

Seasons Greetings from the LEA



Santa has his "Elf T F"
ready for Christmas!





LEA Webinar

Rapid Problem Solving

D.Brunt, D.Marriott, P.Watkins
December 8th 2021

Webinar House Keeping

- Q & A – In middle and end 
- Raise Questions in Teams Chat
- Mute in Teams Environment 
- We are recording
- Copy of recording & slides
- Copy of Teach Poster & Script
- To use in your own organisation

Copy of Criteria sheets for reflection exercise

RAPID PROBLEM SOLVING (RPS) EVALUATION CRITERIA

C:\Users\user\Dropbox (Lean Academy)\Lean Academy Team\Folder\LEA Youtube\Learning Platform\Material\RPS\Website Material\Level 3\RPS Coaching Evaluation Form Ver 1.0.0.doc (RPS Evaluation - Coaching)

1.0 Concern

Expected Content

- Background/context/why solve this problem?
- Clarify the Current Situation, Standard & Gap.
- Gap Analysis to define the Problem to Pursue.
- Use of the 7 PS Tools to visualise.

Step 1 | CONCERN - What's the GAP?

1.1 Background

- Why are you tackling this problem and why is it important?
- How would you introduce this problem to someone else?
- Where did the problem come from?
- Scope of the subject/problem?
- What would happen if you did nothing or impact to the business?

Use a graph, a sketch or a photo to help explain the Background...

1.2 Clarify the Problem - Gap

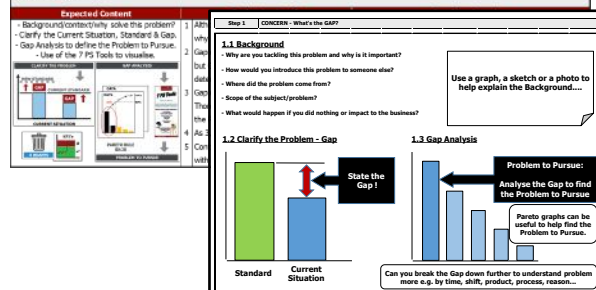
State the Gap!

1.2 Gap Analysis

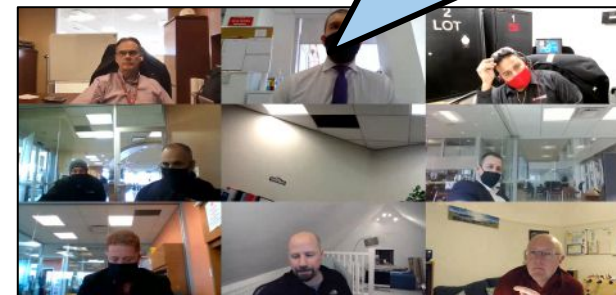
Problem to Pursue: Analyse the Gap to find the Problem to Pursue.

Pareto graphs can be useful to help find the Problem to Pursue.

Can you break the Gap down further to understand problem more e.g. by time, shift, product, process, reason...



Optional discussion at the end



To join, scan the QR Code on your mobile device camera



OR in type in your browser:

<https://ahaslides.com/RPSWEBINAR>
on desktop, laptop or mobile.

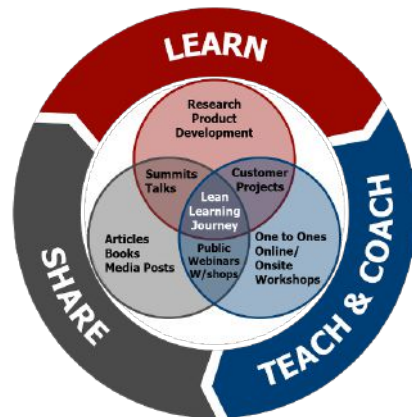
LEA - Purpose & Approach

Our Purpose:

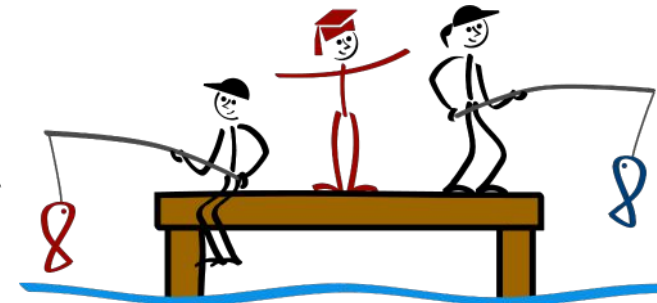
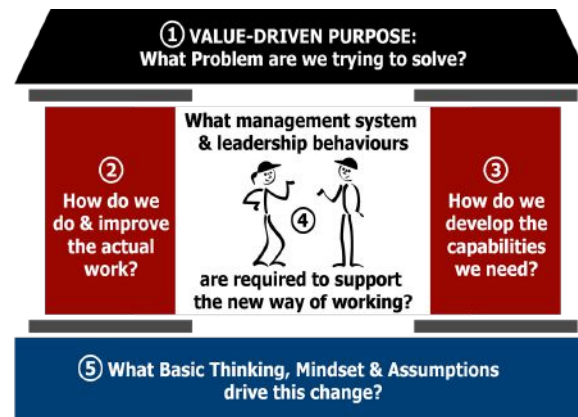
We are a not for profit organisation, established to help customers become self-reliant on their lean journey. Through research, products and services we provide better, faster and cheaper ways to learn and improve.

Our Approach:

SELF RELIANT CUSTOMERS



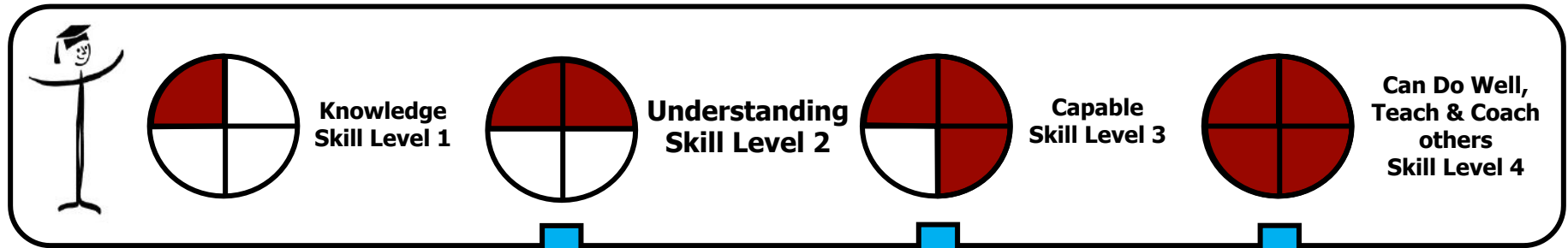
LEAN TRANSFORMATION FRAMEWORK



*"Give a man a fish and you feed him for a day. **Teach** him how to fish and you feed him for a lifetime" – Lao Tzu*

What is your Lean Journey?


Lean Learning Journey – Skill Levels



Today


Online Course

4 Step Rapid Problem Solving Level 1




- Knowledge
- Understanding
- Capable
- Teach & Coach Others

- 1 Hour, Online, On Demand, Self Paced Learning.
- Par pose, Process & People of Rapid Problem Solving.
- Teach Poster, 3 Teach Videos, Problem Solving Capability Assessment.
- Learning Confirmation and Certificate of Completion.

Lean Enterprise Academy 


Online Course

4 Step Rapid Problem Solving Level 2




- Knowledge
- Understanding
- Capable
- Teach & Coach Others

- 4 Hours, Online, On Demand, Self Paced Learning.
- Par pose, Process, People & Method of Rapid Problem Solving.
- Teach Poster, Delegate Workbook, 12 Teach Videos, RPS Case Study.
- Learning Confirmation and Certificate of Completion.

Lean Enterprise Academy 


Coached Course

4 Step Rapid Problem Solving Levels 1, 2 & 3




- Knowledge
- Understanding
- Capable
- Teach & Coach Others

- 12 Weeks Online Live Teaching & Coaching Sessions with Star LEP Member.
- Par pose, Process, People & 4 Step Method of Rapid Problem Solving.
- Teach Poster, 3 Teach Videos, Case Study & Evaluation Method Workbook.
- Learning Confirmation and Certificate of Completion.

Lean Enterprise Academy 


Coached Course

4 Step Rapid Problem Solving Levels 1, 2, 3 & 4



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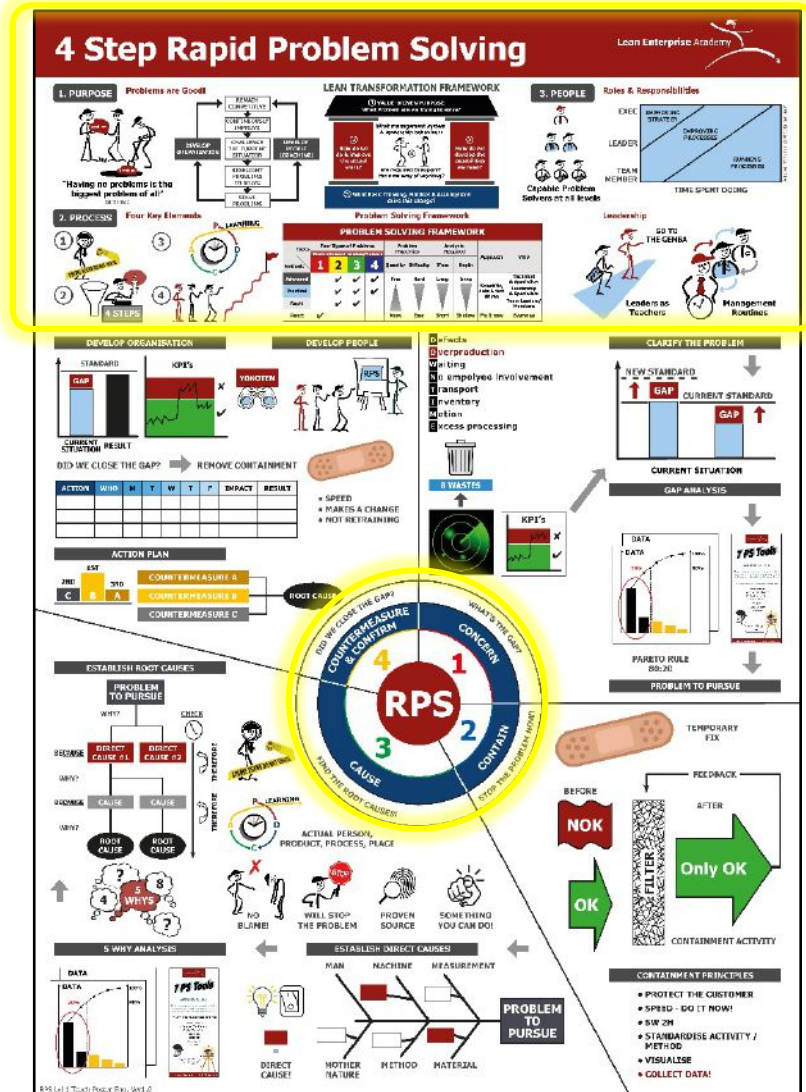
- 18 Weeks Online Live Teaching & Coaching Sessions with Star LEP Member.
- Par pose, Process, People & 4 Step Method of Rapid Problem Solving.
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Lean Enterprise Academy 



Learn more about our online & coached courses at:

www.leanuk.org/lean-courses



- **Agenda**
- **Teach Poster Concept**
- **Introduction to Problem Solving**
 - **Purpose**
 - **Process**
 - **People**
- **Q & A**
- **Overview of the 4 Steps**
- **RPS Quadrant Chart**
- **Lean Learning Journey for RPS**
- **Summary/Q & A**

The Problem with Problem Solving?

- 1. Certifications based upon Knowledge not Capability**
- 2. Trying to use A3's for every problem**
- 3. Only Containing Problems, not getting to Root Cause**
- 4. Jumping to solutions**
- 5. Leaders trying to solve all problems**
- 6. Leaders not coaching others in the process/thinking way**
- 7. Taking too long to do**
- 8. I Understand it, but can't apply it in my situation**
- 9. Not capturing and visualising problems**

Problem Solving – Introduction

Work through:

1. Purpose
2. Process
3. People


Starting Point:

Lean Transformation Framework


4 Step Rapid Problem Solving

1. PURPOSE

Problems are Good!



