Root Cause Analysis (RCA)
Key Insights for Problem Solving

Abstract

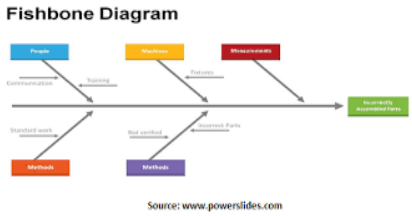
Solving problems large and small, critical and annoying has always been the task of managers and professionals. Why do we often solve what we find out later to be a symptom and not the problem? Why are problems assumed solved and they happen again? The reason is simple, the analysis was not sufficient to identify the core problem or what is now called 'the root cause' of the symptoms we see.

Some problems are simple and non-threatening and need basic analysis, other problems can be catastrophic to the organization or population at hand. Whenever there is a risk of fatalities or large scale destruction, the best and most applicable techniques should be used for solving problems. The analysis path develops like a crime scene investigator and a crime. The root cause analyst needs the right analytic tools to reach a conclusion and sort through the data. Some of the tools are software and some are techniques.

Solving problems is a systematic process. The starting point is known and the desired result is known but the path in between can take many twists and turns. Since root cause analysis is a key management tool, it can be used at a very general level or in specific detail. The result of the root cause analysis is 'meaningful changes' that improve organizational performance. This could mean process, policy, procedure, technology or skills changes need to avoid the problem next time the situation shows up.

This hands-on workshop provides a set of basic skills that are needed for root cause problem solving. The skills learned in this seminar can be used on a wide variety of business problems. This course uses an RCA template for exercises, laptops required.

Who should attend: Business analysis teams, Business planners, Process Analysts, Managers, IT Specialists, Enterprise architect and Business Architects.



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Root Cause Analysis

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Day One

Day 1 Theme: Solving problems and getting results

Section 1: Is it the problem or a symptom?

- The root cause methodology
- Problems, solutions and outcomes
- Root cause analysis and processes
- Where do the analytics fit?
- The goal is prevention!

Exercise – What is the problem

Section 2: Analysis – Mastering the art of questioning

- Asking questions about the situation
- Working past the symptoms
- Step by step analysis – the 5 whys of questioning
- When are you done questioning?
- Dealing with causes and effects

Exercise – Setting up the problem

Section 3: Starting the analysis – Data collection

- The what and how of an event
- Just the facts
- Documenting what happened
- Questions not just steps
- Identifying critical factors

Exercise – identifying and collecting data

Section 4: Causal Factor Charting – The Causal Tree

- Multiple causal factors
- Starting at the end and working backwards
- Starting with the skeleton chart
- Iterating the chart with new information
- This is an investigation

Exercise – Creating a causal factor tree

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Day Two

Day 2 Theme: Steps of root cause analysis

Section 5: Root Cause Mapping – Single Incident

- Root cause identification
- How do you know you have all the causal factors?
- Components of a root cause map
- Difficulties, problems and causes
- Starting the root cause summary table

Exercise – A root cause map

Section 6: Root Cause Categorization – Fishbone Diagrams

- Multiple incident analysis
- Categorizing factors
- Identifying the root cause
- Recommending the fix
- Issue with process change

Exercise – Identifying barriers to change

Section 7: Recommendations - Opportunities for improvement

- Trending of root causes and results
- Completing the root cause summary table
- Would a decision table help?
- Fixing the gaps and deficiencies
- The investigation report

Exercise – The summary table

Section 8: Techniques and Software - The right tool for the right problem

- Statistical charts, Pareto, Scatter
- Influence diagrams, decision trees and decision tables
- Mind mapping tools
- Diagramming tools like Visio
- Issues with RCA

Final Q&A – Wrap

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Learning Objectives

Expected Learning Outcomes (what they will learn):

- Develop a root cause analysis plan
- Prepare a causal tree
- Analyze multiple incident situations
- Investigating a single incident with a root cause map
- Explain the basics of the five ‘whys’
- Recognize what are problems, difficulties and causes
- Differentiate symptoms and causes
- Describe way to identify a solution
- Apply some basic analytics techniques and tools to support the investigation