

5 Whys Root Cause Analysis

A quick way to get from a problem to its root cause: ask why, through each of the 4Ms, until you reach something you can fix.

REFERENCE

PART NUMBER OR PROCESS

DATE

LED BY

CUSTOMER (IF ANY)

LINKED 8D OR NCR

How to use this template

1. Type straight into the boxes on screen, or print it and write by hand.
2. Do it with the people who know the process, at the place where the problem happened if you can.
3. Write facts, not opinions or blame. Every answer should be something you could check.
4. For problems with many possible causes, start with a fishbone diagram, then use 5 Whys on the likeliest causes.

1 State the problem One sentence, in facts

Write what is wrong, where and how often, as a fact you could check.

- Good: "12 of 400 assemblies failed functional test on lot 4417, all at connector J3."
- Weak: "Quality is poor on the new product."

2 Ask why, five times, across the 4Ms Man, Machine, Method, Material

- Look at the problem through each of the four Ms in turn. In each column, ask why it happened, and write the answer as a fact.
- Ask why again about that answer, and keep going down the column until you reach a cause you can act on, usually by the fifth why. Leave a column empty if that M plays no part.
- Stay with the process. If an answer becomes a person ("the operator forgot"), ask why the process allowed it.
- Mark the root cause in the bottom row. Often only one or two Ms lead to it.

	Man people, skills, training	Machine equipment, tooling, software	Method procedures, instructions	Material components, PCBs, consumables
WHY 1				
WHY 2				
WHY 3				
WHY 4				
WHY 5				
ROOT CAUSE?				

3 Check the chain backwards Read it from the bottom up

Read from the last why back to the problem, saying "and therefore" between each line. If any link doesn't follow, the chain is broken: go back and check that step.

Then prove the root cause with data or a trial, where you can.

HOW THE ROOT CAUSE WAS CHECKED

4 Fix it One action for the root cause, one for why it wasn't caught

- Choose an action that removes the root cause, not one that only deals with the symptom.
- Ask one more question: why didn't our checks catch it? Add an action for that too.
- Give every action an owner and a date.

ACTION	OWNER	DUE	DONE

Going round in circles on a recurring problem?

Grindstone leads root cause investigations alongside your team, on site or remotely, at a fixed price agreed before we start.

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