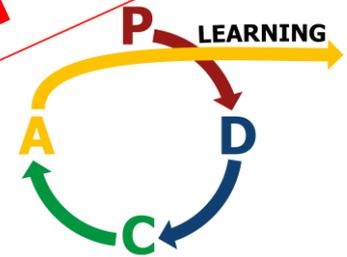
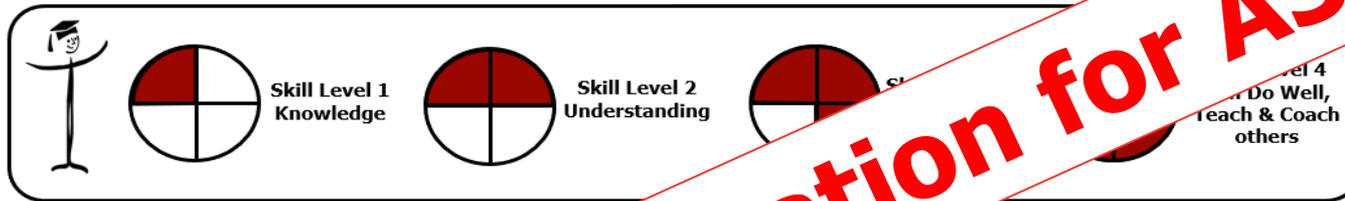




# Problem Solving Capability Development



*Partnership with* **XXX Company**

*Prepared By  
Peter Watkins*

**June 2021**



# Problem Solving Capability Development



## Purpose

Develop problem solving capability so Leaders can teach and coach others in their own organisation - Sustainable Lean Capability Development

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						
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

Plan for Every Person (PFEP)



10 Leaders developed initially



Initial Leaders develop 20 others in the organisation

## Process

Leaders progress through 4 skill levels to be able to teach & coach others.

**Skill Level 1**  
Knowledge  
(2 Hrs 1 week)

**Skill Level 2**  
Understanding  
(12 Hrs over 2 wks)

**Skill Level 3**  
Capable  
(16 weeks)

**Skill Level 4**  
Teach & Coach Others  
(21 weeks)

Demonstrate Capability by solving an actual business problem in Skill Level 3.

## People

10 Selected Leaders

Region	Level 1	Level 2	Level 3	Level 4
UK/ USA	→	→	→	→

# Problem Solving Capability Development



- Process**

## Phase 1 – Leader Development

## Phase 2 – Develop Others

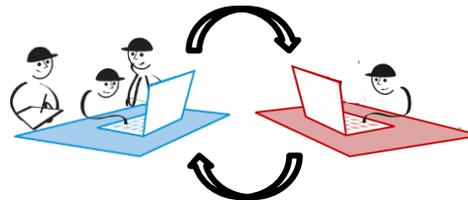
### Levels 1 & 2

Mainly Conducted Online  
Independently  
Coaching Debrief's with LEA



### Level 3

Online Coaching with LEA



### Level 4

Conducted Independently  
Check-in's with LEA



**Skill Level 1  
Knowledge  
(2 Hrs 1 week)**

**Skill Level 2  
Understanding  
(12 Hrs over 2 wks)**

**Skill Level 3  
Capable  
(15 weeks)**

**Skill Level 4  
Teach & Coach Others  
(21 Weeks)**

- Self-paced learning on LEA web platform
- 1 x Live Group Introduction Session

- Self-paced learning on LEA web platform
- 3 x Live Group Debrief / Coaching Sessions
- Delegate Workbook

- 14 x Live Group Coaching Sessions
- Work on real business problems
- Final "Report Out" to MCC Snr Management

- Coaching Development
- Initial MCC Leaders Coach two other leaders to Skill Level 3
- 8 Live Group Coaching Sessions
- Final "Report Out" to MCC Snr Management

