What is 8D in Problem Solving?

Introduction

Eight Disciplines (8D) is a structured method of solving problems typically employed by quality engineers or other professionals. It was first implemented by the United States government during World War II but popularized by Ford Motor Company to approach and resolve problems in the automotive industry. 8Ds has become a standard in other industries that require a thorough structured problem-solving process using a team approach, such as the food manufacturing, health care, and high-tech manufacturing industries.

Its focus is on product and process improvement, with the purpose of defining a problem as well as its root cause, implementing a solution to correct it and reporting findings. It establishes a permanent corrective action based on statistical analysis of the problem and on the origin of the problem by determining the root causes. It comprises eight 'disciplines' or steps that enable business owners and organizations to find obstacles that prevent smooth running of the business and prevent its recurrence in the future. It helps in involves a step-by-step consideration of the issues- even the minutest, that led to the problems.

Definition

The Eight disciplines (8D) is a problem solving technique that is used in approaching problems with facts so as to provide quality solutions.

Use 8D

8D can be used to resolve customer complaints and ensure lasting customer satisfaction, especially when the complaint is beyond the capacity of a single worker.

The 8D Style

The 8D problem-solving steps are:

D1: Assemble Team:
This team should be made up of people with enough knowledge of a typical product/process, where the problem occurred and technical experience to solve it. Recommended team membership is 3-5 for small businesses or 5-10for larger ones.

D2: Describe the Problem:
This step involves describing the problem with clear words and based on sufficient information by the team assembled in D1. This team tries to answer questions such as:
- 'What is the problem?'
- 'Where did it occur?'
- When did it occur?'
- 'Who is affected?'

D3: Develop Temporary Containment Plan:
The aim of this step is to establish and implement a temporary measure that would reduce the impact(s) of the problem(s) on the customer until permanent measures are developed.

D4: Analyze Root Cause of the Problem:
Identify all applicable causes that could explain why the problem has occurred. All causes shall be tested before isolating the root cause. This can be the most tedious step.

D5: Determine Permanent Corrections for Problem:
After identifying root cause, corrective actions must be formulated. The correction(s) must be realistic, cost-effective and does not create further problems. At this stage also, the correction should be tested on a small scale to verify it will effectively solve the problem.

D6: Define and Implement Corrective Actions:

After defining and implementing corrections on a small scale in D6, the correction is deployed on a large scale in this step. This step also provides opportunity for feedback.

D7: Prevent Recurrence:

This step involves modifying the operation systems, business practices, and procedures to prevent recurrence of this and similar problems.

D8: Congratulate the Main Contributors to your Team:

This step involves recognizing the collective efforts of the team and their response to the problem. The team needs to be formally thanked by the manager or business owner and subsequently dissolved.

Example

Documentation is a very important aspect of the 8D steps. It is suggested that a form be drafted and filled after each step. A sample of an 8D form looks like this:

FORM 8D Document	Date Initiated: August 2022
CONCERNS:	
D1: Team members	Person 1
	Person 2
	Person 3
D2: Statement of the Problem	
D3: Temporary Containment Actions	
D4: Root causes	
D5: Suggested Permanent Corrections	
D6: Implemented Corrections	
D7: Actions Taken to Prevent Recurrence	
D8: Notes on Team	