TOTAL* time through the loop



Ries, *The Lean Startup*

Tacit Knowledge

Practices that enhance tacit knowledge learning:

1. Real-time standup meetings
2. User Story writing as a whole team
3. Limiting WIP

Theory-In-Use vs. Espoused Theory



Michael (Doc) Norton

@DocOnDev



Following

We simply ask that you be innovative without mistakes while working as a team to achieve individual performance goals.

RETWEETS

1,357

LIKES

1,186



9:10 AM - 12 Sep 2015



1.4K



1.2K



Theory of Action

Espoused Theory

\neq

Theory-in-use

Prevents Double Loop Learning

Espoused Theory

$=$

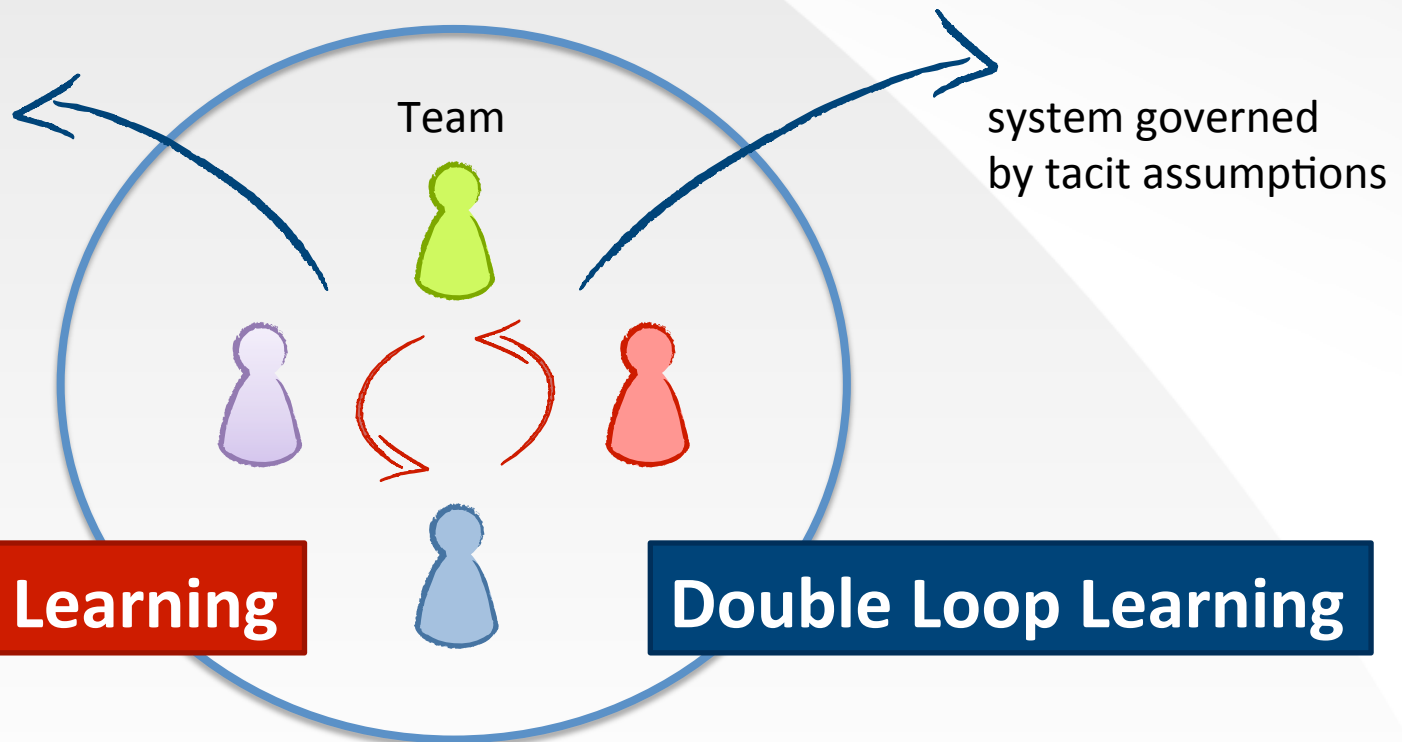
Theory-in-use

Enables Double Loop Learning

--Argyris and Schon, *Theory in Practice*, 1974

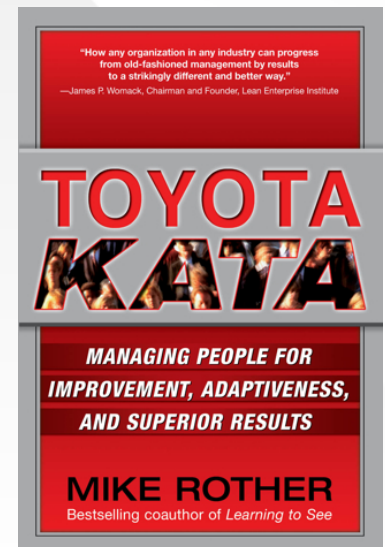