# Activity Overview

## Phase 1 – 18 weeks – Short Burst Teach & “Learning by Doing”

Level 1		Level 2					Level 3														
Welcome & Kick Off Level 1	Complete Level 1	Debrief Level 1 Kick Off Level 2	Complete Level 2 Steps 1-3	Debrief Steps 1-3	Complete Level 2 Steps 4-8	Debrief Steps 4-8	Select Problem	Review PPS Proposals	Step 1	Step 1	Step 2	Step 2 -3	Step 3	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 8	Report Out
Week 1	Week 2		Week 3		Week 4		Week 5		Week 6	Week 7	Week 8	Week 9 Evaluate	Week 10	Week 11 Evaluate	Week 12	Week 13	Week 14 Evaluate	Week 15	Week 16 Evaluate	Week 17 Evaluate	Week 18

## Phase 2 – 21 weeks - Short Burst Teach & “Learning by Doing”

Preparation		Level 1-2		Level 3																		
Core Skills SSL Coaching Facilitation Tips Week 1	Core Skills SSL Coaching Facilitation Tips Week 2	Delegates Do Level 1 & 2	Debrief Level 1-2 Teach	Kick Off Level 3	Review PPS Proposals	Step 1	Step 1	Step 2	Step 2 -3	Step 3	Step 3 Report Out	Step 4	Step 5	Step 6	Step 7	Step 8	Step 8	Report Out				
				Group 1	Group 2	Group 3	Group 4	Group 5		Week 9	Week 10 Checkin	Week 11	Week 12 Checkin	Week 13	Week 14 Evaluate	Week 15	Week 16 Checkin	Week 17	Week 18 Checkin	Week 19	Week 20 Checkin	Week 21 Evaluate



# Group Size & Timing



- **Candidates – 10 selected Leaders TBC**
  - **Optimum Coaching Group Size is 3**

Phase 1			Phase 2		
Skill Level	# of Phase 1 Delegates	# Coaching Groups	Skill Level	# of Phase 2 delegates coached by Phase 1 Leaders	# Coaching Groups
1 to 4	3	3	1 to 3	6	2
	3			6	2
	4			8	2

- **Timing – Optimised for Learning (Can be flexed for business need)**

**Phase 1 – Skill Levels 1, 2, 3**

**Phase 2 – Skills Level 4**

Region	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
UK / USA			Phase 1				Phase 2				

**Assuming Holidays in August \ December**

# Development Costs



- **Costs Excl VAT , includes delegate workbooks & materials**

# Delegates for Development	# Groups	Phase 1 Levels 1-3 Online Coached (18 Weeks)	Phase 2 Level 4 Online Coached (21 Weeks)
1	1	£3650	£7499
2		£6500	£12499
3		£9199	£17599
4		£12499	£24299
5		£16499	£31699

**Typical initial A3 PPS's deliver savings of £25K upwards**



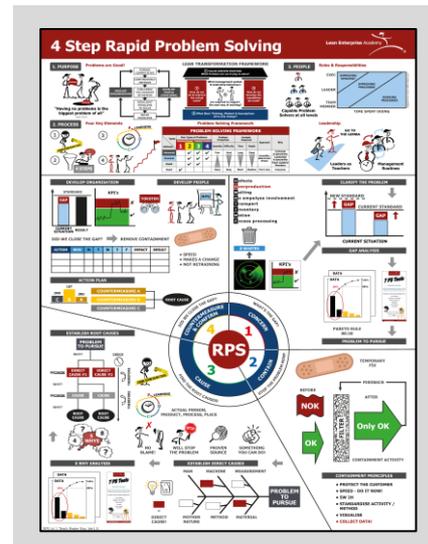
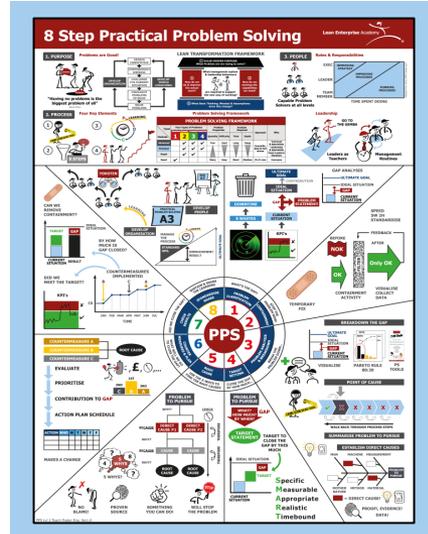
# Additional Information

