

Tools for Identifying Potential Causes

Problem-solving teams use a number of tools for generating ideas and gaining process knowledge. In this video, you learn about some "soft" tools for identifying potential root causes. You learn about brainstorming, multi-voting, affinity diagrams, cause-and-effect diagrams the 5 Whys, and cause-and-effect matrices.

In the upcoming modules, you learn how to use statistical tools to make decisions from data. The tools covered in this lesson rely heavily on subject matter knowledge, creativity, and an open and collaborative team environment.

These tools can help you determine the data you need to collect and where to focus your efforts. Brainstorming is probably the best-known method for generating a list of ideas. Within a problem-solving framework, you can use brainstorming to generate a list of process inputs, potential causes of problems, factors for an experiment, or solutions.

After you have a brainstormed list, you might want to identify the top ideas or identify a few groupings of ideas. You can use multi-voting to narrow down the list, or you can use an affinity diagram to group the items into common themes.

What if the focus of your brainstorming session is to identify potential causes of a problem? You can use a cause-and-effect diagram, which sorts the potential causes into categories using a fishbone diagram.

The 5 Whys can be used to identify potential sub-causes and sub-sub-causes of the problem. If you have multiple effects, you can use a cause-and-effect matrix to evaluate the causes across all of the effects.

Note that there are many other tools for identifying potential root causes that are not discussed here. For a broader list of tools for idea generation, including information about other basic problem-solving tools and tools for root cause analysis, see the Read About It for this module.