

# 8D & QRQC Training Course



Welcome to 8D & QRQC Training.

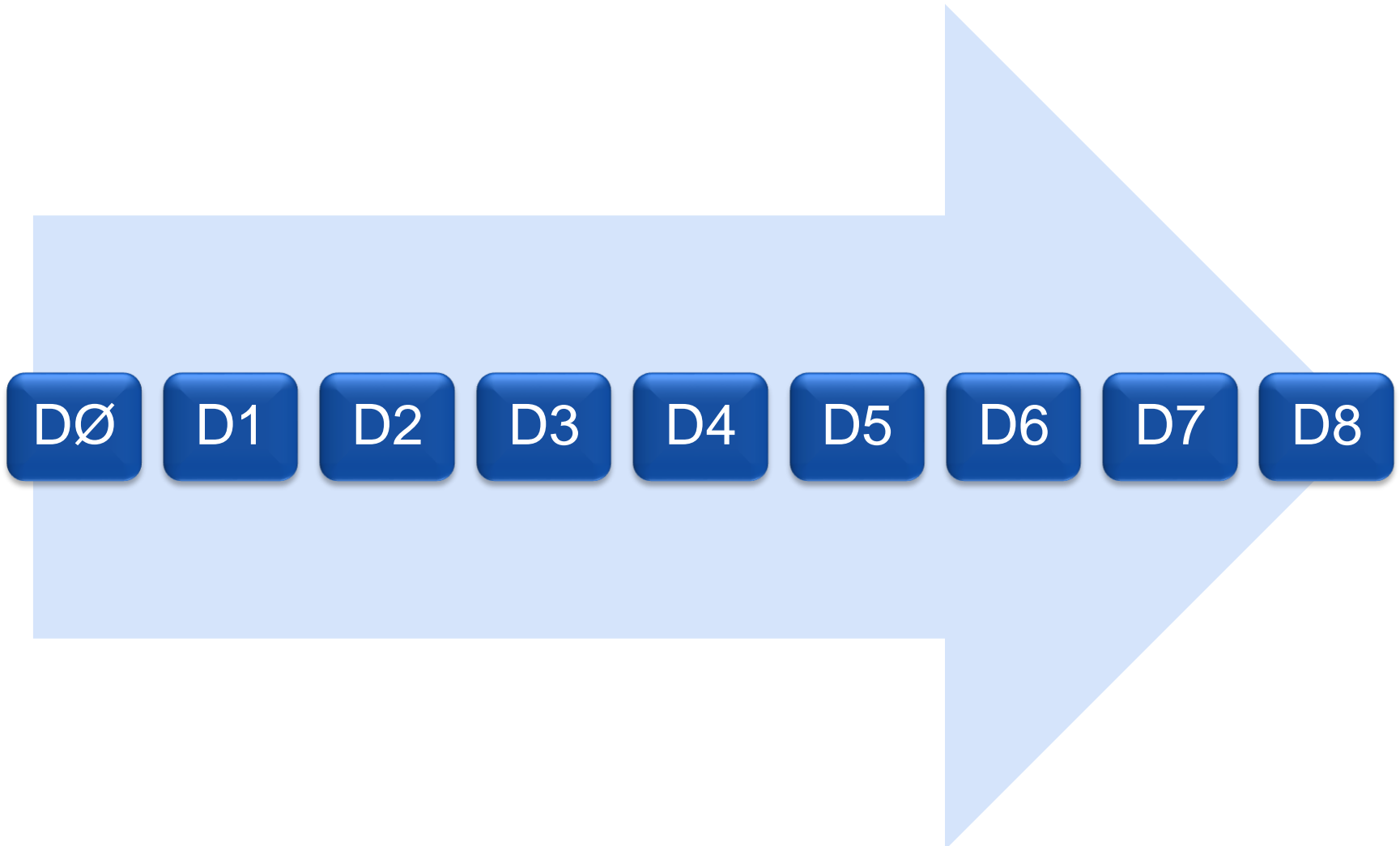
After you complete this course you will be able to:

- Describe the purpose and benefits of key problem-solving tools at each 8D step.
- Complete the problem description at D2.
- Complete root cause analysis at D4.
- Complete the 8D report.
- Describe the management (Deming Cycle) that constitutes an action plan.

- Problem-solving process
- Reporting format
- Corporate standard



# 8D process and its preparation



# DØ – Preparation for 8D Process

24 hrs per QRQC

## Purpose

- Evaluate the need for the 8D process.
- Provide emergency response action (24 hrs).
- Understand the symptom.



