

# Relentless Aviation Root Cause Analysis for Quality & Safety Practitioners – 2 Days

## Introduction

Relentless Root Cause Analysis considers the process as a combination of people, material, machines, tools, environment, preventative maintenance, measuring and test equipment, and work instructions needed to produce a product or service.

Relentless Root Cause Analysis engages with a process to enable the rapid and persistent understanding of the fundamental reasons for the breakdown or failure of the process that, when resolved, prevents a recurrence of the problem.

Important Notes:

- The root cause is the fundamental breakdown of the process.
- The root cause must be controllable and not an act of nature.

Organisations that can deliver an effective Safety & Quality System as well as a process to understand and analyze issues and exposures and follow up in an effective and practical way, grow and flourish, Relentless Root Cause is an enabler in this process.

The ability to understand exposure and to analyze root causes are without doubt essential skills for auditors and managers alike.

The purpose of this training is to identify best practice techniques and behaviors to support the delivery of Relentless Root Cause Analysis This course is intended to be highly practical and to help the delegate focus on the 5 elements which exist within a finding or issue.

The finding – What is the problem? – Why is it a problem? – What standard has not been met (is it internal or external)? – Why did it happen? – How to consider Root Cause?

The outcomes of such activities play a significant role in supporting the organization to achieve its goals to not just maintain, but to exceed regulatory compliance – What is the consequence – risk or opportunity considered and to consider the corrective action disposition – Who, What & When?

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## Who is the Course for?

Relentless determination of root cause is a task addressed to functional area managers, nominated persons and senior management. Quality assurance staff should also have good knowledge of Root cause analysis to support the process of determination of root cause and the process of developing appropriate corrective actions.

The course is also beneficial for persons involved with interaction with organization SMS.

## What is the Benefit of this Training – What will I learn?

- a) To be able to explain the key elements required to ensure the organisations compliance audit System processes are able to identify Root Cause to both ensure compliance and to deliver maximum effectiveness.
- b) To be able to engage in the optimum techniques of Relentless Root Cause Analysis
- c) To consider in depth Compliance Management Auditing and to raise an understanding of the difference related to root cause within the Quality System (QMS) & Safety System (SMS).
- d) Ability to focus on effective identification of root cause analysis and promotion of positive action.
- e) To be able to place a clear priority on best practice management within a strong quality assurance “compliance-based” system.
- f) Understand techniques to focus on the organisational issues during the audit including the relationship within the work place and responsibility to address issues.
- g) Able to identifies the root cause of the faults and failures.
- h) Able to apply the corrective actions for preventing the recurrence of the causes leading to failures.

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## Detailed Content / Topics - The following Subjects will be addressed

- General Introduction
- Regulatory framework and international requirements (ICAO-SMS framework, EASA, FAA, IATA)
- Abbreviations and Terms
- Introduction to the concept of Relentless Root Cause Analysis
- Understanding Complex Problems & Determination of Root Cause
- Understanding The Nature of Risk
- Practical Understanding of the role of Root Cause
- Identification of Root Cause
- Is Human Error in Aviation an Acceptable Outcome as a Root Cause
- Common Errors in Aviation Root Cause Analysis (RCA)
- Root Cause - Understanding the Different Role Between Quality & Safety
- Introduction to Bowtie Risk Assessment Methodology
- Aviation Human Factors Considerations Related to Root Cause Analysis (RCA)
- Human Factors Analysis and Classification System (HFACS)
- Using Root Cause Analysis to Drive an Effective Quality System
- Effective Aviation System Root Cause Analysis using 5 Why & Fishbone Techniques together
- Introduction to Fault Tree Analysis
- Introduction to Bowtie Risk Assessment Methodology
- The Role of Process Failure Mode and Effects Analysis (PFMEA) in Aviation System Root Cause Analysis
- Relentless Root Cause Analysis using 8D Techniques
- Collection of Evidence -How Much is Too Much?
- Additional Practical Techniques for Determining Root Cause
  - Using Pareto as an Aviation Root Cause Assessment Technique
  - Tripod Beta
  - Brainstorming
- Investigation and Analysis Risk and Exposure
- Performing and Managing Investigations
- Relentless Root Cause Team Exercises
- Debrief & Close

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## Target Groups

This training is highly relevant for senior management and members of the quality Assurance Audit department, it is also relevant for all business area stakeholders.

## Pre-Requisites?

A background or understanding of Aviation auditing techniques knowledge of SMS an Advantage.

## Learning Objectives

To re-enforce a comprehensive understanding of the requirements for both the QA & SMS systems including an understanding of the different types of audits applicable for each area and how to identify discrepancies.

To understand the methodology to determine root cause and develop appropriate responses.

To consider the fundamentals of a fully compliant Aviation Quality System together with the key elements required to deliver maximum effectiveness.

How to identify areas that need special attention and how to focus our efforts on making sure we have a comprehensive understanding of multiple root causes.

An essential element then of benefiting from this training is to focus on the issues, how they relate in our work place, and what we need to do to address them.

The intention of this training is not to tick the regulatory box but to identify the significant issues which need to be addressed.

Learn to apply the Relentless (RRCA) techniques based on case studies and/or simulated scenarios which will allow reinforcing of the key concepts.

Produce a final report containing the main contributing factors and recommendations.

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*"The content of the course will be very useful for my future practices."  
"All my expectations are met."  
"The course really contributed to expanding my knowledge in that area."  
"The instructor really added up to me understanding the topic."  
"The presentation made the material so much more comprehensible."*

## Duration

2 training days – Consists of 6 hours each day with the appropriate pauses.

Sofema Aviation Services offers a flexible approach to developing all in-company training courses which are specific to the client's needs. If you would like additional information concerning how course content may be configured to be more appropriate for your organisation please email [team@sassofia.com](mailto:team@sassofia.com)



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