

## Getting to the Root of a Problem

By BNET Editorial

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Organizations often respond to financial and market imperatives by resolving problems with short-term solutions. Often, there are procedures in place to guide people's actions so that they spend minimal time on original thinking and then focus on the immediate requirements of the job. However, constantly relying on quick fixes requires one to repeat the same tasks over and over again, all while maintaining the status quo. Focusing on short-term solutions is not a recipe for increased profitability and organizational growth.

When people spend a lot of time putting out fires in the workplace, there is an illusion of industry; lots of busy people completing lots of tasks. Working harder and faster, we allow the environment's energy and rhythm to seduce us into believing we're doing our best to increase productivity and efficiency. But the law of diminishing returns applies here. Whether you are in the service or manufacturing industry, you can improve efficiency by taking time to think through problems from first principles, and then tackling the causes rather than the effects.

To improve efficiency and productivity, organizations need to look beneath the surface to the root of a problem or issue. By observing the effect (which is really just the symptom) of a problem and deducing what has caused it to occur, you can create a preventative solution that should put an end to the problem. In order to understand the source of a problem, you will need to undertake a *root cause analysis*.

### What You Need to Know

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#### **How will I know if I have actually solved the problem?**

If the problem recurs over and over again, it has not been solved, probably because you have been following the wrong line of inquiry. You have not addressed the root cause, merely the symptom. We often take a short-term approach when we are under pressure and don't have the time to explore the situation in greater detail. Unfortunately, until we understand and resolve its cause, the matter will remain unresolved and the problem will present itself again and again.

#### **Our company already has procedures in place to help us make decisions and take action, so why do we need to tackle new ways of solving problems?**

In the long run, an organization and its people will not benefit from knowing procedures and being able to take action quickly unless these procedures and actions work for them. If not, the business will only stand still. As an organization reaches the limit of its current capacity to take action, it won't be

able to increase efficiency any further. It will have reached its “operational ceiling.” Tackling the root cause of a problem will probably require more initial input of time and money, but down the line it will save time and money and result in higher levels of productivity. It is an investment worth making.

### **I don’t want to spend more time than necessary trying to get to the root of a problem. How will I know when I found the optimum solution?**

Doing a *cost/benefit analysis* should help you. At some point you will find that the effort you are putting into trying to get to the heart of a problem is no longer yielding much reward. At this point, it is probably not worthwhile to continue. You can do this analysis intuitively or analytically. Whichever way you choose, consider the advantage to be gained in the context of the situation and, when the energy needed exceeds the advantages to be gained, end the inquiry.

### **The company I work for uses a lot of outdated systems and procedures. How can I persuade the people in charge that we could become more efficient by looking at the root of some of our problems?**

It can be difficult to bring change into an organization, especially if you are newer or younger than the people you want to influence. Everyone has heard comments such as, “But that’s the way we’ve always done it,” even though the reason for doing something a particular way is no longer valid. By exposing how certain habits are obsolete and highlighting the amount of time they waste, you are likely to be able to persuade people to do things differently. But do it gently, as you don’t want to damage anyone’s ego or appear to be trying to take over from your boss.

## What to Do

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### **Determine Which Issues Would Benefit Most From the Reassessment Process**

This is not always easy, because when we are used to doing something one way, we often aren’t aware of how it could be made better. Many organizational processes and procedures have been around for a long time, while the reason for them may have long since disappeared. And even though they don’t make sense anymore, everyone is used to them and they have become familiar and habitual. Finding the root of a problem or issue will improve the situation in the long run and repay the time and effort spent in identifying it.

Think about the layout of a computer keyboard. We still use the QWERTY configuration although many people do not touch type. A layout that is based on the frequency of letter usage does not help with two finger typing. In fact, there is no need for physical keys at all on a computer keyboard. These are two examples of habits that made sense at one time and have not been reevaluated in the light of modern technology.

Ask a few questions about the situation. For instance:

- Are distractions keeping you from attending to the main tasks of your job?
- Do you find that you are putting great effort into bypassing certain processes or procedures in order to get your work done on time?
- Are you constantly fighting fires rather than producing results?
- Do you have so many interruptions that you can't get anything done until the end of the day?
- Are non-core processes costing too much?
- Are simple activities taking too long to perform?
- Would it cost less to uncover and remove a root cause than to deal with its symptoms?

## Explore the Dynamics of a Problem With Root Cause Analysis

Root cause analysis may assist in answering the types of questions listed above. It is a way of thinking systemically rather than looking at the elements of a problem in isolation. It encourages you to look beneath the surface and uncover the causes and interconnections that lie behind the problem. Unlike basic problem solving, when you think in terms of systems, you are required to examine the dynamics of the problem and the relationship between the effects.

Root cause analysis is a logical deductive technique that seeks to identify those aspects of a problem that need to be resolved in order to prevent it from recurring. In undertaking a root cause analysis, you will begin to dissect and distill information that will help you to determine the connections between a series of effects. You should continue this process until you have isolated the source of the sequence—in other words, the root cause of the problem—or until you have reached the level of analysis that yields the best result you can get under the circumstances. Although it sounds very technical, a good root cause analysis also considers human issues, such as peoples' abilities and motivations. An elegant solution is useless unless it is carried out effectively by people. A lack of interest, inadequate training, or a limited aptitude can all cause delays and errors that may be preventable. Recognition and reward are important motivators that are often overlooked when people are too busy putting out fires. It is therefore crucial to resolve the human side of the issue.

