

The Meaning of Six Sigma

Six sigma has different meanings to different people. Some believe it is all about reducing variation, while others believe it's strictly a quality improvement method. While reducing variation leads to quality improvement when the target is met, there are broader meanings to the term six sigma and "six sigma initiative".

Many successful six sigma initiatives have reducing variation as one of the tools, but the broader meaning is to improve the business. Six sigma is used to improve the business systems as a whole, often having quality as an underlying edict.

For example, a hospital may use six sigma to improve the occupancy rate, improve bed turnover, reduce emergency room wait time, and reduce administrative check in cycle time. All of these initiatives have a little bit to do with quality, but have a different overall objective.

There are many tools included in the six sigma discipline. To name a few, there is the CT tree (critical to quality, cost, schedule, etc), cause and effect matrix, (FMEA) failure mode and effects analysis, DOE (design of experiments), hypothesis testing, analysis of means and standard deviation, advanced statistical analysis. There are many others within the discipline that a trained black belt will explore and use when necessary.

It is important for six sigma practitioners to understand the overall goals and objectives rather than picking projects that enable the use of six sigma tools. Once the goals and objectives are determined in the Define phase of the DMAIC model (Define-Measure-Analyze-Improve-Control), the six sigma green and black belts will methodically choose the tools necessary to solve the challenges.

Anyone that has been involved in any continuous improvement activity in the business world knows how far most businesses are from perfect. Most business problems do not involve advanced statistical analysis to solve. This fact is one reason many six sigma projects are solved very early. It isn't always a mystery that must be solved, but simple investigation and then execution.

Defining six sigma projects is the most important part of the initiative. Some projects may not really require six sigma tools. The goal is to solve business problems, using any improvement method. Although advanced tools many not be necessary, the DMAIC model works well even for simple projects.

Some black belts prefer to determine if the project is worthy of consideration to be classified a "six sigma project". Some groups prefer to leave these "easy" projects for others while the black belts use their skills on more complex problems. While this may be fine for some groups, it also has the potential to distance the black belt from the real issues in the organization.

Many books describe the typical six sigma group as including sponsors, champions, master black belts, black belts, and green belts. Their respective roles are defined very clearly. While this may work well for very large corporations, many six sigma black belts are now being employed as a one person change agent. When a six sigma black belt is hired as the only change agent in the organization, rarely would a company wait six months for projects to be completed. Obviously, six sigma has a different meaning for this organization than a conglomerate with 100 black belts.

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