"Having no problems is the biggest problem of all"
Taichiro Ohno



REMAIN COMPETITIVE
 CONTINUOUSLY IMPROVE
 CHALLENGE THE CURRENT SITUATION
 HIGHLIGHT PROBLEMS TO SOLVE
 SOLVE PROBLEMS

DEVELOP ORGANISATION DEVELOP PEOPLE (COACHING)

LEAN TRANSFORMATION FRAMEWORK

① VALUE-DRIVEN PURPOSE:
What Problem are we trying to solve?

② How do we do & improve the actual work?

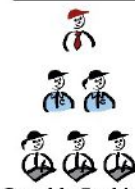
③ How do we develop the capabilities we need?

④ are required to support the new way of working?

⑤ What Basic Thinking, Mindset & Assumptions drive this change?

3. PEOPLE

Roles & Responsibilities




Capable Problem Solvers at all levels

EXEC	IMPROVING STRATEGY
LEADER	IMPROVING PROCESSES
TEAM MEMBER	RUNNING PROCESSES

TIME SPENT DOING

2. PROCESS

Four Key Elements



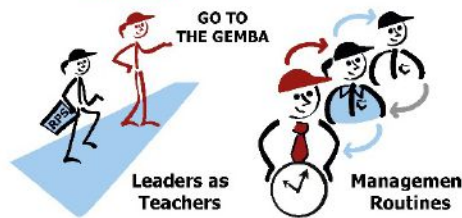
P LEARNING

Problem Solving Framework

Types	Four Types of Problems				Problem Properties		Analysis Required		Approach	Who
	1 <small>Reactive/Cause</small>	2 <small>Created/Proactive</small>	3	4	Quantity	Difficulty	Time	Depth		
Advanced	✓	✓	✓	✓	Few	Hard	Long	Deep	Scientific, data & fact driven	Technical & Specialists
Practical					▲	▼	▼	▼		Leadership & Specialists
Rapid	✓	✓								Team Leaders/ Members
React	✓				Many	Easy	Short	Shallow	Fix it now	Everyone

Leadership

GO TO THE GEMBA

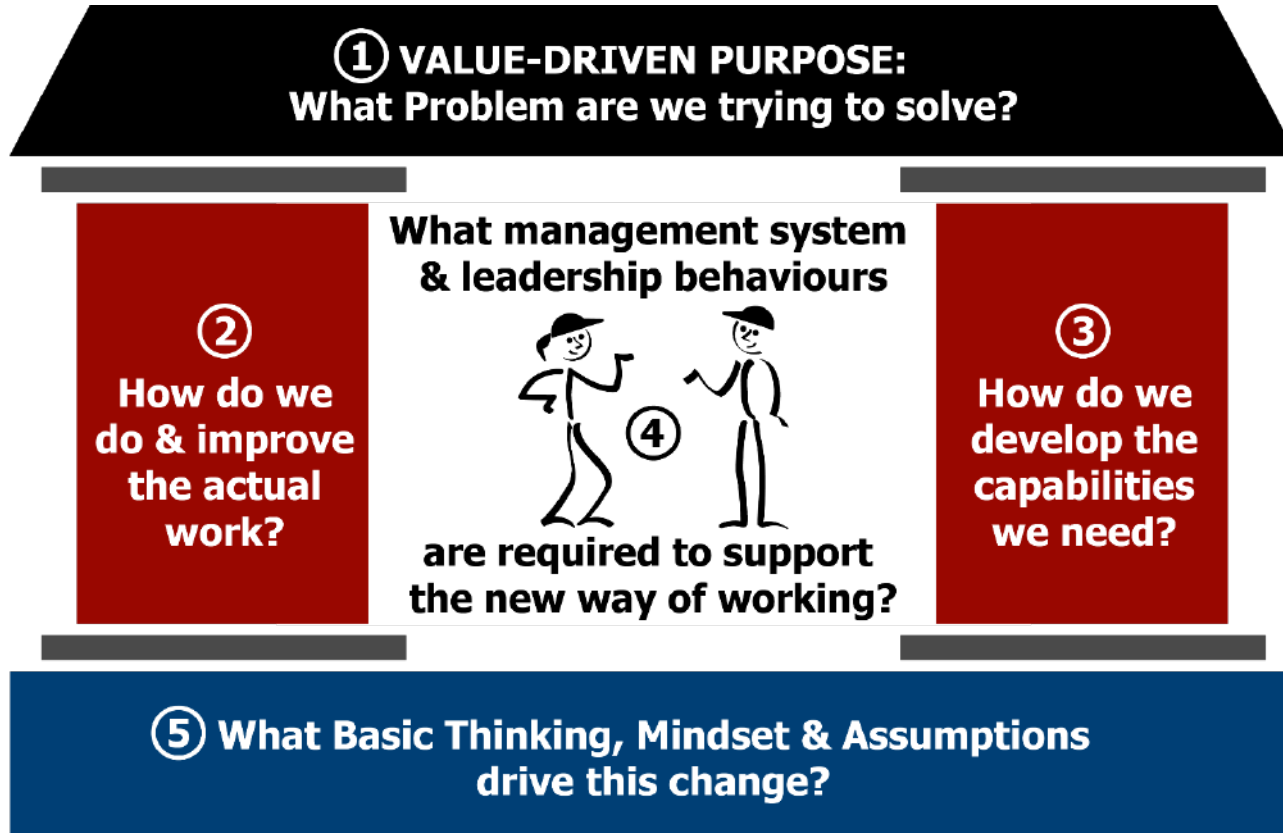


Leaders as Teachers
Management Routines

Accepted from IMV (1997) Keller 307

RPS Lvl 1 Teach Poster Eng. Ver1.0

Problem Solving is the #1 Lean Skill!

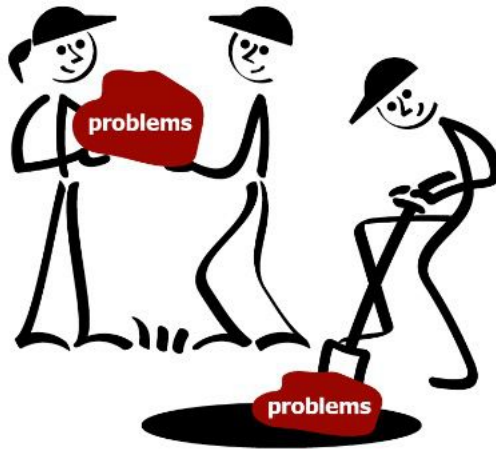


Go to www.leanuk.org/about-the-lean-enterprise-academy/how-to-do-lean/
to see the full LTF video explanation

1.0 Purpose

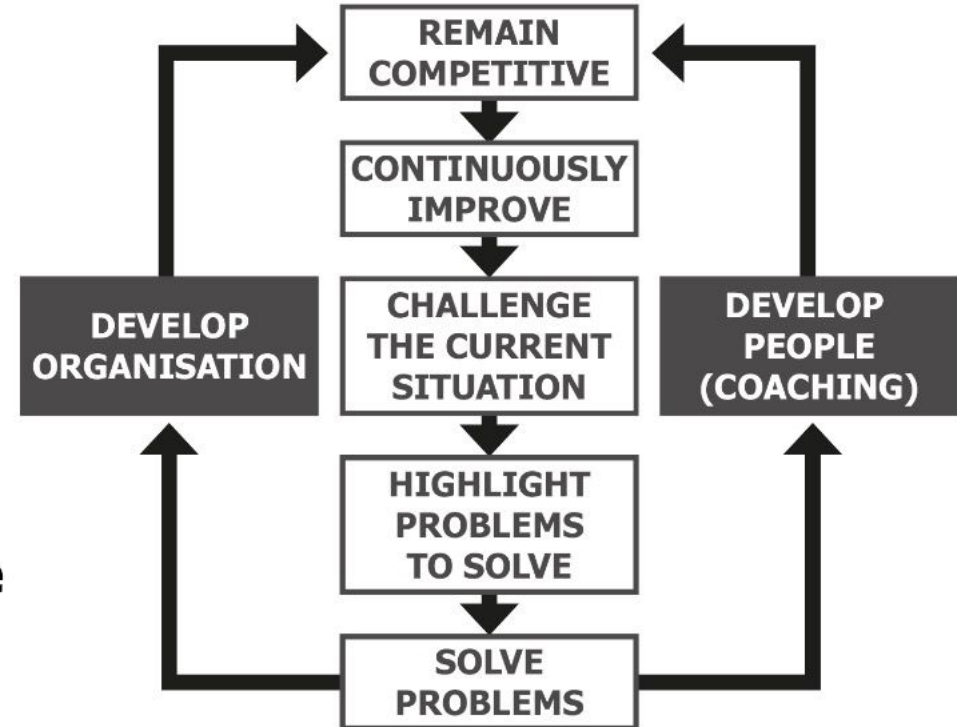
1. PURPOSE

Problems are Good!



“Having no problems is the biggest problem of all”

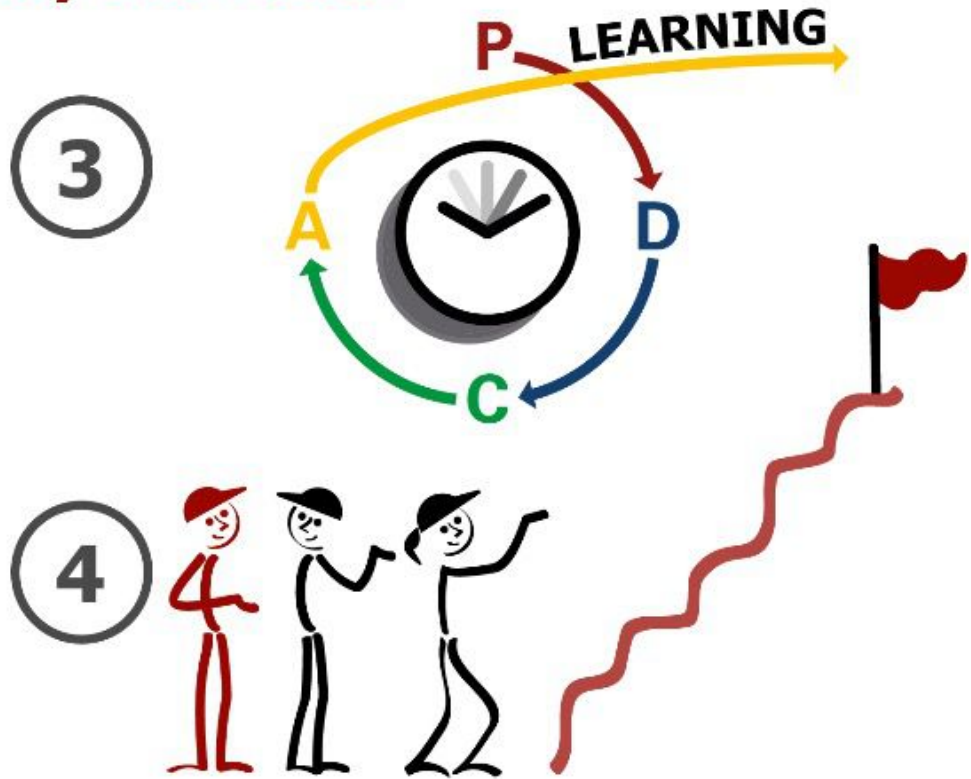
Taiichi Ohno



Supports People and Business Development

2. PROCESS

Four Key Elements



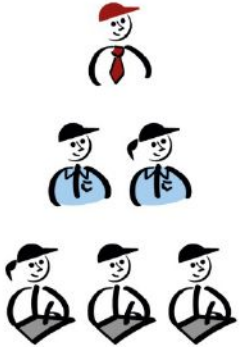
PROBLEM SOLVING FRAMEWORK

Types Methods	Four Types of Problems				Problem Properties		Analysis Required		Approach	Who
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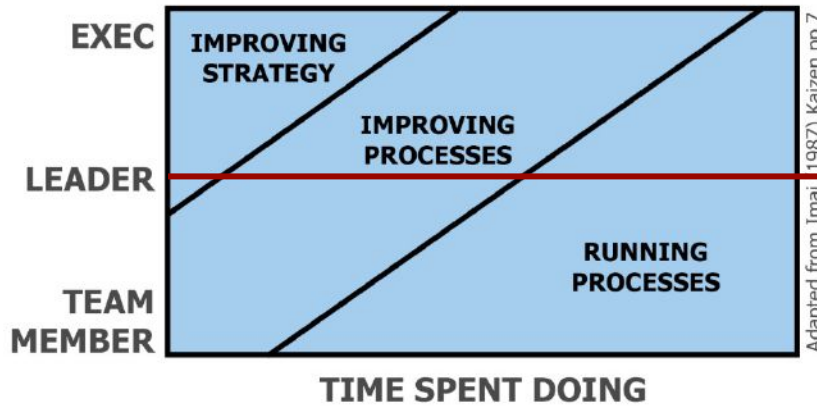
3.0 People

3. PEOPLE

Roles & Responsibilities



Capable Problem Solvers at all levels



What is your Time Spent Doing?

