



MAESTRO
CONSULTANTS

Root Cause Analysis

COURSE OUTLINE 2024

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TRAINING TITLE

Root Cause Analysis

VENUE

Dubai, UAE

DURATION

5 Days

DATES

02 - 06 September 2024

PRICE

\$5,250 per attendee including training material/handouts, morning/afternoon coffee breaks, and Lunch.

TRAINING INTRODUCTION

Root Cause Analysis (RCA) is a methodical approach used to identify the underlying reasons for problems or incidents within an organization. The goal is to pinpoint the fundamental causes of issues rather than just addressing the symptoms, thus preventing recurrence and improving overall systems and processes.

Key Concepts of Root Cause Analysis

1. **Definition:** RCA is a process of discovering the primary cause of a problem by breaking down and analyzing the contributing factors. It involves investigating why something happened and identifying the systemic issues that allowed it to occur.
2. **Purpose:** The primary purpose of RCA is to prevent the recurrence of issues by addressing their root causes. This leads to more effective solutions and improvements in processes, policies, or systems.
3. **Steps in RCA:**
 - **Problem Identification:** Clearly define and understand the problem or incident.
 - **Data Collection:** Gather relevant data and evidence related to the problem.
 - **Cause Identification:** Use various techniques to identify potential causes. This often involves tools like the "5 Whys," Fishbone Diagram (Ishikawa), or Fault Tree Analysis.
 - **Root Cause Determination:** Analyze the data to determine the root cause(s) of the problem.
 - **Solution Development:** Develop and implement solutions to address the root causes.

- **Verification:** Monitor and evaluate the effectiveness of the solutions to ensure they resolve the problem.
- 4. **Tools and Techniques:**
 - **The 5 Whys:** Asking "Why?" five times or more to drill down to the root cause.
 - **Fishbone Diagram:** A visual representation of cause-and-effect relationships.
 - **Failure Mode and Effects Analysis (FMEA):** Identifying potential failure modes and their impacts.
 - **Fault Tree Analysis:** A diagram that uses Boolean logic to map out causes and effects.
- 5. **Benefits:**
 - **Prevents Recurrence:** By addressing root causes, RCA helps prevent the same issues from happening again.
 - **Improves Processes:** Identifying weaknesses in processes can lead to improvements and increased efficiency.
 - **Enhances Understanding:** Provides a deeper understanding of complex issues and their interrelationships.
- 6. **Challenges:**
 - **Complexity:** Some problems have multiple, interconnected root causes that can be challenging to identify.
 - **Data Quality:** Inaccurate or incomplete data can hinder the analysis process.
 - **Resistance to Change:** Implementing solutions may face resistance from stakeholders.

TRAINING OBJECTIVES

By the end of this course, participants will be able to:

1. Identify the Underlying Causes

- Determine the true root causes of a problem rather than just addressing its symptoms.

2. Prevent Recurrence

- Implement solutions that address the root causes to prevent the problem from recurring.
- Long-term elimination or reduction of similar issues in the future, leading to improved reliability and stability.

3. Improve Processes and Systems

- Use insights from RCA to enhance processes, systems, and practices.

4. Enhance Problem-Solving Capabilities

- Develop skills and methods for systematic problem-solving.

5. Increase Accountability and Transparency

- Understand and document how and why problems occur to hold appropriate parties accountable and ensure transparency in the resolution process.

TRAINING AUDIENCE

1. Problem Solvers
2. Process Owners
3. Quality Assurance Teams
4. Operations Managers
5. Technical Experts
6. Project Managers

TRAINING OUTLINE

Day 1: Introduction to Root Cause Analysis

- **Welcome and Course Overview**
- **Introduction to RCA**
 - Definition and Importance
 - Objectives and Benefits
- **Key Concepts and Terminology**
 - Symptoms vs. Root Causes
 - Types of RCA
- **RCA Process Overview**
 - Steps in RCA
- **Data Collection Techniques**
 - Types of Data and Sources
 - Methods for Gathering Information
- **Interactive Session: Case Study Review**

Day 2: RCA Tools and Techniques

- **The 5 Whys Technique**
 - Explanation and Application
- **Fishbone Diagram (Ishikawa)**
 - Creating and Analyzing Diagrams
- **Failure Mode and Effects Analysis (FMEA)**
 - Introduction and Steps
- **Fault Tree Analysis (FTA)**
 - Creating and Interpreting Fault Trees
- **Practical Exercises: Using RCA Tools**
 - Hands-on Practice with Each Tool
- **Group Activity: Applying Tools to Case Studies**

Day 3: Advanced RCA Methods and Implementation

- **Advanced Techniques in RCA**
 - Pareto Analysis
 - Trend Analysis
- **Developing Effective Solutions**
 - Creating Action Plans
 - Implementing Changes
- **Verification and Follow-Up**
 - Monitoring Effectiveness
 - Continuous Improvement Strategies
- **Practical Exercise: Solution Development**
- **Review and Q&A Session**

Day 4: RCA Integration and Best Practices

- **Integrating RCA into Organizational Processes**
 - Embedding RCA in Daily Operations
 - Training and Development
- **Best Practices for RCA**
 - Common Pitfalls and How to Avoid Them
 - Success Stories and Lessons Learned

Day 5: Group Project: Full RCA Implementation

- Teams Work on Real or Simulated Problems

- Presentation of Findings and Solutions
- Course Wrap-Up and Evaluation

TRAINING CERTIFICATE

MAESTRO CONSULTANTS Certificate of Completion for delegates who attend and complete the training course.

METHODOLOGY

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of “real life” issues in their organizations. The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.