Kata Overview Webinar

Invest NI OPEX Team

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Agenda

- An alternative way to look at business challenges

- Kata definitions

- Why do problems and obstacles keep coming back

- Could a different approach work – scientific thinking?

- Phases of the improvement and coaching kata

- Step 1 – 4 Improvement kata

- Coaching kata

- Summary – Improvement Kata Mind-set

- Invest NI OPEX Solutions

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An alternative way to look at Business Challenges

Old Business Challenges → **Mike Rother Improvement Kata & Coaching Kata** → **New Business Challenges**

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Kata Definitions

The Improvement Kata (IK):
A practical four-step model of scientific of thinking and acting, for achieving challenging goals.

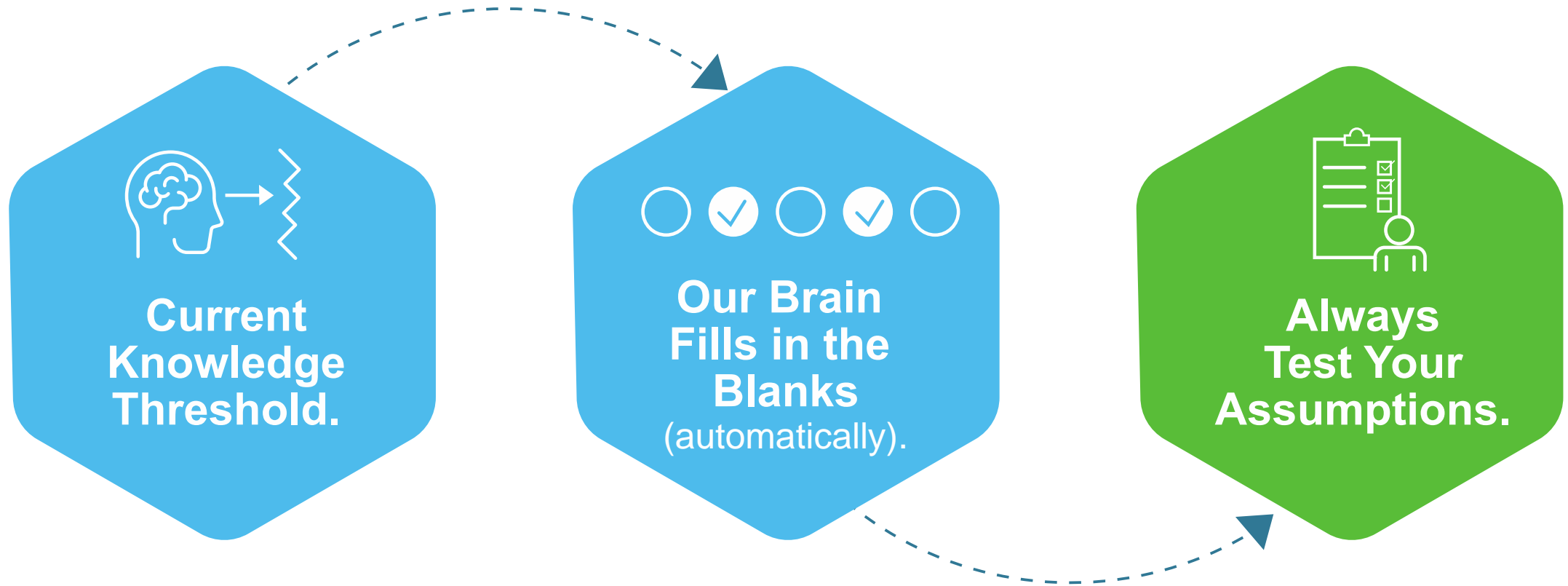**The Learner:**
Could be Team Leader, Supervisor or Manager

The Coaching Kata (CK):
Is a pattern for teaching the Improvement Kata pattern of thinking and acting.

The Coach:
Usually someone who has direct reports to coach

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Why do Problems & Obstacles Come Back?

Current Knowledge Threshold.

Our Brain Fills in the Blanks (automatically).

Always Test Your Assumptions.

