



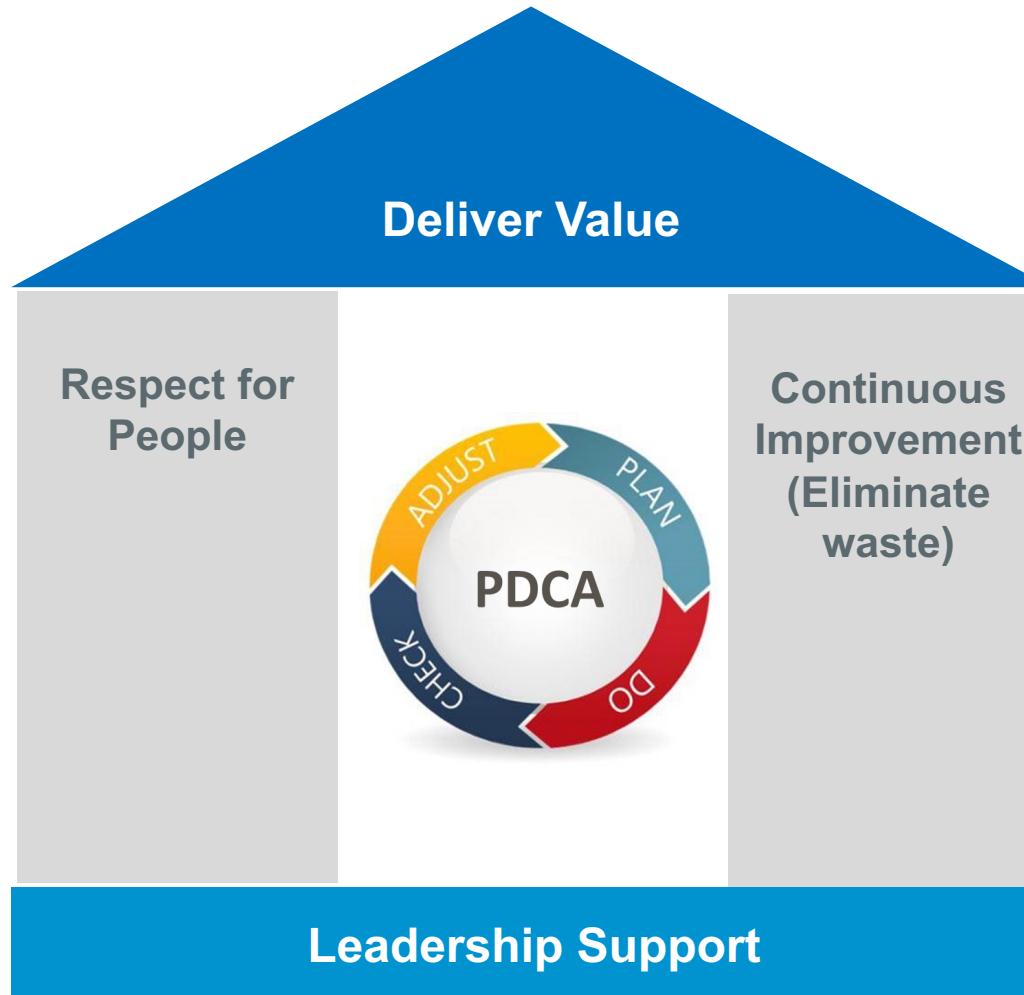
University of California
San Francisco

Welcome to A3 Thinking for Value Improvement

September 1, 2021



Value Improvement Embraces the Pillars of Lean: *Respect for People & Continuous Improvement*



Value Improvement Ideas will Reduce Non-Valued Added Work



Transportation

Unnecessary movements of products & materials.



Inventory

Excess products and materials not being processed.



Motion

Unnecessary movements by people (e.g., walking).



Under-Utilization

Underutilizing people's talents, skills, & knowledge.



Waiting

Wasted time waiting for the next step in a process.



Overprocessing

More work or higher quality than is required by the customer.



Overproduction

Production that is more than needed or before it is needed.



Defects

Efforts caused by rework, scrap, and incorrect information.

What is A3 Thinking?

- A3 = International paper size (11x17)
- A3 thinking = Structured problem solving, the scientific method
- Approach originated at Toyota in the 60s
- Prevents us from jumping to conclusions
- Enables root cause analysis and data-driven experimentation
- Supports PDCA model for continuous improvement
- Promotes a culture of continuous improvement

What's important is not the format... it is the process and thinking behind it.