# Problem Solving



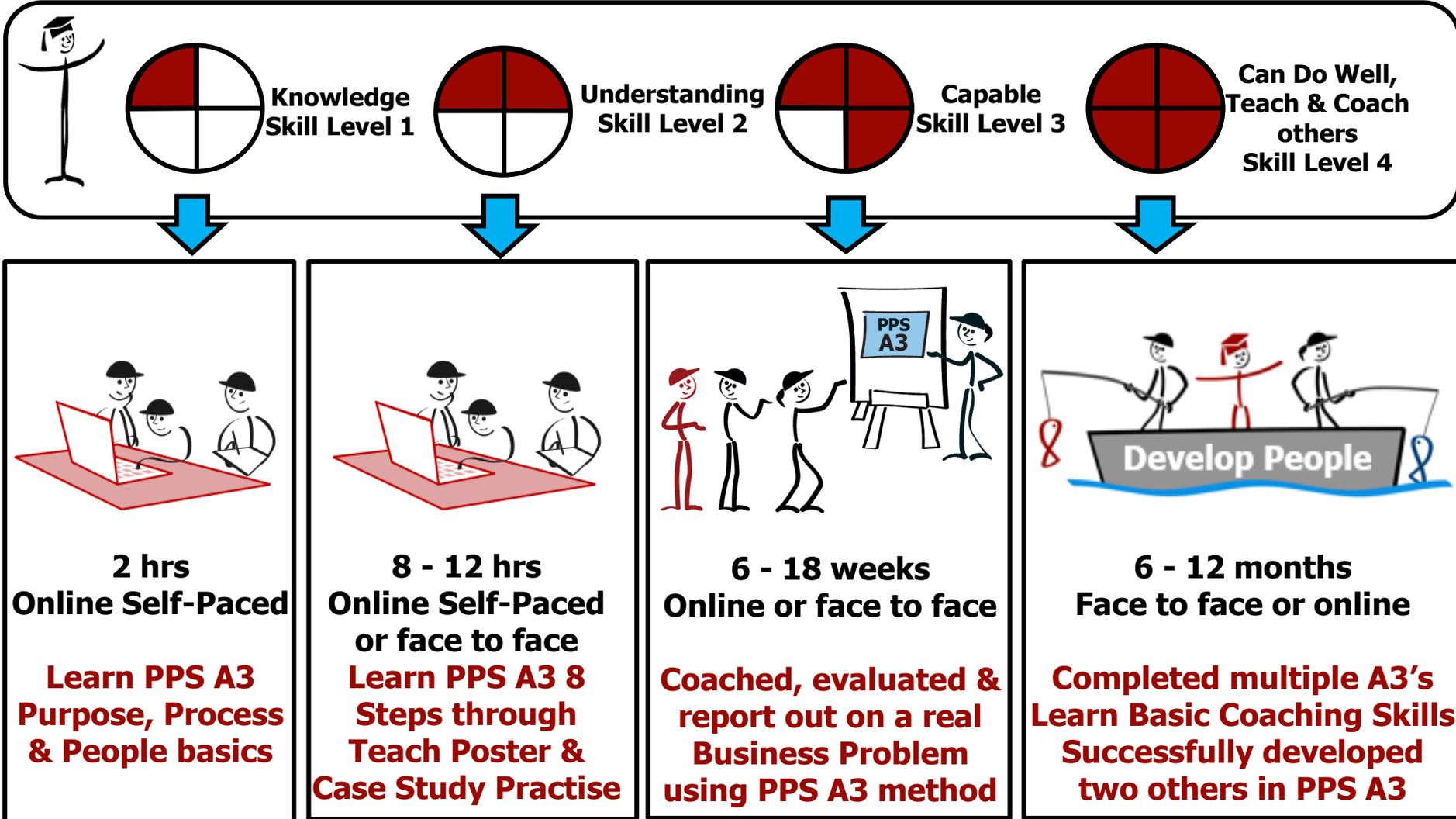
## PROBLEM SOLVING FRAMEWORK

Types	Four Types of Problems				Problem Properties		Analysis Required		Approach	Who
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Practical		✓	✓	✓	▲	▼	▼	▼		Leadership & Specialists
Rapid		✓	✓							Team Leaders/ Members
React	✓				Many	Easy	Short	Shallow	Fix it now	Everyone



- Different Types of Problems
- Solved using the right method
- By the right people

# Lean Learning Journey For A3 Problem Solving



# Problem Solving – Learning Example

## • Skill Level 1 -Web Based Learning Platform

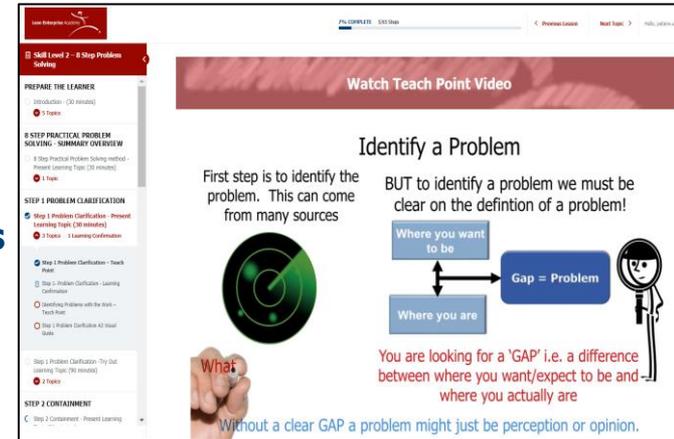
- Gives awareness of the types of problems & different methods to solve them
- Gives awareness on why problem solving is so important

## • Skill Level 2 – Web Based Learning Platform & 3 Live Reviews

- The materials guide the learner through an eight-step methodology, developing deep understanding of problem solving. Includes:
  - 30 Teach Point modules & 28 Videos
  - 10 “learn by doing” exercise modules on a problem
  - 8 Learning Confirmation Quizzes
  - 12 supporting material downloads incl – A3’s examples, A3 Evaluation guide & visual, 3 Visual Teach Posters & Teach scripts

## • Skill Levels 3 & 4 Live Online Coaching Sessions

- Review and coach each leader through the 8 Steps to solve their selected business problem
- Leaders receive feedback and evaluation of their Problem Solving A3 – to adjust & progress
- Sessions on a weekly cadence
- Leaders “Report Out” to Snr Leaders on progress & results



## Skill Levels 1 & 2 using Interactive Guided Learning Platform



## Skill Level 3 focuses on leaders being coached to solve a real business problem



Lean Enterprise Academy 7% COMPLETE 5/65 Steps < Previous Lesson

## Skill Level 2 – 8 Step Problem Solving

**PREPARE THE LEARNER**

- Introduction - (30 minutes)  
3 Topics

**8 STEP PRACTICAL PROBLEM SOLVING - SUMMARY OVERVIEW**

- 8 Step Practical Problem Solving method - Present Learning Topic (30 minutes)  
1 Topic

**STEP 1 PROBLEM CLARIFICATION**

- Step 1 Problem Clarification - Present Learning Topic (30 minutes)  
3 Topics | 1 Learning Confirmation
- Step 1 Problem Clarification - Try Out Learning Topic (90 minutes)**  
2 Topics
- Step 1 Problem Clarification – A3 Learning Exercise
- Step 1 Problem Clarification – A3 Exercise Answer & Knack Points

**STEP 2 CONTAINMENT**

- Step 2 Containment - Present Learning Topic (30 minutes)  
2 Topics | 1 Learning Confirmation
- Step 2 Containment - Try Out Learning Topic (90 minutes)  
2 Topics

