

Understanding the Switch Theory

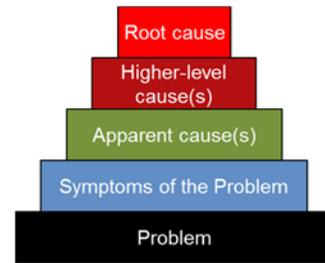
Root Cause Analysis and Leadership – The Core of a Successful Continuous Improvement Effort in your Organization

By Josh Hoops, UMS Group Inc.

Leadership WILL Be The Difference!

What is the difference between a problem and a root cause? The answer is not as simple as one might think. Most people can give you a general definition of the two, at a hypothetical or even a theoretical level. However, when an unfortunate event occurs in your organization, these two terms often become interchangeable. Some may say it's the "chicken or egg problem". I call it a "self-licking ice cream cone", always working but never really satisfied. Ultimately, you can't understand the real reason for a near miss or actual incident without being able to define the problem in the first place. Likewise, some may argue you can't understand a problem without having full comprehension of the root causes and events that led to the problem.

Root Cause Analysis comes in many forms. There are diagrams and steps and processes one "must follow" in order to achieve results. However, RCA is much more than defining a root cause. It's what the organization does with the results that defines the level of success achieved. At the core of any successful organization is the ability for that organization to learn from their mistakes. This all starts with the organization's leaders. The drumbeat of continuous improvement must be constant... and *consistent* across the organization.



During my time in the U.S. Navy, while serving as an officer on board Submarines for over 26 years, I learned the most vital component in leadership is consistency. The U.S. Nuclear Navy has undeniably one of the best RCA systems in the world. However, it would be a worthless pile of paperwork, binders, and databases if it were not for the involvement of its leaders. Continuous improvement must be ingrained in the organization's culture. Again, this starts with the leadership. Establishing a drumbeat and continually driving for improvement must be a daily activity from the CEO all the way to the operator/technician/mechanic/clerk. I used to ask my most junior sailors on any given day "What are we getting better at today?", and when their response was exactly what I was thinking, I felt I had achieved absolute utopia. Consistent, and constant communication was the key to achieving our goals for continuous improvement.

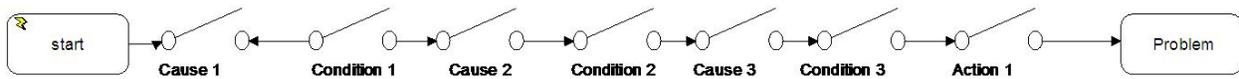


If you get 10 people in a room and ask them to describe a successful RCA program, you will inevitably get 10 different answers, and many if not most, are likely to be correct! The point is that a complete RCA program, well implemented, can dramatically improve the many different facets of safety, operations, maintenance, and training throughout the organization. And in an immature program, most people will have different views of what success looks like.

Switching to Success

The switch theory is an excellent method for understanding the true nature and getting to the root causes of any untoward event. Although there are many different methods for conducting an RCA investigation, the switch theory

is a simple and easy method for determining the most significant factors that led up to the problem. Below is a simplistic diagram of how the switch theory can unfold the story of an incident or near miss.

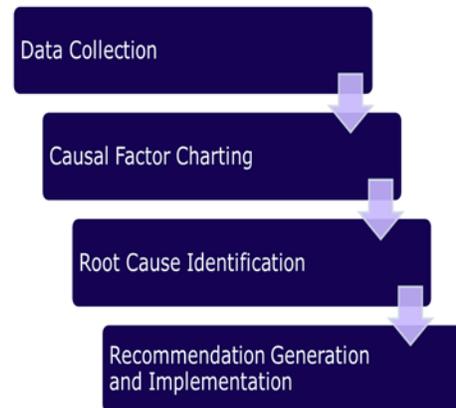


The idea here is that a problem will occur only when all of the switches are closed. In this example there are three causes, three conditions, and an action by a worker. If any of these seven events had not occurred, the event would not have happened. It is then up to the organization (leadership) to determine the best method to prevent all the switches from closing in the future.

Development of an effective and consistent RCA program is vital to the success of the organization. In the more advanced organizations, these analyses look beyond the immediate event and determine where and how these organizations can apply these actions in other methods or forms to prevent additional / different problems from occurring. This is where an effective RCA program can be a vital part of any organization.

An effective RCA program achieves the following:

1. Defines the problem(s) – Although this may seem rather simple, I have sat through more critiques/RCA sessions than I care to remember, arguing with some very smart people over the definition of a problem. This can be a very difficult concept to grasp. It usually takes someone looking in, from outside the event, to assist in accurately defining the problem.
2. Identifies contributing factors, conditions, and causes – Again, this may seem straightforward to most people. However, when you have a group of people with different perspectives on any given event, they will undoubtedly see each of these items differently. Most people have heard of the “five whys”. This is an excellent system for getting down to the actual root causes of an event. However, it is vital to capture each level of the “whys” and analyze them independently. There may be a seemingly “insignificant” factor buried in one of these “whys” that could save someone’s life down the road.
3. Develops immediate, short-term, and long-term corrective actions – Determining corrective actions can be very difficult; determining **effective** corrective actions even more so. Unfortunately, this step in the process occurs late in the investigation and usually does not get the full attention it deserves.
4. Initiates Follow Up – By far this most IMPORTANT part of an effective RCA program is dependent upon the organization’s processes and determination to follow up on the corrective actions. This is where leadership’s involvement is paramount. More often than not, the RCA is conducted and actions are defined and promulgated; only to be left with no follow up or further direction. A system **MUST** be in place to go back and determine the effectiveness of the corrective actions. Most importantly, the process must redefine new actions if the original corrective actions are determined to be ineffective. Unfortunately, this can become a lengthy and iterative process. However, with the proper leadership and “buy-in” throughout the organization, follow up will eventually become second nature and be ingrained in the organization’s culture.





Continuous improvement starts with leadership. An effective RCA program is an excellent tool that leadership can leverage to improve many different aspects of the organization; safety, operations, maintenance, environmental, training, etc. However, real success depends on constant and effective communication regarding the importance and success of the RCA program. Remember, it is important to celebrate the wins across your organization! Once your team realizes how important continuous improvement is, they will respond accordingly and RCA will become part of your day-to-day successes and achievements.

Josh Hoops is a Senior Associate with UMS Group Inc. UMS Group is a Management Consulting firm specializing in Asset Management, Enterprise Performance Management and Learning Consortia; working primarily within the utility industry. He has been involved with Asset Management Assessment and Transformation projects, as well as Corporate Governance, Operational Efficiency, and other Management Performance projects with major utilities across the globe.