

EMBRACING EXCELLENCE

# LEAN

CONFERENCE CANADA  
WINNIPEG | JUNE 6-9, 2022



PRESENTED BY

CANADIAN  
MANUFACTURERS  
& EXPORTERS

KATA-mazing  
By Severine Guitton

[EMBRACINGEXCELLENCE.CA](http://EMBRACINGEXCELLENCE.CA)



# About the Speaker

- 28 years in Aerospace industry
- Last 12 years working with continuous improvement
  - 7 years experience with Toyota Kata
- **IMP Aerostructures**
  - ~50 years experience
  - We specialize in the manufacturing of flight-critical aircraft assemblies and detail components.
  - Special Processes: Heat treatment, Chemical Processing  
Spotwelding, Drop Hammer Forming &  
Composite Bonding



# Let's embark...

- How many people today have held a Kaizen event?
- **How many people have had a Kaizen event fail?**
- How many have done a Kata training?
- How many of us do not know where to start a kata?



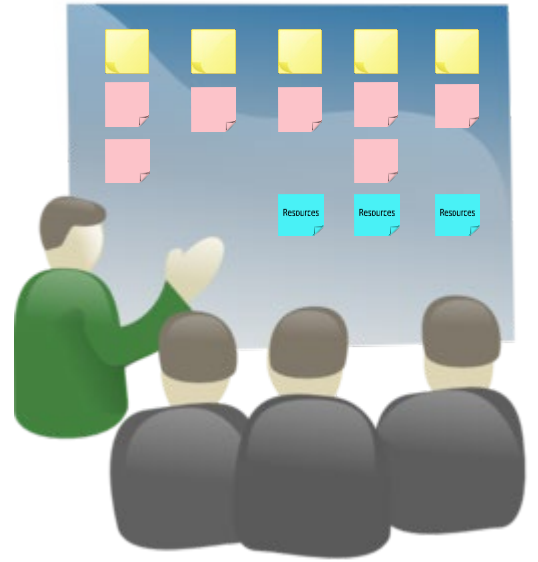
# Here's the plan

- Speaker's KATA Testimonies
- 10-minute exercise
- Self-Start a Kata
- Lessons learned

