BOOST
THE LEADING TRAINING PROVIDER

Management And Leadership

Root Cause Analysis Tools & Techniquse - RCA

Course Introduction

This 5-day training program on RCA tools and techniques will equip participants with the knowledge and skills to apply RCA methodologies effectively.

Through a combination of theoretical learning, real-world case studies, and hands-on exercises, participants will gain a comprehensive understanding of RCA and how to implement it to resolve recurring issues and enhance performance in their organizations.

Target Audience

- Quality Assurance/Quality Control Personnel
- Operations and Maintenance Managers
- Safety Officers and Risk Management Professionals
- Engineers and Technicians
- Process Improvement Specialists
- Project Managers
- Human Resources and Organizational Development Professionals.

Learning Objectives

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

- Define RCA and understand its significance in problem-solving and continuous improvement.
- Use methods like the "5 Whys," Cause-and-Effect Diagrams, Fault Tree Analysis, and FMEA to systematically uncover root causes of problems.
- Implement advanced techniques such as Bowtie Analysis, Current Reality Trees (CRT), and Event & Causal Factor Charting for complex problem-solving scenarios.

- Leverage statistical tools like Histograms, Control Charts, and Scatter Diagrams to support RCA findings.
- Gather accurate and relevant data to support the RCA process and ensure the correct identification of root causes.
- Identify and mitigate the role of human error in failures through Human Reliability Analysis and cognitive bias understanding.
- Create, verify, and validate corrective actions, ensuring their long-term success in preventing future problems.
- Use RCA to address issues in complex systems and develop process maps to identify breakdowns.
- Implement strategies for monitoring and sustaining improvements derived from RCA, ensuring ongoing operational efficiency.

Course Outline

- **01 Day One**

  Introduction to Root Cause Analysis (RCA):

  - Definition and significance in problem-solving.
  - Benefits of RCA in preventing recurring issues and improving efficiency.
  - Types of problems addressed by RCA.
  - Understanding the RCA lifecycle.
  - Case studies: Successful applications of RCA in various industries.

- **02 Day Two**

  Basic RCA Techniques:

  - The "5 Whys" Technique: A simple method for identifying root causes.
  - Cause and Effect (Fishbone/Ishikawa) Diagrams.
  - Pareto Analysis.
  - DMAIC Template.
  - Exercise: Applying basic RCA techniques to hypothetical scenarios.

  Intermediate RCA Tools:

  - Fault Tree Analysis (FTA).

- Failure Mode and Effects Analysis (FMEA).
- Affinity Diagrams.
- Case Study: Applying FTA and FMEA in a manufacturing or service environment.

- **03 Day Three**

Advanced RCA Techniques:

- Bowtie Analysis
- Current Reality Trees (CRT)
- Event and Causal Factor Charting
- Exercise: Building a Bowtie Analysis for a real-world case.

Statistical and Analytical Tools for RCA:

- Statistical Process Control (SPC).
- Histogram and Control Charts.
- Scatter Diagrams and Correlation Analysis.
- Practical Exercise: Using statistical tools to diagnose process inefficiencies.

- **04 Day Four**

Data Collection and Evidence Gathering:

- Effective data collection for RCA.
- Tools for data gathering.
- Evaluating data sources.
- Case Study: Real-world RCA where poor data collection led to misidentification of root causes.
- Practical Application.

Human Factors and RCA:

- The role of human error in failures.
- Understanding cognitive biases.
- Human Reliability Analysis (HRA).
- Case Study: Analyzing the root cause of human error in a critical incident.

- **05 Day Five**

RCA in Systems and Processes:

- RCA in complex systems.
- Systematic root cause mapping.

- Process Mapping and Flowcharting.
- Practical Exercise: Process mapping for an operational problem.

Implementing and Sustaining RCA Solutions:

- Developing corrective actions.
- Verifying and validating solutions.
- Monitoring for recurrence.
- Sustaining improvements.
- Case Study: Long-term RCA success in a continuous improvement initiative.
- Practical Application.

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
Sept. 22, 2025	Sept. 26, 2025	5 days	4950.00 $	Austria - Vienna
May 4, 2025	May 8, 2025	5 days	4250.00 $	KSA - Riyadh
Dec. 15, 2025	Dec. 19, 2025	5 days	4250.00 $	UAE - Dubai