
Arabian Institute For Training

Innovative Root Cause Analysis

INTRODUCTION

- To maximize reliability and availability of assets against minimum costs, problems need to be solved fast and effectively, as well as permanently prevented in the future. However, “jumping to conclusions”, “trial and error” and “jumping to solutions” are well known pitfalls in daily practice. In this rapid changing world, with trends like Industry 4.0, robotics, big data, machine-learning, etc., complex problem solving is recognized as the most important skill in future jobs.
- This Innovative Root Cause Analysis (IRCA) training seminar will give you the knowledge and skills to prioritize, describe, analyse, solve and prevent all problems, regardless the complexity. The comprehensive and scalable RATIO-approach and innovative RATIO-methods like Event Mapping, Problem Analysis and Human Factor Analysis are recognized by many as best practice.

This training seminar will highlight:

- The increasing relevance of root cause analysis methods
- A comprehensive and generic approach for every problem to solve and prevent
- Innovative and highly effective methods to support this approach e.g. Event Mapping, Problem Analysis and Human Factor Analysis
- An extensive list of practical ideas for effective application and implementation of RCA in daily practice

OBJECTIVES

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

- Understand the increasing necessity of using sound methods for root cause analysis
- Involve the right people in the right way in any analysis
- Prioritize problems and determine the best approach to solve them
- Solve and prevent any technical, production, quality or other incident or problem more rapidly and effectively
- Communicate and present analysis, solutions and recommendations with maximum understanding and acceptance
- Apply and implement the methods learned in daily practice immediately after the training

TRAINING METHODOLOGY

- Participants to this training seminar will receive a thorough training on the subjects covered by the seminar outline, with a combination of theory, practical examples, many exercises and application on issues from their own work environment. Besides a comprehensive training manual, participants will receive additional materials like process cards, work sheets, case descriptions, sample solutions, etc.

ORGANISATIONAL IMPACT

By attending this training course, your organization will get sustainable results:

- Issues and problems will be analysed to the full extend and presented in a holistic, visual and therefore easy to understand way
- Complex problems will be solved more rapidly and more effectively, preventing recurrence and providing tangible contribution to business performance
- The structured approach for solving problem will enhance communication and collaboration between all people involved
- Colleagues of your participant will start asking the right questions as well, triggered by the questions they did not hear before
- The methods presented, enables the organisation to significantly improve any existing continuous improvement approach

PERSONAL IMPACT

- Understand the increasing importance of problem solving skills
- Learn about their own pitfalls while solving problems
- Be skilled to describe, analyse, solve and prevent any issue or problem in daily practice
- Improve their communications skills by asking the right questions, being able to reformulate effectively and write very specific answers
- Gain many ideas about the way the problem solving methods could be used and best implemented in practice
- Significantly improve their personal effectiveness and boost their future career opportunities

WHO SHOULD ATTEND?

This training seminar is suitable to a wide range of professionals but will greatly benefit:

- Engineering and Technical Managers and Supervisors from any industry
- Operations and Manufacturing Managers and Supervisors
- Maintenance-, reliability-, process-, quality- and plant engineers
- Maintenance Planners and Coordinators
- Foremen and Team leaders

Course Outline

Introduction

- Introduction to the Program
- Introduction: RCA
- Introduction: Generic Approaches for RCA (8D, A3, DAMIC and RATIO)
- Introduction: RCA Methods (5 Why, Ishikawa, Fault tree, Apollo, etc.)
- Introduction: RATIO-Approach
- Introduction: Case and Demo

Prioritize and Reflect on your Problem

- Theory and Exercises to prioritize problems
- Theory: RATIO-step - Reflect
- Introduction Case to Determine the Root Cause
- Theory and Exercise: 5-Why
- Theory and Exercises: Event Mapping

Analyse Technical Problems

- Theory: RATIO-step - Analyse
- Theory: Problem Analysis - Describe the problem (IS/IS-NOT) and determine true cause(s)
- Theory in additional methods to determine possible causes e.g. Ishikawa-diagram and Characteristics and changes
- Exercises in Problem Analysis
- Completion of Event Map with outcome of Problem Analysis

Analyse Complex Technical Problems and Human or Organizational Problems

- Theory of Common and Special Causes
- Theory and Exercises for Handling Startup Problems, recurring problems and other complex problems
- Theory and demo Cusum
- Theory and Exercise of Human Factor Analysis
- Completion of Event Map with outcome of Human Factor Analysis

Determine, Implement, Observe and Evaluate Solutions

- Theory: RATIO-steps - Target determine alternative and best solutions, Implement solutions and Observe and Evaluate results
- Exercise of Full RCA with RATIO-Approach and Methods
- Application of RATIO-Approach and -Methods in daily practice (when/how to use)
- Guideline and many practical ideas for successful implementation of RCA


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