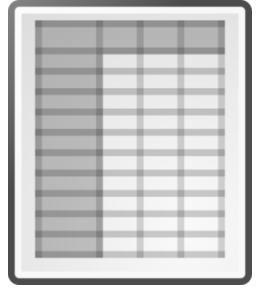


# Speaker's KATA journey

**Change**



**Kaizen Event**

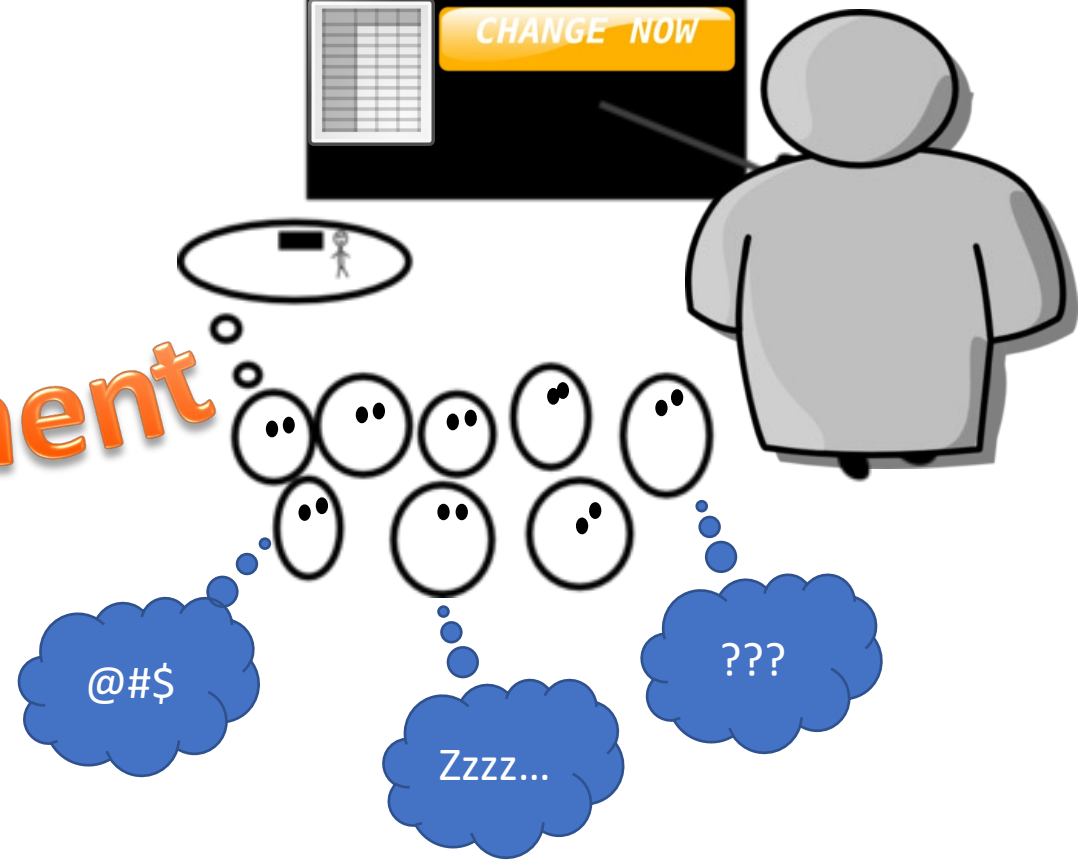


**Action Item list**

**Management**

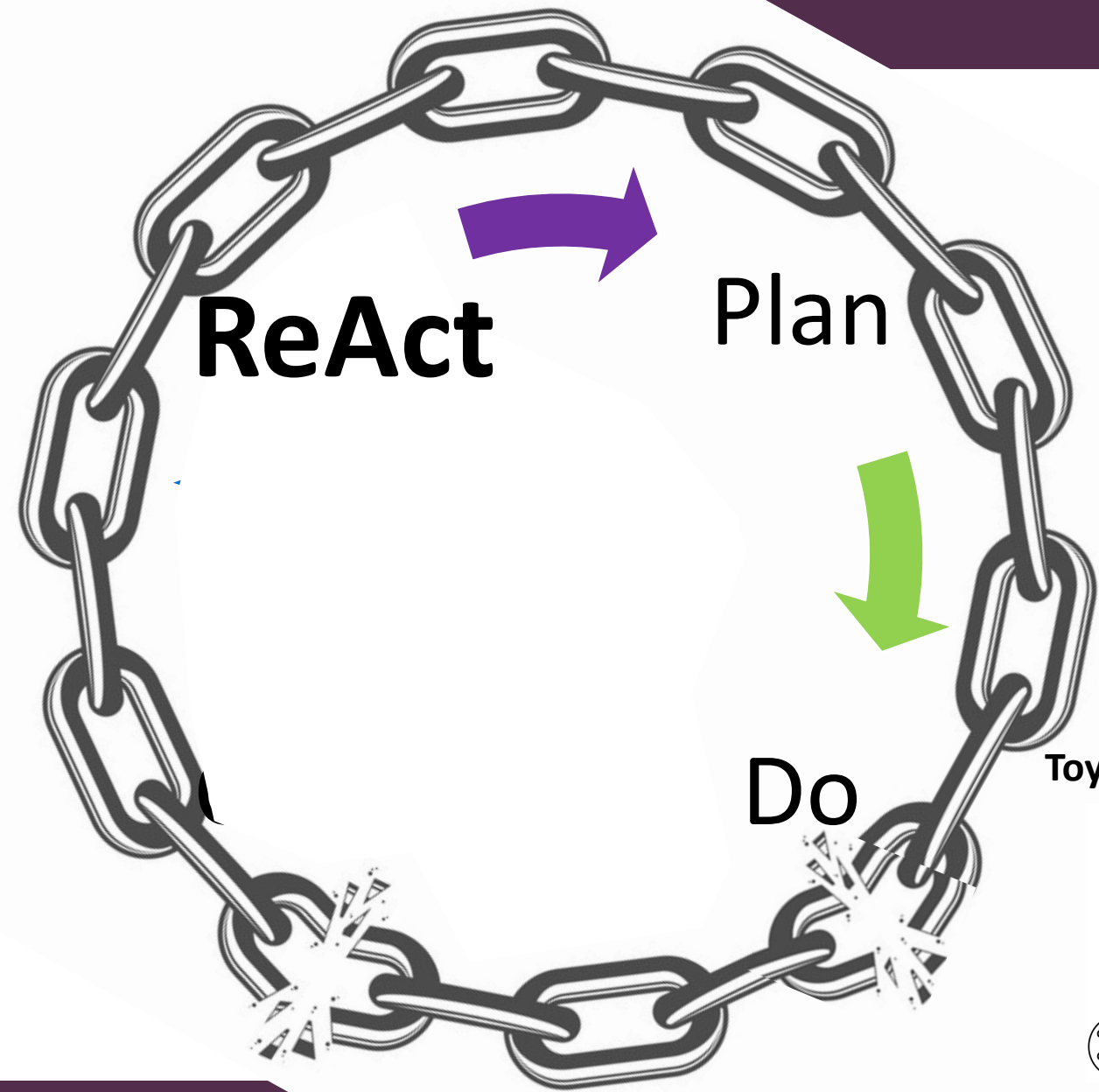


**Engage the team**



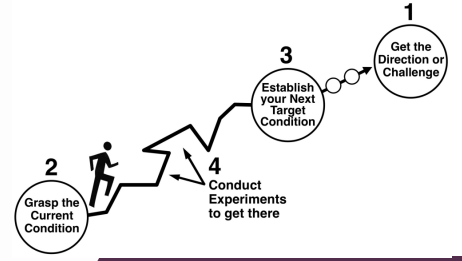


# PDCA



**Toyota KATA = Scientific thinking**

**THE FOUR STEPS OF THE IMPROVEMENT KATA**





# Why does Toyota Kata work? Change vs Evolve

**change** verb

\ 'chānj \

To **make** someone or something different

**evolve** verb

\ i- 'vòlv \

To **naturally develop** to a different adaptive state or condition



# Speaker's KATA journey

- Toyota Kata is a lean tool created by Mike Rother to 'develop scientific thinking as a way of working... to improve, adapt and innovate'

<http://www-personal.umich.edu/~mrother/Homepage.html>

- 2014 – Received Toyota KATA training workshop



- First Toyota KATA project launched started with 2 people



# For this exercise we'll build this 15-piece puzzle several times, and experiment with ways to do it faster





## 2 KATA Testimonies

# 2 KATA Testimonies

## #1 - Non-Union KATA

### *Sub-Purchase order Turnaround Time (TAT)*

- Where we were: 45 days TAT (was 30 days)
- Challenge: 1 day TAT
- Work center: Purchasing
- # of people started: 2 then 3
- KATA Tool: Traditional
- Frequency: 3-days a week

## 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*



# Traditional board

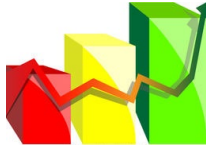

**Focus Process:**
**Challenge: 1 Day**

**Target Condition**  
Achieve by: 2 mth

30 Days

**Current Condition**

45 Days

**PDCA Cycles Record**

PDCA CYCLES RECORD				
Day	What do you expect?	What actually happened?	What did you learn?	What do you expect?

