

The '5-Whys' Method

The method known as "5-Whys" is an analysis method used to dig below the outward symptoms of a problem in order to find its real root cause.

The method involves asking "Why ... ?" five times in succession. This can sound deceptively simple, but requires intelligent application in order to find the right Why? Question to ask, and the discipline and persistence to follow the method.

The answer to one question leads you to ask the next Why...? Question, although it may not always be possible to answer the next question immediately. You may need to gather and analyse more information in order to answer it properly, or do more thinking and brainstorming. By the time you get to the fourth or fifth Why...? you are almost invariably looking straight at **management practices** as opposed to mere symptoms.

The method is valuable and powerful. It does require practice. The more you use and practice it, the more you'll begin to find the real *root* causes of problems.

Example 1

Here is a real example from a firm providing training services:

Symptom

The wrong materials for training courses have been delivered to the training rooms on several occasions.

Why.... ? 1

The person packing and dispatching them for delivery made some mistakes. She was packing materials for three different courses at the time, was in a hurry and didn't notice. *(Symptom)*

Why....? 2

She's quite new to the job and we hadn't had time to train her. *(Symptom)*

Why....? 3

The person who used to do that job had left and everyone else was busy too. And there's nothing written down, such as a checklist of materials to pack, nor any procedure. *(Symptom)*

Why....? 4

We've had so many new staff (turnover has been very high) that there's just been no time to spend on things like setting up training or writing procedures. *(Symptom)*

Why....? 5

Root Cause: There is no effective system of training in place. No priority or importance has been placed on making sure key things are written down, to make sure things are done consistently, despite changes of personnel.

Note: It might also be worth while looking at *why* turnover is so high, and/or whether there is adequate advance planning occurring.

Example 2

Another real example, this time from a manufacturer of auto accessories:

Symptom

We can't meet demand for Product 123 in stock, even though we're not selling any more of it.

Why....? 1

Our inventory is being used up to replace faulty products returned under warranty. *(Symptom)*

Why....? 2

There's a problem with the seal: it has to fit tightly into an indented rim. Sometimes the parts don't come off the line with quite enough tolerance to allow the seals to fit tightly enough, but this only shows up later when it's fitted to a vehicle. *(Symptom)*

Why....? 3

The tolerance is very fine and the castings we get sometimes don't allow quite enough depth for the very tight seal needed. Usually we pick up the problem at assembly and take it down a bit, but we don't always pick them all up. *(Symptom)*

Why....? 4

The main body of the part is machined from castings we buy in, but the dimensions on the supplier's mould aren't quite accurate. It would cost more than \$1200 to replace the mould, and Production is under strict instructions to save costs. *(Symptom)*

Why....? 5

Root Cause: Management doesn't understand the casting/mould process or the engineering issues, and that it would actually save money (on warranty replacements). It also has not had effective methods in place to identify *why* the product keeps being returned and why it keeps failing.

Using the method

Too often, people stop at the first or second simple answer, blinded by the symptoms or settling for the first 'apparent' cause. The first 'cause' offered is almost never the real *root cause*. And only when you find that can you take really effective action to remove the cause and so prevent the problem cropping up again.

I've lost count of the times that 's/he made a mistake' or 'it was just human error' has been proffered as the cause of a failure. Of course we are human, and of course mistakes happen. But that's one of the reasons that robust quality systems are needed – systems designed to have inbuilt controls and mechanisms that help avoid error in the first place, as well as aim to detect it if it does occur, and to do something effective to stop it recurring.

Always look for the root cause, and beware of accepting too simple answers, or those immediate 'kneejerk' answers to questions. They're often misleading, and they may deal only with symptoms – the outward signs of a problem that are observed, but which are not its real root cause.

One reason a good quality management system insists on a systematic approach to dealing with nonconformity, corrective and preventive action is because getting these right can produce quite enormous improvements in even smallish systems. If you are still responding individually to problems, weaknesses and failures, then you're almost certainly still in reactive mode: one of the hallmarks of a business with an immature system. Organisations with mature systems are in proactive mode: they've already recognized this and used it to improve.

Aim to collect information on your problems and failures, analyse them and spend time on them. Because symptoms can crop up in various places and disguises, and fool you into thinking they are all different, whereas often they are often just 'more of the same'.

If for some reason I was only allowed to choose two 'quality' methods or tools to work with, it would be this method and the PDSA (Plan Do Study Act) cycle. They are both indispensable.

NB: The 5-Why method is closely related to the Cause & Effect (Fishbone) diagram; it can be very effective to use them together.

Where did it come from? Some people believe the 5-Why? Method was invented by Toyota. It's certainly something they've made extensive and effective use of, as well as other quality methods, as witness the reputation Toyota cars have for reliability.

But the method itself has been around rather longer. The earliest known written version of the following rhyme (often taught to British children) is in John Gower's *Confesio Amantis* dated approximately 1390 AD.

*For want of a nail a shoe was lost,
for want of a shoe a horse was lost,
for want of a horse a rider was lost,
for want of a rider an army was lost,
for want of an army a battle was lost,
for want of a battle the war was lost,
for want of the war the kingdom was lost,
and all for the want of a little horseshoe nail.*

You are welcome to distribute this report, publish it or forward it on provided that you credit the author, and do not alter it in any way or remove this information box. I hope you find it useful; any feedback is welcomed.

We specialises in intelligent quality management systems mainly for ISO 9001: simple, practical and effective. We are a consulting company based in Melbourne, Australia. We specialise in project and service-based businesses. If you would like a consultation to discuss your needs free of obligation, please contact us on (03) 9416 7344 or 0417 030 499. Jane Bennett, Director.