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Eight Discipline of Problem Solving (8D) Training

INTRODUCTION

- The 8D (Eight Disciplines) Problem Solving Methodology is a step-by-step problem solving methodology pioneered by Ford Motor Company through its Team Oriented Problem Solving Global 8D Process. It is a highly effective approach to finding root causes, development of proper actions to eliminate root causes, and implementation of permanent corrective action. The 8D process uses a combination of effective techniques and tools to focus a cross functional team through a very detailed analysis of the problem. When followed diligently, 8D will lead to the discovery of the root causes and possible solutions with consideration of cost, timing, effect on customers, and the impact on the organization.
- In this 2-day practical workshop, participants will learn through a step by step instructional process of preparation, establishing a team, brainstorming, to systematically analysing and preventing problems from recurring. In addition, participants will learn the practical problem solving tools required by the 8D process. Through the workshop, participants will be able to appreciate why implementing and using an 8D problem solving methodology using a multi-disciplined team is beneficial and important, especially when meeting customer expectations.
- The 8D is a problem-solving methodology for product and process improvement. It is structured into eight disciplines, emphasizing team synergy. The primary difference between 8D and other problem-solving approaches is the emphasis on involving a TEAM versus doing it all yourself. The 8D Process is a problem solving method for product and process improvement. It is structured into 8 steps (the D's) and emphasizes team. This is often required in automotive industries. The 8 basic steps are: Define the problem and prepare for process improvement, establish a team, describe the problem, develop interim containment, define & verify root cause, choose permanent corrective action, implement corrective action, prevent recurrence, recognize and reward the contributors.

COURSE CONTENT

1. Use Team Approach

Establish a small group of people with the knowledge, time, authority and skill to solve the problem and implement corrective actions. The group must select a team leader.

2. Describe the Problem

Describe the problem in measurable terms. Specify the internal or external customer problem by describing it in specific terms.

3. Implement and Verify Short-Term Corrective Actions

Define and implement those intermediate actions that will protect the customer from the problem until permanent corrective action is implemented. Verify with data the effectiveness of these actions.

4. Define and Verify Root Causes

Identify all potential causes which could explain why the problem occurred. Test each potential cause against the problem description and data. Identify alternative corrective actions to eliminate root cause.

5. Verify Corrective Actions

Confirm that the selected corrective actions will resolve the problem for the customer and will not cause undesirable side effects. Define other actions, if necessary, based on potential severity of problem.

6. Implement Permanent Corrective Actions

Define and implement the permanent corrective actions needed. Choose on-going controls to insure the root cause is eliminated. Once in production, monitor the long-term effects and implement additional controls as necessary.

7. Prevent Recurrence

Modify specifications, update training, review work flow, improve practices and procedures to prevent recurrence of this and all similar problems.

8. Congratulate Your Team

Recognize the collective efforts of your team. Publicize your achievement. Share your knowledge and learning.



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OBJECTIVES

- Participants will be exposed to an 8-step systematic problem solving process
- Participant will learn and apply tools related to problem solving methodology
- Participants will actually work on solving a problem during this period and will be provided feedback on the correct application of the problem solving steps and the associated tools
- Appreciate the need for a standardised approach



COURSE OUTLINE

Section 1 – 8D Overview

- Team Problem Solving Principles
- Process Description (8 Step Process)
- Team Structure (Cross Functional Team)
- Inductive vs. Deductive Problem Solving
- Change-Induced Problems
- Never-Achieved Problems

Section 2 – Review of Analytical Tools in 8D

- Brainstorming Rules
- Ishikawa / Fishbone / Affinity Diagram
- Control Chart
- Relationship between 8D and FMEA
- Why why techniques and 3x5 Why Techniques
- Error Proofing / Poka Yoke
- Incident mapping – Interfaces and Noise Factors

Section 3 – 8D Process Step by Step

- D0 – Prepare (Plan) for the 8D
 - Problem Symptom
 - Quantified Symptom
 - Criteria for 8D Continuance
- D1 – Form the Team
 - Roles and Responsibilities
 - Team Preparation
 - Agenda and Rules
 - Core Team and SMEs
- D2 – Problem Description
 - Repeated Why
 - Affinity Diagram
 - Is / Is Not
 - Incident map
 - Break-up session on Problem Statements and Brainstorming
 - Break-up session on Problem Description Development
- D3 – Interim Containment Action (ICA)

