8D Methodology

1D – Form a team

Team must be multi disciplined, knowledgeable about quality of manufactured product and production process. Involvement of Operators is mandatory.

2D – Describe a problem

Fully-detailed description of problem included:

- Description of problem reported by customer,
- Result of initial supplier analysis

3D - Containment

These are activities that minimize the risk, often preventing the production from stopping. Activities, which appears mainly at the supplier are:

- Stock verification,
- Analysis of risk based on material data, history of complaints and results of checks/tests, especially on complained batch,
- Making decision about isolation of materials/products and sorting based on the risk analysis,
- Implementation of an additional test/checking,
- 100% inspection must be clearly defined (for example: „100% with a microscope x 30 magnification”)

4D – Root Cause Analysis

This step is used to identify the root cause of the error and understanding why the error was not detected in the qualified production process.
This is the only way to eliminate the problem effictively.

In this step, strengthening tools are used very often to help in understanding the essence of the problem and directing of analysis activities.

4D – Root Cause Analysis

5Why

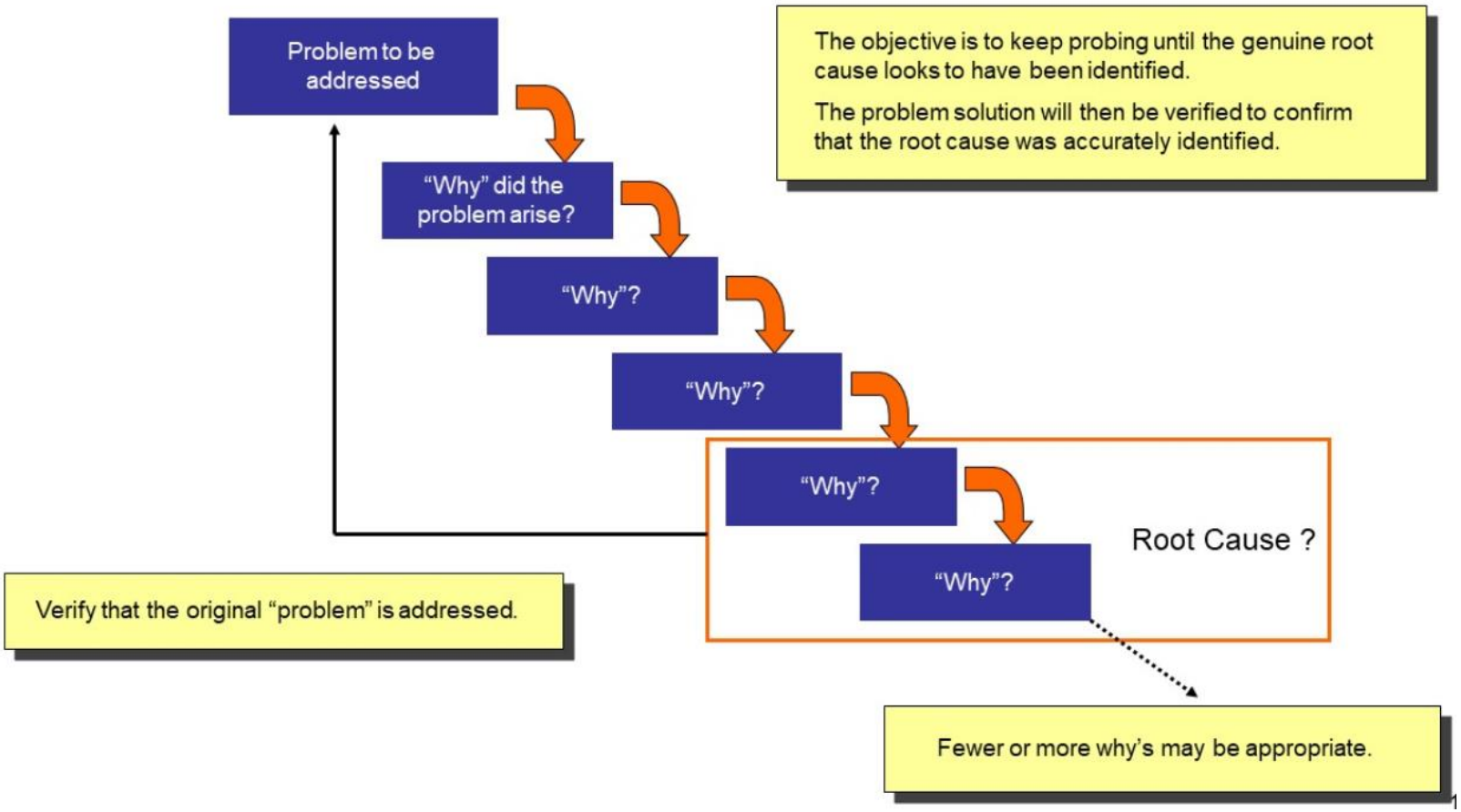
5Why analysis is the tool which is directed for identify the root cause and understanding why the error was not identified in process.