Leadership

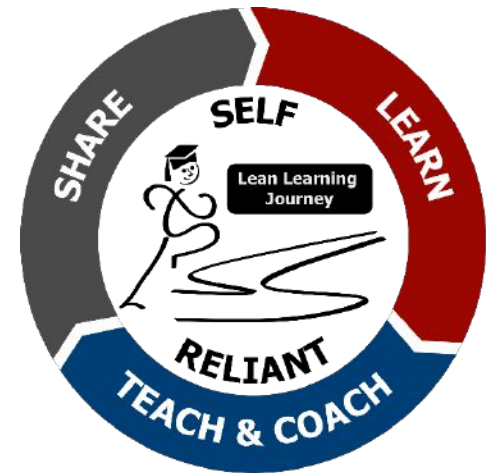


GO TO THE GEMBA


Leaders as Teachers



Management Routines




What Questions Do You Have?



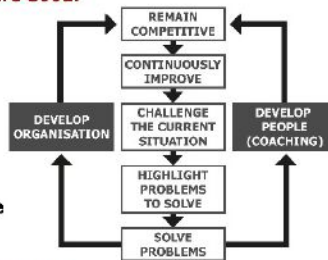
Lean Enterprise Academy

4 Step Rapid Problem Solving

1. PURPOSE Problems are Good!



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Takide Ohno



LEAN TRANSFORMATION FRAMEWORK

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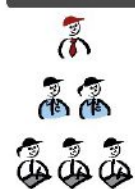
② How do we do & improve the actual work?

③ How do we develop the capabilities we need?

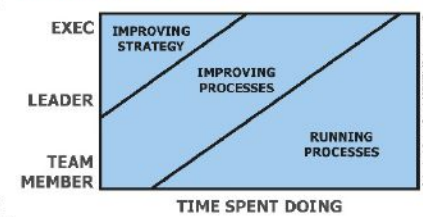
④ are required to support the new way of working?

⑤ What Basic Thinking, Mindset & Assumptions drive this change?

3. PEOPLE Roles & Responsibilities





Capable Problem Solvers at all levels



Adapted from Inoue (1997), Leaban, pp.7

2. PROCESS Four Key Elements





Problem Solving Framework

Types	Four Types of Problems				Problem Properties		Analysis Required		Approach	Who
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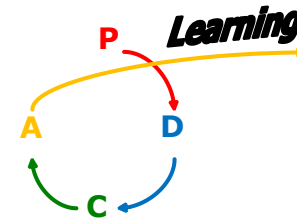
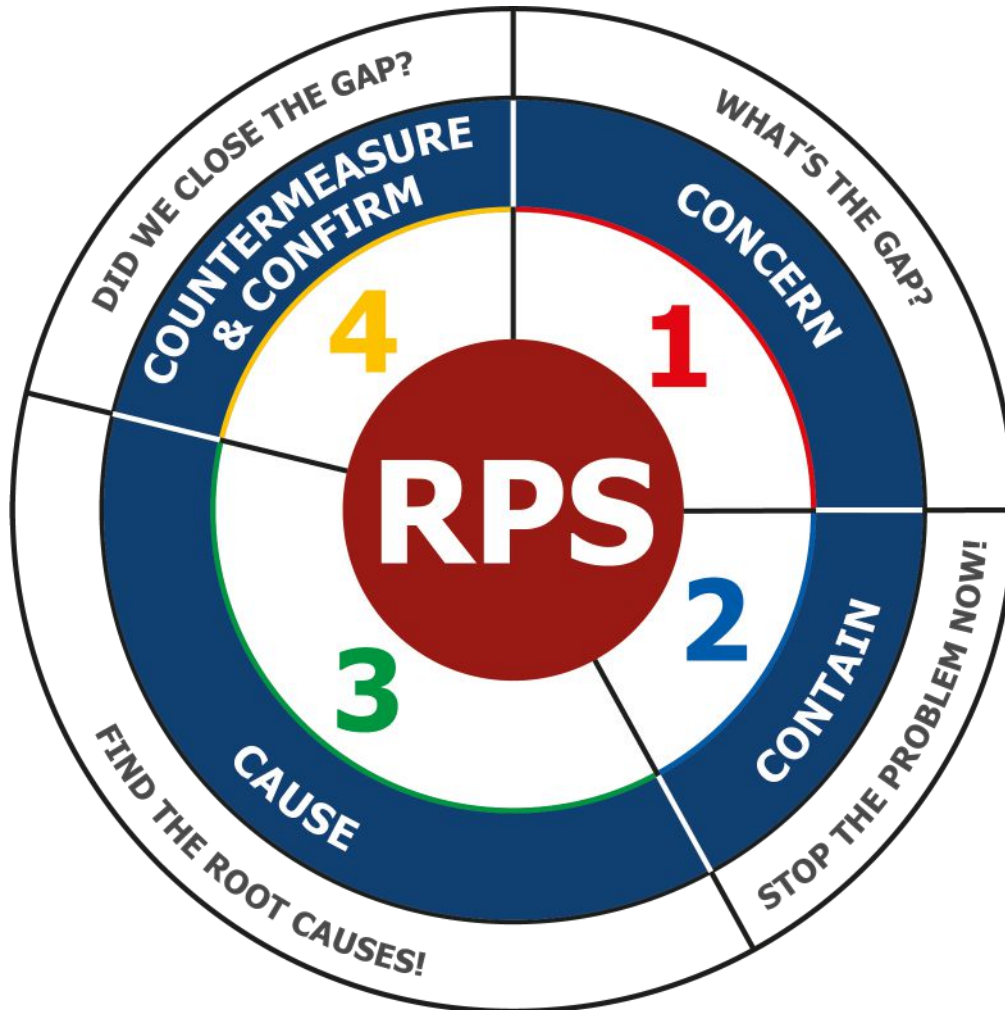
Leadership

GO TO THE GEMBA



Leaders as Teachers **Management Routines**

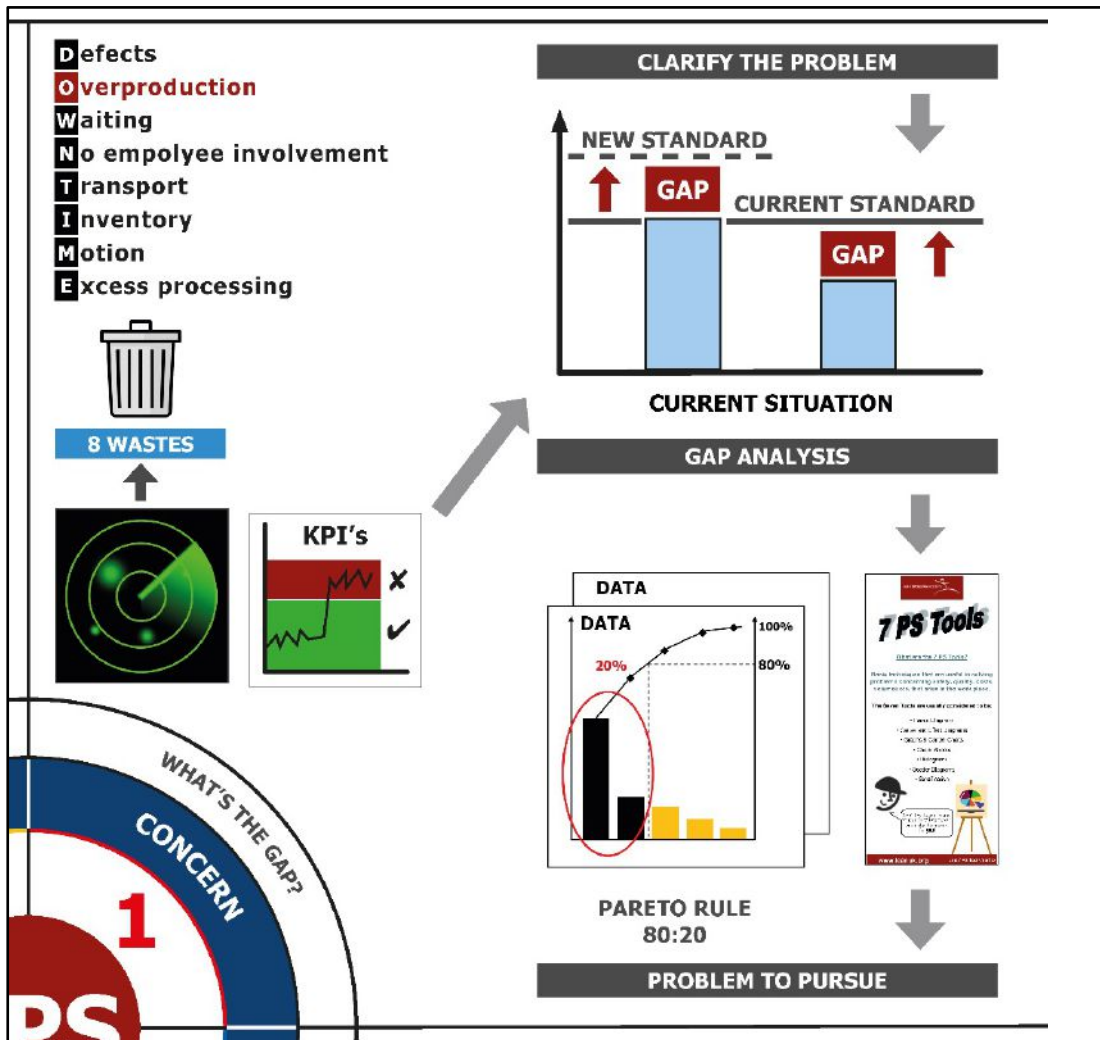
Overview of the 4 Steps



**Follows
PDCA
Thinking**



Step 1 – Concern

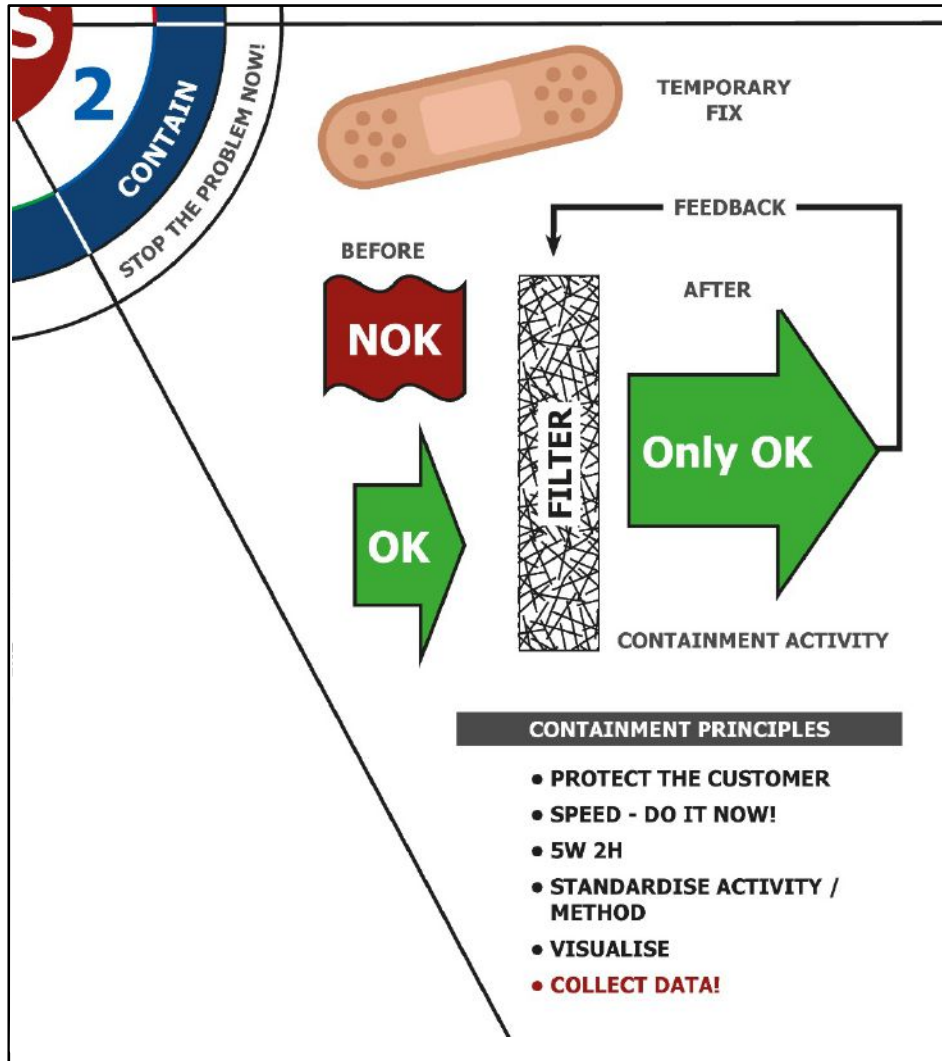


- Understand Waste to identify Problems
- What's the GAP?
- Visualise the GAP so everyone is aligned
- Analyse the GAP
- Problem to Pursue