A3 T E M P L A T E



Title:

Sponsor:

Owner:

UCSF A3 Template

Team:

1. Background: What problem are you talking about and why?

Why address this problem?



Last update:

5. Experiments: What countermeasures do you propose and why?

ROOT CAUSE	COUNTERMEASURE	IN-PROCESS METRIC

2. Current Conditions: Where do things stand now?

Data, charts to paint a picture of the current state

Succinct problem statement with data

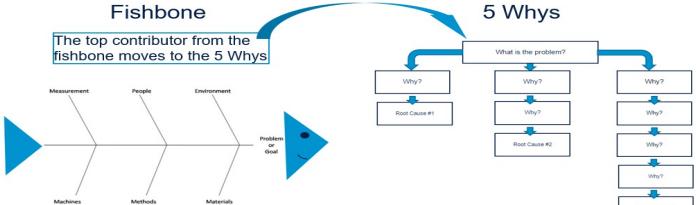
6. Action Plan: How will you implement?

WHAT	WHO	BY WHEN

3. Target Conditions (Goals): What specific outcome is desired?

*What do you want to achieve?
Is it measurable?*

4. Gap Analysis: Why does the problem exist?



7. Study, Reflect, Plan Next Steps: How will you assure ongoing PDCA?



Understanding the Current Condition

What do you actually know?

→ How do you know it?

What do you need to know?

→ How can you learn it?

“

A problem well-stated is half-solved.”

“A problem thoroughly understood is always fairly simple. Found your opinions on facts, not prejudices. We know too many things that are not true.”

Charles F. Kettering (1876-1958)

American Inventor, Social Philosopher and Head of Research for GM

Problem Statements

Good problem statements require data. They should be specific as to what exactly is happening, where it is happening, over what time period it is happening, and what is the business result or impact of this problem.

Answering these 4 questions will help you create a specific problem statement:

Question	Example
What is the specific problem?	30% of phone calls are not answered in the desired timeframe of 45 seconds
Where is it happening?	Z company call center in Chicago
When was the specific problem observed or measured?	January – March 2019
What is the result of this problem?	Customers are complaining of long waits to talk with staff

Common initial problem statement:

Lots of our customers are complaining that they wait too long on the phone.

Well-defined problem statement:

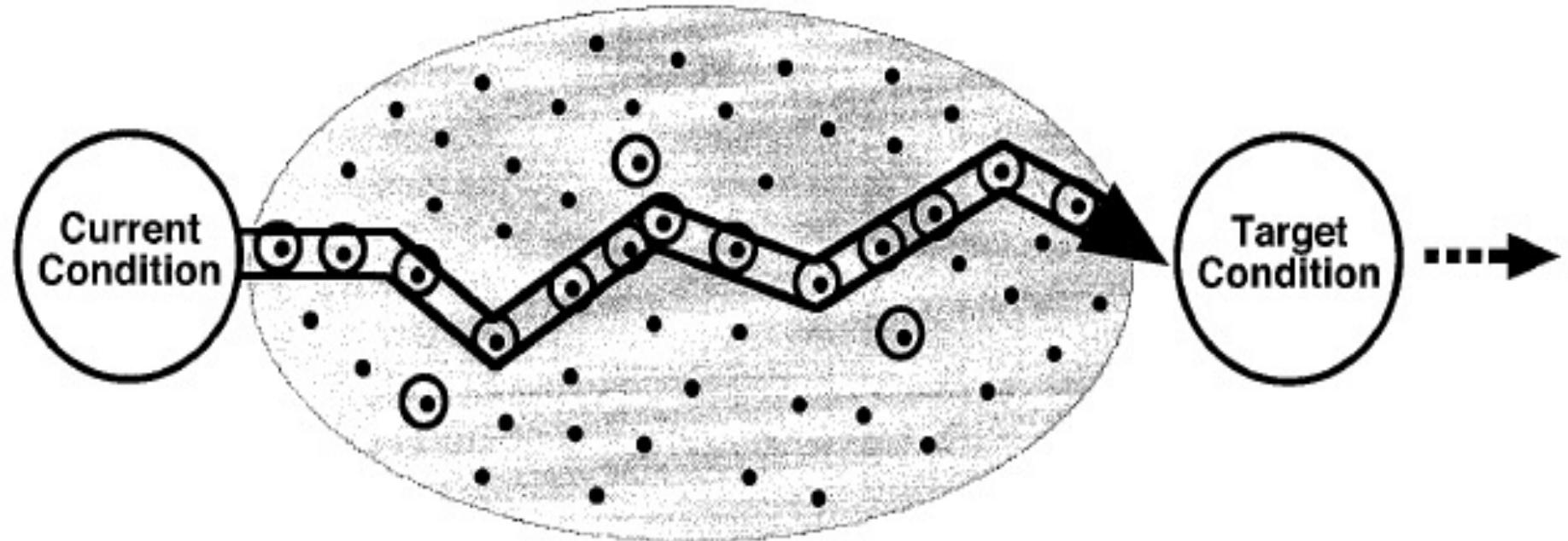
In the 1st quarter of 2019, 30% of the phone calls to Z's call center were not being answered within 45 seconds. This results in customer complaints and dissatisfaction.