**Obstacles Parking Lot**

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?  
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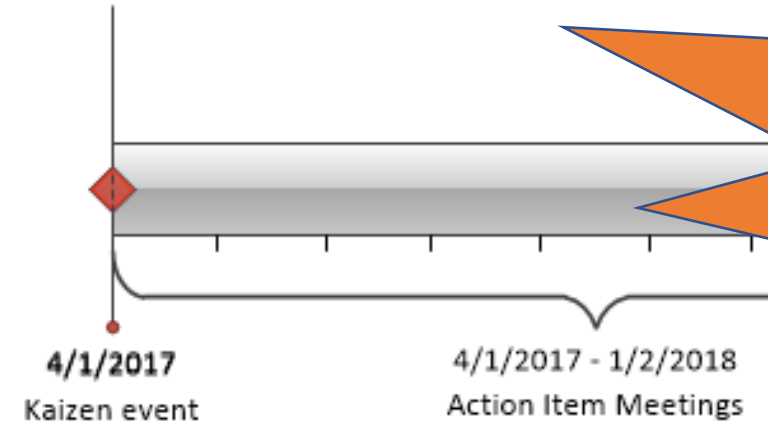
----->  
*Return to question 3*



# Sub-Contact Purchase Order

Challenge: 1 Day TAT

4/1/2017  
TAT = 30 Days



**KATA-mazing**

10 Departments  
20 people

**Target: 30 days TAT by June 30**

# Tip #1

Overcoming one obstacle at a time increases engagement which promotes growth, profits and benefits faster

## *What did we change? Some examples...*

Business processes and workflows

Floor layouts

Electronic form creation

Waste reduction

## *Did we sustain?*

4 years later still held strong



## **#2 Union KATA**

### **Improving the throughput of a product (Beam)**

- **Where we were**: 7 days TAT (48 hours)
- **Challenge**: 2.5 days TAT (20 hours)
- **Work center**: Assembly
- **# of people**: 8 (4 Learners + 1<sup>st</sup> Coach + 2<sup>nd</sup> Coach + PM + QA)
- **Kata Tool**: Modified
- **Frequency**: 2-days a week

## Tip #2

If the traditional questions/Board do not “work” for you, change the method but keep the intent



# The modified “Five” Questions

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

COACHING KATA

## The Five Questions

- 1) What is the Goal for the week?
- 2) (Monday) How did we do?  
(+Thursday) What is the goal for next week?
- 3) Did “xyz” work out as expected?  
**Yes:** Can you explain?*or Move to next question*  
**No:** What happened? (5-Whys?)
- 4) Are there any new issues? (*Maximize one way discussion - ask questions*)
- 5) What is the next improvement expectation?  
(Who?)





# KATA Board Tweak

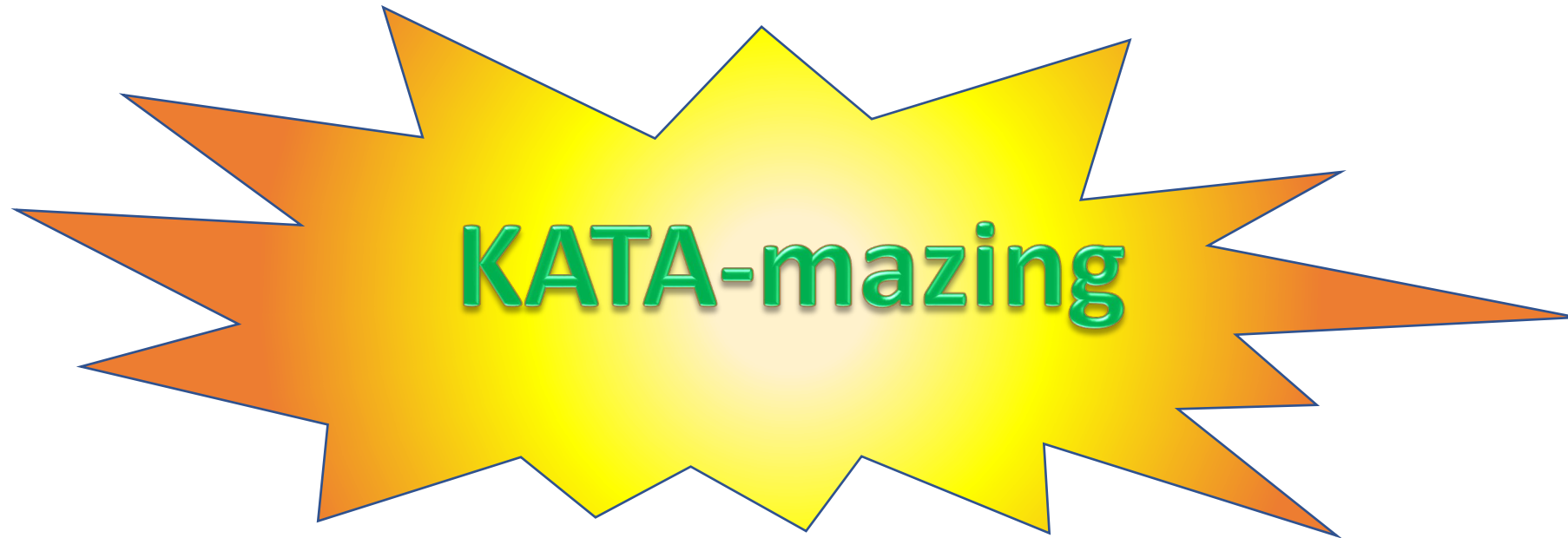
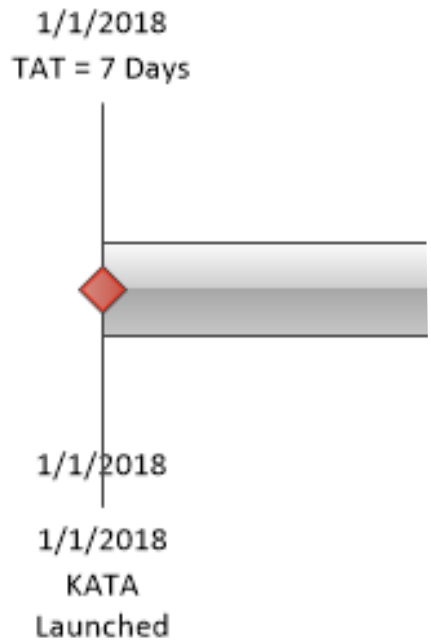
- PDCA was verbal and logged by the second coach
- The learner still defined the milestones
- Modified the 5-questions to be less intimidating

