

Cause Categorization: Does it Aid in Improvement?

By Jon Bernardi

Applying categorization to allow for analysis of types of causes is a method that appears to be an aid in searching out areas for long term investigation and improvement. Unfortunately, what appears helpful on the first glance does not always turn out that way in the harsh light of implementation.

When completing a Cause Map, you are striving for as much detail as you need to come up with workable and practical solutions to prevent the issue or incident from recurring. It also means you need to probe beyond the generalities of the situation, i.e., “poor communication” or “inadequate training.” With the increased specificity, categorization becomes increasingly difficult. The causes become more nuanced and thus prove very difficult to break down into buckets. At ThinkReliability, we try to be very clear that adding an adjective to attempt to rate or classify a cause (e.g. primary, secondary, formal, major, minor) can lead to much wrangling/arguing over the designation, which is a very value-subtracting kind of activity. Remember, your goal is to find the cause-and-effect relationships so that you can come up with a good range of solution possibilities and ultimately the solutions you will implement.

It is most often better to look at the goals impacted, to try to assist with the development of longer-term strategies. This can be further defined by using the degree of impact. For example: was it a lost time accident, a minor injury or a first aid case; from a financial point of view, was it a \$10 million issue, a \$100,000 issue, or a \$10 issue? Do not lose sight of the need to factor in the frequency of occurrence. The \$10 issue, happening on a very frequent basis, may overtake the \$100,000 issue. Most companies use a grid of some type to define the level of impact and the level of investigation; a three by three grid is very common (with high, medium and low for frequency and impact scales). Don't forget to include “near-misses” as a part of this analysis. Near-miss incidents can sometimes get lost in the heat of day-to-day activities, but should be thought of as a “Get out of the disaster free” card. They are warnings of potential issues, which can be addressed early on.

The Cause Map outline offers other information to assist with categorization: the “type of equipment” and “task being completed” can be especially helpful for certain types of organizations. For example, most large-consequence airline incidents occur during landing, so rather than grouping nearly all airline accidents as “human error” as is most often done, this approach would lead to a more detailed look at exactly what is happening during landing that makes it the most dangerous stage.

A third approach, to fulfill the demand for categorization, would be to look at broad buckets, perhaps five to nine. Here you break down items into categories that make sense for your business. This would give you experience on how the system of categorization is working and what value you are seeing as a result of the effort. That is, can you make significant inroads toward process improvement based on the analysis of the causal categories? From there you can make an informed and data-based decision on the value or merit of the approach.

As mentioned above, I will also offer a caution here; using general categories will lead you down the path of using and relying on the overly general causes in place of those with effective solutions. “Human Error”, “Poor Communication”, “Management Oversight” and the like will perpetuate the tendencies to stop a Cause Map at those points, leading to overly broad and ultimately ineffective solutions.

We would very much like to hear back from anyone that has used, tried, abandoned, amended, etc., such an approach.