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Statistical Problem Solving

Each of these methodologies provides a series of steps for solving problems. The specifics of each approach are slightly different, but there are four general groupings of activities within each of these methodologies: identifying the problem, identifying the root causes of the problem, implementing solutions, and taking steps to ensure that the improvements are maintained, or sustained.

These activities form the basis of statistical problem solving. If you work for a company that doesn't use a well-defined problem-solving methodology, statistical problem solving provides an intuitive approach.

In statistical problem solving, you use process knowledge, data, and statistical methods as you Identify and clearly define the problem, identify and evaluate potential causes of the problem, identify and evaluate potential solutions, implement solutions, make sure that the changes were effective in solving the problem, and then make sure that improvements are standardized, or sustained. Note that at any point in this process the team might loop back to a previous step, or the process might start over if the problem wasn't completely solved.

In the next lesson, you learn how to clearly define the problem. Then you learn how to define the process that you will be improving and how to identify potential causes of problems within the process. You also learn how to collect data, so you can characterize process variability and evaluate the potential causes.

In the remaining modules, you learn how to use these data and statistical methods to identify the most likely root causes and ultimately solve your problem. For a complete list of topics you'll learn throughout this course, see the Read About It for this module.

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