Assembly	Beam Project	
	<u>QTY complete</u>	
	Target	Actual
Week ending 26-Oct	0.75	0.75
Week ending 2-Nov	0.75	0.8
Week ending 9-Nov	0.75	0.8
Week ending 16-Nov	1	0.9
Week ending 23-Nov	1	1
Week ending 30-Nov	1	0.9
Week ending 7-Dec	1	1
Week ending 14-Dec	1	1



# Product Line TAT Improvement

**Challenge: 2.5 Day TAT**



**Target: 5 days TAT by April 30**

**Target: 4 days TAT by May 31**

**Target: 3 days TAT by June 30**

## *What did we change? Some examples...*

Workflows

Tooling and equipment improvements

Developed cross-functional teams

Waste reduction

## *Did we sustain?*

3 years and holding

# Self-Start a Kata



## Tip #3

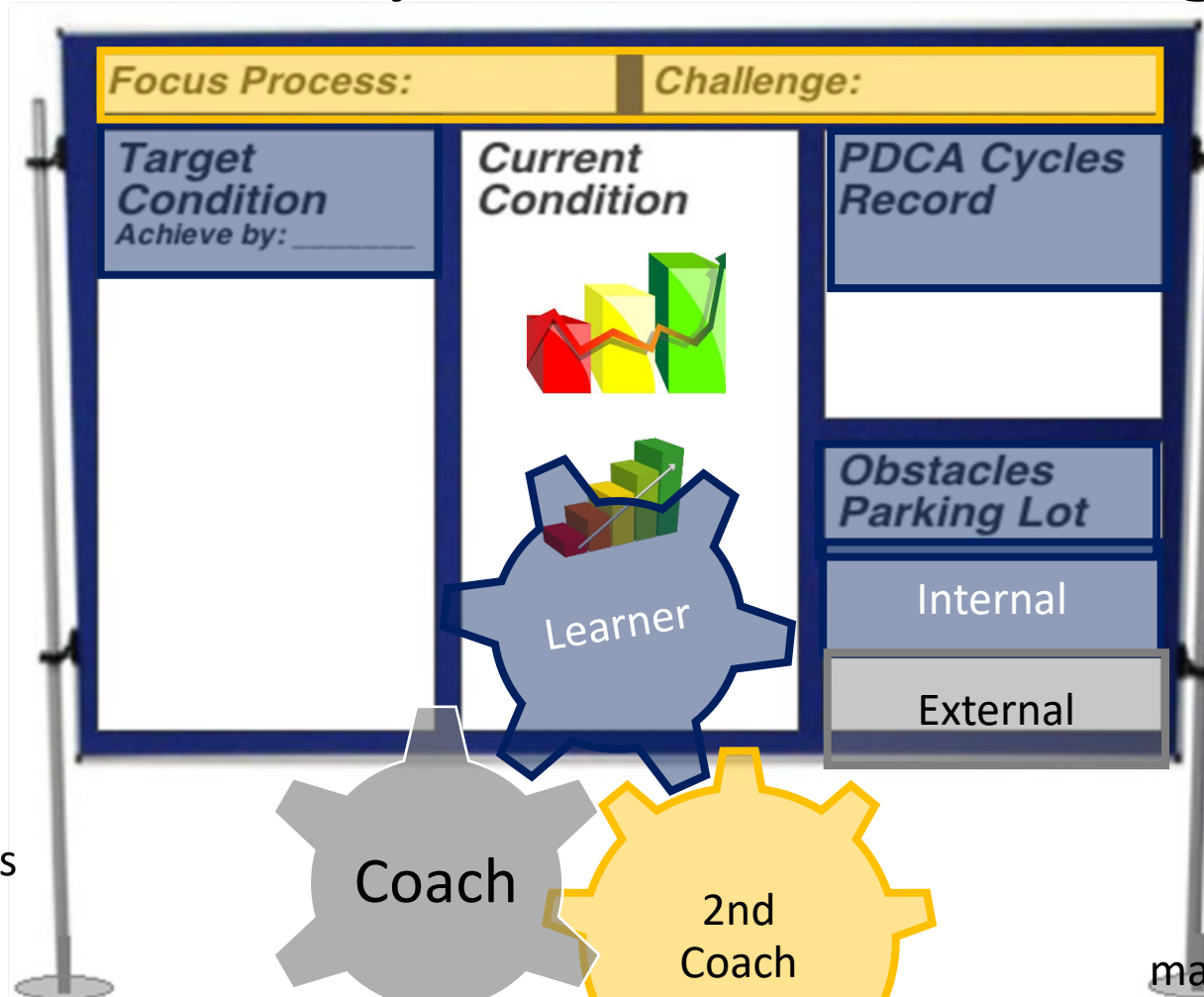
Stop solving the problem as a leader and encourage problem solving as a coach