“Step 1 is Key”



Step 2 – Contain

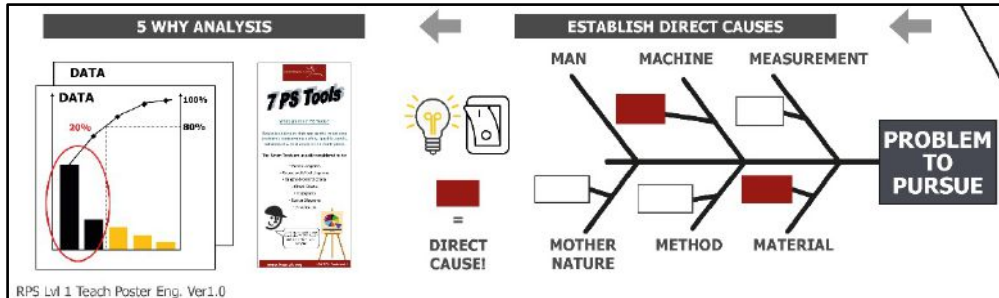


- Stop the bleeding
- Protect the customer
- Understand the problem better

“Don’t stop after Step 2 Contain”



Step 3 – Cause



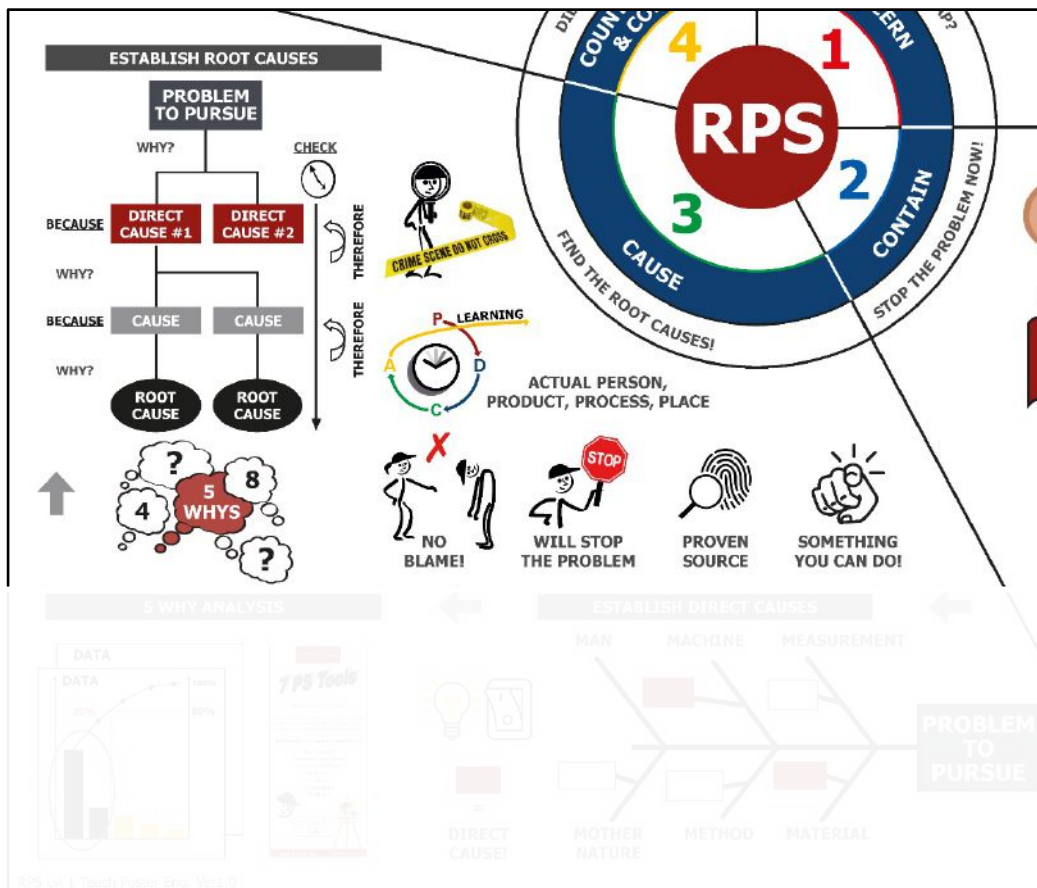
- **Establish Direct Causes of Problem to Pursue**

- **Can use Fishbone diagram as brainstorm framework**
- **Light switch test!**
- **Must Prove with Data**

“Prove Cause & Effect”



Step 3 – Cause

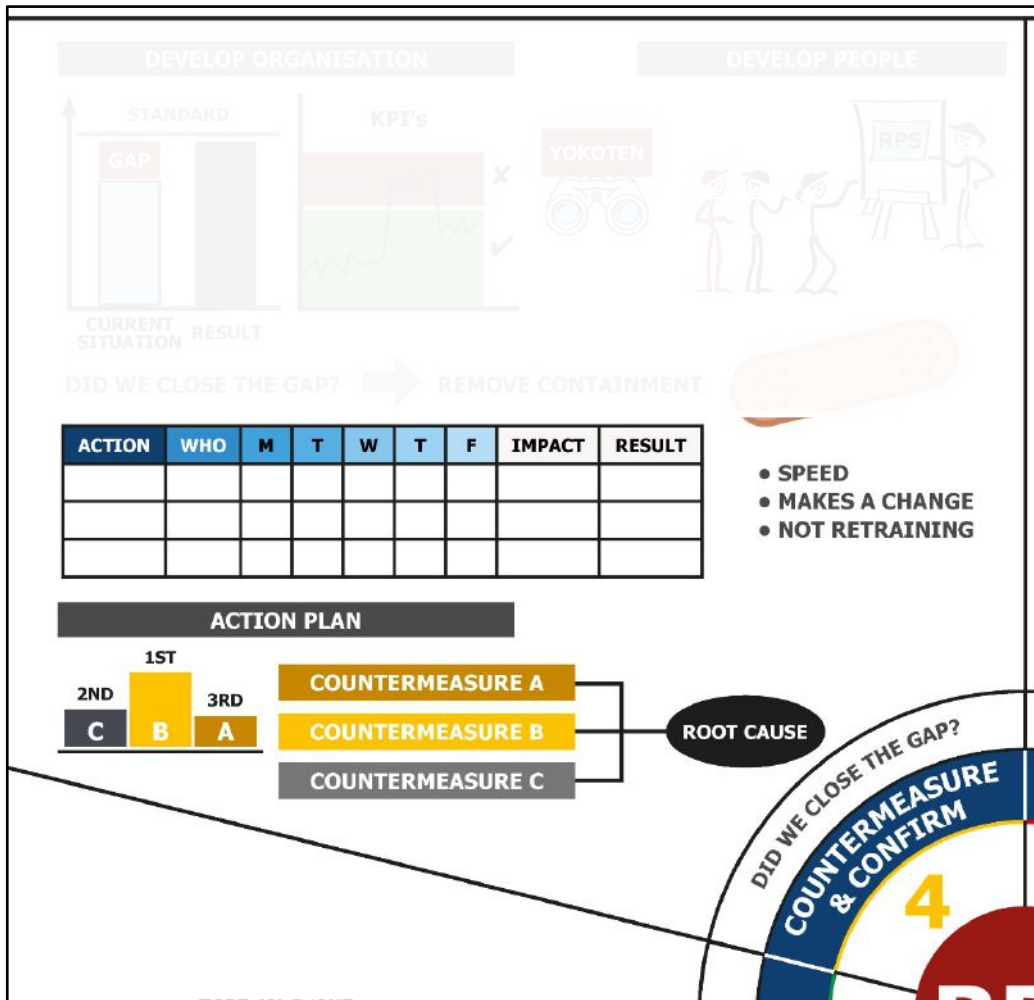


- Establish the Root Causes
- 5 Why Analysis
- Start with Problem to Pursue
- First Level of Why is the Direct Causes

“Will Stop the Problem”



Step 4 – Countermeasure & Confirm

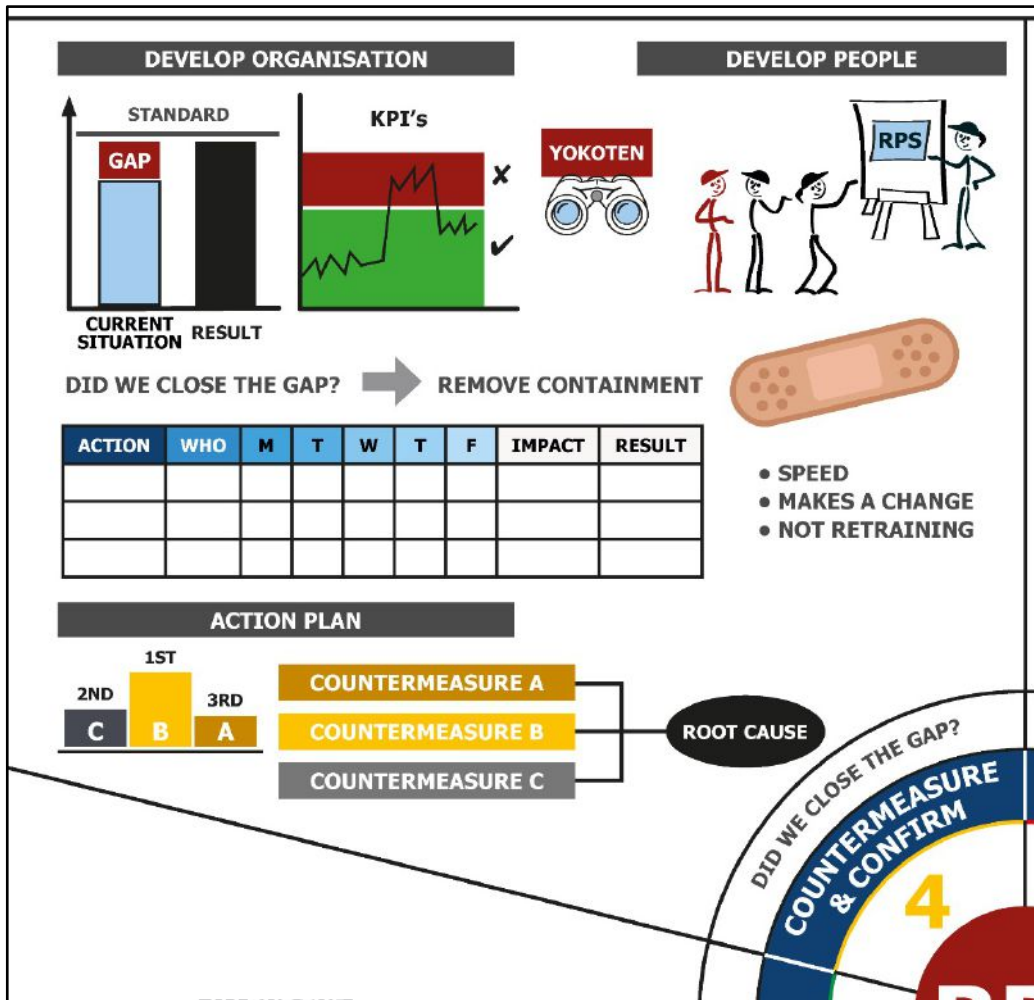


- Countermeasures aligned to specific to Root Causes
- Alternative Ideas
- Evaluate & prioritise
- Make a change
- Action Plan for each countermeasure

