COURSE BROCHURE

Root Cause Analysis and Problem Solving

A specialist course in advanced root cause analysis tools, from change analysis and fault trees to FMEA, leading to corrective actions that prove their effectiveness.

Code	HT-QMS-105
Category	Quality & Operational Excellence
Duration	1 week
Level	Intermediate
City	Dubai

Introduction

When the same problem returns months after its file was closed, the team usually treated a symptom or stopped at the first cause that sounded convincing, without checking against evidence that the action removed the real cause.

Objectives

- Write a precise problem definition that separates facts from assumptions
- Rank problems and causes with data to focus effort where it matters
- Apply change analysis and fault tree analysis to test possible causes
- Use FMEA to anticipate failure modes before they occur
- Design corrective and preventive actions and verify their effectiveness with evidence

Who should attend

- Quality and process engineers
- Production, maintenance and service line supervisors
- Staff who handle complaints and nonconformities
- Continuous improvement team members investigating recurring problems

Skills you will develop

- Precise problem definition
- Fault tree analysis
- Failure mode and effects analysis
- Corrective action verification

Learning Outcomes

- Write an is/is-not problem statement for a real quality case
- Build a fault tree with AND and OR gates for an unwanted event
- Prepare an FMEA table for a process and rank failure modes by treatment priority
- Draft a verification plan naming the evidence, time frame and closure criterion for a corrective action

Course Outline

Day 1: Defining the Problem

- The is/is-not problem statement
- Urgent containment actions and how they differ from root cause treatment
- Forming the investigation team and gathering the first facts

Day 2: Setting Priorities with Data

- Pareto analysis to find the problems with the greatest impact
- Check sheets and defect concentration diagrams
- Timelines and the sequence of events before the problem

Day 3: Change Analysis and Fault Trees

- Change analysis comparing a sound situation with a faulty one
- Building a fault tree and reading AND and OR gates
- Testing likely causes against evidence and avoiding blame on individuals

Day 4: Failure Mode and Effects Analysis

- Proactive analysis compared with after-the-event investigation
- Rating severity, occurrence and detection, and the limits of the risk priority number
- Linking FMEA results to process controls and control plans

Day 5: Corrective and Preventive Action

- Correction, corrective action and preventive action compared
- Verifying action effectiveness and setting the closure criterion
- Applied project: a full investigation of a recurring quality problem, from problem statement to a corrective action verification plan

Training methodology

Recurring quality cases with records and data for participants to investigate
Group fault tree building on whiteboards
An FMEA workshop on a process each team picks from its own work
Critical review of corrective action reports closed without enough evidence

Certification

Participants receive a Harbor Training Center certificate of attendance on completing the course.

Upcoming dates

City	Dates	Language	Fee
Dubai	22 – 26 February 2027	EN	EUR 4,500
Dubai	23 – 27 August 2027	AR	EUR 4,500

Fees are per participant.

Contact us

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To register and for details, scan the code or visit:

https://harbor4training.com/en/courses/root-cause-analysis