**STEP 3 PROBLEM ANALYSIS & BREAKDOWN**

- Step 3 Problem Breakdown & Analysis - Present Learning Topic (40 minutes)  
3 Topics | 1 Learning Confirmation
- Step 3 Problem Analysis & Breakdown - Try Out Learning Topic (120 minutes)  
2 Topics

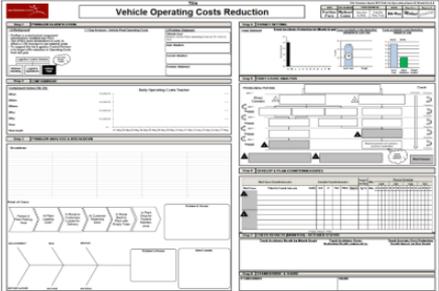
**STEP 4 TARGET SETTING**

### Step 1 Problem Clarification – A3 Learning Exercise

Skill Level 2 – 8 Step Problem Solving > Step 1 Problem Clarification - Try Out Learning Topic (90 minutes) > Step 1 Problem Clarification – A3 Learning Exercise IN PROGRESS

## Exercise Instructions

0:23 / 0:23



**Read** the description of the problem situation in the first part of this short case on the following pages for step1.

**Respond** to each of the “key questions” stated at the end of this section

**Complete** the “ Step 1 Problem Clarification” section on the pre-formatted A3 worksheet to record and visualise your answer.

**The pre-formatted A3 worksheet and other supporting material are available in the prepare the Learner section – course material download (Link Below)**

[Course Material Download section](#)