- D4 – Root Cause Analysis (RCA) and Escape Point
 - Human Factors (Operator Error)
 - Comparative Analysis
 - Root Cause Theories
 - Root Cause Verification
 - Escape Point
 - Workshop on Root Cause Theories
- D5 – Permanent Corrective Action (PCA)
 - Methods for Selecting PCA
 - Error Proofing
 - Verification of PCA
- D6 – Implementation and Validation of PCA
 - Plan, Do, Study, Act (PDSA) Implementation Plan
 - Change Management
 - Stakeholders
 - Validation Criteria and Sample Size
- D7 – Prevention Action
 - Processes and Procedures
 - Lessons Learned
- D8 – Closure and Congratulate the Team
 - Archive of Documents

METHODOLOGY

- Team-Focused Approach
- Facilitation, Theory and Lecture
- Discussions – Learn & Apply
- Practical Approach – Work on a real problem during the Workshop

TARGET PARTICIPANTS

- All personnel including Managers, Engineers, Supervisors and Technicians (incl. Quality and Logistics)

DURATION

- 2 Day (9.00 am to 5.00 pm)

PARTICIPANTS

- Up to 20 pax



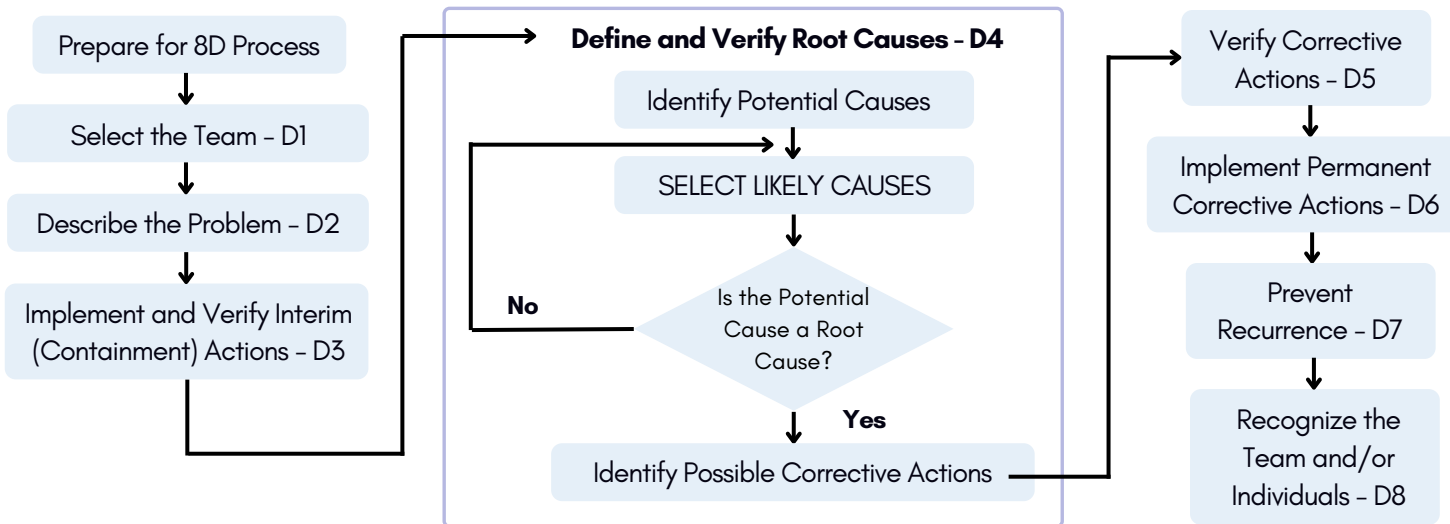
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COURSE APPROACH: PROCESS FLOWCHART



LEAN SIX SIGMA EXPERT & DESIGNATED CONSULTANT, MBB

Mr. Gurbachan Singh
Senior Consultant - Full Time

Gurbachan Singh is a well-rounded professional. He has over 32 years of exposure to a broad range of manufacturing industry and management consulting; over 20 years in executive management and more than 10 years in management consulting; Business Process Diagnostics, Supplier Development, Quality, Lean Six Sigma, Industrial Engineering, Project Management, Plant-wide Cost Optimisation, Leadership & Performance development.

He has a Bachelor Degree in Engineering, Post-graduate Diploma in Manufacturing Engineering, Lean Six Sigma Master Black Belt and PRINCE2 foundation certification. His industry operations background spans many different sectors that include high technology precision electronics (Hitachi Semiconductor), heavy industry (Air Radiators), truck manufacture (Iveco), automotive components (DMG-Venture), white goods (Olympic Group), and pharmaceuticals (CSL).

In consulting he has been an operations advisor, program developer, facilitator and project manager with various organizations such as PAC Project Advisors, Australia, ACTZEL Consulting, Australia, Penang Skills Development Centre (PSDC) and ARGI Institute of Manufacturing, Penang. He has travelled extensively to conduct projects in Australia, USA, Malaysia, India, Thailand, Hong Kong, Japan, Egypt and the UAE.