

K&L Microwave Guide for Supplier Corrective Action Requests



Overview

- Companies that use corrective and preventive action as management tools are those that experience consistently superior results from their value delivery system.
- They are the ones that meet problems head on, find the root cause, and then ensure that the same problem is not repeated and the same battles fought over again.

As General George S. Patton said,

"I only want to pay for this real estate once."



K&L's Expectations

- Documentation
- Responsibility
- Implementation
- Verification of effectiveness



Documentation

- At a minimum, we will send the following
 - Corrective action request
 - A cover letter defining what we require from you
 - Supporting documentation , if appropriate, such as photographs



Supplier Responsibility-Response

- Use our form
- Reply to the Sender
- A response by the due date
 - Communicate progress
 - Ask for an extension if the plan is going to take more time, and . . .
 - Submit your *plan* for our approval
- Attach objective evidence that demonstrates your corrections-inspection data, test data, photographs, revised procedures, records



Please Remember

- You are responsible for your suppliers
- We can participate in the corrective action
 - Let us know if you need assistance
- Notify us if other parts have the same condition



Supplier Responsibility-Objective Evidence

- Example: Supplier inadvertently ships nonconforming material. Supplier decides to revise the method by which nonconforming material is identified. Supplier implements use of a new Hold area and new reject tags.
- K&L expects to receive:
 - Completed CAR
 - Copy(ies) of revised procedure(s)
 - Training record for the revised procedure(s)
 - Photograph of the new Hold area
 - Sample reject tag



Verification and Close-out

- What signifies to us that everything is done? Have all the deliverables been met? Has your plan been implemented? Did it work? Are both parties satisfied with the outcome? Do you have all the documentation, evidence, sign-offs, etc., that your process requires?
- One of the biggest benefits of supplier corrective actions, besides actually solving a problem, is that it provides us with evidence that our suppliers are capable of addressing nonconformances.



Identifying Root Cause and Corrective Action

- Make Sure You Address the Root Cause and not just the Symptom



Corrective Action

Corrective Action

- ✓ **Definition: “Action to eliminate the cause of a detected non-conformity”**
- ✓ **Perform root-cause analysis**
 - “I only want to pay for this real estate once.” — General Patton
- ✓ **Follow-up to verify effectiveness**

- Proactively correct processes to keep nonconformities from recurring
- Perform methodical actions to ensure that the corrective action was effective

Examples-Not So Good

- 3 examples
 - “More attention will have to be paid to this process. Operator is no longer here.”
 - “Defect confirmed. Sent for repair. Repair complete, plot taken to send to customer. Return to customer.”
 - “Had to be rebuilt.”



Example-Good

- This was the response to an actual CAR:
 - 1. Process change implemented** to assure that flux contamination is removed from assembly. Assembly is placed in aqueous solution to remove flux before installing into housing. See attached photo.
 - 2. Sample** set of parts cleaned with new process and subjected to “life-test” series of environmental tests. 100% PASS-see attached electrical data.
 - 3. MOP changed** to include new cleaning process; all assemblers trained. Copy of MOP attached; training form attached.
 - 4. Process improvement implemented for all similar products.** Copy of router attached.



Preventive Action

Preventive Action

- ✓ **Definition: “Action to eliminate the cause of a potential non-conformity”**
- ✓ **Proactive program of problem avoidance**
 - Documented and acknowledged

- How do you prevent a problem that has yet to happen?
- Proactive approach to assuring conformance.
- Actively look for problems based on data trends.
- Process FMEA
- PokeYoke
- Management Reviews



Training & Reference Materials



Root Cause Analysis-Defined

- If we do not define the problem correctly, we will never be able to solve the problem **PERMANENTLY.**
- Ensure that we are working on the problem, not just a **SYMPTOM** of the problem