# Starting KATA Story board – Learning K



**Learner**

(SME at the heart of the process and owns the storyboard & is responsible to update it)



**2<sup>nd</sup> Coach**

(Coach's supervisor or change management expert)



**Coach**

(SME's supervisor or change management expert owns Questions)

## *Select the Process and Challenge*

Linked to strategic objectives and/or company goals

*Understand the process's current state and  
communicate the importance of the Challenge*

Employee meetings

Risk/Benefit



## *Select your learner/coach team*

An individual at the heart of the process who has the autonomy to tackle the challenge obstacles

## *Develop/Roll-out a Kata training*

Group exercise involving learner, their team and the first coach

## *Develop KPIs as a team*

Start small

Consensus

## *Select the First Target Condition/by Date*

Defined by the learner

## *List the Obstacles*

Learner = Internal

Coach = External (Another Kata?)



# *How often do you meet at the Kata board?*

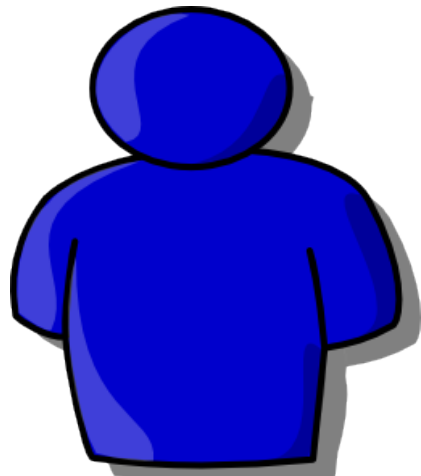
Meeting frequency  $\propto$  Cycle time of the process

**No less than once a week**

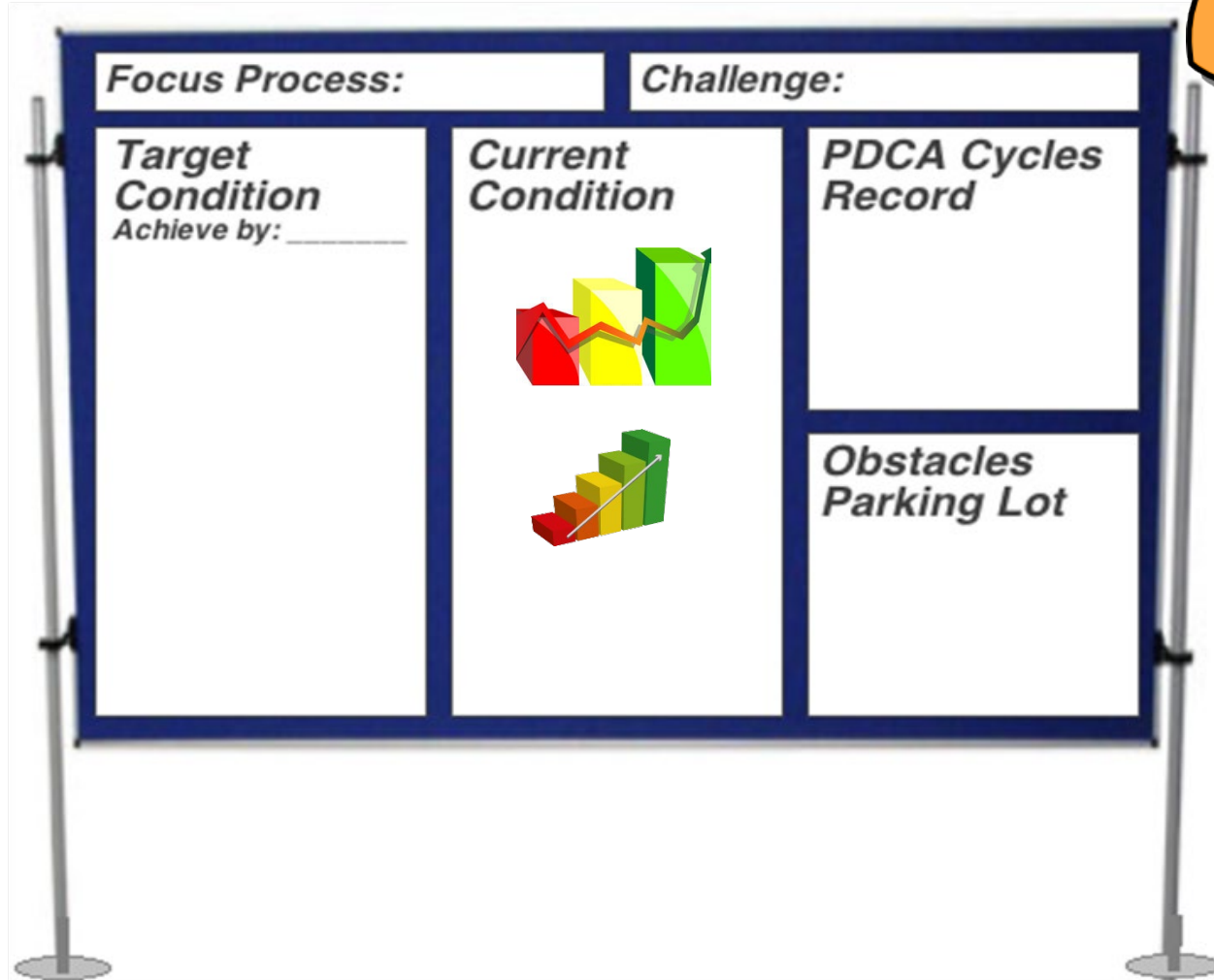
Cycle time	Frequency
Hourly	Daily
2-3 Days	3 times a week
3+ Days	2 times a week
@3 Month sustain	Once a week