Tips for writing a good problem statement:

Do	Don't
Use a full sentence .	Express the problem as a failure to meet a target (<i>we missed our target of...</i>)
Quantify the problem condition in terms of the business plan of the company and/or workplace (dollars, performance, safety, reliability, person-hours).	State an opinion (<i>I think the problem is...</i>)
State a specific time period during which the problem condition has occurred.	Attempt to analyze the problem (<i>the problem is due to...</i>)
Include a benchmark or other comparative value.	Embed a solution (<i>we don't have a system to...</i>)
Clearly answer the question: Why is this a problem? What is the business impact?	

Target Conditions move us towards a desired future state

PDCA cycles toward the next target condition

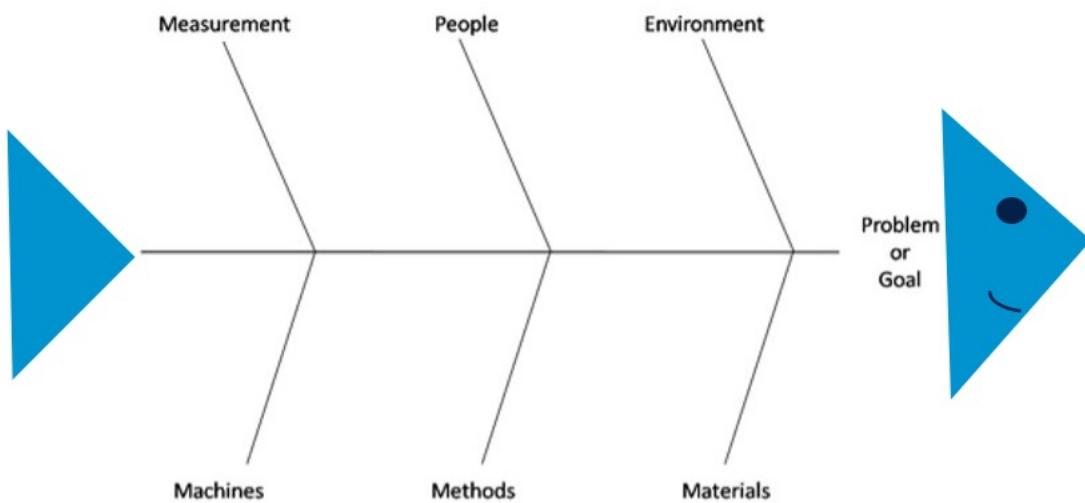


We ask: Which problems need to be addressed to achieve the target condition? Which things will help most?