Root Cause Analysis

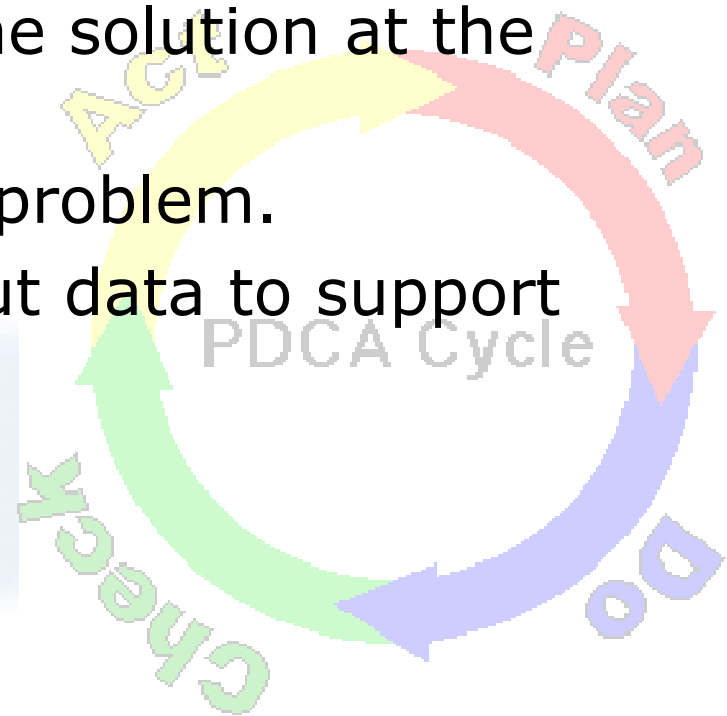
Root cause analysis is a structured investigation that aims to identify the true cause of a problem and to eliminate it.

- Understand the problem.
- Find the root cause.
- Identify potential solutions and implement the best one.
- Check your results.
- Standardize OR
- Go through the process again.



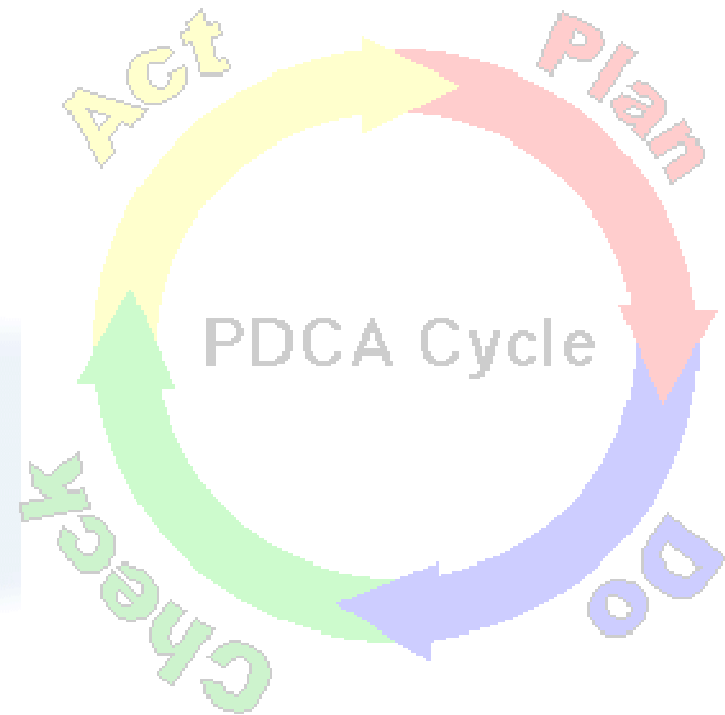
Understanding the Problem- Common Mistakes

- Defining the problem and the solution at the same time.
- Defining a symptom as the problem.
- Defining the problem without data to support definition.