# Attendance



**Learner**  
 (Always attends)



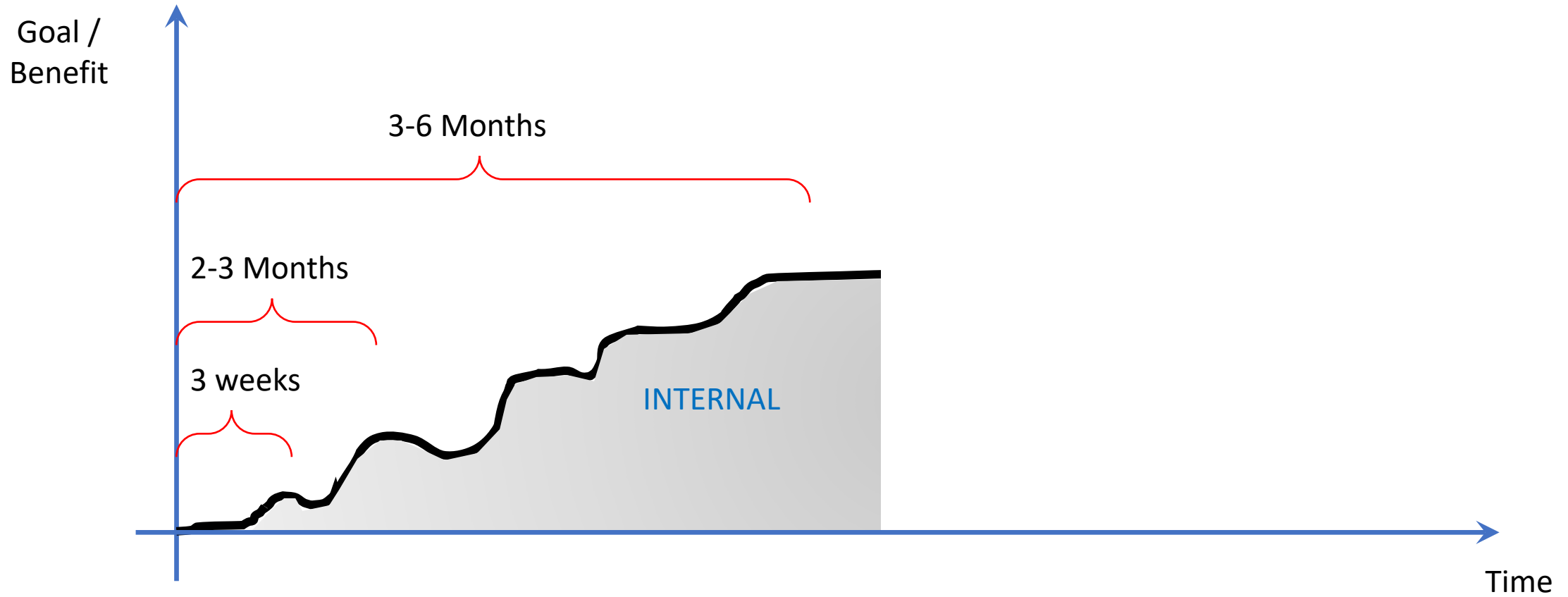
**2<sup>nd</sup> Coach**  
 (If cannot always attend  
 Minimum once a month)



**Coach**  
 (Always attends)



# Anticipated Progress



## *When do you “stop” a Kata board?*

When your challenge is sustained  
A change in strategic objectives

## *How did “we” define sustain?*

3 months with no variation in the current condition at  
the challenge target



# *How do I get management buy-in?*

- Toyota KATA is “So new” that there are many lean leaders who still do not know about it, even less in management
- When trying to introduce the Toyota Kata, a lot of resistance and opposition is expected. Instructed not to implement.
  - The plant is too busy / Impact other projects in work
  - It will take resources away from their main tasks
  - Skeptical/Disbelief (Sounds too good to be true)
- What was there left to do?

