## The 5 Minute Talk on Reducing Variation

By Timothy J. Clark

In 1924, Dr. Walter Shewhart of Bell Labs discovered an innovative yet simple way to manage variation. His breakthrough is similar to the discovery that the earth was not flat, in that it is so revolutionary, that it too will take over a century to be considered common knowledge.

All action is accomplished through a process and system. Shewart's methods help determine when change to a system or process is needed, the type of action needed and how to determine if the change resulted in an improvement.

Dr. W. Edwards Deming, who has been recognized for his contributions in expanding upon Shewhart's concepts and promoting application of the methods worldwide, remarked that if he had to reduce his message to just a few words, it all had to do with reducing variation...

...which begs the question "Reduce variation from what?"

#### Variation

Variation is a law of nature that states that everyone and everything is unique— one of a kind. No two things are ever exactly alike. It is the difference between an ideal outcome and the actual situation. An ideal result represents a standard of perfection as defined by yourself and others. You can strive for but never achieve that ideal situation—a fact that makes continuous improvement and progress possible. (ASQ What is the Law of Variation?)

# **Expanded Description of Variation**

Typically, the term variation has been defined in statistical and scientific terms, which has limited its applicability and understanding on a broader basis. To relate the concept on an individual basis, consider the example of personal health and fitness.

For purposes of discussion, let's presume that if we do everything under our control regarding our diet and exercise habits, we will live longer and have a quality of life that benefits ourselves and others – stakeholders would include family, friends and the community.

Given the variation principle, it's a fact that you will never have the ideal quantity and quality of exercise, vitamins and nutrients required for perfect health. There will always be a difference between the ideal outcome and the actual. In other words, there will always be "variation."

Now this difference can be thought of as a problem. But considering the variation principle, a problem represents a judgment that the variation is unacceptable. For example, hunger is a problem, but it also represents an unacceptable degree of variation. When you eat something to satisfy the hunger, you now have an acceptable degree of variation. Variation always exists and either gets better or gets worse. In other words, you are either making progress in implementing and sustaining a healthier diet and exercise program or you are risking an earlier death and a poorer quality of life by sustaining current habits and routines, e.g., the status quo.

Using the health and fitness metaphor, consider the health and fitness within your organization, community, or country. In embracing the new perspective, the immediate steps are to identify the ideals and implement solutions that will result in making progress toward those ideals. To help make the case for change, it also helps to identify the cost and risk of doing nothing. Ploty points

# **Simple Actions, Powerful Results**

Sometimes, simple actions can be taken that can have immediate and significant impacts.

When it was accepted belief that the earth was flat, learning that it was not flat would have been as easy as getting on a ship to discover new worlds. I am going to propose a simple challenge that will take you only a few minutes to do but has the potential to change your perspective and improve the quality of your problem-solving and decision-making skills.

Among the best ways to understand variation is to develop a run chart. An easy way to get started is for you to weigh yourself 24 times within a period of 30 days and record the data by date and time. When you have the 24 data points, calculate the average and plot the weight and median on a run chart.

## Assess your knowledge of variation?

The final step in the exercise is to determine if you lost weight, gained weight or stayed about the same. This simple exercise will provide the basic knowledge for assessing the outcomes from a system or process, no matter whether it is in your personal life, organization, community, or country.

I hope you choose to take the challenge to learn more about variation. I also hope that you will apply what you learn with the aim of helping to improve your organization and your country. The result may be a "healthier" quality of life for us all.

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