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Phases of the Improvement and Coaching Kata

The Learner

① Understand the Direction or Challenge
② Grasp the Current Condition
③ Establish the Next Target Condition
④ Experiment Toward the Target Condition

TC
CC

Planning Phase (covers ①②③)
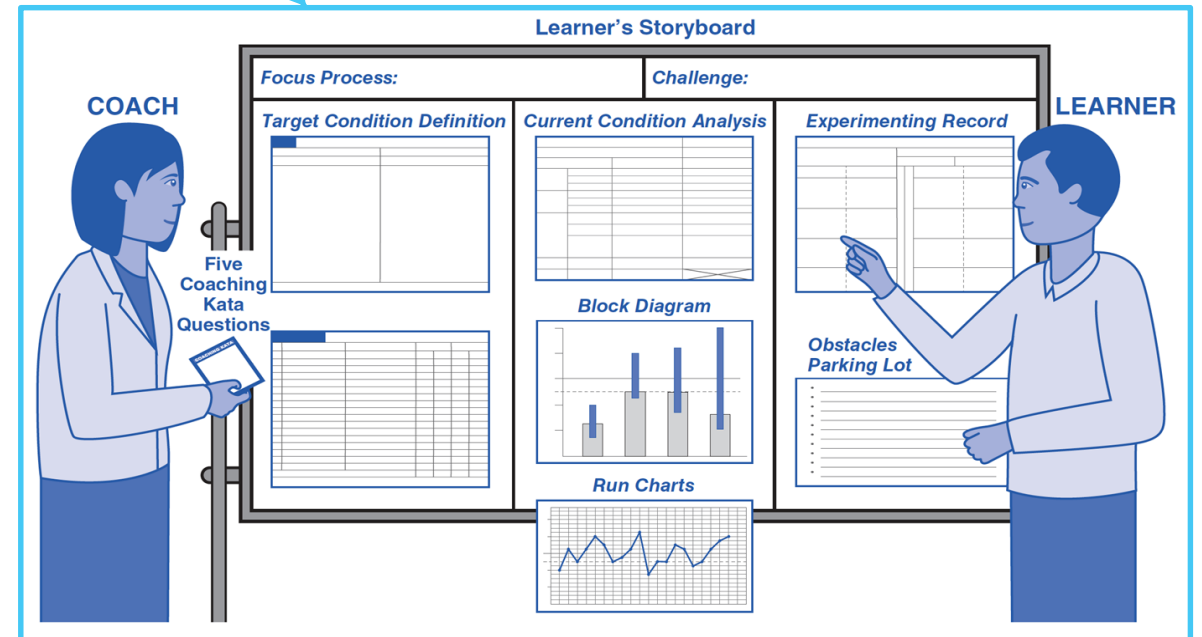**Executing Phase** (covers ④)
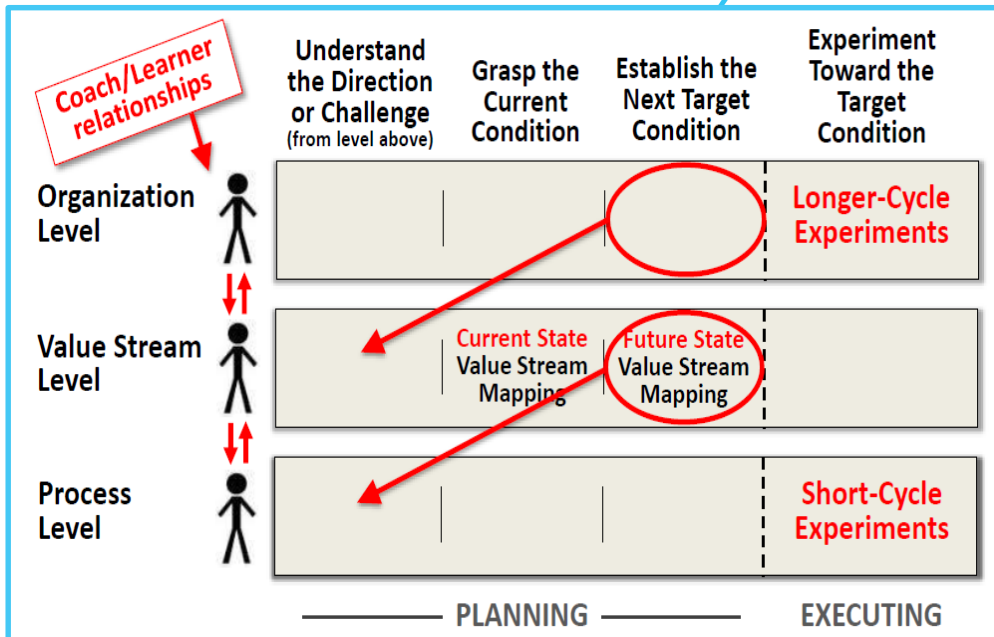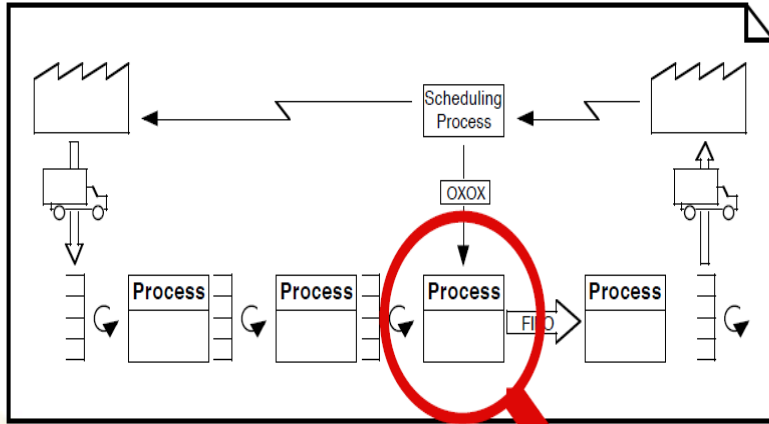
Practice Routines

