

Course Outline

Problem Determination Root Cause Analysis (RCA)

Course BA17: 2 days Instructor Led

About this course

Excellent problem determination skills cannot be acquired simply by reading a book. They mostly come from experience as well as discipline. After this course, you should have a general understanding of a structured problem determination approach, which you can then apply in your daily work to gain more experience.

Audience profile

Executives, Project Managers, Business Analysts, Business and IT stakeholders working with analysts, Quality and process engineers, technicians, corrective action coordinators or managers; supervisors, team leaders, and process operators; anyone who wants to improve their ability to solve recurring problems.

At course completion

After completing this course, students will be able to:

- Identify the different types of tools and techniques available
- Apply change management successfully
- Review what to look for when applying business case thinking to Root Cause Analysis
- Develop a process to systematically approach problems

Course Outline

Section 1: RCA Foundation Concepts and Objectives

- Section Learning Objectives
- Discuss Definitions – IT Perspective
- Discuss What is a problem and why do they exist?
- **Exercise 1a: Why is RCA important**
- What is Root Cause?
- RCA Benefits and Approaches
- **Exercise 1b: Why are multiple approaches important?**
- Event and Casual Analysis
- **Exercise 1c: Apply Event and Causal Analysis**
- Event and Causal Analysis: Exercise 1c Worksheet
- RCA Tools for each approach
- **Exercise 1D: Prepare for Case Study**
- Section Summary and Conclusions

Section 2: Enhance use of RCA tools

- Why use a Particular Method
- Tool: Change Analysis
- Change Analysis Examples
- **Exercise 2a: Apply Change Analysis**
- **Exercise 2b: Change Analysis Worksheet**
- Tool: How to Resolve Conflict
- Tool: 5 Why's
- Example Learning Management Problem
- **Exercise 2b: Apply 5 Why's Sequence-of-Events**

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- **Exercise 2b: Worksheet**
- Tool: Cause and Effect
- **Exercise 2c: Apply Cause and Effect**
- **Exercise 2c: Cause and Effect Worksheet**
- Tool: Fault Tree Analysis
- Why do we use Fault Tree Analysis?
- How does it work?
- Fault Tree Diagram Symbols
- Example #1 of FTA: Car Hits Object
- **Exercise 2D: Apply Fault Tree Analysis**
- Tool: Failure Modes and Effects Analysis (FMEA)
- Example: Failure Modes and Effects Analysis
- **Exercise 2E: Apply FMEA**
- Tool: Design / Application Review
- Exercise 2d: Apply Design/Application Review
- Section Summary and Conclusions

Section 3: Problem Resolution and Prevention

- Section Objectives
- The Secret of Solving Problems
 - A Note about Statistical Control
 - A Note about Fire Fighting
- Technique: Business Process Mapping
- Example: IGOE
- **Exercise 3A: Problem as IGOE**
- **Exercise 3A: IGOE Template**
- Technique: Lean Six Sigma and DMAIC
- Lean Six Sigma Benefits
- **Exercise 3B: Apply Lean Six Sigma**
- Importance of Understanding the Business Process
- The Business Process Mandate
- Technique: Process Modeling
- Graphical Notation Standard (BPMN)
 - What is Business Process Modeling Notation (BPMN)?
 - Benefits of BPMN
 - Basic Components of BPMN
- **Exercise 3C: Use BPMN to Document a Current State**
- Technique: Business Process Maturity Model
- Five Levels of Maturity
- **Exercise 3D: Appraise Business Process Maturity Level**

Section Summary and Conclusions

Section 4: Capability Improvement for RCA

Section Learning Objectives

- Steps in Disciplined Problem Solving
- RCA as a RCA Process
- Key RCA Role Considerations

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- **Exercise 4A: Apply RCA to RCA Process**
- Sustainable RCA Improvement
- Organizational Units
- Process Area Goals, Practices
- Specific and General Practices
- Specific Practice Examples
- Software Maturity Survey
- **Exercise 4B: Apply Strengths, Weakness, Opportunities and Threats (SWOT) to RCA**
- SWOT Analysis Worksheet
- Recognize the importance of the Change Management component in your RCA implementation
- Using the ADKAR Model to Communicate Change
- Review ADKAR® Model –
 - **Awareness** of the need for change
 - **Desire** to participate and support the change
 - **Knowledge** on how to change
 - **Ability** to implement required skills and behaviors
 - **Reinforcement** to sustain the change
- **Exercise 4C: Create an Ability Checklist**
- The ADKAR Model: Reinforcement
- **Exercise 4D: Find two examples of how ADKAR will be different**
- **Section Summary and Conclusions**

Section 5: Course Summary and Conclusions

- Plan the Proposal and Business Case
- Example: 1 Page Business Case
- **Exercise 5A: Creating Action Plans**
- Resource Guide
- Questions