



Accident Causation Analysis Module

The 5 Whys

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Safety Talks

Accident Causation Analysis Module

The 5 Whys Support Material

Script

Mindful leaders ask why and why, over and over again. They are aware that accidents aren't just the result of mistakes or violations by front-line workers, but are fundamentally multi-causal in nature.

A large car manufacturer has formalised this in their 'five whys' program and they provide an interesting example of where you can get to if you ask this question 'why' persistently.

Suppose there is a puddle of oil on the shop floor. The mindless response might be to get someone to wipe it up, and to see it as a housekeeping issue.

But really, that is just the beginning of the story. We need to ask:

Why was there a puddle on the floor? And the answer is the machine was leaking oil.

Why was it leaking oil? Because the gasket had deteriorated.

Why? Because we bought gaskets made of an inferior material.

Why? Because we got a good price or a good deal on those gaskets.

Why? Because the purchasing agent gets evaluated on short-term cost savings.

In other words the bonus or remuneration system operating in that company is encouraging decision making that ignores questions of quality and safety.

This example demonstrates how, by asking the rights questions, we get back to some really fundamental organisational causes. If you can deal with these causes, you won't simply resolve the problem of gaskets; you'll resolve a whole lot of deeper organisational problems as well. So the further back you go into the system, the broader is the range of problems you can resolve and the greater the number of potential accidents you can avoid.

The '5-whys' strategy is just one of many. Many organisations have their own root-cause programs.

The important point is to ensure that your own root-cause analyses get back to these fundamental issues such as pay systems. Very few root-cause analyses do this. They usually get stuck one or two steps away from the accident, instead of getting

back into questions of how the organisation is designed or what it is that people are rewarded for.

Suggested Discussion Questions and Answers

1. What investigative techniques do we use and do they reveal organisational causes?

A tool is distinguished by its limited use, while a method may involve many steps and processes and has wide usage. A non-exhaustive list is provided below.

- Events and Causal Factors Charting: (Method)
 - Change Analysis: (Tool)
 - Barrier Analysis: (Tool)
 - Tree Diagrams: (Method) - Ishikawa Fishbone Diagram, Management Oversight and Risk Tree Analysis (MORT), Human Performance Evaluations System (HPES),
 - Why-Why Chart: (Method)
 - Pareto Analysis: (Tool)
 - Storytelling Method: (Method)
 - Fault Tree Analysis: (Method)
 - Failure Modes and Effect Analysis: (Tool)
 - Reality charting: (Method)
2. How do we choose a technique?
 - Knowledge of the application of each is essential
 - There should be a choice available
 - Training on the application of each technique should be provided
 3. How do we scope an investigation?
 - Decide on the objectives, such as
 - Determining root causes
 - Identifying corrective actions
 - Degree of legal compliance - breaches
 - Individual liability