From a practical point of view it works very well during determining the reason of escape point.

Also, it can be used in determining the root cause, however, this tool works much better in analysis of simple complaints.

4D – Root Cause Analysis

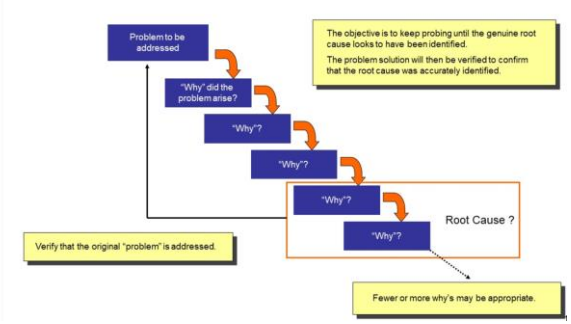
5Why



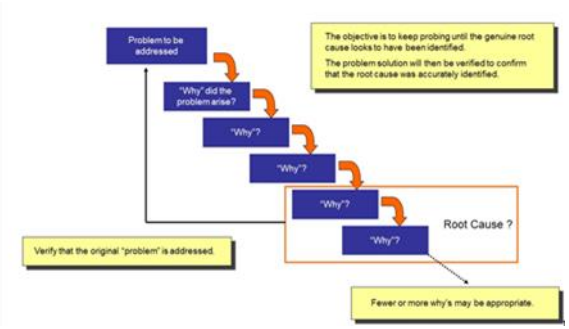
3 Leg 5 Why

Kimball Electronics may require the use of the 3 leg 5 why to address, Detection, Specific Root Cause, and Systemic Root Cause.

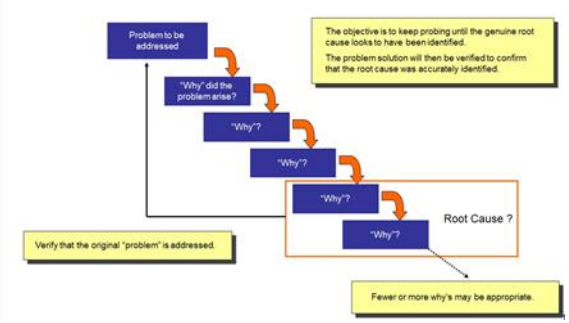
Escapement 5 Why. Why did it escape existing detection methods?



Systemic Root Cause 5 Why. Root cause for systems or processes. Aids in look across to other similar items.