“See Countermeasures through” with speedy action together as a team

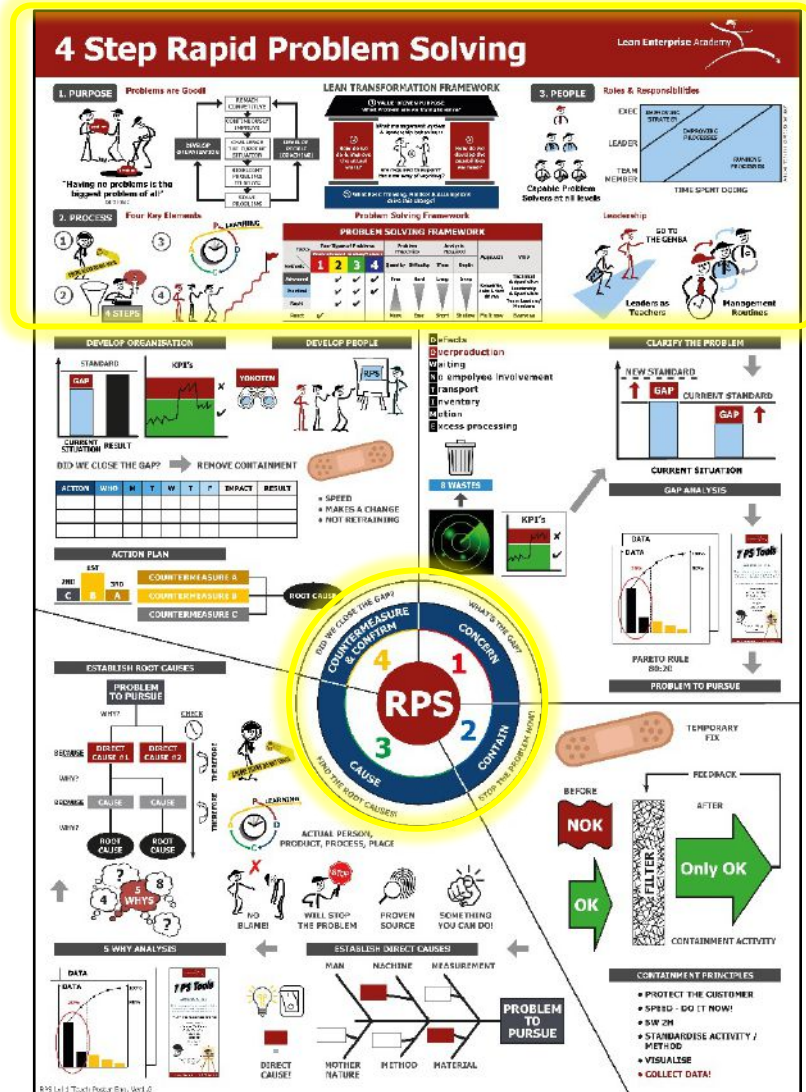


Step 4 – Countermeasure & Confirm



- What is the Result
- Did we close the GAP?
- Remove Containment
- Yokoten – Share the Learning

“Develop People & Develop the Organisation”



- **Agenda**
- ✓ **Teach Poster Concept**
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 - ✓ **Purpose**
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- ✓ **Q & A**
- ✓ **Overview of the 4 Steps**
 - **RPS Quadrant Charts**
 - **Lean Learning Journey for RPS**
 - **Summary/Q & A**

RPS Quadrant Chart – 4 Steps

- Quadrant Chart is how we summarise the problem solving journey using the 4 Steps.

Online Course

4 Step Rapid Problem Solving Level 2

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Lean Enterprise Academy

Lean Enterprise Academy

4 Step Rapid Problem Solving

Understanding: Skill Level 2

Delegate Workbook

LEARN TEACH & COACH SHARE



RPS Case Study Answer Sheet Steps 1 and 2

RPS Case Study Answer Sheet Steps 3 and 4

Packtrain Rib/Arm Output

Improvement

Wk 36 Daily Output with Overtime vs Demand

Wk 36 Overtime Cost Tracker \$'s

Wk 36 - Average Daily Output

Wk 48 - Average Daily Output

Wk46 Containment removed

Customer Demand achieved no overtime

Wk44 Actions: 1, 2, 4

Wk44 Actions: 3, 5, 6

Result Summary:
- Stamping Machine lost pcs/day reduced from 109 to 24 ave.
- Gap closed to meet Customer Demand without overtime.
- Containment overtime stopped Wk 46.
- Focus on Cycle Time Lost Pieces next; 32/week average.

RPS Title: Packtrain Rib/Arm Output

Step 1 | CONCERN - What's the GAP?

1.1 Background

- Rib and Arm product volumes have been increasing over the last 6 months due to Customer demand surge.
- Production build rate has become a problem to meet the Customer demand.
- Operating on 3 shifts to try and maintain supply.

1.2 Clarify the Problem - Gap

August - Average Daily Output

Standard Customer Demand	1100
Current Situation Actual Output	991
Gap	109

Problem to Pursue: 109 Pcs/day Output

1.3 Gap Analysis

Average Lost Pieces/Day Pareto

Stamping Lost Time Pcs	109
Milling Lost Time Pcs	53
Cycle Time Lost Pcs	24
Changeover Lost Pcs	20
Arm Scrap Pcs	8
Rib Scrap Pcs	5

Step 2 | CONTAIN - Can we stop the problem now?

What: Daily Overtime Working

When: From Week 36 (Sept)

Where: Who: Rib/Arm Production Cell

Who: Cell Team

Why: To meet customer demand of 1100 pcs/day

How: Staggered breaks by using the Teamleader

How Much: Ave 109 pcs/day

Wk 36 Daily Output with Overtime vs Demand

Wk 36 Overtime Cost Tracker \$'s

Mon	150.0
Tues	600.0
Wed	300.0
Thurs	0.0
Fri	450.0

Wk 36 - Average Daily Output

Standard Customer Demand	1100
Actual Output with Overtime	1118
Gap	-18

Containment Impact: Customer Demand met with Overtime at \$1500/Wk.

Improvement

Step 3 | CAUSE - Investigate and find the root causes?

3.1 Direct Cause Investigation

Machine overheats
Machine locks don't engage
Machine stops mid cycle
Operator absent
PPE replenishment too long
Tools missing during changeover
Training Operators
No Raw Material
No Packaging

3.2 Direct Cause Proof

Stamping Lost Time Causes

Machine Overheat	30	45%
Run out of Raw Material	21	31%
No Packaging	7	
Machine Reset	6	
PPE Replacement	3	

3.3 Root Cause Investigation

Stamping Machine Lost Pieces of 109/Day

Direct Causes:	Machine overheating	Run out of raw material
Why?	Filter is blocked with dust	Raw material is not replenished in time
Why?	Not been cleaned	Replenishment is irregular
Why?	No preventative maintenance (PM)	No raw material replenishment process
Why?	Not specified on PM schedule	
Root Causes:	No PM schedule to clean the filter	Raw material replenishment process does not exist with Logistics

Root Cause 1: No PM schedule to clean the filter
Root Cause 2: Raw material replenishment process does not exist with Logistics.

Step 4 | COUNTERMEASURE & CONFIRM - Did we close the GAP?

4.1 Countermeasure Plan

Root Cause	#	Countermeasure Action	Who	When	Impact
1 No PM schedule to clean the filter	1	Clean Stamping and Milling machine filters	Roger	Wk 43	45% of 109 = 49 Pcs/Day
	2	Add filter cleaning to the Rib/Arm PM schedules	Roger	Wk 43	
	3	Look across countermeasure to other machines	Frank	Wk 44	
2 Raw material replenishment process does not exist with Logistics	4	Agree with Logistics a raw material replenishment process	Frank	Wk 43	31% of 109 = 34 Pcs/Day
	5	Implement raw material replenishment process	Sonia	Wk 44	
	6	Check all Rib/Arm replenishment processes	Frank	Wk 44	
	7	Look across to other cells	Frank	Wk 45	

4.2 Confirm Results

Stamping Lost Time Causes Wk 45-48

Average Weekly Output vs Demand

Wk46 Containment removed

Customer Demand achieved no overtime

Wk44 Actions: 1, 2, 4

Wk44 Actions: 3, 5, 6

Result Summary:
- Stamping Machine lost pcs/day reduced from 109 to 24 ave.
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RPS Quadrant Charts – What the Story Should Look Like

Visual guidance on creating an RPS Quadrant Chart.

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4 Step Rapid Problem Solving

Understanding: Skill Level 2

Delegate Workbook

LEARN TEACH & COACH SHARE



RPS Title What the Story Should Look Like

SITE	RPS LEADER	TEAM MEMBERS	DATE	Signature	Approval

Step 1 | CONCERN - What's the GAP?

1.1 Background

- Why are you tackling this problem and why is it important?
- How would you introduce this problem to someone else?
- Where did the problem come from?
- Scope of the subject/problem?
- What would happen if you did nothing or impact to the business?

Use a graph, a sketch or a photo to help explain the Background...

1.2 Clarify the Problem - Gap

State the Gap!

1.3 Gap Analysis

Problem to Pursue: Analyse the Gap to find the Problem to Pursue.

Pareto graphs can be useful to help find the Problem to Pursue.

Can you break the Gap down further to understand problem more e.g. by time, shift, product, process, reason...

Step 2 | CONTAIN - Can we stop the problem now?

Who: **What:** Clearly visualise the result of the Containment activity to show that it is working.

Where: Use the SW's 2H's to clearly explain what the Containment activity is.

When: **Why:** **How:** **How Much:**

Does the Containment activity have any other impact/consequence? Do you need to track or visualise that?

2.1 Containment Result

Standard Current Situation Containment Result: Has it closed the Gap for now?

Step 3 | CAUSE - Investigate and find the root causes?

3.1 Direct Cause Investigation

Mother Nature Machine Man Problem

Measurement Method Material

3.2 Data to Prove the Direct Causes

Direct Causes: Have cause/effect relationship on the problem. Light switch test. Proven with data or experiment.

3.3 Root Cause Investigation

Problem to Pursue

WHY? Therefore

beCAUSE DIRECT CAUSE DIRECT CAUSE

beCAUSE CAUSE..... CAUSE.....

WHY? Therefore

beCAUSE ROOT CAUSE 1 ROOT CAUSE 2

Characteristics of a Root Cause: It does not blame anyone. You can do something about it. It will change the way you do things in the future. It is not to re-train someone !! It will Stop the Problem.

Step 4 | COUNTERMEASURE & CONFIRM - Did we close the GAP?

4.1 Countermeasure Plan

Root Cause	#	Countermeasure Action	Who	When	Impact
1					
2					

List the Root Causes. Number and list the Countermeasures Actions, who will do them, when they will be completed. Quantify the impact on the problem.

4.2 Confirm Results

Direct Causes **Gap Closure** **Results Evolution - Sustainment**

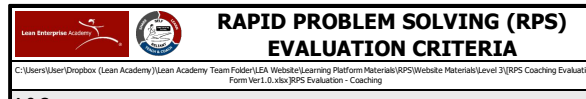
Standard Current Situation Standard

Show when Countermeasures implemented Show when Containment removed

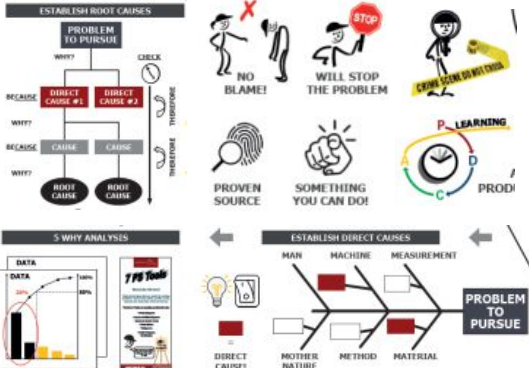
Show results to demonstrate that the Direct Causes have been eliminated. Show how much the Gap has been closed. Summarise the results What did you learn... Yokoten/Look across... What will you do next..