**Scroll down and complete each section of the topic**

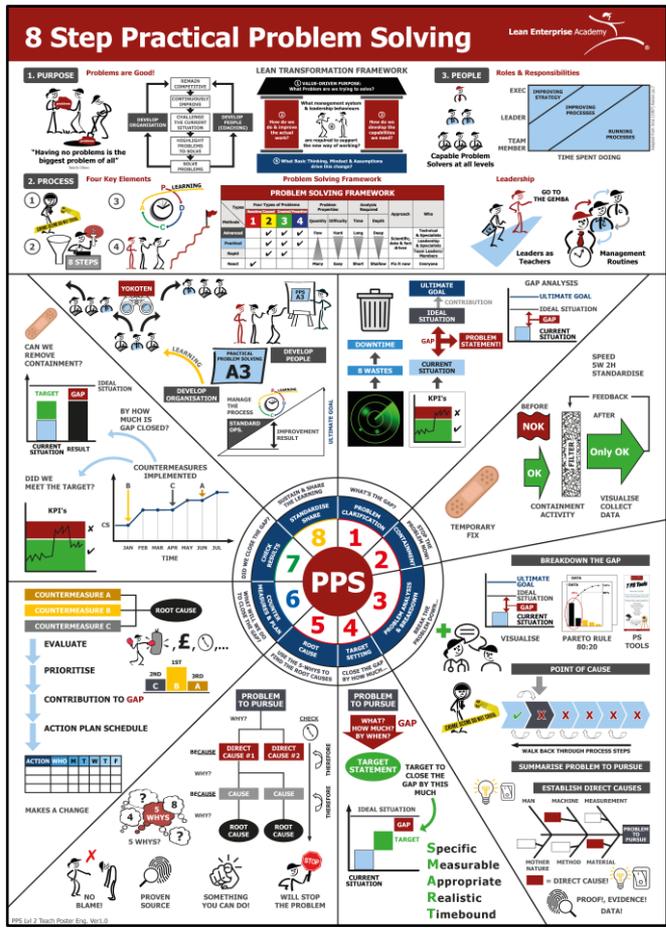
## Read Situation Description

0:00 / 4:51

Play Audio file if you want to listen to situation description

# Evaluation of Leaders Problem Solving A3's

## Teach Poster

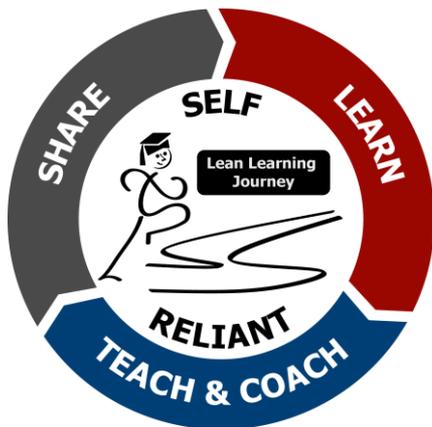


PRACTICAL PROBLEM SOLVING (PPS) A3 EVALUATION CRITERIA			
<b>1.0 Problem Clarification</b> <b>Expected Content</b> - Background context (why solve this?) - Clarify the Ultimate Goal, Ideal and Current Situation - Clear Problem Statement - Gap clearly visualised <b>Problem Statement</b> - CLEAR - MEASURABLE - APPROPRIATE - REALISTIC - TIMEBOUND <b>Problem Solving Framework</b>		<b>5.0 Root Cause Analysis</b> <b>Expected Content</b> - Clear 5M & 8D story from Problem to Pursue - List Why to the Direct Cause(s) and Root Cause(s) <b>Evaluation Levels</b> 1. Root cause analysis is Root Cause/Logical Pursue 2. Root cause(s) have been specified, but based upon intuition, opinion or pre-conception without adequate investigation - will not stop the problem. 3. Root cause(s) have been specified with a logical, fact based analysis by deep investigation from the Problem to Pursue and Direct Cause. Eliminating the root cause(s) will eliminate the problem. 4. Root cause(s) beyond their normal area of responsibility or scope are being tackled. 5. Simple, easy to share and understood by anyone.	
<b>2.0 Containment</b> <b>Expected Content</b> - Customer needs and containment considered - Speed, priority and feedback - Who, What, Where, When, Why, How, How much. <b>Evaluation Levels</b> 1. Containment considered but method is weak, slow, impact on gap, actions taken are not clear. 2. Closed top containment done. Method, start date, actions taken and impact on gap clearly explained and visualised to demonstrate it is working. 3. Inadequacy is being used to collect data to help understand the problem more (for Step 3). 4. Also, the content is simple, clear and easy to share with no explanation.		<b>6.0 Develop &amp; Plan Countermeasures</b> <b>Expected Content</b> - Develop as many potential countermeasures as possible. - Narrow down to prioritise the most practical and effective. - Build consensus with others. - Create a detailed and clear action plan. <b>Evaluation Levels</b> 1. Countermeasures (CM) are specified but are inadequate to address the Root Cause(s). 2. CM are specified but are not evaluated or prioritised particularly well, allowing a poor CM to be logical, address the Root Cause(s) and are self-evaluated, prioritised, planned, tracked. 3. The expected contribution of each CM has been calculated towards the target or gap. 4. The plan is well managed to ensure the results are achieved e.g. catback contingency. 5. Simple, easy to share and understood by anyone.	
<b>3.0 Problem Analysis &amp; Breakdown</b> <b>Expected Content</b> - Breakdown the Problem into size and facts (7 PPS Tools) - Select and state the Problem to Pursue - Location of Cause by Go & See. - Identify and confirm Direct Cause(s) through data and investigation. <b>Evaluation Levels</b> 1. CS/Gaps not broken down into size, but start date, level, mainly opinion into data or facts. 2. Breakdown with data done, but difficult to understand the logic story, Point of Cause, Problem to Pursue & Direct Cause not stated or defined. 