

ROOT CAUSE ANALYSIS CHECKLIST

Identify the Cause, Not Just the Symptom

Most recurring automation problems are not caused by a single component failure. They are often the result of underlying issues that remain unresolved, leading to repeated downtime, maintenance costs and operational disruption.

Use this checklist to assess whether the true root cause has been identified before implementing corrective action.



1 DEFINE THE PROBLEM



- Has the issue been clearly defined?
- Has the exact fault or failure been recorded?
- Has the impact on production been quantified?
- Have all affected systems been identified?
- Has the issue occurred previously?
- Is there evidence showing when the issue first appeared?

2 GATHER EVIDENCE



- Have operators been interviewed?
- Have maintenance personnel been consulted?
- Have alarm logs been reviewed?
- Have PLC diagnostics been checked?
- Have SCADA event logs been analysed?
- Have maintenance records been reviewed?
- Has supporting documentation been collected?
- Have environmental conditions been considered?

3 IDENTIFY POTENTIAL CAUSES



EQUIPMENT

- Hardware failure
- Ageing equipment
- Incorrect component specification
- Wear and degradation



PROCESS

- Inadequate procedures
- Poor change control
- Inconsistent operating practices
- Documentation issues



PEOPLE

- Training gaps
- Human error
- Communication failures
- Incorrect system use



CONTROL SYSTEMS

- PLC logic issues
- HMI configuration issues
- SCADA integration problems
- Network communication failures
- Sensor or instrumentation faults

4 VERIFY THE ROOT CAUSE



- Has the suspected root cause been tested?
- Can the issue be consistently reproduced?
- Does evidence support the conclusion?
- Have alternative causes been ruled out?
- Has the team agreed on the identified root cause?

5 DEFINE CORRECTIVE ACTIONS



- Has a permanent solution been identified?
- Have temporary fixes been eliminated?
- Has ownership been assigned?
- Have deadlines been agreed?
- Have risks been assessed?
- Has implementation been planned?

6 PREVENT RECURRENCE



- Have procedures been updated?
- Has documentation been revised?
- Has training been completed?
- Have backups been verified?
- Have maintenance schedules been reviewed?
- Has system performance been monitored after implementation?

RCA SCORE

45+	Checked	Excellent, strong RCA process.	✔
35-44	Checked	Good process, minor gaps identified.	✔
25-34	Checked	Moderate risk of recurring issues.	!
Below 25	Checked	Root cause may not have been fully identified.	!



HOW STRATOS HELPS

Stratos Control Systems helps manufacturers identify recurring automation issues, improve fault finding processes and implement permanent corrective actions that reduce downtime and improve reliability.



SPEAK TO AN ENGINEER

Get expert support to find the root cause and implement solutions that last.



**SOLVE THE RIGHT PROBLEM.
PREVENT THE NEXT DOWNTIME.**

Talk to an Engineer Today.

