



شركة ميرك العربية السعودية
MEIRC Saudi Arabia

Root Cause Analysis

Duration 5 Days

Introduction

This 5-day course provides an introduction and extensive discussion of many different tools for root cause analysis. Each one is presented in an easy to follow structure: a general description of the tool, its purpose and typical applications, the procedure when using it, an example of its use, a checklist to help you make sure it is applied properly, and different forms and templates

Course Objective

Upon completion of this course, participants will be able to:

- ↪ Explain the concept of root cause analysis
- ↪ Describe how to use tools for problem cause brainstorming
- ↪ Develop strategies for problem cause data collection and analysis
- ↪ Deploy tools for root cause identification and elimination
- ↪ Practice ways of implementation solutions

Course Outline

1. **Introduction**
2. **Pre Assessment**
3. **Overview of Root Cause Analysis Concepts and Practices**
 - 3.1. Introduction to Root Cause Analysis (RCA)
 - 3.2. The need and the practice
4. **Practical Problem Solving**
 - 4.1. Defining a Problem
 - 4.2. Strategies to Solve Problems
 - 4.3. Understanding Causes and Its Levels
 - 4.4. Finding Root Causes
 - 4.5. Eliminating Root Causes
 - 4.6. Proactive Problem Solving
5. **Case Studies & Hands-on Activity**
6. **Root Cause Analysis**
 - 6.1. Defining Root Cause Analysis
 - 6.2. Conducting Root Cause Analysis
7. **Case Study & Group Activity**
8. **Tools for Problem Understanding**
 - 8.1. Problem Understanding
 - 8.2. The Purpose and Applications of Flowcharts
 - 8.3. Using Flowcharts
 - 8.4. Checklists
 - 8.5. Using Critical Incidents
 - 8.6. Using Performance Matrices
9. **Tools for Problem Cause Brainstorming**
 - 9.1. Problem Cause Brainstorming
 - 9.2. The Purpose and Application of Brainstorming



- 9.3. Brainstorming Recording Templates
- 10. Tools for Problem Cause Data Collection**
 - 10.1. Problem Cause Data Collection
 - 10.2. Taking Advantage of Samplings
 - 10.3. Steps in Using Samplings
 - 10.4. Taking Advantage of Surveys
 - 10.5. Using Check Sheets
 - 10.6. Problem Cause Data Collection Checklist
- 11. Case Study & Hands-on Activity**
- 12. Tools for Problem Cause Data Analysis**
 - 12.1. Understanding Problem Cause Data Analysis
 - 12.2. The Purpose and Application of Histograms
 - 12.3. Using and Interpreting Histograms
 - 12.4. Using Relations Diagram
- 13. Case Study & Hands-on Activity**
- 14. Tools for Root Cause Identification**
 - 14.1. Fundamentals of Root Cause Identification
 - 14.2. Using Cause-and-Effect Diagrams
 - 14.3. Using the Five Whys Method
 - 14.4. Using the Fault Tree Analysis Technique
- 15. Tools for Root Cause Elimination**
 - 15.1. An Overview of Root Cause Elimination
 - 15.2. Using DeBono's Six Hats
- 16. Tools for Solution Implementation**
 - 16.1. Overview of Solution Implementation
 - 16.2. Organizing the Implementation
 - 16.3. Developing an Implementation Plan
 - 16.4. Using Tree Diagrams
 - 16.5. Creating Change Acceptance
 - 16.6. The Purpose and Application of Force-Field Analysis
- 17. Case Study & Hands-on Activity**
- 18. Selecting the Right Tool**
 - 18.1. What to Watch for When Using Tools and Techniques
 - 18.2. Selecting the Right Tool
- 19. Case Study & Hands-on Activity**
- 20. Example Cases and Practice**
- 21. Post Assessment**