3. Deep, logical breakdown done to determine/improve the Point of Cause (where), Problem to Pursue (what, when, how) and Direct Causes (why). 4. Evidence of Go & See & gap contribution defined. 5. The investigation is so deep that the question remains unanswered. Every avenue is covered. Also, the problem is made so simple, clear and easy to share with no explanation.		<b>7.0 Check Results &amp; Monitor</b> <b>Expected Content</b> - Evaluate the overall results - has the target been met, how much has the Gap closed, what progress has been achieved from this result. - Understand the factors behind success. - If OK, remove Containment - TOCA <b>Evaluation Levels</b> 1. The results of implementing the CM is not clear. 2. The results of implementing the CM are shown but is not related back to the target or gap. 3. The results and impact of each CM can be seen as per the plan. This has been compared to the target set and the impact on the gap evaluated. 4. Reasons for achievement or non-achievement are understood and reflection/learning done. 5. Simple, easy to share and understood by anyone.	
<b>4.0 Target Setting</b> <b>Expected Content</b> - SMART Target Statement - Clear explanation of how much the GAP is expected to close by solving the Problem to Pursue (contribution) - Gap clearly visualised. <b>Evaluation Levels</b> 1. Target is stated and visualised but does not connect to the Problem to Pursue/Direct Causes. 2. Target is stated and visualised but does not show by how much it will impact on the gap. 3. Target is stated, logical & fulfills the SMART criteria. It is clearly visualised and shows by how much it will close the gap and by when. Management and tracking method is clear. 4. Also, it takes in to account the longer term impact e.g. look across potential for the problem/solver. 5. Simple, easy to share and understood by anyone.		<b>8.0 Standardise &amp; Share</b> <b>Expected Content</b> - Successful processes/practices are standardised. - Learning has been shared inside/outside. - What progress has been for further improvement. <b>Evaluation Levels</b> 1. Standardisation/sharing not deeply considered. 2. Considered but little personal action taken. 3. Standardisation/learning completed and shared. 4. Inadequacy, original standardisation are/were reviewed, updated and deployed for future. 5. Also, next level of improvement is planned.	
<b>9.0 A3 Document</b> <b>Expected Content</b> - A3 is understandable at a glance - Clear storyline, which steps is Clear - Visuals, graphics used that simplify facts and data <b>Evaluation Levels</b> 1. A3 is difficult to read/understand - no logic story 2. A3 logic story evident, but wordy, not visual. 3. A3 logic story clear, visual and easy to follow. 4. A3 can stand alone as a document. 5. A3 can be used to train others.		<b>Coaching Questions</b> 1. How did you learn when you solved 'why five times'? 2. What specific causes did you uncover through your investigation? 3. How did you verify the causes? 4. So, what do you think happened in terms of the timing or sequence of events to arrive at the root cause? 5. How are you sure that solving this root cause will eliminate the problem? 6. When you are checking, therefore check, what did you learn? 7. Why, why, why, why...?	

