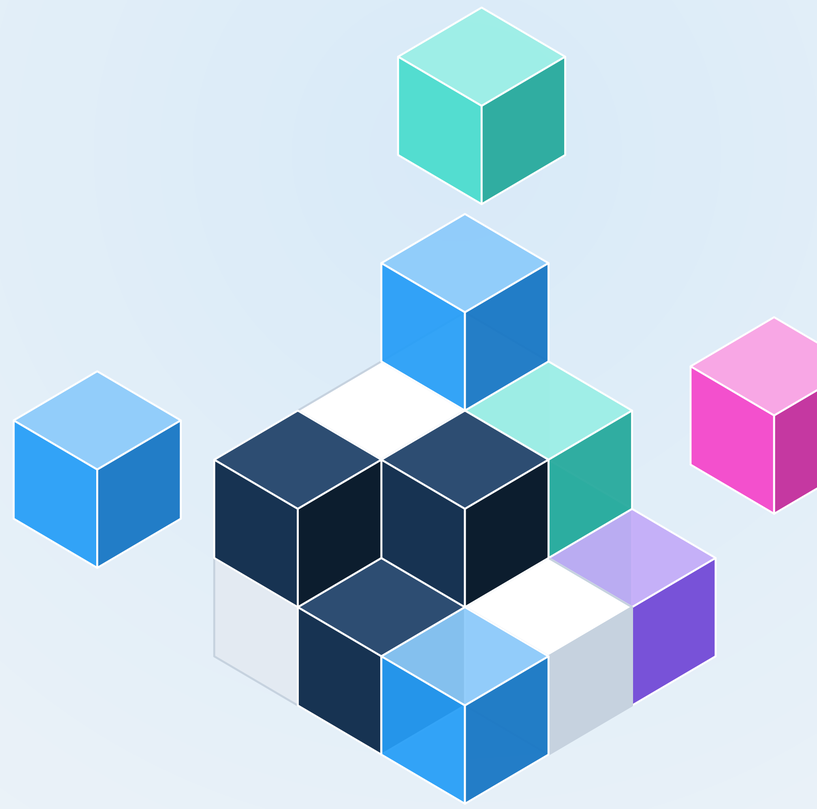
QUALITY MANAGEMENT

Root Cause Analysis: 5 Whys

The 5 Whys is a simple root cause method: ask why a problem occurred, verify the answer, and repeat until you reach a cause that, once removed, stops the problem from returning.



01 THE CORE MODEL

WHY LADDER · FROM SYMPTOM TO ROOT CAUSE

01 WHY 1
Overload
Why did the machine stop? An overload blew the fuse.

→

02 WHY 2
Poor lubrication
Why the overload? The bearing was not lubricated enough.

→

03 WHY 3
Weak pump
Why? The lubrication pump did not deliver enough oil.

→

04 WHY 4
Worn shaft
Why? The pump shaft was worn and rattling.

→

05 WHY 5
No strainer
Why worn? Metal chips got in because there was no strainer.

Problem statement
A specific, observed gap: what, where, when and how much.

Evidence check
Each answer is verified at the gemba before the next why is asked.

Root cause
The cause that, once removed, stops the problem from returning.

02 DOING IT RIGHT

Each answer must be a verified fact, not a plausible guess.

GUESSING — VERIFYING

WEAK 5 WHYS

- Answers invented in the meeting room
- Chain ends at "human error"
- One path only, other causes ignored

STRONG 5 WHYS

- Each why checked at the machine
- Stops at a cause you can act on
- Branches where several causes exist

03 WORKED EXAMPLE

TAIICHI OHNO'S CLASSIC MACHINE-STOP EXAMPLE

SYMPTOM
Machine stopped
the fuse blew

→

ROOT CAUSE
No strainer
chips entered the pump

→

COUNTERMEASURE
Fit a strainer
protects the pump shaft

→

CHECK
No repeat stops
confirmed over time

04 MANAGEMENT TAKEAWAYS

01
Start from a precise problem
A vague statement leads to a vague chain of answers.

02
Verify every link
Go and see; test each answer before moving on.

03
Stop at an actionable cause
Five is a guide, not a rule; stop when the fix prevents recurrence.

05 COMMON MISTAKE

LIMITATION
Ending at "human error"
Blaming a person stops the learning. Ask why the process allowed the error to happen.