

ASCENT TRAINING WALES · ONE-DAY COURSE

# Root Cause Analysis

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Root cause analysis training: find the real cause, fix it once, and stop problems repeating

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## 01 · COURSE OVERVIEW

# About this course

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Root Cause Analysis gets past the symptoms of a problem to the causal chain behind them. This one-day course shows your team how to investigate with evidence and fix causes for good.

QUESTIONS BEFORE THE DAY?

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## 02 · COURSE PROGRAMME

# Course times

9:00 am                      Arrival & welcome

9:30 – 10:45 am           Problem definition & evidence

10:45 – 11:00 am           Morning break

11:00 am – 12:00 pm      5 Whys & causal chains

12:00 – 1:00 pm           Lunch break

1:00 – 4:00 pm              Fishbone, Pareto & corrective action



# Symptoms vs. causes



1

## TREATING THE SYMPTOM

Quick fixes clear the visible problem — the rework, the complaint, the outage — but leave the mechanism that created it fully intact, so the failure returns.

2

## REMOVING THE CAUSE

Root cause analysis follows the evidence back along the causal chain to the condition or decision that made failure possible, then removes it for good.

## 04 · METHOD

# The RCA process

**Step 1** Define the problem precisely

**Step 2** Gather evidence and facts

**Step 3** Map the causal chain

**Step 4** Identify the root cause

**Step 5** Agree corrective actions

**Step 6** Verify the fix has held



05 · TECHNIQUE

# The 5 Whys

|            |                                 |
|------------|---------------------------------|
| Why 1      | The line stopped mid-shift      |
| Why 2      | The drive belt sheared          |
| Why 3      | The bearing had seized          |
| Why 4      | It was never re-lubricated      |
| Why 5      | Not on the maintenance schedule |
| Root cause | The schedule, not the belt      |



06 · TECHNIQUE

# Fishbone analysis

**People**

Skills, handovers, workload

**Process**

Methods, sequence, controls

**Equipment**

Condition, calibration, upkeep

**Materials**

Supply, specification, storage

**Environment**

Layout, noise, pressure

**Measurement**

Data quality and checks



07 · EVIDENCE

# Evidence & data

**People** Interview early, without blame

**Physical** Secure parts and samples

**Paper** Logs, records, procedures

**Digital** System data, alarms, trends

**Pareto** Fix the vital few first

**Test it** Remove it — does it stop?



08 · MAKING IT STICK

# Corrective action

Own it

One named owner per action

Date it

A deadline, not "ongoing"

Rank it

Design out beats warn about

Verify

Check the measure moved

Share it

Apply it to similar risks

Review

Re-open if it returns





THANK YOU

# Root Cause Analysis

Training delivered by Ascent Training Wales

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