## Key Concepts

- Symptom
- Problem

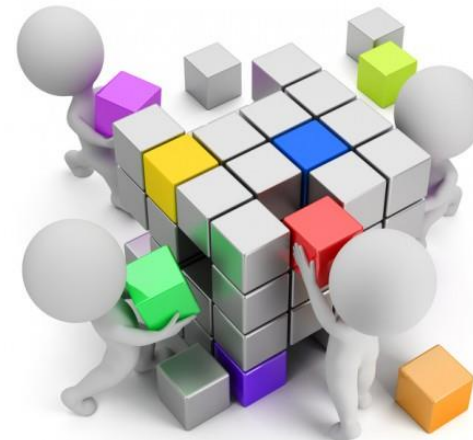




- The symptom(s) have been identified and quantified.
- The customer(s) who experienced the symptom(s) (and when appropriate the affected parties) have been identified.
- Measurements taken to quantify the symptom(s) demonstrate that a performance gap exists, **and/or** the priority (severity, urgency, growth) of the symptom(s) warrants initiation of the 8D process.

## Common Tasks

- Document the changes.
- Review team composition.
- Review the measurable(s).
- Determine if Service Action is required.
- Update 8D report.



# D1 – Establish the Team

24 hrs per QRQC

## Purpose

D1

- To establish a small group of people (4 to 10 members) with the process and/or product knowledge, allocated time, authority, and skills in the the required technical disciplines to solve the problem and implement corrective actions.
- To begin the team-building process



**The problem cannot be solved by one person, in not a one man show.**

- Needs different technical skills.
- Membership can change.
- Conduct task, maintenance, process observation.
- Use speaking skills.
- Establish ground rules for teamwork.

## Ground Rules for Teamwork

- Start and finish on time.
- Quickly select roles
- Keep work visible
- Help leader
- Team membership
- Operating procedures
- Team system model
- Team synergy





# D2 – Describe the Problem

24 hrs per QRQC

## Purpose



- To describe the internal/external Customer problem by identifying **“what is wrong with what”** detailing the problem in quantifiable terms.
- Identify the object and the defect.
- Act as a database for describing the problem.
- Defining the problem as accurately as possible.

## Key Concepts

- Problem Statement: a simple, concise statement that identifies the object and defect of a problem for which the cause **is unknown**, derived by using the process question **What’s wrong with what?**
- Problem Description: the output of a process used to amplify the problem statement. Provides the basis for testing.

## D2 – Problem Description

D2

The problem statement defines for what problem you want to find the root cause and narrows the search for it. Also keeps the team focused and serves as a starting point for the problem description.



The problem description defines the boundaries of a problem. To develop a problem description, describe the event in terms of...



# D3 – Develop Interim Containment Action (ICA)

24 hrs per QRQC

D3

## Purpose

- To define, verify and implement the Interim Containment Action to isolate the effects of the problem from any internal/external Customer until Permanent Corrective Actions are implemented.
- To validate the effectiveness of the Containment Actions.

## D3 Rationale

- Protects the Customer.
- Contains the problem.



- **Interim Containment Action (ICA)**

Action that prevents the symptoms resulting from one or more problems from being experienced by the parties involved. The ICA:

- Attacks the symptom.
- Is verified for effectiveness.
- Is monitored while being used.
- Is documented.
- Is replaced by Permanent Corrective Action at D6.
- Adds cost.



**The Interim Containment Action is not just  
a “Band Aid”**

- **Verification**

Proof developed before implementation that the action will do what is intended and does not introduce a new problem. Verification activities may include:

- Tests and demonstrations.
- Comparisons of the new action with a similar proven action.
- Reviews of newly designed documents before their release.

- **Validation**

Ongoing evidence that the action is doing what was intended, without introducing a new problem. Follows successful verification.

- **Pre-Customer Validation:** Ongoing evidence before exposure to the Customer and following successful verification.
- **Customer Validation:** Ongoing evidence received from the Customer that the action taken to eliminate the Customer's symptom is still working.