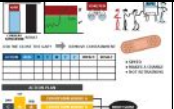
RPS Quadrant Chart – Evaluation Method

- Evaluation Method for RPS Quadrant Charts.
- Learn how to Teach & Coach RPS with Us!



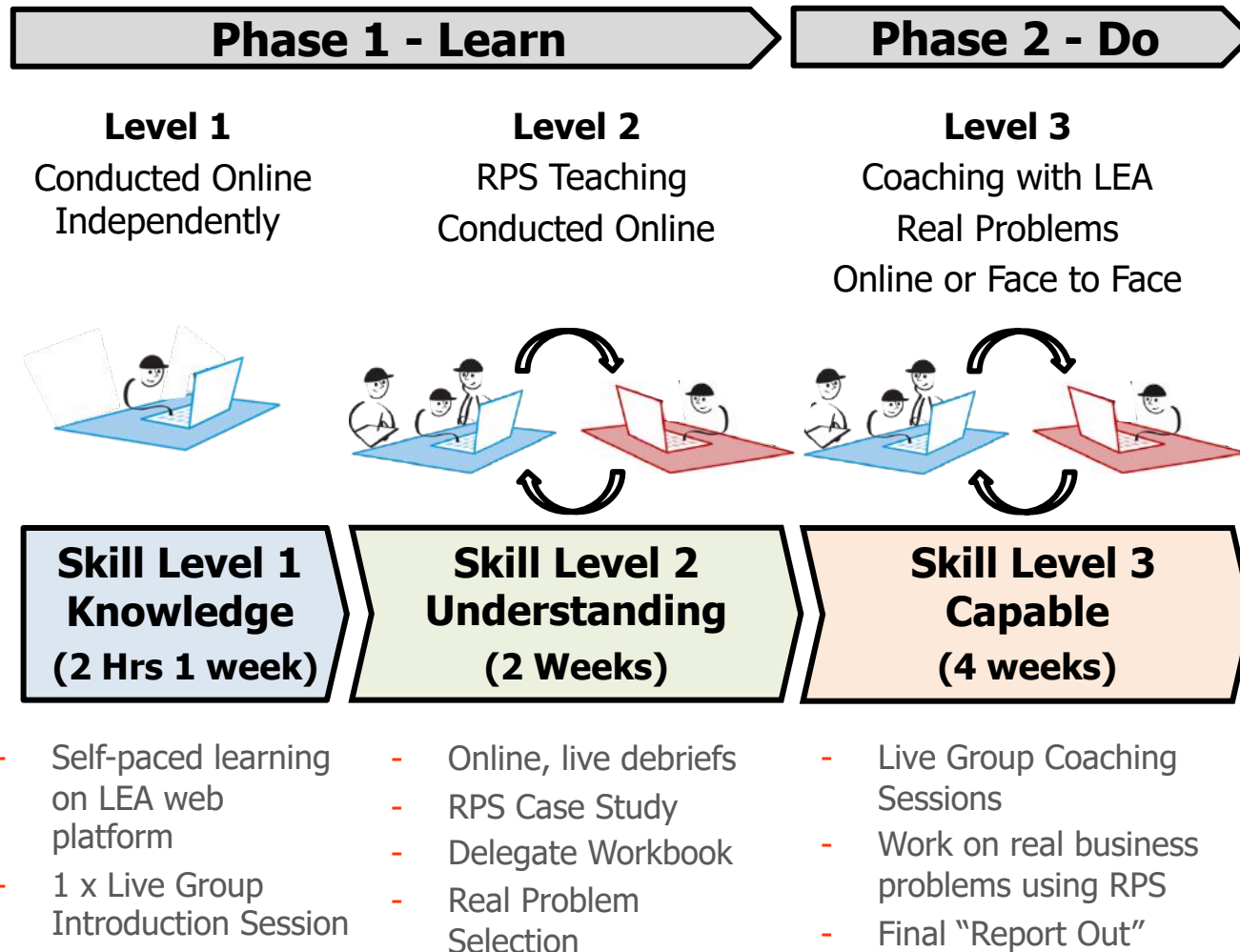
3.0 Cause

Expected Content	Evaluation Levels	Coaching Questions
<ul style="list-style-type: none"> - Cause Effect relationship proved between the Problem to Pursue and the Direct Cause(s). - Use of data and experiments to prove it. - Logical 5 Why Analysis to determine the Root Cause(s) that will stop the Problem. 	<ol style="list-style-type: none"> 1 Direct Cause investigation is weak and the effect on the Problem can't be proven. Based upon intuition, assumption, what they think. 2 Direct Cause investigation is good but the 5 Why Analysis is not logical. No go & see. 3 Logical 5 Why Analysis used to find the Root Causes. Evidence of go & see/investigation. Root Causes will stop the problem. 4 In addition, rapid low cost experiments have been used to prove the Root Causes. 5 Simple, easy to share and understand by anyone. 	<ol style="list-style-type: none"> a. What did you find when you went to see it for yourself? b. How would you summarize the problem in your own words? c. How did you check that they are Direct Causes? (1st Why) d. What did you learn when you asked "why" five times? e. What specific causes did you uncover through your investigation? f. How did you verify the causes? g. What do you think happened in terms of the timing or sequence of events to arrive at the root cause? h. How are you sure that solving this root cause will stop the problem? i. What did you learn from the because/therefore check? j. Why, why, why.....?

	<ol style="list-style-type: none"> 3 Towards the gap but results are lacking. As 2 but results show Direct Causes eliminated and the Gap closed. Containment removed, results sustained. As 3, but also standardization and sharing of learning (Takeshi) is completed. The RPS Document is so clear it can be used as a stand alone document to train others. 	<ol style="list-style-type: none"> How do you agree the plan with the other people involved? How did the results impact in closing the gap? How did you verify that the results were sustained to remove containment? What changes will be needed to standardise the? Who else would benefit from knowing about the result? What did you learn, what are you going to do next?
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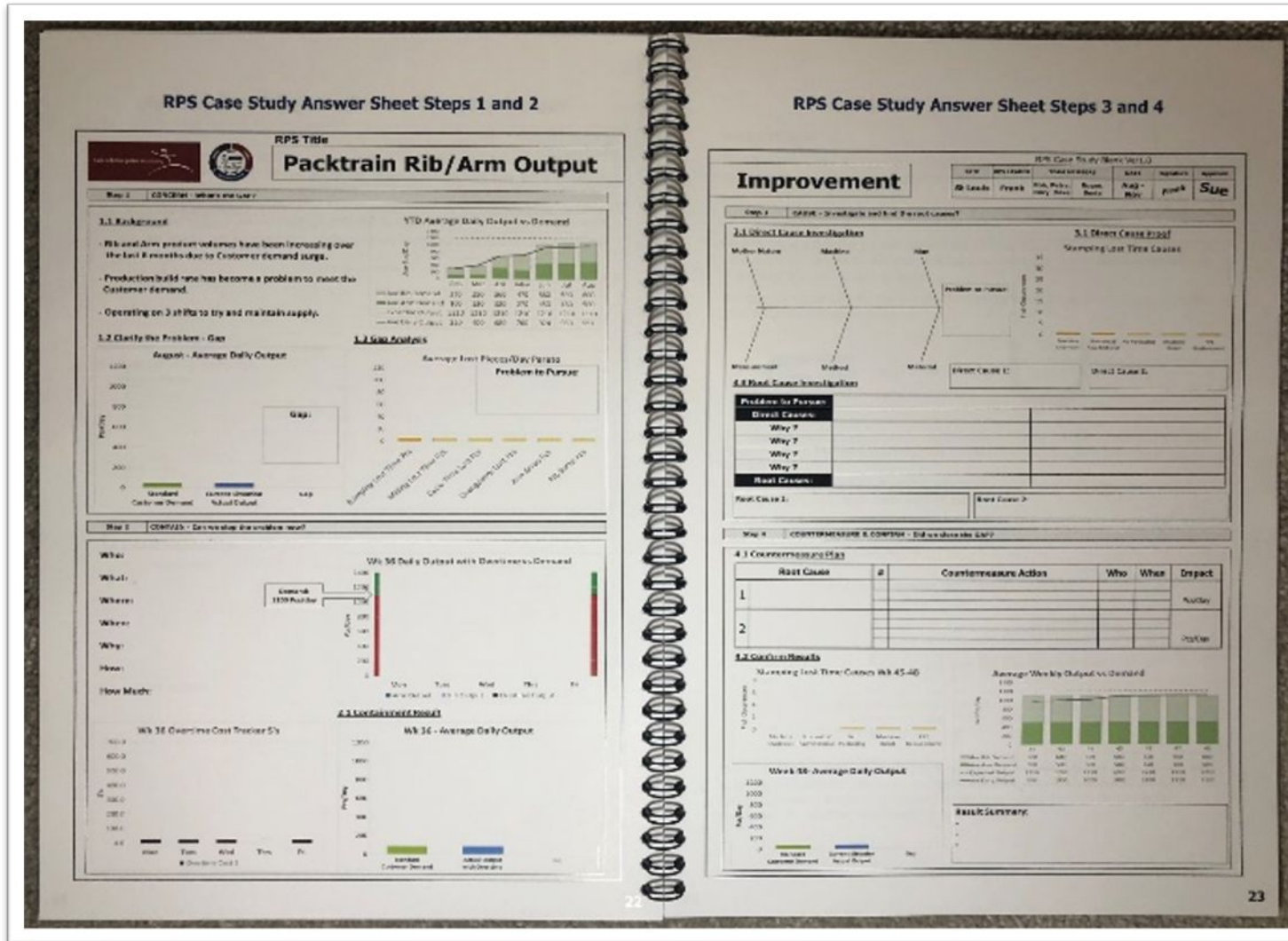
RPS Capability Development Lean Learning Journey

- Process**



RPS Capability Development Lean Learning Journey

- Process



The image shows two pages of a spiral-bound notebook containing an RPS Case Study Answer Sheet for 'Packtrain Rib/Arm Output'.

Page 1: RPS Case Study Answer Sheet Steps 1 and 2

RPS Title: Packtrain Rib/Arm Output

Step 1: CONCEPT - Understand the Case

3.1. Background

- Global Arm production volumes have been increasing over the last 3 months due to Customer demand surges.
- Production build time has become a problem to meet the Customer demand.
- Operating on 3 shifts to try and maintain supply.

3.2. Clarify the Problem - Gap

Gap: Average Daily Output

3.3. Root Causes

Problem to Pursue

Step 2: CONTEXT - Carry out the analysis work

Why

What: Wk 36 Del'd with Delivers Overd

Where: Customer 1000 Production

When: Wk 36

Why: Customer 1000 Production

How Much: Wk 36 Customer Cost Tracker \$/s

3.4. Loss Analysis

Wk 36 - Average Daily Output

Step 3: IMPROVEMENT

4.1. Root Cause Analysis

4.2. Countermeasures & Controls - Did we solve the Gap?

4.3. Countermeasures

Root Cause	#	Countermeasure Action	Who	When	Impact
1					Number
2					Cost/Time


4.4. Control Plans

Managing Lead Time: Customer Wk 45-46


Average Wkly Output vs. Demand

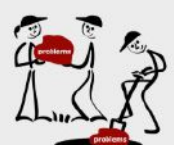
Wk 36 - Average Daily Output

Basic Summary:

Lean Enterprise Academy 

4 Step Rapid Problem Solving

 Understanding: Skill Level 2



Delegate Workbook

LEARN TEACH & COACH SHARE

Vol 2

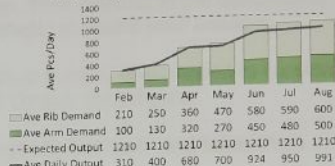
RPS Capability Development Lean Learning Journey

1.0 Concern

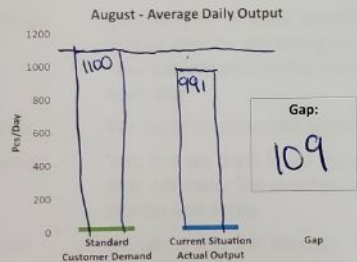
1.1 Background

- Rib and Arm product volumes have been increasing over the last 6 months due to Customer demand surge.
- Production build rate has become a problem to meet the Customer demand.
- Operating on 3 shifts to try and maintain supply.

