

## 5 Whys – Root Cause Analysis

Your 5-years old may drive you crazy with "whys" but you can utilize same "whys" to perform root cause analysis of any problem in hand.

5 Whys technique invented by Sakichi Toyoda, founder of Toyota in the 1930s. Taiichi Ohno, the architect of the Toyota Production System, describes the method in his book Toyota Production System: Beyond Large-Scale Production as "the basis of Toyota's scientific approach . . . by repeating why five times, the nature of the problem as well as its solution becomes clear."

5 Whys is an iterative interrogative technique used to explore the cause-and-effect relationships underlying a particular problem. The primary goal of the technique is to determine the root cause of a defect or problem by repeating the question "Why?" Each answer forms the basis of the next question. The "5" in the name derives from an anecdotal observation on the number of iterations needed to resolve the problem.

Not all problems have a single root cause. If one wishes to uncover multiple root causes, the method must be repeated asking a different sequence of questions each time.

The method provides no hard and fast rules about what lines of questions to explore, or how long to continue the search for additional root causes. Thus, even when the method is closely followed, the outcome still depends upon the knowledge and persistence of the people involved.

### **When Is 5 Whys Most Useful?**

- When problems involve human factors or interactions
- In day-to-day business life.

### **How to Complete the 5 Whys**

1. Write down the specific problem. Writing the issue helps you formalize the problem and describe it completely. It also helps a team focus on the same problem.
2. Ask Why the problem happens and write the answer down below the problem.
3. If the answer you just provided doesn't identify the root cause of the problem that you wrote down in Step 1, ask Why again and write that answer down.
4. Loop back to step 3 until the team is in agreement that the problem's root cause is identified. Again, this may take fewer or more times than five Whys.

## Example

The problem: This car is not starting.

1. Why? - The battery is dead. (First why)
2. Why? - The alternator is not functioning. (Second why)
3. Why? - The alternator belt has broken. (Third why)
4. Why? - The alternator belt was well beyond its useful service life and not replaced. (Fourth why)
5. Why? - The vehicle was not maintained according to the recommended service schedule. (Fifth why, a root cause)

