ROOT CAUSE ANALYSIS





Root Cause Analysis (RCA) is a systematic process used to identify the underlying causes of problems or nonconformities to find solutions. The goal is to prevent the recurrence of the issue by addressing its root cause rather than just treating the symptoms.

RCA is an integral part of continuous improvement efforts and is widely used in various industries to enhance quality and efficiency.

HOW TO CONDUCT ROOT CAUSE ANALYSIS

- **1. Describe the Problem:** Clearly define the problem, its impact, and desired outcomes.
 - **Tools:** Problem Statement, SIPOC Diagram.
- 2. Collect and Analyze the Data: Gather relevant data and analyze it to understand the problem Tools: Data Collection Sheets, Pareto Charts, Histograms.
- **3. Identify Possible Causes:** Brainstorm all potential causes of the problem.
 - **Tools:** Fishbone Diagram (Ishikawa), 5 Whys Analysis.
- **4. Evaluate and Prioritize Causes:** Assess and rank the identified causes to find the root cause.
 - **Tools:** Cause and Effect Matrix, Failure Mode and Effects Analysis (FMEA).
- 5. Develop and Implement Corrective Actions: Create and execute action plans to address the root cause.
 Tools: Action Plans, PDCA (Plan-Do-Check-Act) Cycle



5 WAYS TO LEARN MORE!

- Learn the basics with this LAQ overview of RCA and the tools used in each step of the methodology.
- 2. Download these classic articles:
 - "The Art of RCA," to learn how to ask the right questions using a 5 Whys Analysis
 - "Applying the Scientific Method to RCA Using Quality Tools," to test and evaluate hypotheses.
- 3. Watch this popular webinar to learn The Future of RCA: Machine Learning Driven Root Cause Discovery.
- 4. Use this free checklist to try an advanced approach to RCA using the Bayes' Theorem.

ASQ also offers a popular interactive, self-paced e-course, "Root Cause Analysis" that steps you through the process, working the tools using real-world examples! Or, if you're more of an in-person learner, our live-virtual or face-to-face courses.

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