# D4 – Define & Verify Root Cause and Escape Point

5 – 9 days per QRQC

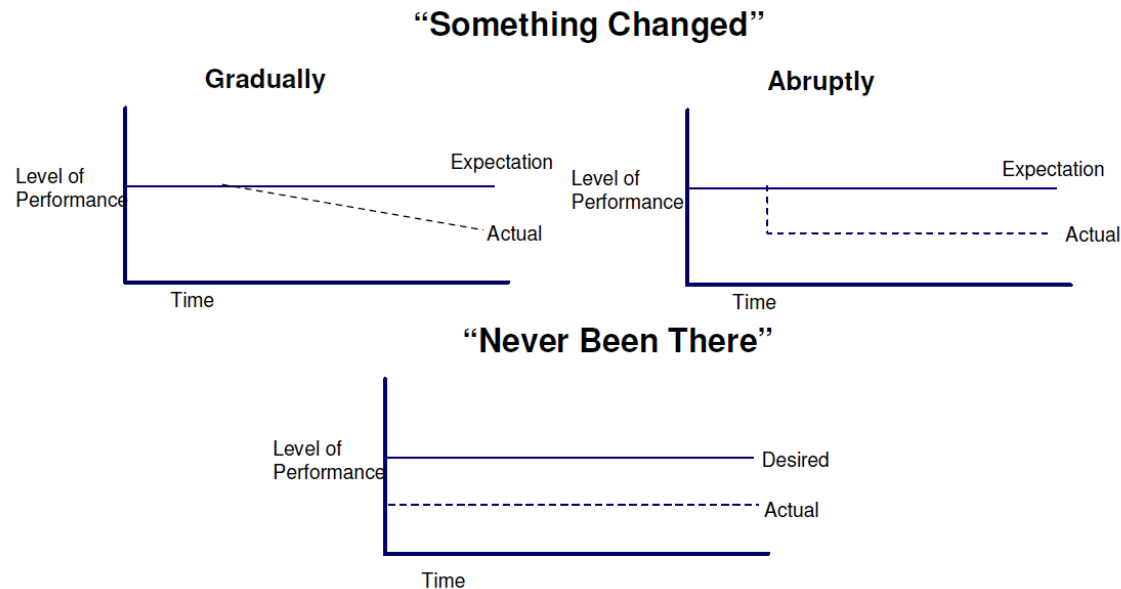
D4

## Purpose

- To isolate and verify the root cause.
- To isolate and verify the place in the process where the effect of the root cause could have been detected and contained (escape point).

## Change and Never Been There Situations

Things were all right, but now are not.



## Terminology

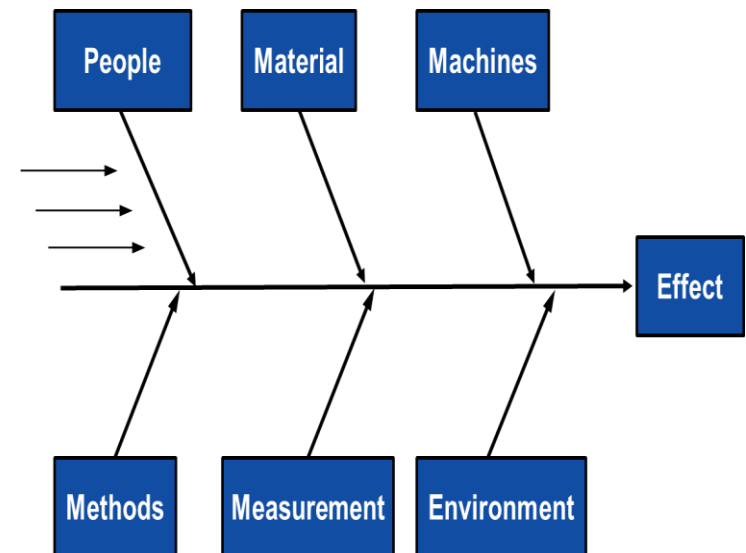
- Possible cause.
- Most likely cause.
- Root cause.



D4

## Using the Timeline to find the Root Cause

- List all known changes.
- Ask what changes have taken place with people, machines, material, methods, measurement and environment.
- Consider changes in, on, around or about the object with the effect.
- List all changes in chronological form on a timeline (note date of each change).



## Verification of the Root Cause

Proof that confirms proper identification of the root cause. This verification should be performed in two steps:

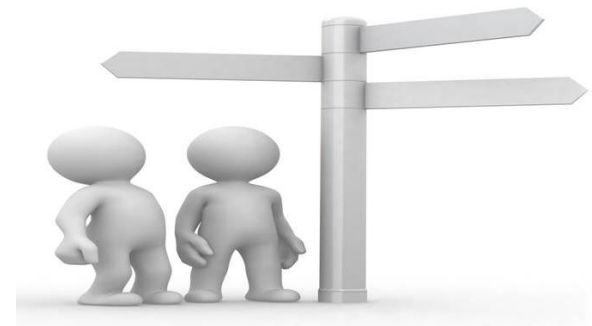
- **Passive Verification:** By observation.
- **Active Verification:** Process to make the effect come and go.



