



Guidance Notes: 5 Why's Technique

Definition of 5 Whys

Invented in the 1930's by Toyota Founder Kiichiro Toyoda's father Sakichi and made popular in the 1970s by the Toyota Production System, the 5 Whys strategy involves looking at any problem and asking: "Why?" and "What caused this problem?"

The idea is simple. By asking the question "Why" you can separate the symptoms from the causes of a problem. This is critical as symptoms often mask the causes of problems. As with effective incident classification, basing actions on symptoms is worst possible practice. Using the technique effectively will define the root cause of any non-conformances and subsequently lead you to defining effective long term corrective actions.

5 Whys offers some real benefits at any maturity level:

- **Simplicity.** It is easy to use and requires no advanced mathematics or tools.
- **Effectiveness.** It truly helps to quickly separate symptoms from causes and identify the root cause of a problem.
- **Comprehensiveness.** It aids in determining the relationships between various problem causes.
- **Flexibility.** It works well alone and when combined with other quality improvement and troubleshooting techniques.
- **Engaging.** By its very nature, it fosters and produces teamwork and teaming within and without the organization.
- **Inexpensive.** It is a guided, team focused exercise. There are no additional costs.

Often the answer to the first "why" uncovers another reason and generates another "why." It often takes five "whys" to arrive at the root-cause of the problem. You will probably find that you ask more or less than 5 "whys" in practice.

How to Use the 5 Whys

1. Assemble a team of people knowledgeable about the area of non-conformance. Include as many personnel as possible.
2. On a flip chart, presentation board, or even paper; write out a description of what you know about the problem. Try to document the Problem and describe it as completely as possible. Refine the definition with the team. Come to an agreement on the definition of the Problem at hand.
3. Have the team members ask "Why" the Problem as described could occur, and write the answer down underneath the Problem description.
4. If the answer provided from 3 (above) does not solve the Problem, you must repeat steps 3 and 4 until you do.
5. If the answer provided from 3 (above) seems likely to solve the Problem, make sure the team agrees and attempt a resolution using the answer. You may find that there are more than one root causes to the problem.

The 5 Whys can help you uncover root causes quickly. However, making a single mistake in any question or answer can produce false or misleading results. You may find that there is more than one root cause for each non-conformance; corrective actions should be implemented for each of these.



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Mastering the 5 Whys

To validate those potential root-causes that are under your control, you can apply the following validations to your answers or root causes. Ask the following questions for every possible root-cause you identify at all levels of the 5 Whys:

- It there any proof (something you can measure or observe) to support this root-cause determination?
- Is there any history or knowledge to indicate that the possible root-cause could actually produce such a problem?
- Is there anything “underneath” the possible root-cause that could be a more probable root cause?
- Is there anything that this possible root-cause requires in order to produce the problem?
- Are there any other causes that could possibly produce the same problem?

Example 1

Non-conformance

Components are being delivered late to our customers.

- **Why 1**
Why were we unable to meet the agreed-upon timeline or schedule for delivery? The job took much longer than we thought it would.
- **Why 2**
Why did it take so much longer? Because we under estimated the complexity of the job.
- **Why 3**
Why did we underestimate the complexity of the job? Because we made a quick estimate of the time needed to complete it, and did not list the individual stages needed to complete the project.
- **Why 4**
Why didn't we do this? Because we were running behind on other projects.
- **Why 5 and Root Cause**
Why are we running behind on other projects? We do not allow enough manufacturing/lead time when issuing quotations to our clients.

Example 2

Non-conformance

The CNC Machine keeps failing.

- **Why 1**
Why did the equipment fail? Because the circuit board burnt out.
- **Why 2**
Why did the circuit board burn out? Because it overheated.
- **Why 3**
Why did it overheat? Because it wasn't getting enough air.
- **Why 4**
Why was it not getting enough air? Because the filter wasn't changed.
- **Why 5 and Root Cause**
Why was the filter not changed? Because there was no preventive maintenance schedule in place informing the operator to do so.