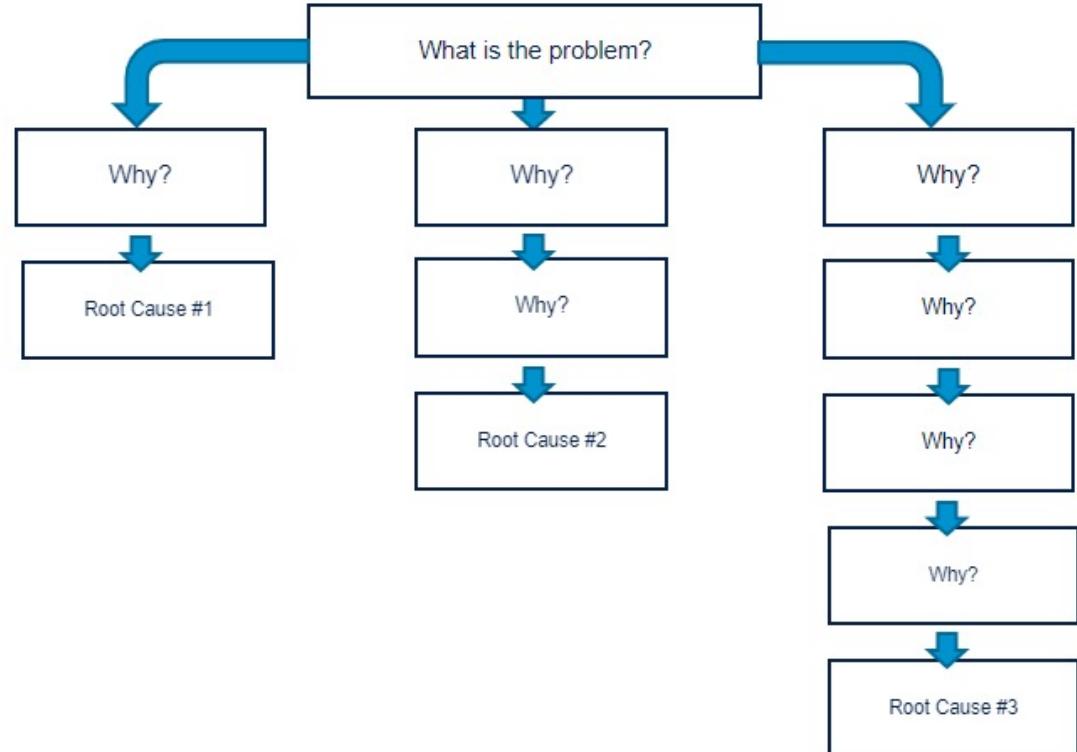
Gap and Root Cause Analysis

Fishbone

The top contributor from the fishbone moves to the 5 Whys



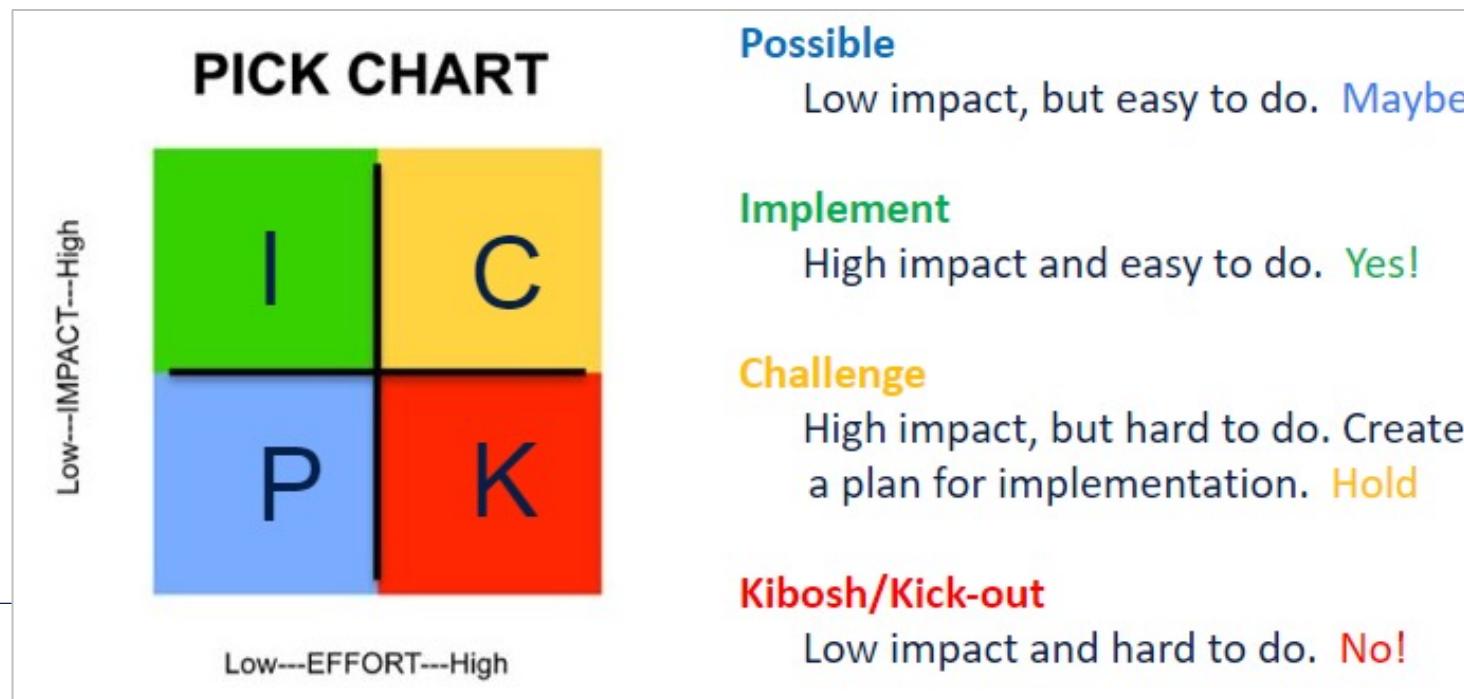
5 Whys



Brainstorm and Select Countermeasures

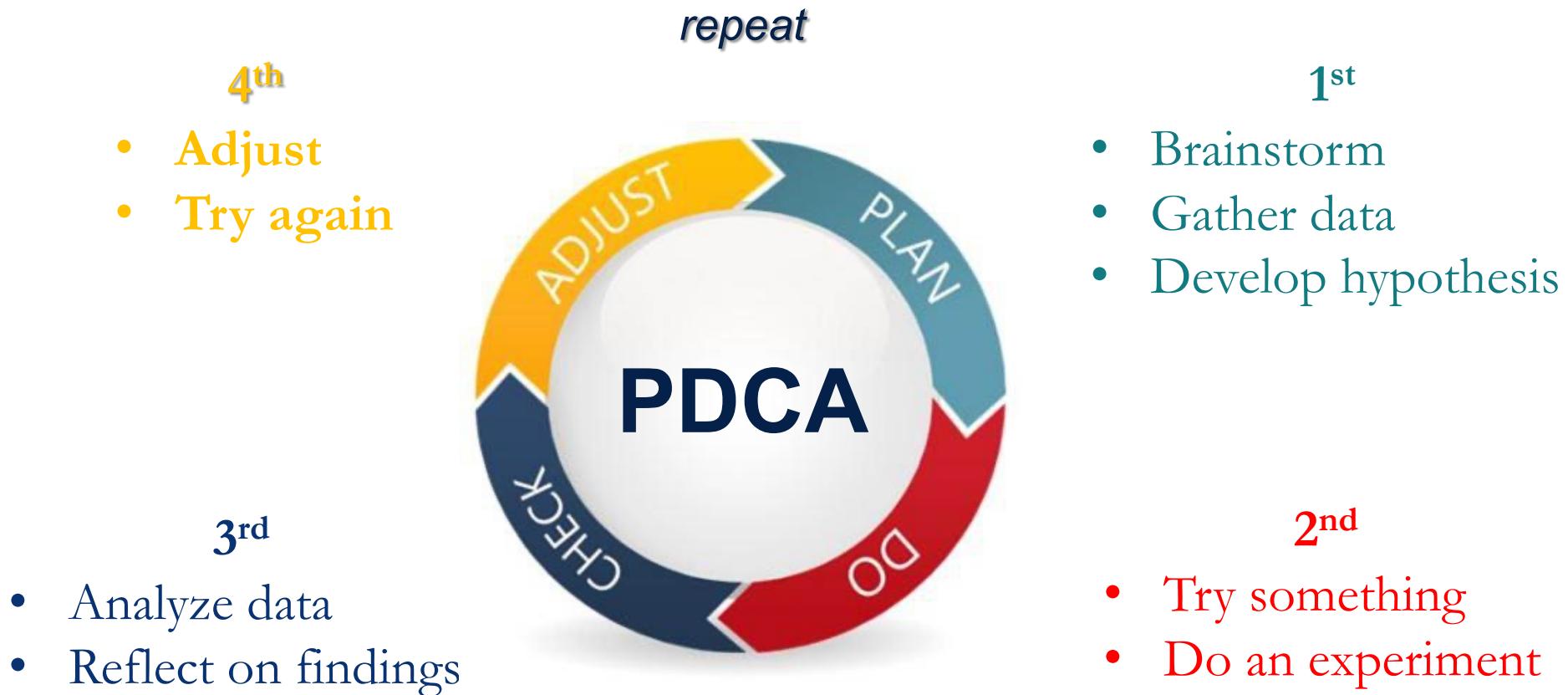
Root Cause	Countermeasure	PICK
#1	Idea A	C
	Idea B	I
#2	Idea A	P
	Idea B	I
	Idea C	P

Experiment with these two ideas



Always try ideas in the green quadrant first

Use PDCA to Refine a Countermeasure





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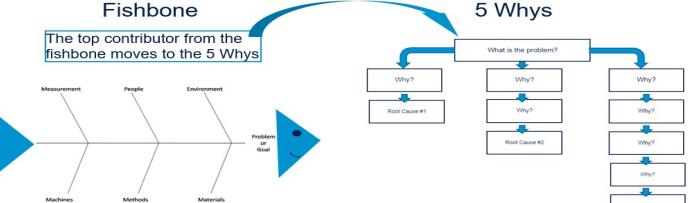
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