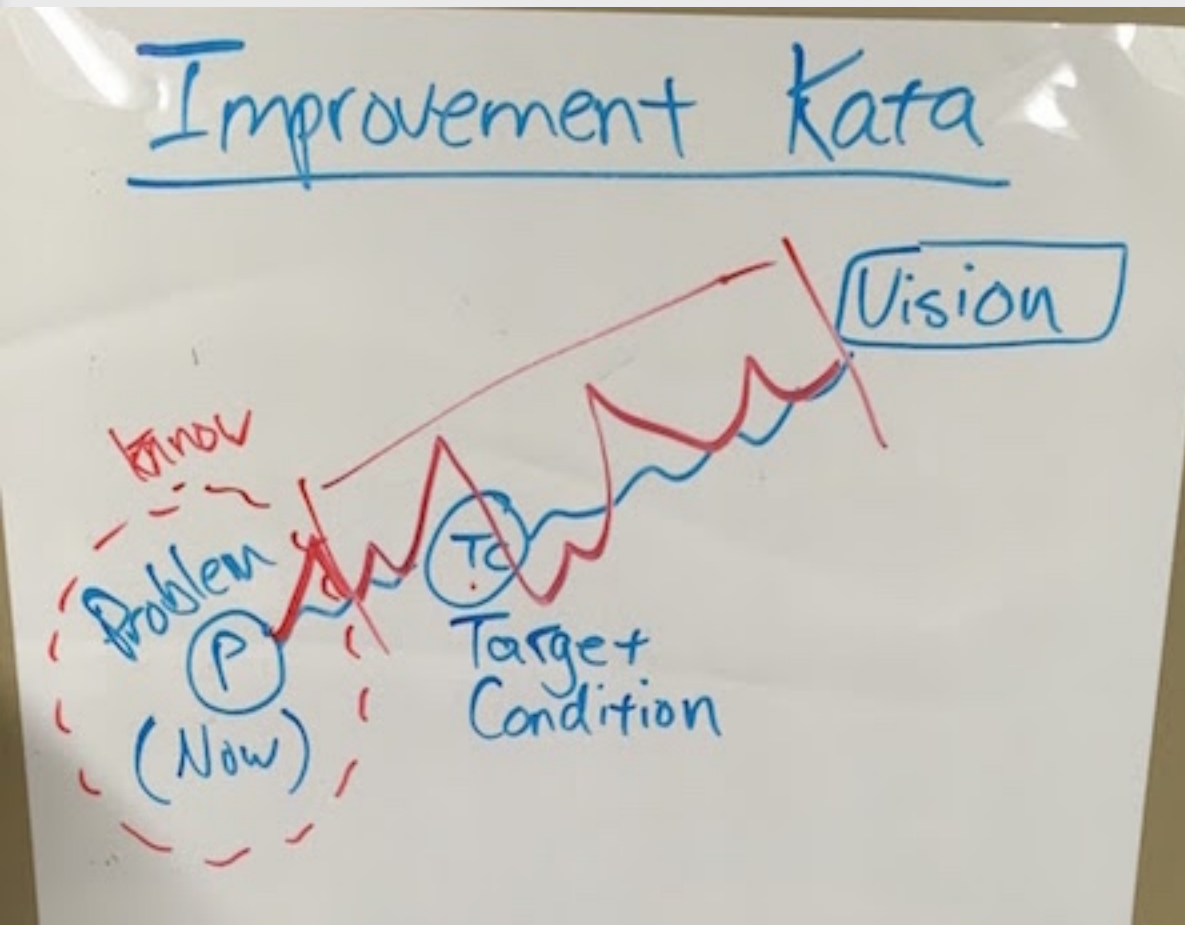
Retrospectives

Retrospectives are *reflection* tools for teams and organizations




Improvement Kata

The Improvement Kata concept comes from the Toyota Production System



Improvement Kata

Practical Toyota Kata Format:

Improvement Theme	
Now / Current Condition	Next Target Condition
Definition of Awesome (vision)	First Steps 

Improvement Kata


Let's Exercise!

Our Goal: To create an Improvement Kata Candidate

- Work in Groups of 2 and 3
- Share current condition ideas and decide on one
- Create a Kata Board as a group

Improvement Kata

Make your own Kata

Improvement Theme	
Now / Current Condition	Next Target Condition
Definition of Awesome (vision)	First Steps 

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