

Conducting a Root Cause Analysis

Description:

This tool provides the steps for conducting a Root Cause Analysis and a template to guide the process.

How it can be used:

Root Cause Analysis is a useful process for understanding and solving a problem. It seeks to identify the origin of a problem by using a specific set of steps and tools to:

1. Determine what happened.
2. Determine why it happened.
3. Figure out what to do to reduce the likelihood that it will happen again.

You can apply Root Cause Analysis to almost any situation. Determining how far to go in your investigation requires good judgment and common sense. It is important to recognize when a significant cause that can be changed is identified.

Follow the steps and use the template when you want to conduct a comprehensive review of a significant problem and identify the events and factors that led to the root cause.

Root Cause Analysis assumes that systems and events are interrelated; an action in one area often triggers an action in another. By tracing back these actions, you can discover where the problem started and how it grew into the symptom now being faced.

There are **three basic causes**:

1. Physical causes – Something failed in some way (for example, a car's brakes stopped working).
2. Human causes – People did something wrong, or did not do something that was needed. Human causes typically lead to physical causes (for example, no one filled the brake fluid, which led to the brakes failing).
3. Organizational causes – A system, process, or policy that people use to make decisions (for example, no one person was responsible for vehicle maintenance, and everyone assumed someone else had filled the brake fluid).

Root Cause Analysis looks at all three types of causes. It involves investigating the patterns of negative effects, finding hidden flaws in the system, and discovering specific actions that contributed to the problem. This often means that Root Cause Analysis reveals more than one root cause.

Five Steps to Conduct a Root Cause Analysis

1. **Define the Problem**
 - a. What do you see happening?
 - b. What are the specific symptoms?
2. **Collect Data**
 - a. What proof do you have that the problem exists?
 - b. How long has the problem existed?
 - c. What is the impact of the problem?

You need to fully analyze a situation before you can look at factors that contributed to the problem. To maximize the effectiveness of your Root Cause Analysis, get everyone together who understands the situation. People who are most familiar with the problem can help lead you to a better understanding of the issues.

A helpful approach is to look at the same situation from different perspectives: the clients, the staff who implement the solutions, the community, and the leadership.

3. Identify Possible Causal Factors

- a. What sequence of events led to the problem?
- b. What conditions allow the problem to occur?
- c. What other problems surround the occurrence of the central problem?

During this stage, identify as many causal factors as possible. With Root Cause Analysis, you do not want to simply treat the most obvious causes – you want to dig deeper.

Some tools that help identify causal factors are:

- *Appreciative Inquiry* – Use the facts and ask "So what?" to determine all the possible consequences of a fact.
- *Five Whys* – Ask 'Why?' until you get to the root of the problem.
The 'Five Whys' is a method for rapidly determining the root cause of a problem. It involves asking 'why' until you reach the real source of the problem. Asking 'why' five times usually gathers the right information to fix the problem.
Example
Problem: People are falling more often in our health unit.

1) Why?	The floors are slippery.
2) Why?	The cleaners are using a new cleaning product.
3) Why?	The suppliers offered a special deal on a new product.
4) Why?	To save money on cleaning supplies.
5) Why?	The buying process has no standardized process that considers the risks and benefits of trying new products.
- *Drill Down* – Break down a problem into small, detailed parts to better understand the big picture.
- *Cause and Effect Diagrams* – Create a chart of all of the possible causal factors to identify where the trouble may have begun.

4. Identify the Root Cause(s)

- a. Why does the causal factor exist?
- b. What is the real reason the problem occurred?

Use the same tools you used to identify the causal factors (in Step 3) to look at the roots of each factor. These tools are designed to encourage you to dig deeper at each level of cause and effect.

5. Recommend and Implement Solutions

- a. What can you do to prevent the problem from happening again?
- b. How will the solution be implemented?
- c. Who will be responsible for it?
- d. What are the risks of implementing the solution?

Analyze your cause-and-effect process, and identify the changes that are needed. It is also important that you plan ahead to predict the effects of your solution. This way, you can spot potential failures before they happen.

ROOT CAUSE ANALYSIS TEMPLATE

ISSUE			
Description	Source	Negative Impact	
		Level (high, med, low)	Explanation

LIKELY ROOT CAUSE		
Description	Likelihood (high, med, low)	Information/Tests to clarify

POSSIBLE SOLUTIONS					
Description	Risk			Measure of Success	
	Description	Likelihood	Mitigation	Test	Results