

## What Is a Process?

A process is any activity, or group of activities, that takes inputs, adds value, and provides outputs to internal or external customers. Any product that is produced, or service that is provided, is the result of a process.

For example, consider eating at a restaurant. You order a side of white rice. You expect to receive your order in a timely manner, cooked just the way you like it. But you only see the end of the process, the final output.

There are many inputs, and there are a series of steps that transform the inputs into this output. This diagram is a simple process map. It's a high-level, or "macro," view of the process that maps the inputs, through the process, to the output (or outputs).

Likewise, you can use a high-level process map to help you and your team understand the process that you are trying to improve. You can build on this high-level map by creating a more detailed map of how the process works.

In this module, we briefly discuss four tools for mapping a process: SIPOC maps, input/output maps, top-down flowcharts, and deployment flowcharts. These tools are invaluable for developing an in-depth understanding of your process. Another tool, value stream mapping, can be used when the focus is on improving efficiencies and eliminating activities that don't add value.

To learn about value stream mapping, see the Read About It for this module. As you start mapping the process, you need to consider the following: Are the process boundaries clearly defined, is the purpose of the process well understood, and what level of detail is needed?

The process boundaries define the beginning and end of a process. By establishing the process boundaries, you understand which activities to include as part of the process.

You define the purpose of the process to make sure that you understand the process from the perspective of the customer. You need to understand the customer's requirements and the customer's definition of quality.

Understanding what the customer requires helps you evaluate which tasks add value to the product or service that you are providing. You also need to determine the level of detail required in defining the process.

There shouldn't be so much detail that the big picture is lost, particularly early on in the project. On the other hand, there shouldn't be so few details that major opportunities for improvement are missed.

Finally, it is necessary for all team members to have an overall understanding of the process. Some members will be more familiar with the process than others, and even the most knowledgeable members might not know as much about the process as they think they do.

To make sure everyone has a solid understanding of the process, you should take these steps: Observe the process in action, interview associates and others involved in the process, interview internal suppliers and internal customers, and review operating procedures or manuals. These steps alone can help you identify many opportunities for improvement.

Statistical Thinking for Industrial Problem Solving

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