**Do it anyway without management knowing.**

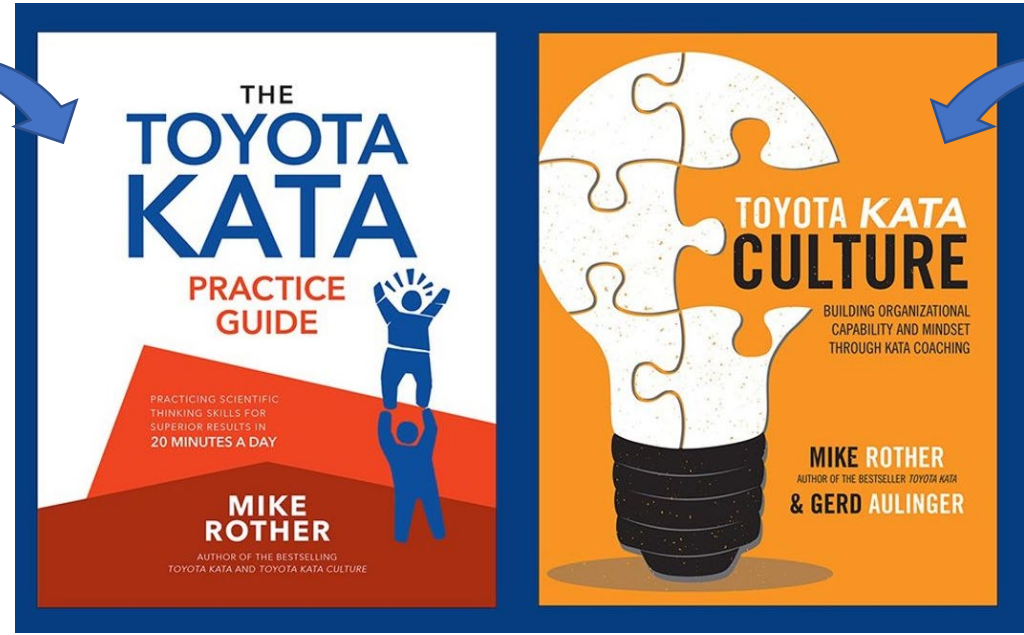


Shhhhh!



# Further reading...

Step-by-step guide on how to develop and execute your KATA board



A detailed top down approach to achieving goals across the organization using KATA



# Lessons learned

## Tip #4

As a coach and second coach...

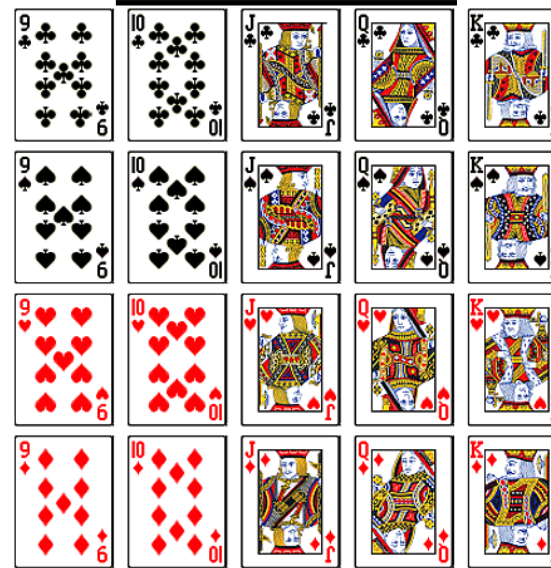
Stop figuring out how to get there faster and  
“trust” that you will get there sooner