The Coach

Source: Mike Rother

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Step 1. Understand the Direction of Challenge

The four steps are captured on the Learners Storyboard

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Step 2. Grasp the Current Condition

A PROCESS is the work that a *person* or a *group of persons* do as they interact with objects such as routines, schedules, materials and equipment.

STEPS OF THE PROCESS ANALYSIS KATA

Step		
Step ①	**Outcome Performance** — How is the process performing over time? (Graph)	**Outcome metrics**
Step ②	**Customer Demand & Planned Cycle Time** — What is the rate of demand and the desired rate of 'production'?	**Process metrics and characteristics**
Step ③	**Characteristics of the Current Process** — • Make a block diagram of the work pattern. • Measure exit cycles and graph fluctuation. • Record your bullet-point observations.	
Step ④	**Equipment Capacity** — Are there any equipment constraints? What are they? *Optional*	
Step ⑤	**Necessary Number of Operators** (if the process were stable) — How many people are necessary? (Calculated)	

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Step 3. Establish the Next Target Condition

The exact series of target conditions required to meet the overarching challenge can't be defined in advance. When you reach one Target Condition you'll know a lot more about what the next Target Condition should be.

Current Condition — Obstacles — **Target Condition (date)** — Successive / Target Conditions — **Challenge** — **Vision**

You're only trying to specify the **next** Target Condition at this time

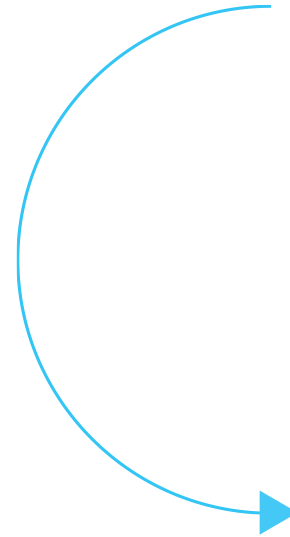**Three Elements of a Good Next Target Condition**

1. Achieve by Date

2. Desired Outcome Score

3. Desired Operating Pattern

Source: Mike Rother

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Step 4.
Experiment Towards the Next Target Condition

* Focus on removing the first obstacle now!

* Capture your predictions and then your results from your experiment

* Then adjust based on what you have learned and experiment again

Obstacle Parking Lot

PDCA CYCLES RECORD *(Each row = one experiment)*

Obstacle:
Process:
Learner: Coach:

Date, step & metric | What do you expect? | What happened   What we learned

Prediction Side
Written before the experiment

Do a Coaching Cycle / Conduct the Experiment

Evidence Side
Recorded after the experiment

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Experimenting Record Example

EXPERIMENTING RECORD		Process: Parts Picking		
Obstacle: Parts Presentation & Accuracy to Assembly Cells		**LEARNER:** John B. **COACH:** Scott T.		CASE #1
Step & Date	**What do you expect?**	**Result** Observe closely	**What We Learned**	
1. 6-20-2017 Evaluate the picking process of the high volume parts for ABC product line.	1. 20% percent of the ABC product parts drive 80% of the pickers movement. Pickers incur wasted time & energy.	1. 161 picks were allocated to ABC products. Pickers traveled over 1600 steps, 196 total picks , 120 minutes, 16 empty locations, ladder used 9 times while picking for a standard pump	1. Majority of picks allocated to the ABC family. No logical positioning of parts and inventory accuracy questionable. Excessive ladder usage..	
2. 6-21-2017Arrange high volume parts shelves 2 &3 to avoid ladder usage.	2. The pickers will minimize the number of ladder moves by 50%.	2. Pickers incurred 3 ladders moves for the same order type. 1300 steps incurred.	2. Position of high volume parts reduced the need for ladders. Operator still moving a lot.	
3. 6-22-2017 Parts will be arranged by assembly sequence.	3. Reduction in picking steps & cycle time by at least 50%	3. Picker cycle time reduced from 120 minutes to 62 minutes and travel distance reduce from 1600 steps to 432 steps.	3. Location of parts improved productivity and safety.	
4. 6-23-2017 Monitor daily re-pick orders .	4. The number of re-pick orders into stockroom to be reduced by 75%	4. The number of past re-pick orders was difficult to find.	4. Discovered that no accurate data was available to confirm accuracy improvement	
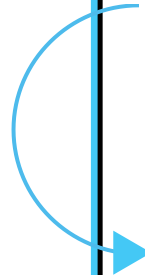
Coaching Cycle | *EXPERIMENT*