## Create a Cause and Effect Diagram

The relatively simple cause and effect diagram is a technique that is often used to find long-term solutions to problems. You start by drawing a circle on the right hand side of the paper, and then writing the effect of the problem inside it. Next, draw lines from the circle to the left side of the page to indicate the different causes. Once you have done this, you can examine each of these causes in relation to the effect. This exercise will also help to highlight the interconnections between the causes and effects, and may reveal an elegant solution. There are many different styles of cause and effect diagrams, but basically they all seek to identify the underlying features of a problem or situation. You may have a preferred style of your own which will help you to uncover the problem.

Here are some questions you might want to ask of your problem:

- What caused this problem to occur?
- What negative impact of this problem?
- What is the background leading up to the problem?
- What happened immediately before the problem presented itself?
- What happened after the problem became apparent?
- Who or what is affected by the problem?
- Under what circumstances would the problem continue to exist?
- Under what conditions would the problem cease to exist?
- What would cause the nature of the problem to change?
- Is timing a significant issue with this problem?
- Where does the problem lie? (geographical, process, system)

Once you have answered these questions, you should be able to draw a thread through the cause and effect relationships and find a workable solution.

## Use Six Sigma and The “5 Whys”

Six Sigma is a structured approach to problem solving that uses statistical analysis to measure and improve the way an organization performs. It does this by identifying and eliminating flaws in manufacturing and service-related processes. Part of the Six Sigma methodology uses a technique called the “5 Whys,” which allows you to quickly get to the root of a problem. It was popularized in the 1970s by the Toyota Production System where it was used to diagnose the cause of a problem by asking “Why?” five times over. Children of course perfected this technique long before Toyota discovered it!

The reason that “Why?” is asked successively is that very often the answer to the first “Why?” involves another “Why?” The more times you ask the question “Why?”, the greater the distillation and

the nearer to the essence of the problem you get. This simple technique is very easy to learn, and quick to apply.

To use the “5 Whys” to get to the heart of an issue, start with the effect and work backward toward the root. Then ask the question “Why?” five times.

## **Example:**

The example here is a paper process that takes too much time because it has to pass through too many hands before reaching an objective. It is also subject to human error and delay.

- *Why* do we use paper purchase orders when ordering stationery?

Because we need a record of what we have requested.

- *Why* do we need a record of what we have requested?

So that we can monitor how we are using our resources.

- *Why* do we need to do this?

So that we can keep track of costs.

- *Why* do we need to do this?

So that we can minimize waste.

- *Why* can't we do this electronically?

Good question...!

## **What to Avoid**

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### **You Don't Invest Enough Time Exploring the Root of the Problem**

Short-term pressures can lead you to believe that you don't have enough time to identify the source of a problem. Too often we succumb to these imperatives just to keep the tasks at bay. However, being in too much of a hurry can result in repeated short-term actions and no ultimate progress. It is usually worthwhile to take a little more time to think about your problems systemically. This way you can resolve them in the longer term and release yourself from the need to be constantly putting out fires.

## **You Spend A Lot of Time and Energy, Only to Find That You Have Solved the Wrong Problem**

If you don't give enough thought to what is causing a problem, you are likely to make an inaccurate root cause analysis and end up with meaningless results. It would probably be helpful to get the opinion of an experienced person or an expert to make sure that you haven't missed anything obvious. This objective view will ensure that you don't spend time solving the wrong problem and then have to start all over again!

## **You Solve One Problem, Only to Have Another One Emerge!**

Take another look at the results of your systematic analysis to make sure that you haven't inadvertently created this new problem. Any intervention will impact everything that is connected to it, even when we can't see or understand that connection. You don't want to set up a chain reaction that is more trouble than the original problem. Look out for anything unexpected that mysteriously pops up after you have intervened. If something surprising happens, even if it doesn't appear to be related, do a quick analysis to see whether it is connected in some way to what you have done, or whether it is a new problem altogether.

## **You Realize That You Have Opened a Can Of Worms**

You may find that the time and energy involved in resolving a problem begins to get out of hand. Remember that it's important to put limits on the time you spend solving a problem and the level of your intervention. Keep in mind the cost/benefit equation, and if it starts costing too much in terms of time, resources, and effort, think about settling for a less complete (e.g. 80%) resolution of the problem.

## **Where to Learn More**

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### **Books:**

Higgins, James M., 101 Creative Problem Solving Techniques: The Handbook of New Ideas for Business. New Management Publishing Company, 2006.

Senge, Peter M., The Fifth Discipline. Random House Business Books, 2006.

## Web Sites:

MindTools.com: [www.mindtools.com](http://www.mindtools.com)

Root cause analysis: [www.systems-thinking.org](http://www.systems-thinking.org)

Determine the root cause: The "5 Whys": [www.isixsigma.com](http://www.isixsigma.com)

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