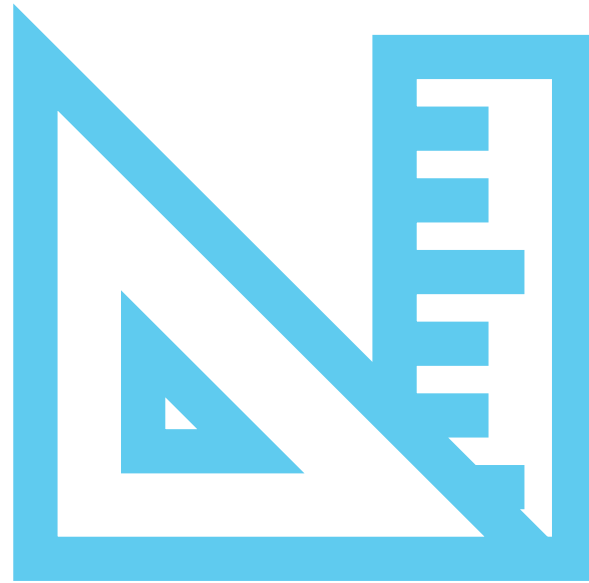


# A3

## 8 Step Problem Solving Method



Presented by

The Continuous Improvement Team

## What is an A3?

- ▶ An A3 is a blank template of paper, split up into eight sections.
- ▶ Use an A3 to guide your thinking through the 8-step problem solving method, and to share your ideas, plans and work.

## A3 8-step problem solving worksheet

Problem

Responsible person	People involved	Issue			
<b>1 Clarify the Problem (Plan)</b> Current situation: Desired situation:					
<b>2 Breakdown the Problem (Plan)</b>					
<h1>Why a A3?</h1>					
<b>3 Set the Target (Plan)</b>					
<b>4 Root cause analysis (Plan)</b>					
<b>5 Develop countermeasure (Plan)</b>					
<b>6 Run experiments to validate countermeasures(Do)</b> <table border="1"><thead><tr><th>Owner</th><th>Support people</th><th>Dates</th></tr></thead><tbody></tbody></table>			Owner	Support people	Dates
Owner	Support people	Dates			
<b>7 Monitor results from experiments(Check)</b>					
<b>8 Standardize successful countermeasures (Act)</b>					

# An A3 captures

A specific problem

Material to help people see where the problem occurs

Targets for improvement

Analysis around the root cause of the problem

A list of possible countermeasures, with prioritization

A detailed plan for an experiment to try out a countermeasure

Status of results from the experiment

Decisions made about what to do after an experiment ends

A countermeasure is a suggested or proposed solution. We don't call them solutions because they're ideas about what might address the problem—you can call it a solution once you know it works.

# Why use an A3?

A3 is structured, but flexible. An A3 is completed in a small group.

It is the way you "do" continuous improvement, using the Plan, Do, Check, Act (PDCA) cycle. It is a tool for conversation and building shared understanding.

It is a way to show respect for people by getting everyone involved in problem solving.

It is a snapshot of your thinking about a particular problem that is affecting your work and impeding the delivery of value to your customers.



Questions

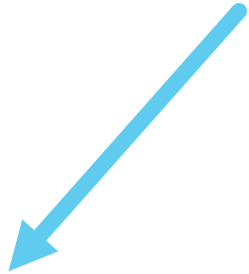
# Pulse Check

- ▶ Why use an A3?
- ▶ What is an A3?
- ▶ Why a A3?
- ▶ What does an A3 capture?



**A3 8-step problem solving worksheet**

Responsible person		People involved		Date	
1 Clarify the Problem (Plan) Current situation: Desired situation:		5 Develop countermeasure (Plan)		6 Run experiments to validate countermeasures(Do) Owner      Support people      Date	
2 Breakdown the Problem (Plan)					
3 Set the Target (Plan)		7 Monitor results from experiments(Check)			
4 Root cause analysis (Plan)		8 Standardize successful countermeasures (Act)			



At the top of an A3, look for the names of the responsible person, everyone who has been involved in the A3, and date(s) when work has happened.

The responsible person is someone who can answer questions about the A3, who can serve as a point of contact for communication with the people involved, and who will handle coordination and scheduling.



# 1. Clarify the problem

A3 8-step problem solving worksheet

Responsible person	People involved	Problem
1 Clarify the Problem (Plan) Current situation: Desired situation:		5 Develop countermeasure (Plan)
2 Breakdown the Problem (Plan)		6 Run experiments to validate countermeasures(Do) Owner      Support people      Dates
3 Set the Target (Plan)		7 Monitor results from experiments(Check)
4 Root cause analysis (Plan)		8 Standardize successful countermeasures (Act)

- ▶ Gives the current situation and the desired situation
- ▶ Expresses the *gap* between these two situations
- ▶ Answers the question.' "Why am I looking at this problem?"

## 2. Break down the problem

A3 8-step problem solving worksheet

Problem

Responsible person	People involved	Problem
1 Clarify the Problem (Plan) Current situation: Desired situation:		
2 Breakdown the Problem (Plan)		
3 Set the Target (Plan)		
4 Root cause analysis (Plan)		
5 Develop countermeasure (Plan)		
6 Run experiments to validate countermeasures (Do) Owner      Support people      Date		
7 Monitor results from experiments (Check)		
8 Standardize successful countermeasures (Act)		

- ▶ Breaks the problem into manageable, understandable pieces.
- ▶ Identifies the point of occurrence
- ▶ Answers the question: "Where does this problem occur?"