# Training – KATA simulations

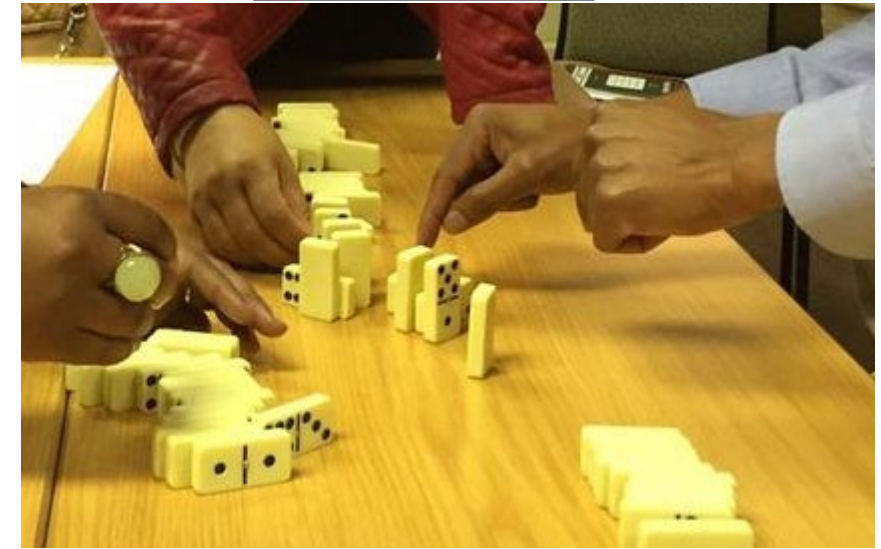
**1-2 Hours**



**2-3 Hours**



**3-4 Hours**



**Manufacturing**

**Resistant to Change**

**Dealing with difficult people**



# Training – KATA simulations

## Before



## Now





# KATA – “Malfunctions”

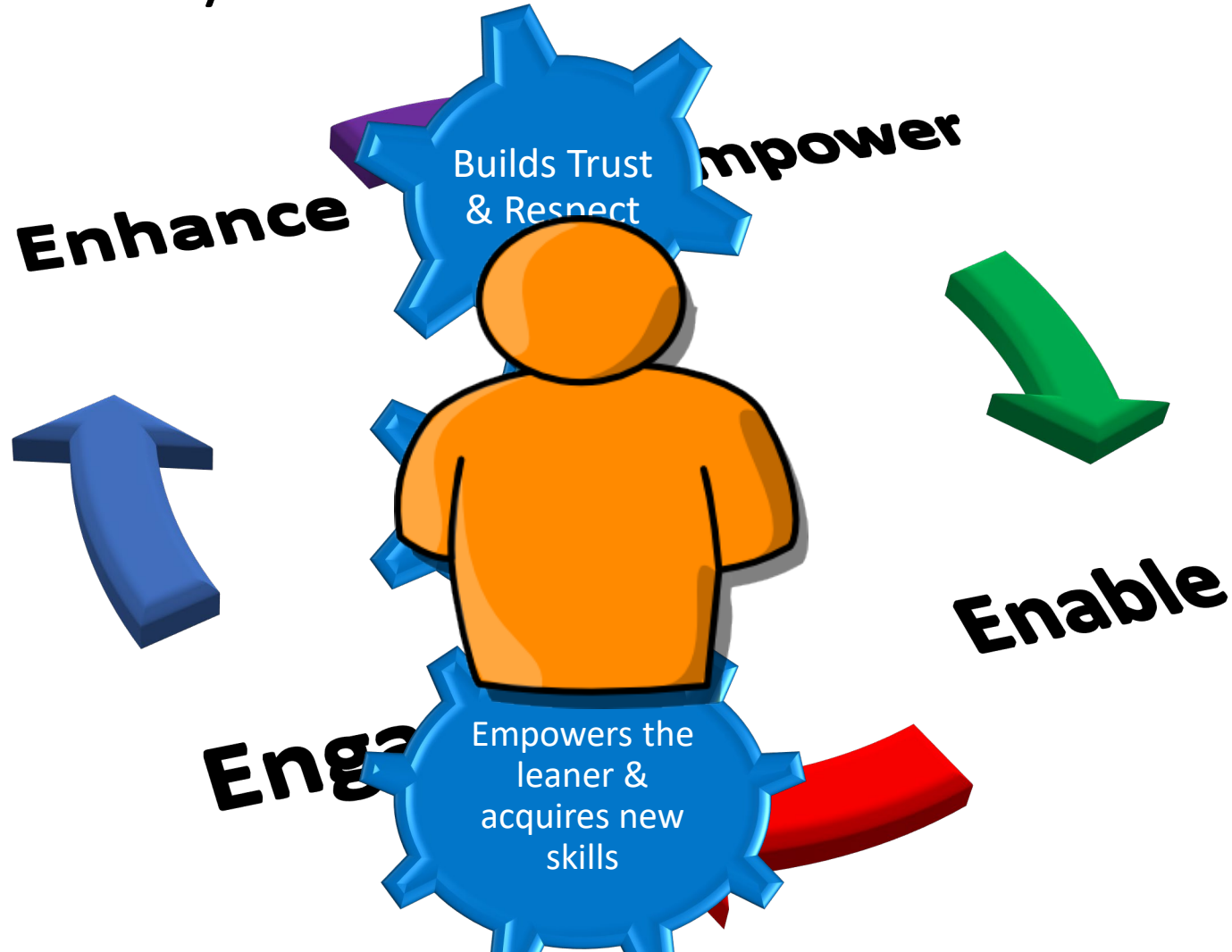
- **Change of players (transfer/departure):**
  - First coach: Have to rebuild trust and redo the KATA training with the team
  - Learner: Allow the new learner to make the same “experiments” as the previous learner even if the coach knows better (as long as... it is safe – no high \$\$ loss...)
- **When the first coach does not respect the 5-Questions**
  - Replace, Reuse or Recycle (Retrain)

# KATA – “Malfunctions”

- **Second coach attendance issues**
  - Traditionally is represented as the first coach supervisor
  - Position was replaced by a continuous improvement representative with KATA knowledge at the regular meeting times
  - First coach supervisor was required to attend as a second coach once a month

# Wrapping-up

# Why does Toyota KATA work?





# Why does Toyota KATA work?

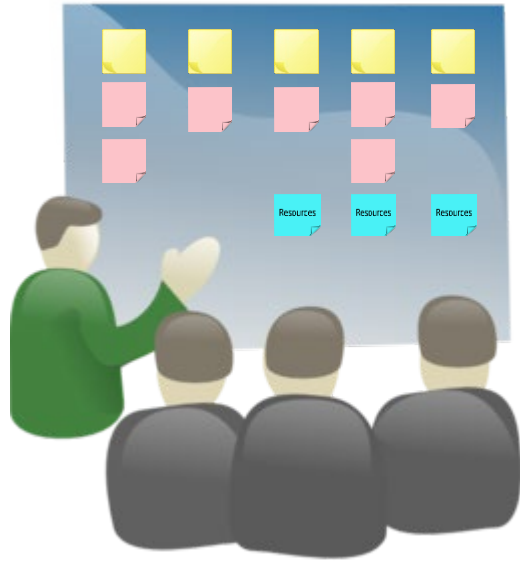
## For the employee

- Drives employee engagement
- People development
- Nurtures scientific thinking
- It's simple

## For the industry

- Achieves business goals
- Positive working environment
- Promotes Innovation
- Low cost to maintain

# In conclusion



**Kaizen Event**

# BOTTLENECKS

# VISION



Focus Process:		Challenge:
Target Condition Achieve by: _____	Current Condition	PDCA Cycles Record
		Obstacles Parking Lot

Focus Process:		Challenge:
Target Condition Achieve by: _____	Current Condition	PDCA Cycles Record
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Focus Process:		Challenge:
Target Condition Achieve by: _____	Current Condition	PDCA Cycles Record
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IMPOSSIBLE

KATA-mazing

## The Five Questions

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- 4) What is your **Next Step**? (next PDCA / experiment) What do you expect?
- 5) When can we go and see what we **Have Learned** from taking that step?

\*You'll often work on the same obstacle for several PDCA cycles



*Thank You*