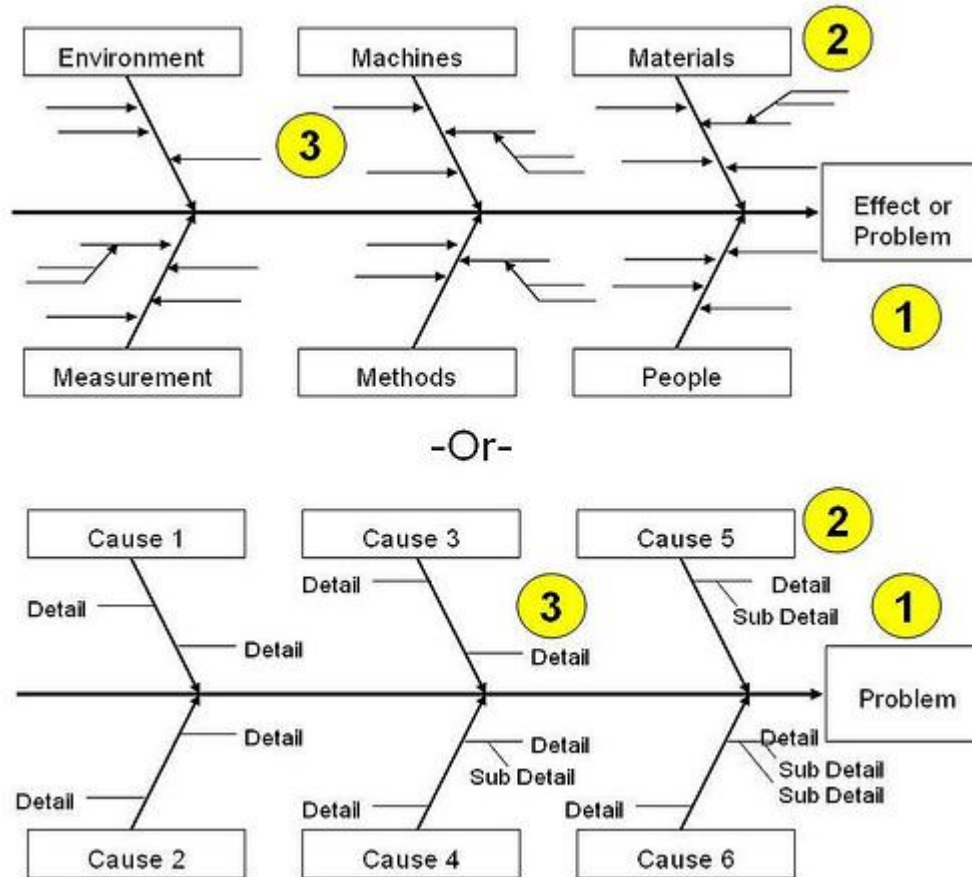


Root Cause Analysis

Once you have a good understanding of how the process (i.e., the one that needs to be fixed) currently works, it's time to figure out what the root causes are to the errors or inefficiency. To accomplish this, first make a list of the main problem(s). Next, ask the appropriate "why?" questions until you reach the root cause. A good rule-of-thumb is that you haven't reached the root cause until you've asked "why?" at least five times in series.

A common tool used in Root Cause Analysis is the Ishikawa Diagram, which is depicted below:



Main Components of an Ishikawa Diagram

1. At the head of the Fishbone is the defect or effect, stated in the form of a question.
2. The major bones are the capstones, or main groupings of causes.
3. The minor bones are detailed items under each capstone.
4. There are common capstones, but they may or may not apply to your specific problem. The common ones are:
 - People
 - Equipment
 - Material
 - Information
 - Methods/Procedures
 - Measurement
 - Environment

After completing your Fishbone Diagram exercise as a group, it is helpful to test your logic by working the bones: top-down OR bottom-up like:

this happens because of g; g happens because of f; f happens because of e; e happens because of d; d happens because of c; c happens because of b; b happens because of a.

The exercise above is crucially important — you must test your logic so that it makes pragmatic sense and that the atomic root cause is actionable — that is, you can do something to correct it, reduce it, or eliminate the root cause.