



*Training Course:  
Root Cause Failure Analysis*

*20 - 24 July 2025  
In-House*

## Training Course: Root Cause Failure Analysis

Training Course code: EN236080 From: 20 - 24 July 2025 Venue: In-House - Training Course Fees: € Euro

### Introduction:

In today's complex and high-pressure industrial environments, unplanned failures and downtime can have severe consequences—financially, operationally, and in terms of safety. Organizations across industries are increasingly realizing that temporary fixes and reactive maintenance are not sufficient to ensure long-term reliability and operational excellence.

**Root Cause Failure Analysis (RCFA)** is a systematic methodology used to investigate failures, identify their underlying causes, and implement long-lasting corrective actions. Unlike surface-level problem-solving techniques that address symptoms, RCFA goes deeper to uncover the true root causes—whether technical, human, or systemic—allowing organizations to eliminate the source of problems and prevent recurrence.

This comprehensive 5-day training program, developed by Global Horizon Training Center, is designed to equip engineers, maintenance professionals, and operations leaders with the knowledge, tools, and practical skills needed to carry out effective RCFA. Participants will explore real-world case studies, engage in hands-on exercises, and learn how to apply structured analytical tools such as the 5 Whys, Fishbone Diagrams, and Fault Tree Analysis.

Whether you're looking to improve equipment reliability, reduce maintenance costs, enhance safety, or drive a culture of continuous improvement, this program provides a solid foundation for applying RCFA as a critical pillar of operational excellence.

### Objectives:

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

- Understand the principles and importance of RCFA.
- Apply systematic techniques to investigate and analyze failures.
- Differentiate between root causes and contributing factors.
- Develop effective corrective and preventive actions.
- Create a culture of continuous improvement through structured analysis.

### Target Audience:

- Maintenance Engineers and Technicians

- Reliability Engineers
- Quality and Safety Professionals
- Operations Managers
- Plant and Facility Engineers

## Course Methodology:

The program combines theoretical sessions, case studies, group exercises, and hands-on practice in applying RCFA tools to real or simulated scenarios.

## Outlines:

### Day 1:

#### Fundamentals of RCFA

- Introduction to RCFA: Purpose and Benefits
- Failure vs. Incident: What Should Be Investigated?
- Types of Failures: Mechanical, Electrical, Process, Human Error
- RCFA Process Overview
- Case Study: Understanding Hidden Failures

### Day 2:

#### Data Collection and Failure Documentation

- Techniques for Effective Data Collection
- Interviewing Witnesses and Gathering Evidence
- Failure Mode and Effects Analysis FMEA - Quick Review
- Using Event Timelines and Sequence Charts
- Hands-on: Creating a Failure Incident Timeline

### Day 3:

#### Root Cause Analysis Techniques

- The 5 Whys Technique

- Fishbone Ishikawa Diagrams
- Fault Tree Analysis FTA
- Cause-and-Effect Diagrams
- Practical Exercise: Apply Methods to Real-Life Case

#### Day 4:

##### Developing and Implementing Solutions

- Distinguishing Between Symptoms and Root Causes
- Generating Corrective and Preventive Actions
- Verification and Validation of Solutions
- Risk Ranking and Prioritization
- Case Study: Implementing RCFA in a Plant Shutdown Incident

#### Day 5:

##### RCFA Reporting and Continuous Improvement

- Structuring an RCFA Report
- Communication and Team Involvement
- Measuring Effectiveness of Actions
- Sustaining Reliability through Proactive RCFA Programs
- Final Group Project: Full RCFA Simulation and Presentation

## Registration form on the Training Course: Root Cause Failure Analysis

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

### Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....  
Position: .....  
Telephone / Mobile: .....  
Personal E-Mail: .....  
Official E-Mail: .....

### Company Information

Company Name: .....  
Address: .....  
City / Country: .....

### Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....  
Position: .....  
Telephone / Mobile: .....  
Personal E-Mail: .....  
Official E-Mail: .....

### Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
- ☐ Please invoice me
- ☐ Please invoice my company

### Easy Ways To Register

Telephone:  
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provisionally reserve your  
place.

Fax your completed  
registration  
form to: +20233379764

E-mail to us :  
info@gh4t.com  
or training@gh4t.com

Complete & return the  
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to: Global Horizon  
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