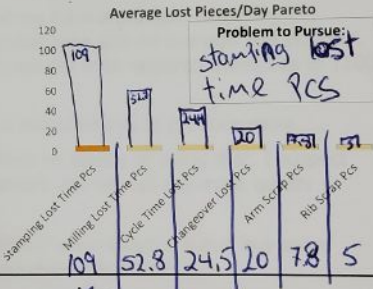
YTD Average Daily Output vs Demand



1.2 Clarify the Problem - Gap

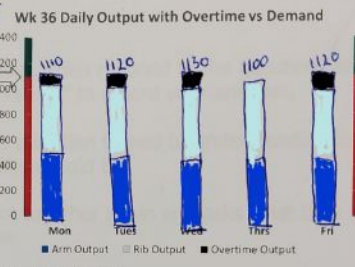


1.3 Gap Analysis

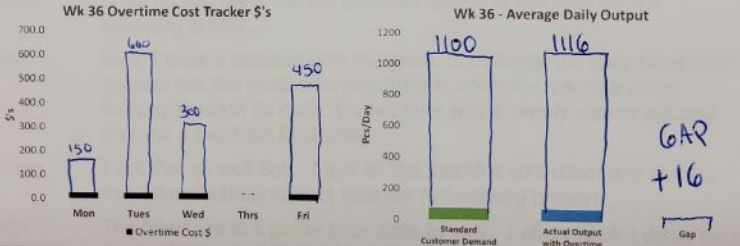


2.0 Contain

Who: Frank
What: overtime → increase production/hour
Where: Production line
When: Week 36
Why: close the gap
How: overtime
How Much: \$300/hr = 1500\$/week 36



2.1 Containment Result



3.0 Cause

3.1 Direct Cause Proof

Stamping Lost Time Causes

Category	# of Occurrences
Machine Overheat	30
Run out of Raw Material	21
No Packaging	7
Machine Reset	6
PPE Replacement	3

3.3 Root Cause Investigation

Problem to Pursue: Stamping lost time

Direct Causes:	Machine overheat	run out of Raw Material
Why?	Filter blocked	Parts shortages
Why?	Filter are not check/replace	Parts are bring on demand
Why?	Machine not put on Maintenance	No visual for order parts
Why?	Machine not on same place	No process in place
Root Causes:	Filter are not check/replace	never took time to implement process

Root Cause 1: Filter are not check/replace
Root Cause 2: No Process in Place for order Parts

1.0 Countermeasure & Confirm

When	Impact
1. No preventive maintenance routine 2. Establish process maintenance	Roger Now Roger week Pcs/Day
1. No process to order parts 2. Measure the priority parts needed/hour.	Sonia Now Sonia 2 weeks Pcs/Day

4.2 Confirm Results

Stamping Lost Time Causes Wk 45-48

Average Weekly Output vs Demand

Week 48 - Average Daily Output

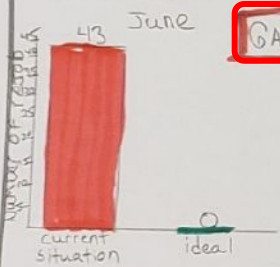
Standard Customer Demand: 1100 Pcs/Day
Current Situation Actual Output: 1105 Pcs/Day
Gap: +5

Result Summary:
- The stamping lost pieces have been reduce by 100%
- The gap has been closed.
- The containment stopped on week 46
- We'll focus on the next problem

Step 1 CONCERN - What's the GAP?

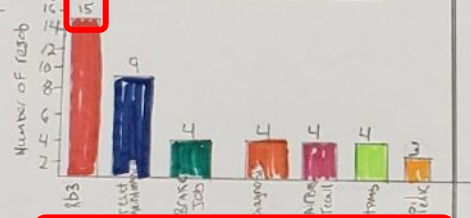
1.1 Background
 - We have a increase of rejob on the workshop
 - the number of rejob increase since June
 - Rejob is bad for CSI and we lost time to fix them

1.2 Clarify the Problem - Gap
 Number of Rejob vs target



GAP: 43

1.3 Gap Analysis rejob cause

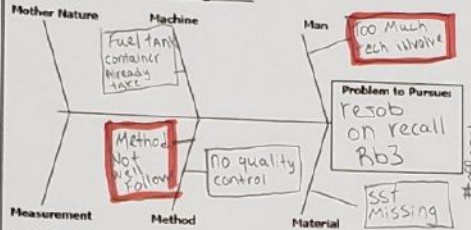


Problem to Pursue:
 Fix Rb3 rejob

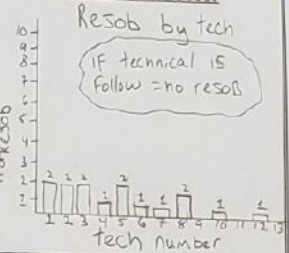
Rb3 Fuel Pump = 15 Rejobs

Step 2 CAUSE - Investigate and find the root causes?

3.1 Direct Cause Investigation



3.2 Direct Cause Proof



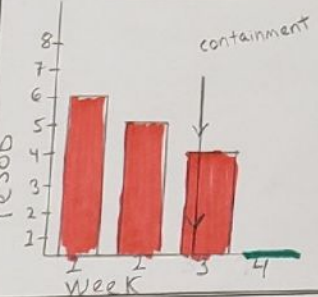
3.3 Root Cause Investigation

Problem to Pursue	Too Much rejob on Rb3 recall	
Direct Causes	too much tech involve	Method not follow
Why?	Job go to anybody	tech not follow instruction
Why?	disbitch set this way	Document too complicated
Why?	No team dedicate	not being simplify/explain
Why?	No training process for recall	no one is responsive / check for update
Root Causes	No training process	No one is responsive

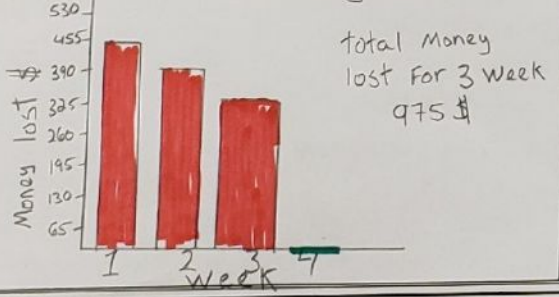
Step 2 CONTAIN - Can we stop the problem now?

Who: Blue line team leader:
What: Create dedicated team for recall
Where: in the workshop
When: on week 3
Why: Fix the Rb3 rejob / close the gap / with Best technician
How: Less people involve and better formation
How Much: 15

Containment of 15 Rejob



total money lost

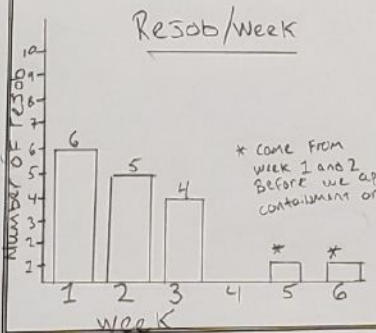


Step 4 COUNTERMEASURE & CONFIRM - Did we close the GAP?

4.1 Countermeasure Plan

Root Cause(s)	#	Countermeasure Actions	Who	When	Impact
No training Process	1	Name recall responsible	David and Marc	week 3	drop on week 4
	2	create dedicated team	Marc	week 3	
	3	team read instruction together	Marc	July	
	4	team simplify instruction	Marc	July	
No one is responsible	5	create quality sheet	David	July	
	6	check for update/instruction	David	July	

4.2 Confirm Results



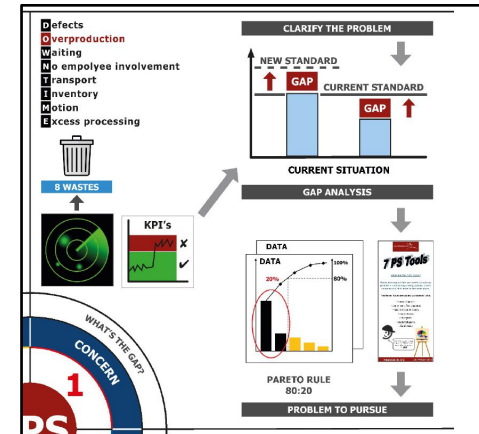
Summary: - rejob drop after creating a dedicate team
 - the rejob on week 5 and 6 come from week 1 and 2 but the customer only notice on week 5 and 6

We have close the gap by creating a team, training and make someone responsible

RPS Quadrant Chart – Evaluation Exercise

- Your chance to Evaluate Step 1.0 of an RPS Quadrant Chart
- You will need the documents sent out to you
- We will present Step 1.0 of an RPS
- Submit your Coaching Questions and Ratings via Aha slides

<https://ahaslides.com/RPSWEBINAR>



RPS Quadrant Chart – Evaluation Exercise

■ Step 1.0 What the Story Should Look Like

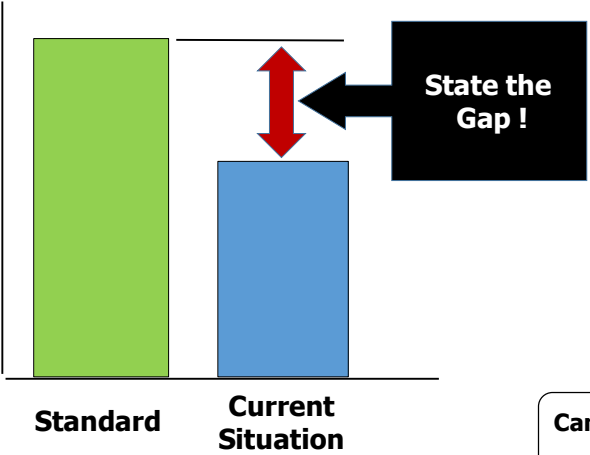
Step 1	CONCERN - What's the GAP?
--------	---------------------------

1.1 Background

- Why are you tackling this problem and why is it important?
- How would you introduce this problem to someone else?
- Where did the problem come from?
- Scope of the subject/problem?
- What would happen if you did nothing or impact to the business?

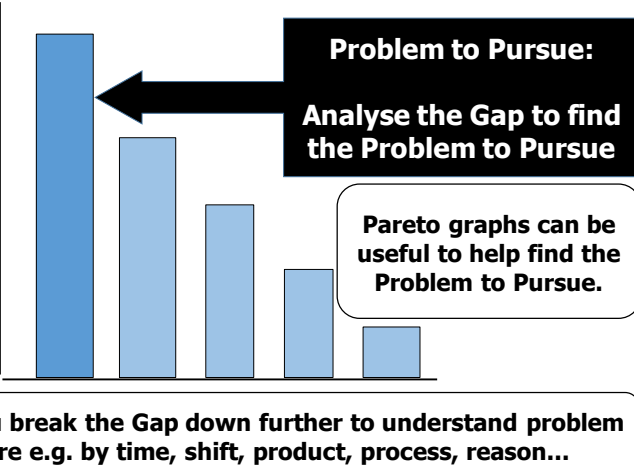
Use a graph, a sketch or a photo to help explain the Background....

1.2 Clarify the Problem - Gap



A bar chart with two bars. The left bar is green and labeled 'Standard'. The right bar is blue and labeled 'Current Situation'. A red double-headed vertical arrow is positioned between the two bars. A black box with white text 'State the Gap!' has an arrow pointing to the red arrow.

1.3 Gap Analysis



A Pareto chart with five blue bars of decreasing height from left to right. A black box with white text 'Problem to Pursue: Analyse the Gap to find the Problem to Pursue' has an arrow pointing to the tallest bar. A white box with black text 'Pareto graphs can be useful to help find the Problem to Pursue.' is positioned below the chart.

Can you break the Gap down further to understand problem more e.g. by time, shift, product, process, reason...