# 3. Set the target

- ▶ Sets a specific, measurable, and challenging target for closing the gap from step 1
- ▶ Might begin with words like “Reduce“, “Increase“, “Maintain“
- ▶ Answers the question: “What do we want to change? By when? By how much?”

A3 8-step problem solving worksheet

Problem

Responsible person	People involved	Date	
1 Clarify the Problem (Plan) Current situation: Desired situation:		5 Develop countermeasure (Plan)	6 Run experiments to validate countermeasures (Do) Owner      Support people      Date
2 Breakdown the Problem (Plan)			
3 Set the Target (Plan)		7 Monitor results from experiments (Check)	
4 Root cause analysis (Plan)		8 Standardize successful countermeasures (Act)	

# 4. Root cause analysis

- ▶ Identifies the root cause of the problem
- ▶ Answers the question: “ Why is this really happening?”

A3 8-step problem solving worksheet

Problem

Responsible person \_\_\_\_\_ People involved \_\_\_\_\_ Date \_\_\_\_\_

1 Clarify the Problem (Plan) Current situation: Desired situation:	5 Develop countermeasure (Plan)	6 Run experiments to validate countermeasures (Do) Owner _____ Support people _____ Date _____
2 Breakdown the Problem (Plan)		
3 Set the Target (Plan)	7 Monitor results from experiments (Check)	
4 Root cause analysis (Plan)	8 Standardize successful countermeasures (Act)	



Questions

# 5. Develop Countermeasures

## A3 8-step problem solving worksheet

Responsible person	People involved	Issue	Problem
1 Clarify the Problem (Plan) Current situation: Desired situation:		5 Develop countermeasure (Plan)	6 Run experiments to validate countermeasures (Do) Owner    Support people    Date
2 Breakdown the Problem (Plan)		7 Monitor results from experiments (Check)	
3 Set the Target (Plan)		8 Standardize successful countermeasures (Act)	
4 Root cause analysis (Plan)			

- ▶ Gives a variety of countermeasures (or proposed solutions)
- ▶ Identifies which countermeasure(s) are higher or lower priority
- ▶ Answers the question: “What could we do next?\*

# 6. Run experiments to validate countermeasures

A3 8-step problem solving worksheet

Problem

Responsible person      People involved      Date

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1 Clarify the Problem (Plan)

Current situation:

Desired situation:

---

2 Breakdown the Problem (Plan)

---

3 Set the Target (Plan)

---

4 Root cause analysis (Plan)

---

5 Develop countermeasure (Plan)

---

6 Run experiments to validate countermeasures(Do)

Owner	Support people	Dates

---

7 Monitor results from experiments(Check)

---

8 Standardize successful countermeasures (Act)

▶ A detailed specification (or action plan) for an experiment. listing:

- ▶ what will happen,
- ▶ who will do it,
- ▶ how long it will take or when it will be done).
- ▶ how we will know if it was successful

▶ Describe what will be measured and when, so we can know if this experiment helps move towards the target in step 3

▶ Answers the question: "What will We actually do next?"

- ▶ Space for updates or status entries as the experiment runs
- ▶ Shows what has happened, what has worked, what hasn't
- ▶ Considers multiple perspectives: how does this all look to you? To customers? To everybody else in the organization.
- ▶ Answers the question: "How did it go?"

A3 8-step problem solving worksheet

Problem

Responsible person	People involved	Scale
1 Clarify the Problem (Plan) Current situation: Desired situation:		
2 Breakdown the Problem (Plan)		
3 Set the Target (Plan)		
4 Root cause analysis (Plan)		
5 Develop countermeasure (Plan)		6 Run experiments to validate countermeasures (Do) Owner:      Support people:      Dates:
7 Monitor results from experiments (Check)		
8 Standardize successful countermeasures (Act)		

## 7. Monitor results from plans(experiments)



- ▶ Identifies what can be done to standardize around successes
- ▶ Describes how results and discoveries can be shared with others across the organization
- ▶ Identifies a starting point for the next round of problem solving. Depending on how the experiment went, you might...
  - ▶ Try another countermeasure from step 5 (or develop additional countermeasures)
  - ▶ Look for a different root cause in step 4
  - ▶ Adjust the target set in step 3
  - ▶ Return to the point of occurrence in step 2
- ▶ Answers the question: "Now what?"

A3 8-step problem solving worksheet

Problem

Responsible person	People involved	Scale
1 Clarify the Problem (Plan) Current situation: Desired situation:		
2 Breakdown the Problem (Plan)		
3 Set the Target (Plan)		
4 Root cause analysis (Plan)		
5 Develop countermeasure (Plan)		6 Run experiments to validate countermeasures (Do) Owner:      Support people:      Dates:
7 Monitor results from experiments (Check)		
8 Standardize successful countermeasures (Act)		

## 8. Standardize successful countermeasures

# A3 - RECAP

A3 - Allows you to work on a specific problem

A3 - Helps people see where the problem occurs

A3 - Targets for improvement

A3 - Analysis around the root cause of the problem

A3 - Provides a list of possible countermeasures, with prioritization

A3 - Gives a detailed plan for an experiment to try out a countermeasure

A3 - Status of results from the experiment

A3 - Allows decisions made about what to do after an experiment ends

Reminder: Have a good representation of staff during A3 discussions. Staff that actually do the work or will be impacted by the countermeasures and experiments/plans. Everyone has a voice in Lean!



Questions



# Continuous Improvement Team

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