

5 WHY Analysis and the 20 Common Pitfalls to Avoid in Problem Solving

By Damon Baker

1. **Logic gap errors:** Generally, this occurs because leave out or fail to properly identify all parts of the causal chain in our analysis.
2. **Logic sequence errors:** Generally, this occurs because we get the parts of the causal chain in our analysis out of order in terms of timing.
3. **Logic path errors:** Generally, this occurs because we include information on the causal path that is unrelated to the cause path being explored.
4. **Asking the wrong questions:** We have a preconceived idea of what happened, therefore we ask and lead off with questions that send us down the wrong path of cause analysis.
5. **Jumping to conclusions without facts:** We do not remain “root cause agnostic” and seek out the first person that agrees with our conclusion without true supporting facts.
6. **Using Blaming language:** During our cause analysis we redirect the causes towards blame of an individual or department without understanding how the process could have led to the outcome.
7. **Excessive Qualitative statements:** Using and abundance of qualitative words as adjectives to explain the causal chain analysis. Generally, the more qualitative the words are, the less the investigation was rooted in facts. Examples include: good, bad, poor, inconsistent, nice, mean, etc.
8. **Disconnected units of measure:** In problem solving we are tasked with uncovering causes that contribute to GAPS that add up to the problem statement we are trying to improve. When we identify unrelated causes that do not connect to the problem statement, we might countermeasure something unnecessary.

9. **Missing splits:** 5 whys, like tree root want to split and expand. It can be challenging for the problem solver to notice when these causes the need to split because they are separate contributors to cause and each has their own impact in measures on the problem statement.
10. **Stopping too soon:** This happens when teams believe they reach a deep enough point to correct the issue, but sometimes miss the system deficiencies that lead to the recurrences of the issues. There are 2 types of fixes to be on the look-out for: physical countermeasures and system countermeasures.
11. **Going too deep:** This is the opposite, where the team digs far too deep into the process and winds up taking on areas of the problem solving that fall out of their control and complicate the size and complexity of the problem.
12. **Incorrect format (write out the question, document the answer, include the Gemba evidence):** The correct format for 5 why analysis should be to step 1: Write out the question being asked. Step 2: Document the answer with a fact-based conclusion. AND 3. Document the Gemba evidence that supports the fact-based conclusion, essentially answering the “how do you know question.”
13. **Picking up the problem too low or high:** Declaring a problem too high or too low will lead to the team to have to deal with team trade-offs in the following problem characteristics: impact, timing, complexity, size, cross-functional nature, and ease/difficulty.
14. **Dead end causes or out your span of control:** Teams have a tendency to take their cause analysis efforts to areas out of their control or they pursue fixing something that cannot be undone or corrected after the fact.
15. **Not using where, what, when, who, how AND why questions:** Why is one of the most USELESS questions in problem solving because it instigates people to identify the answer while not encouraging them to get direct knowledge of the situation. This encourages jumping to conclusions.
16. **Doing 5 whys without direct access to Gemba:** The number one reason Problem Solvers fail. They jump to preconceived ideas or reference/access their already known experience when explaining the events in the causal chain.
17. **Solutions presented in the 5 why:** Similar to the one above, but the they take the statements a step further and propose solutions/countermeasures in the 5 why statements to support the actions that they believe are necessary.
18. **Impact of causes not understood on GAP:** The 5 Why analysis is completed while losing site of the fact that they are being tasked with closing the gap on their problem statement. They identified causes that cannot be tied back to the problem statement in a consistent way.
19. **Missing Gemba evidence:** The HOW DO YOU KNOW statements are not captured as a countermeasure to prevent the problem solvers from jumping to preconceived conclusions.
20. **Incorrect identification of 3 cause types:** There is mis-usage or mis-identification of the 3 cause types being used; Sequential Direct, independent Direct, and Combined Effect.

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BACKGROUND

Damon is the President & CEO of Lean Focus. For over 25 years, he has been implementing lean in consulting, operations, continuous improvement, and GM & VP-level leadership roles for such companies as Danaher, HNI, Eaton, Argo Consulting, Experian, and Winegard.

Trained by disciples of the Toyota Production System, he worked in a Shingo Prize winning facility and is a Shingo Prize Examiner. Over his career he has demonstrated hands-on leadership and facilitation of 500+ kaizen events for 50 major corporations in 16 different countries. Damon led the North American Danaher Business System Office. While at Danaher, one of his mentored operating companies was nominated Most Improved Plant, and one of his factories won Best Plant Worldwide 2 years in a row. Damon holds an MBA from St. Ambrose University and a Bachelors of Arts in Management and Marketing from Iowa Wesleyan University.

INDUSTRY EXPERIENCE

Aerospace and Defense, Automotive, Electronics, Capital Equipment, Chemicals, Protective Packaging, Residential Construction Materials, Water Quality, Dental, Test & Measurement, Sheet Metal Fabrication, Life Sciences, Medical Devices, Discrete Assembly, Oil and Gas.

LEAN EXPERIENCE

Building/Installing Problem Solving & Kaizen Cultures, Operational Due Diligence, Acquisition Integration, Strategic Planning & Policy Deployment, Sales Force Efficiency & Effectiveness Tools, Pricing Margin Analysis, Transactional Kaizen, EBITDA focused operational improvements, Cellular Manufacturing, 6S & Visual Management, Standardized Work, Mistake Proofing (Poka Yoke), Visual Controls, Setup Reduction (SMED), Total Productive Maintenance (TPM), Daily Management Processes, Leader Standard Work, Working Capital reduction via Kanban & Pull Based Inventory tools, DSO Reduction, and Accounts Payable processes, Value Analysis & Engineering, 3P, Accelerated Product Development Tools.