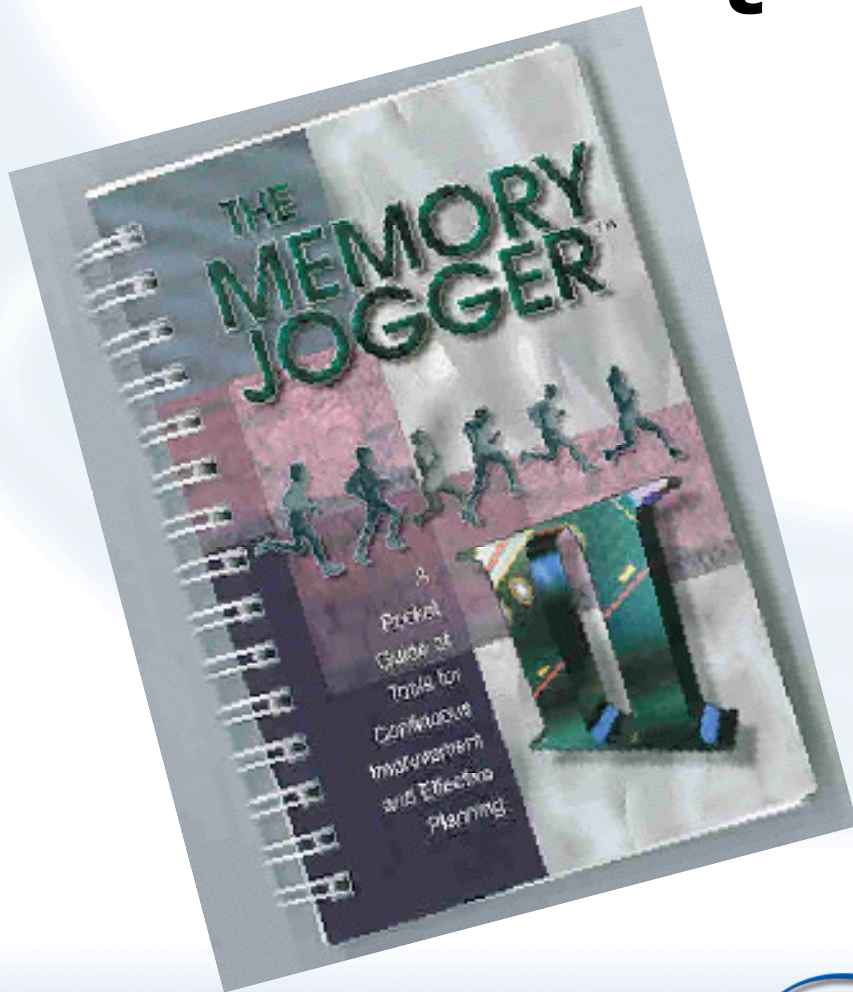


Finding the Root Cause

- Once the root cause is known, then and only then can you start to look for solutions.
- Ask:
 - Why
 - Why
 - Why
 - Why
 - Why



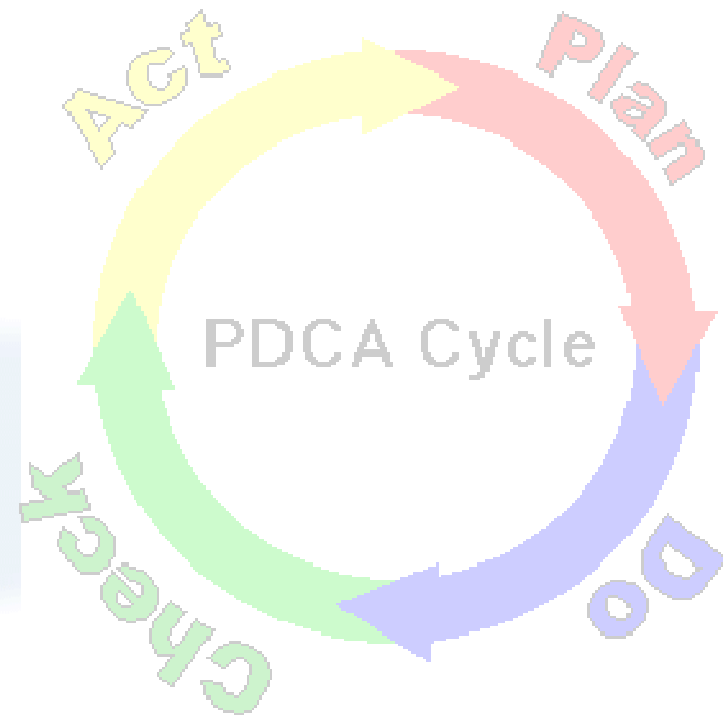
The Seven Quality Control Tools



- Check Sheets
- Histograms
- Pareto Charts
- Flowcharts
- Cause and Effect Diagrams
- Scatter Diagrams
- Control Charts