Leaders Skill Level Achievement Assessed against Problem Solving Criteria - Target Rating 3 out of 5



- The Lean Enterprise Academy is a **not for profit organisation**. Our aim is to develop and disseminate knowledge of Lean thinking and Lean practice – BETTER FASTER CHEAPER
- We help organisations and individuals understand and implement Lean thinking. We do this by working with you to define and address gaps in performance that need to be closed, developing both your capability to improve the flow of value to your customers and the problem solving ability of your people so that you can sustain the gains and continuously improve.
- Our unique perspective is that we continuously seek to learn what the most effective mechanisms are for transferring this Lean knowledge and developing Lean capability – so together we can create more value, right first time, on time, in less time.
- We do this through a number of mechanisms:



- **Learn:** In our Action Research with organisations we develop hypotheses about Lean Thinking and its application and conduct research to see what works best in the real world. This approach helps the organisations we work with build a competitive advantage as together we simultaneously close performance gaps whilst developing new knowledge of Lean thinking and its application.
- **Teach & Coach:** We use our research to develop materials to teach and coach others in Lean Thinking so they can become self-reliant on their own lean journeys. We offer both onsite and online workshops and courses to provide the best capability development possible.
- **Sharing:** We distill the lessons learned from all our activities. Each year we reach out to our Lean community to organize events such our Lean Summit or our Sharing Day as well as publishing books, regular articles on our website and videos on the Lean Enterprise Academy YouTube channel.