RPS Quadrant Chart – Evaluation Exercise

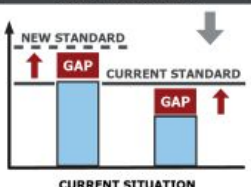

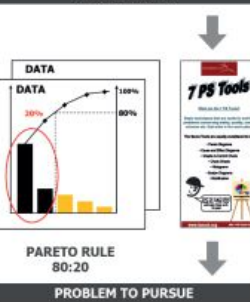
■ Step 1.0 Evaluation Criteria




RAPID PROBLEM SOLVING (RPS) EVALUATION CRITERIA

C:\Users\User\Dropbox (Lean Academy)\Lean Academy Team Folder\LEA Website\Learning Platform Materials\RPS\Website Materials\Level 3[RPS Coaching Evaluation Form Ver1.0.xlsx]RPS Evaluation - Coaching

1.0 Concern

Expected Content	Evaluation Levels	Coaching Questions
<ul style="list-style-type: none"> - Background/context/why solve this problem? - Clarify the Current Situation, Standard & Gap. - Gap Analysis to define the Problem to Pursue. <ul style="list-style-type: none"> - Use of the 7 PS Tools to visualise. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>CLARIFY THE PROBLEM</p>  <p>CURRENT SITUATION</p>  <p>8 WASTES</p> </div> <div style="text-align: center;"> <p>GAP ANALYSIS</p>  <p>PARETO RULE 80:20</p> <p>PROBLEM TO PURSUE</p> </div> </div>	<ol style="list-style-type: none"> 1 Although the problem is stated it's not clear why it is a problem/why they are tackling it. 2 Gap clearly visualised the Problem Clarified, but Gap Analysis insufficient to truly determine the Problem to Pursue. 3 Gap clearly visualised the Problem Clarified. Thorough, logical Gap Analysis to determine the Problem to Pursue. 4 As 3, but also business impact considered. 5 Content is simple, clear and easy to share with little or no explanation. 	<ol style="list-style-type: none"> a. Describe the problem to me in your own words? b. What's the difference between the Standard & Current Situation? c. What will be the benefit if we solve this problem? d. How can you use the 7 PS to visualise the Gap? e. What would happen if we did nothing? f. How did you decide or select this problem? g. How can you break down the gap? h. What are the biggest contributors to the gap? i. What is the Problem to Pursue here? j. What is the impact of this problem on your area or the business?

RPS Quadrant Chart – Evaluation Exercise



RPS Title

Kadia Machine "C" OE Improvement

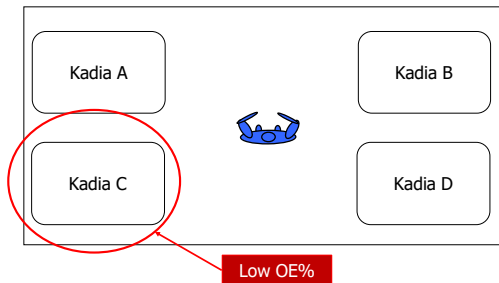
Step 1 | CONCERN - What's the GAP?

1.1 Background

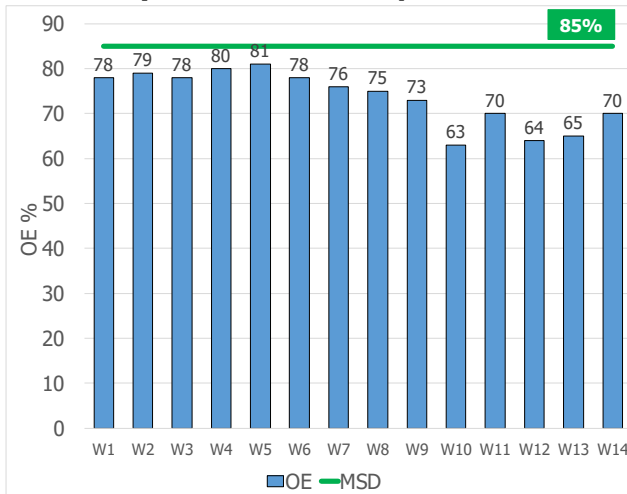
In Q1, OE % is not high enough.

The Kadia Machine C is always stopping causing problems.

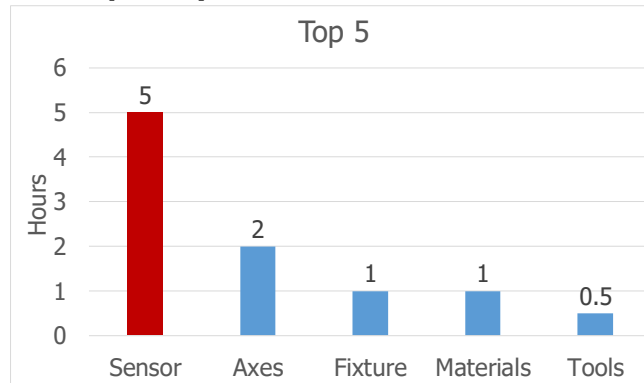
We decided to improve it.



1.2 Clarify the Problem - Gap



1.3 Gap Analysis



**Problem to Pursue:
The Sensor on Kadia Machine C**

RPS Quadrant Chart – Evaluation Exercise

- **Think about how you would coach Ivor to achieve a level 3 rating for his RPS Quadrant Chart**
- **Submit your Coaching Questions/Answers and Ratings via Aha Slides**



To join, scan the QR Code with your mobile device camera OR in type in your browser:



<https://ahaslides.com/RPSWEBINAR>
on desktop, laptop or mobile

RPS Quadrant Chart – Evaluation Exercise



RPS Title

Kadia Machine "C" OE Improvement

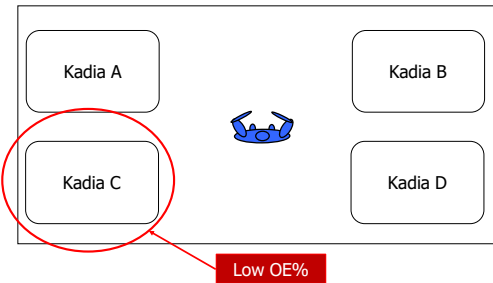
Step 1 | CONCERN - What's the GAP?

1.1 Background

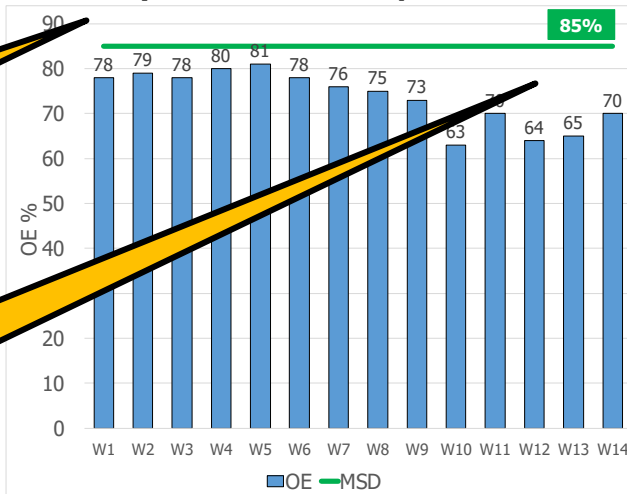
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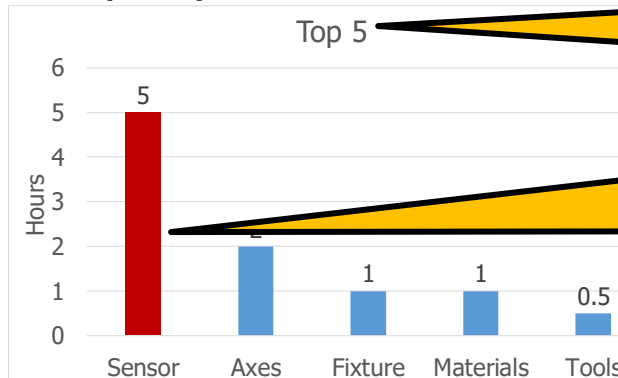
We decided to improve it.



1.2 Clarify the Problem - Gap



1.3 Gap Analysis



Problem to Pursue:
The Sensor on Kadia Machine C

What is OE?

What impact is this having?

Why did you decide to improve it?

What is OE% made up of?

So what is the Gap your are trying to close?

What does the Kadia machine do?

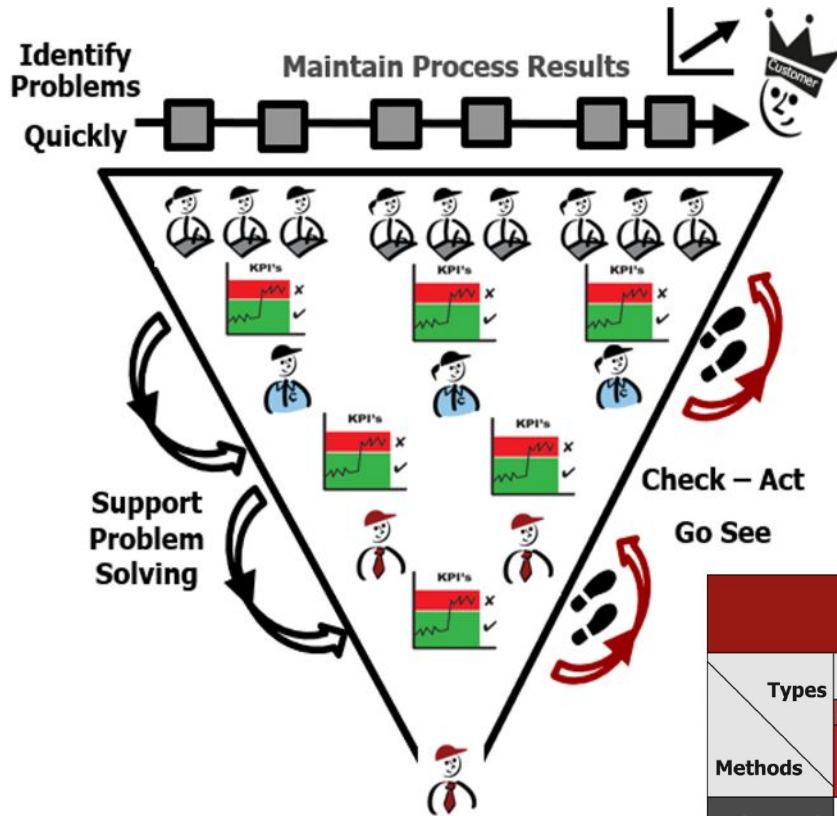
What time period is this data taken from?

Top 5 of what?

What does this mean in terms of the Gap?



How can you Quantify this?

Problem Solving at All Levels



PROBLEM SOLVING FRAMEWORK										
Types	Four Types of Problems				Problem Properties		Analysis Required		Approach	Who
	Reactive/Caused	Created/Proactive	Created/Proactive	Created/Proactive	Quantity	Difficulty	Time	Depth		
Methods	1	2	3	4	Quantity	Difficulty	Time	Depth		
Advanced		✓	✓	✓	Few	Hard	Long	Deep	Scientific, data & fact driven	Technical & Specialists
Practical		✓	✓	✓	▲	▼	▼	▼		Leadership & Specialists
Rapid		✓	✓		▲	▼	▼	▼		Team Leaders/ Members
React	✓				Many	Easy	Short	Shallow	Fix it now	Everyone

Practical Application for Performance Improvement

Plan					Do		Check	Act
No.	Concern	Contain	Cause	Counter-measure	Who	When	Check	Evaluation
1	Vehicle lot car won't start	Boost car	Battery is "flat"	PDI when car is sold	George	14/2		



"Vehicle Lot" Car won't start



"Why" won't the car start?

The battery is flat

"Why" is the battery flat?

The car has stood 1 month since PDI

"Why" has the car stood 1 month since PDI?

We PDI cars asap

We PDI cars to keep techs busy

We PDI get paid for the PDI.....



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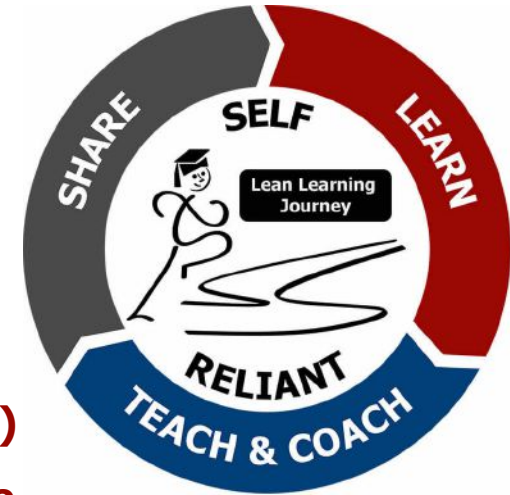
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What Questions Do You Have?