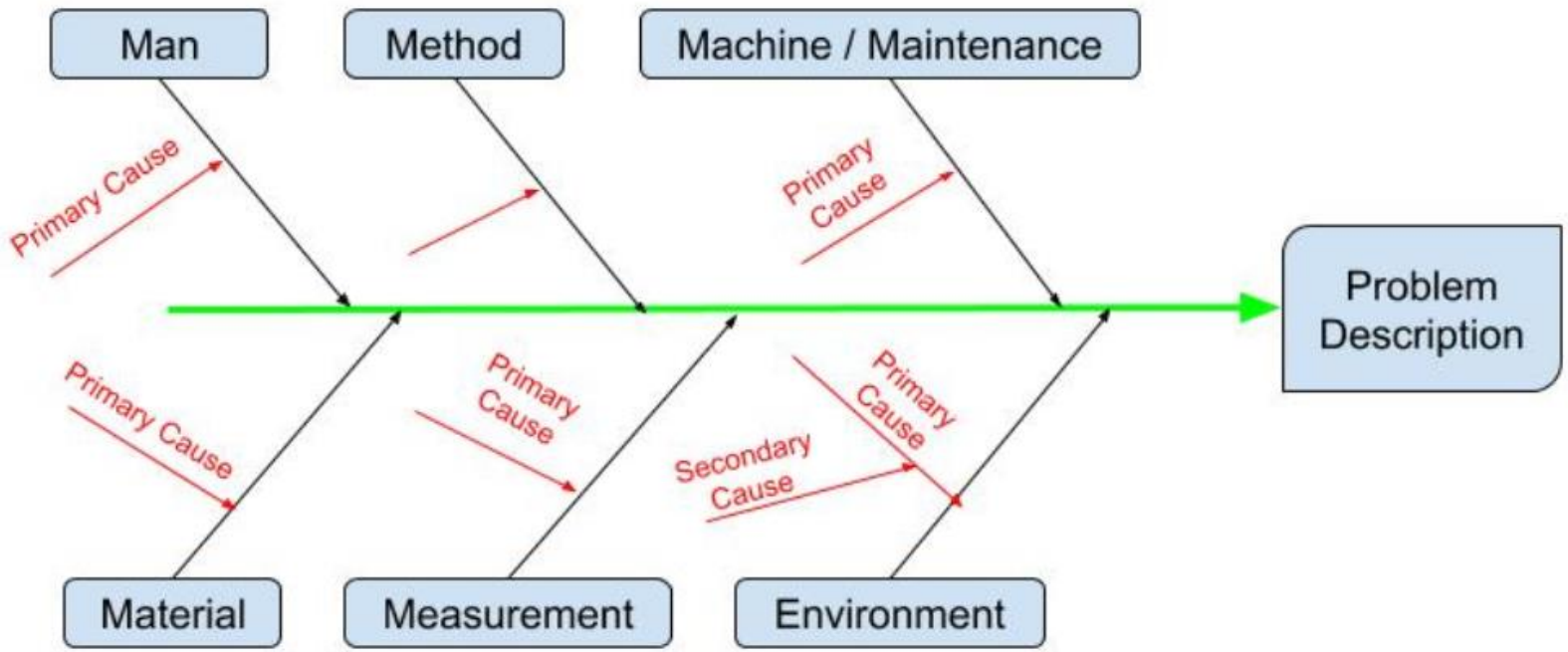
Specific Root Cause 5 Why. Root cause for specific issue.



4D – Root Cause Analysis

Ishikawa

Ishikawa Diagram as the tool illustrating areas and potential causes of mistakes. It allows to separate causes from effects.



4D – Root Cause Analysis

1. We expect you to be able to conduct a Replication exercise:

-Can the defect be turned on or off?

-You should attach back up data, supporting documentation and Evidence.

2. Operator error is unacceptable.

5/6D – Corrective actions and their verification

Corrective actions should hit straight into the problem/root causes as well as the cause of the escape points.

Scheduled activities should be verified in reference of typing undesirable effects.

The verification of supplier activities depends on problem nature but 0 defects on the line after first delivery or additional checking on entrance are used mostly.

7D – Preventive Actions

These are system activities which prevent from constant repeating of the problem. They often concern the extension of corrective actions to others, similar products.

In addition, this is the point where the supplier is obliged to verify PFMEA/CP/other documents about the need to add/extend entries.

Lessons learned has to be considered.

8D – Closure and Team Celebration

Performances of the leader and team members indicate the completion of corrective actions, compliance and the obligation to end PCA (post corrective actions), if there is a need.