

# Root Cause and the Five Whys

## **Problem Solving, Root Cause & The Five Whys.**

Finding the root cause of a problem helps us make a higher quality decision about what action to take and makes development of an optimum corrective action more likely. But sometimes discovering the immediate cause of a problem doesn't give us all the information we need. Many problems are caused by a chain of events in which one problem leads to another, which leads to another. For this reason, tracking root cause can give us a more complete picture of how the observed problem came into being. With a complete understanding of the root cause, (the entire chain of events), we can consciously decide where it would be most appropriate to act.

This article provides a simple definition of root cause, one that has "emerged" from the review and facilitation of several thousand root cause investigations we've conducted with a particular client over the past five years. We will share insightful tips to help the troubleshooter avoid logical errors, minimize frustration, and obtain more satisfactory results.

**Five Whys – Definition.** The "Five Whys" is a troubleshooting procedure suggested by Masaaki Imai and it was made popular as part of the Toyota Production System in the 1970's. Application of the procedure involves taking any problem and asking "Why – what caused this problem?" Then, when the cause is identified, asking "Why?" again (i.e. "what caused the cause?"). The strategy, as commonly understood, is to ask "Why" about five times thereby uncovering links in a causal chain going backward in time.

**Incorrect (sub-optimal) Definition of Root Cause.** We have surveyed participants in our critical thinking workshops about their own working definitions of root cause. They tell us:

- (1) Root Cause is "the cause which when removed corrects the problem." And,
- (2) Root Cause is "what started the sequence of events that led to the problem"

Also, as typically understood, the Five Whys procedure leads backward in time, step by step to the "root cause" of the problem (chronologically the first link of the causal chain).

# Root Cause and the Five Whys

We have found the conception of root cause as the originating link of a chain *unsatisfactory* when developing the best corrective actions. The intervening links between the oldest and the most recent links often contain vital information for helping to correct the problem. All the links, the entire chain of events is important, not just the oldest link we've uncovered. *Interruption or removal of any link of a cause chain may stop the effect from happening and should be considered.*

**The Best (most useful) definition of Root Cause.** We define root cause as simply the uncovering of how the current problem came into being. For a simple causal chain, it is the entire chain. For a complex system of interlocking paths and events, again it is the entire thing. You know you are done gathering information when you see the complete picture of how this problem came into being and are ready to consider what to do about it.

The magic bullet is not to be found only at the last link we uncover (oldest link); in fact, there is no last link, there is only a point where the decision is made to stop uncovering more links. Examining only the tip of the root without considering everything else it's attached to is a limiting approach.

**Problem Solving with the Five Whys.** The **BPI** Problem Solving process is a tool for determining the cause of a problem. It is used to answer the question "Why?" as needed.

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