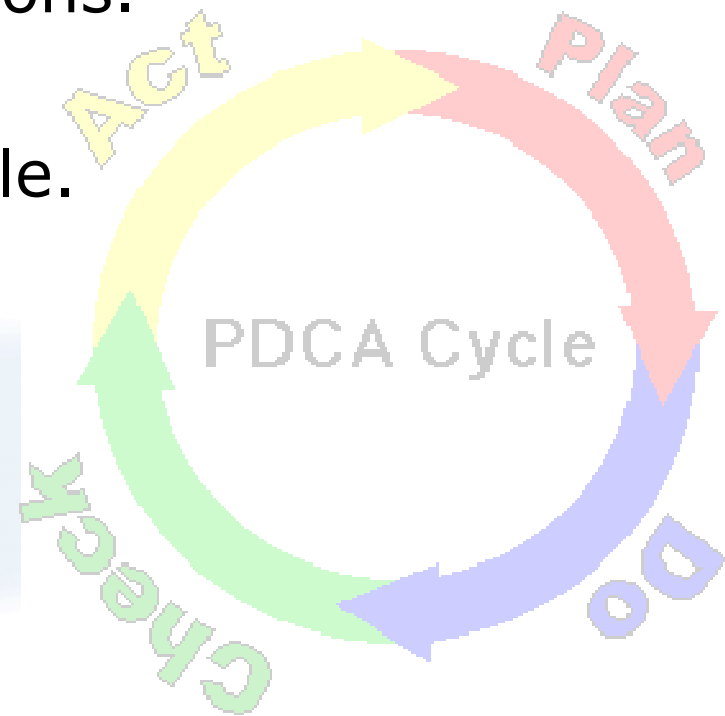
Other Tools

- Brainstorming
- PDCA
- 8D
- DMAIC
- Fishbone
- Fault Tree Analysis



Identify Potential Solutions and Implement the Best One

- Define and rank the solutions.
- Plan the change.
- Implement on a small scale.
- Follow the plan.

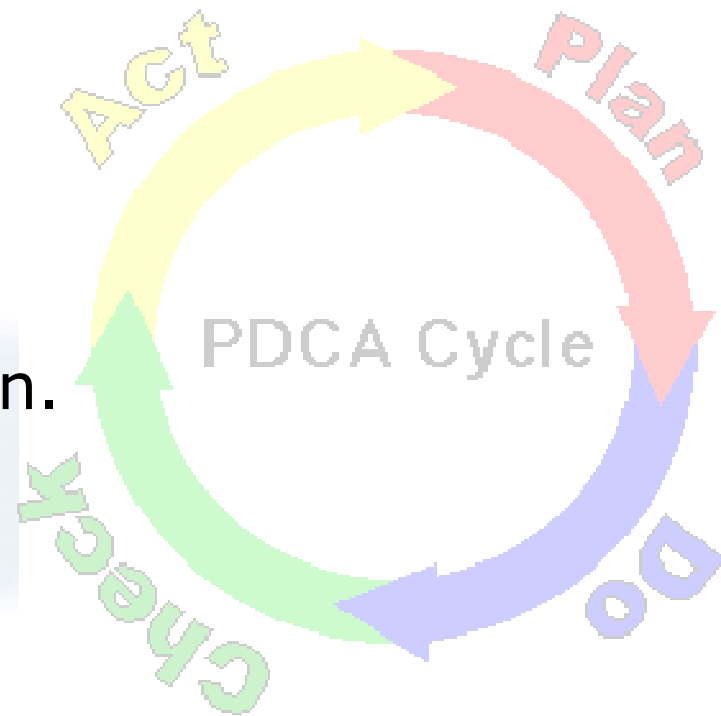


Check-Act

- Check your results.
- Standardize

OR

- Go through the process again.



Resources

- The Memory Jogger II, Goal QPC
- The Problem Solving Memory Jogger, Goal QPC
- www.asq.org
- [ASQ: Learn About Quality](#)
- www.thequalityportal.com

