Course Title: Root Cause Analysis (2-day Program)

Overview

Problems of all sorts come up every day, both in the manufacturing and service industries. These problems result in **inconsistent products and services** to customers, **increasing cost**. What we need in our organisations are employees who take note of these problems and ensure that they are addressed **proactively**, whether by themselves or by notifying the proper persons, and that **these problems do not repeat**.

In order to resolve the problems, we have to **clearly understand the root cause of the defect**. This requires proper problem-solving skills.

This program emphasises **right attitude and behaviour** and uses the **Six Sigma** method to **provide the skills** required to determine the Root Cause of a problem, and to **implement solutions** to prevent recurrence.

Learning Outcomes

Upon completion of this program, participants will:

1. Understand the expected attitude and behaviour on encountering a problem;
2. Be able to contain the problem;
3. Be able to describe the problem sufficiently;
4. Determine the Root Cause Analysis of the problem;
5. Identify and prioritise appropriate Corrective Actions;
6. Implement Controls to prevent or minimise repetition;
7. Verify effectiveness of Corrective Actions.

Who must attend

This program is designed for employees at all levels including managers, supervisors, engineers and executives to enable them to manage, lead or participate in problem-solving activities.

Methodology

Highly interactive sessions designed to communicate program objectives to participants.

This program includes discussions, case study and group activities to enable participants to practise using Root Cause Analysis tools. Participants will also be guided to apply Root Cause Analysis in their own functional area.

Course Outline

Module 1 – Introduction to Root Cause Analysis

- Having the Right Attitude
- What is Root Cause Analysis?
- Benefits of Root Cause Analysis

Module 2 – Identifying and **Defining** Problems

- Problem Verification
- Problem Description
- Containment / Interim Corrective Actions
- Need for Data
- Pareto Principle

Module 3 – **Measurement**

- Method of Measurement
- Measurement Criticality
- Mapping

Module 4 – Root Cause **Analysis** Techniques for Cause of Failure

- Brainstorming
- Cause-and-Effect Diagrams
- Fishbone (Ishikawa) Diagram
- 5 WHYs
- Events and Causal Factors
- Testing the Root Cause

Module 5 – Corrective Actions (**Improve**)

- Theory of Constraints
- Identifying Appropriate Corrective Actions
- Reducing Waste
- Improvement Examples

Module 6- Understanding **Control**s

- Preventive Actions
- Monitoring / Effectiveness of Corrective Actions
    - Statistical Process Control (SPC)
- Error-Proofing
- Documentation
- Post-Mortem

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