Troubleshooting: Taking Corrective Actions 184

CAUSE-AND-EFFECT DIAGRAM OR FISHBONE

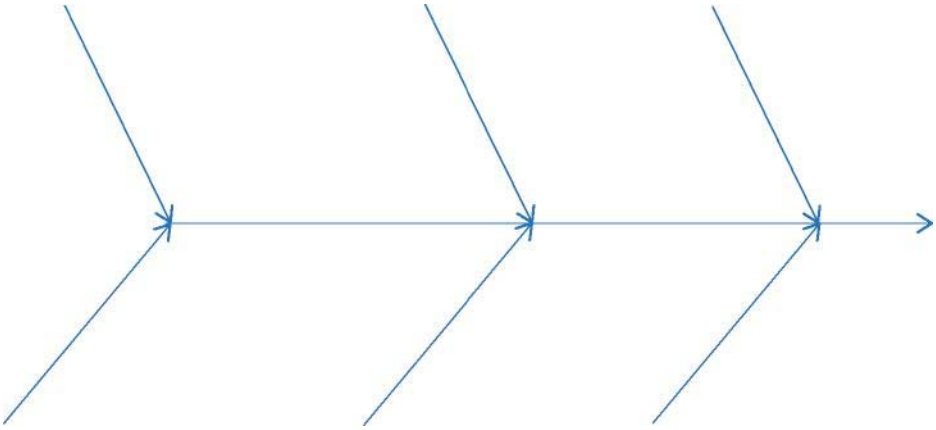
After collecting data from a process and then preparing a pareto or histogram diagram, it's time to consider the reasons for the variation and those defects created. This data collected will reveal that items produced do not always turn out the same on a consistent basis. That is, parts produced can vary from production line to production line, from day shift to night shift, from day to day, and so forth. In other words, you seldom get consistent parts produced every time. What causes these differences or variations within the process? Basically, the variation created can originate from one or more of the following sources:

1. Raw Materials
2. Machinery, equipment or tooling
3. Work method or process
4. Work force—new people, trained differently, etc.
5. Measurement method or inconsistency in ways of measurement
6. Environment—high humidity, cold temperatures, dust, etc.

The real problem becomes which one of the above factors is either totally, mostly, or somewhat responsible for the cause of our problem? Or is it a combination of several causes?

A Cause-and-Effect diagram is useful in sorting out the causes of dispersion and organizing mutual relationships. This is an excellent team problem solving tool, where a team can gather together to "brain storm" the potential causes and resolutions to solve the variation problem.

The Cause-and-Effect Diagram was created by Dr. Kaoru Ishikawa, an engineer and professor in Japan. The Cause-and-Effect Diagram is also referred to as a “Fishbone” diagram, getting the name from its resemblance to a fish skeleton when created. The main purpose of this diagram is to define a problem, identify a possible cause, isolate the cause, and then develop a solution. Below is an example of a generic Cause-and-Effect Diagram. Please fill in the Fishbone for this situation.



This product was funded by a grant awarded by the U.S. Department of Labor’s Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.