Case Study Observations – Picking Process

16 Empty Locations
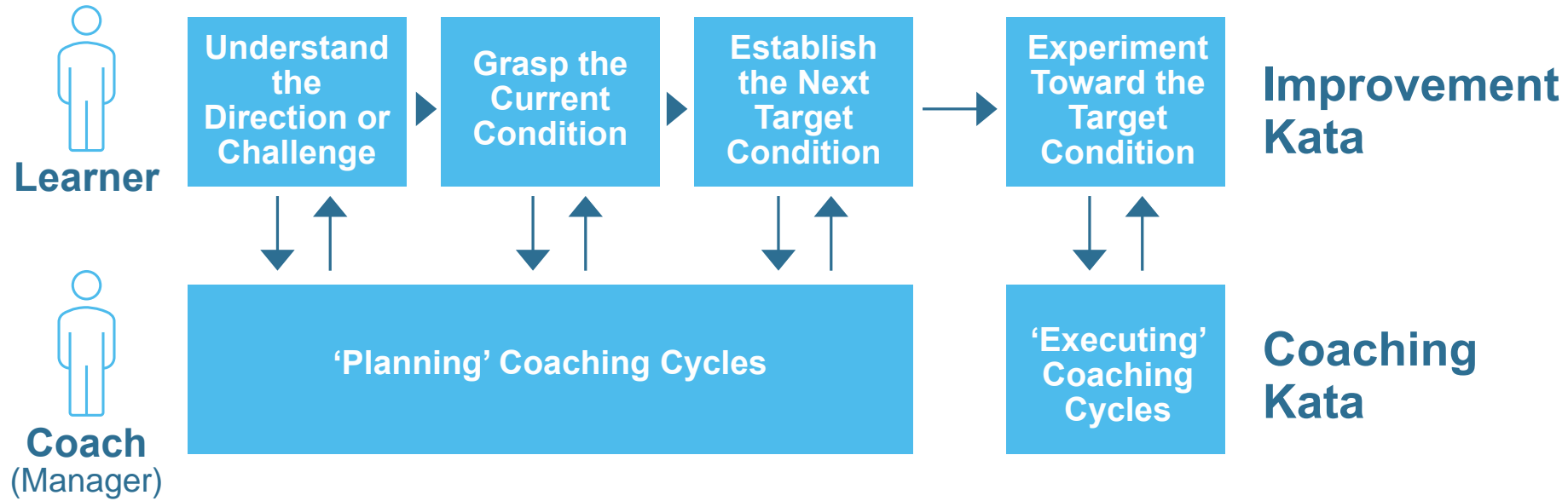

Ladder used 9 times

ABC Parts Difficult To Access

16,000 Steps, 196 Picks – 120 mins

Source: Mike Rother

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Coaching Kata

Learner

| Understand the Direction or Challenge | Grasp the Current Condition | Establish the Next Target Condition | Experiment Toward the Target Condition | **Improvement Kata** |

Coach (Manager)

'Planning' Coaching Cycles

'Executing' Coaching Cycles

Coaching Kata

COACHING KATA

The Five Questions

1) What is the **Target Condition**?

2) What is the **Actual Condition** now?

--------(Turn Card Over)-------->

3) What **Obstacles** do you think are preventing you from reaching the target condition?

Which *one* are you addressing now?

4) What is your **Next Step**?
(Next experiment) What do you expect?

5) How quickly can we go and see what we Have Learned from taking that step?

*You'll often work on the same obstacle with several experiments

Reflect on the Last Step Taken

Because you don't actually know what the result of a step will be!

1) What did you plan as your **Last Step**?

2) What did you **Expect**?

3) What **Actually Happened**?

4) What did you **Learn**?

------------------------->
Return to question 3

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Summary: The Improvement Kata Mind-set

Invest NI:
Operational Excellence Team

Who are we?
Business-experienced Coaches

What do we do?
Improve the productivity, profitability
& competitiveness of NI Businesses

How do we do it?
Tailored support using training, mentoring &
coaching to promote best practice and build
capability within our clients' businesses to
deliver quantifiable & sustainable improvement

Queries: opexquery@investni.com

Process Excellence

Innovative
Products

Commitment
to Quality

Superior Safety

**Operational
Excellence**

Exceed Customer
Expectations

Strategic
Direction
and Focus

Employee
Involvement

Leadership
Engagement

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Get in touch...

For more information from the Operational Excellence Team:

opexquery@investni.com