The Five Fundamental Principles of Six Sigma – Part 2

This article continues the overview of the five fundamental principles of Six Sigma. The principles outlined by Six Sigma founder Dr. Mikel Harry are:

• We don’t know what we don’t know
• We can’t do what we don’t know
• We won’t know until we measure
• We won’t measure what we don’t value
• We don’t value what we don’t measure

We can’t do what we don’t know

Knowledge is everything.

Without any knowledge of the customer’s needs, how they are experiencing your services, and where performance gaps are located, you cannot take meaningful action to make effective improvements. Without knowledge, the more you will struggle with where to start making improvements and how to approach the problem; and the higher your stress level will be. You will also find your efforts to be disorganized and unfocused, causing your resources to be spread thin; and ultimately, you will not achieve the improvement results you and your customers are entitled to. Worse yet, you might start making changes only to find that your efforts do not apply to the issue, and you have wasted time and resources. Few things are more embarrassing than having ‘improvement’ efforts become part of the problem.

Knowledge enables you to ‘work smarter, not harder.’ Spending time upfront to clearly define the problems and requirements, and fully understand process capability will make it easier for you to put an effective solution in place. You will also be able to do so with the confidence that your efforts will address the root cause(s) of the problem, make positive changes, and give both the organization and customers the results they desire.

One thing about effective improvement methodologies like Lean and Six Sigma is that considerable effort is spent upfront on gathering information, examining customer needs and expectations, identifying factors which directly affect process outcomes, and assessing the organization’s ability to meet the identified needs. Something you should take into consideration during these projects is that stakeholders who do not understand the need for careful assessment, or who come from the mindset of jumping to action

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and putting solutions in place to get ‘immediate and visible results,’ will often get antsy while waiting for you to make your assessment. As an improvement leader, you have to educate your stakeholders on the need for and benefits of these efforts. Once you fully understand the issues and what changes need to be made to get real results, the development and implementation of solutions will happen rapidly.

In the example I used in *The Five Principles of Six Sigma – Part 1*, the team of business leaders who were attempting to improve their customers’ satisfaction took a shotgun approach to solving a problem. They did not realize that they were faced with multiple issues, each with unique requirements to make service better. This was because they did not have the information they needed to identify and focus on specific issues and performance gaps, nor had they defined what good customer service from their organization should look like.

**We won’t know until we measure**

Measurement is vital to increasing knowledge.

“I often say that when you can measure what you are speaking about and express it in numbers you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind: it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science, whatever the matter may be.”

– William Thompson, 1st Baron Kelvin

Lord Kelvin is referring to using measurements to increase one’s knowledge of physical sciences; however, it applies to process improvement as well. You cannot increase your knowledge until you devote the time, energy and resources needed to collect information about your customers’ experiences, their preferences, and measure the current performance and capability of your processes. The information you gather can then be used to assess whether you are meeting your customer’s needs; and if you are not meeting those needs, the size of the gap between your current levels of performance and where they should be. The information will also provide you with a starting point for making decisions about how to best close the gap.

I am sure someone is reading this and saying “I don’t have time to go out and measure or make changes to my processes. I have my hands full just trying to serve my customers now.” I have no doubt that you are busy. Just keep in mind that poor processes produce poor results. If what you are doing does not meet your customers’

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needs or is creating rework for you and your coworkers, then you are not doing anyone any favors by not taking the time to measure and make improvements. You might have to wait for a time of the year when demand for your services lessens a bit (such as between semesters), or you may have to put in extra time to do the work, but in the long run, taking the time to measure and improve your processes is worth the effort.

In Part 3 of this article series, I will wrap up this overview of the Five Principles of Six Sigma with a look at measuring what we value. As always, I welcome your questions or comments about this topic or any others related to service and process improvement. You can email me at clayton.taylor@asu.edu.

About the author:

Clayton Taylor, MBA, is the Director, Organizational Performance and a Certified Six Sigma Master Black Belt working in the Office of the Executive Vice President, Treasurer and Chief Financial Officer at Arizona State University. He leads the Organizational Performance Office. He and his team currently consult with diverse Business and Finance and university-wide operational areas to lower costs, improve operational efficiency and provide the highest quality customer experience to internal and external customers. Mr. Taylor can be reached at clayton.taylor@asu.edu.