## More than One Root Cause

Many times a single root cause will not be readily be identified. Your organization must have an 8D strategy for problems where more than one root cause is identified:

- Initiate separate 8D for each.
- Proceed within the same 8D.





## Terminology

D4

- **Control System**

Monitors the product/process and ensures compliance to quality requirements. Consists of responsibilities, procedures and resources. May have one or more Control Points.

- **Control Point**

Location within the control system where the product/process is checked for compliance to certain specified quality requirements. May be multiple locations within a control system.

- **Escape Point**

Where in this process could this root cause have been detected, but was not?

The escape point is the earliest location in the process, closest to the root cause, where the problem could have been detected, but was not.

# D5 – Choose & Verify Permanent Corrective Actions (PCA)

up to 30 days per QRQC

D5

## Purpose

- To select the best Permanent Corrective Action to remove the Root Cause and to address the Escape Point.
- To verify that both decisions will be successful when implemented and to not cause undesirable effects.

## D5 Rationale

Emphasis at D5 on:

- Making the best decision.
- Evaluating benefits and risks.
- Not rushing into implementation.
- Verify the choice will work.



## Criteria for Permanent Corrective Action



- Fix the problem at the root cause level.
- Generate no additional problems.
- Verify it will work.

It is critical to take the time to make the best decision regarding the Permanent Corrective Action at D5.

Use the team decision-making process best suited to the specific needs of the team.



# D6 – Implement & Validate Permanent Corrective Actions

up to 45 days per QRQC

## Purpose



- To plan and implement selected Permanent Corrective Actions.
- To remove the Interim Containment Action(s).
- To validate the Permanent Corrective Actions and monitor the long-term results.

## Need to Remove Interim Containment Action(s)

The ICA is no longer needed, because the Permanent Corrective Actions remove the root cause variable. Also continuing the ICA wastes important resources.

The ICA masks the problem, so verification of the Permanent Corrective Action would be questionable.



## Planning

- State the objectives.
- Identify standards and conditions to be met.
- Identify the action plan steps.

## Problem Prevention

- Identify key steps.
- Identify barriers.
- Identify prevention actions.
- Identify protections actions (contingencies).
- Develop cues for the protection action.
- Define who is responsible for initiating the protection action.

## Planning

- Review, revise, and communicate the final plan.



# D6 – Validation Metric

Confirmation of validation must be obtained by using the same indicator (metric) that demonstrated the problem.

D6

The metric may be tracked using the Paynter/Pareto Chart.



**If you cannot prove the problem is fixed, you cannot say is fixed.**

## Purpose

D7

- Modify the necessary systems including policies, practices, and procedures to prevent recurrence of the problem and similar ones.
- Make recommendations for systemic improvements, as necessary.

## D7 Rationale

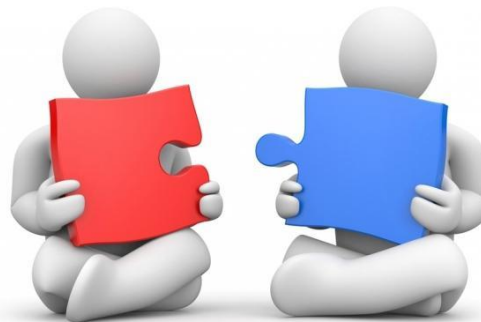
- Fixes the root cause of the root cause of the problem.
- Addresses the systems, practices, policies and procedures that allowed the problem occur and escape.



- **Prevent Recurrence**

Action taken to prevent the recurrence of the present problem, similar problems, and systemic problems.

- **Present Problem:** Is the problem on which the 8D process was performed. In D7, the team looks at the same problem from a systems perspectives and preventive actions are under the authority of the current champion.
- **Similar Problems:** Similar in kind to the present problem. The current champion takes action.
- **Systemic Problems:** Another champion is needed and the present team makes recommendations.





## Purpose

D8

- To complete the team experience.
- Finalizing and archiving documentation.
- Recognizing lessons learned from the team process.
- Making final presentation to the champion and involved parties.
- To give sincere recognition for both team and individual contributors.
- To celebrate!



## Benefits of Completing the Process

For the Supplier:

- Builds partnering skills.
- Promotes problem solving and prevention.
- Improves quality and productivity.
- Prevents future problems.
- Improves customer satisfaction.
- Supports ISO/IATF registration and certification.

For the Customer:

- Increases confidence in the supplier.



# Thank you!