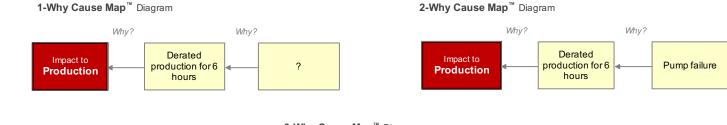
## **Facilitation Tip 19: Reveal Additional Causes**

Problem Solving • Root Cause Analysis

One of the most common questions that I receive as a facilitator is, "How do you know what to ask to identify causes in your incident investigation?" Most people easily pick up on asking, "Why?" to build the Cause Map<sup>TM</sup> diagram. You channel your inner three-year-old and just continue to ask Why questions. It's intuitive. It's also easy to validate by reading the cause-and-effect relationships out loud (Tip #16). There are, however, other less intuitive questions that help reveal causes. Asking "How?" or "What else was required?" can also reveal causes in the analysis.

### Ask, "Why?"

Start simple by asking, "Why?" to reveal causes. You can start with a 1-Why and expand with as much detail as necessary. By asking Why questions, you will document straight-line cause and effect.

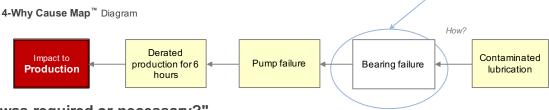


## **3-Why Cause Map**<sup>™</sup> Diagram

# Ask, "How?"



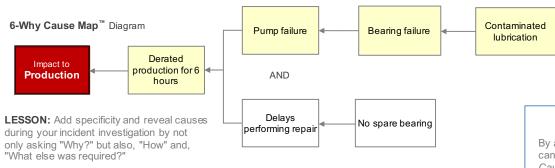
Asking, "How?" can help reveal detail between causes, forcing the team to slow down, as described in Tip #1. It may be unclear how the contaminated lubrication led to the pump failure. By answering that question, we can document that the lubrication issue caused a bearing failure.



## Ask, "What else was required or necessary?"

Asking, "What else was required?" will help reveal additional causes in parallel to existing relationships. By understanding these additional causes, your investigation will have an opportunity for a combination of solutions--producing a cumulative reduction in risk. Each of the different causal paths provides opportunities for additional layers of protection.

This question allows us to reveal more causes by specifically using the definition of a cause: Anything required to produce the effect. By asking, "What else was required to have the production derated for 6 hours?", we not only identify the pump failure as one of the causes, but there were also delays in completing the repair because the site didn't have the proper spare.



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HINT: Other variations on this question are, "What else had to be there?" or, "What else was needed?" Although these are essentially the same questions, sometimes people relate to these questions easier.

#### Facilitation Tip 19

By asking a few different questions, you can expand and add specificity to your *Cause Map* diagram.



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