

Six Sigma (Motorola Standard Certified) – Continuous Improvement

Leadership Jumpstart – 1 day

Champion Training, Six Sigma Foundation – 2 days

Yellow Belt – 2 days

Green Belt – 3 days

Black Belt – 15 days

(Target Audience : Senior Management)

(Target Audience : Senior Management)

(Target Audience : Team member basic)

(Target Audience : Team member intermediate)

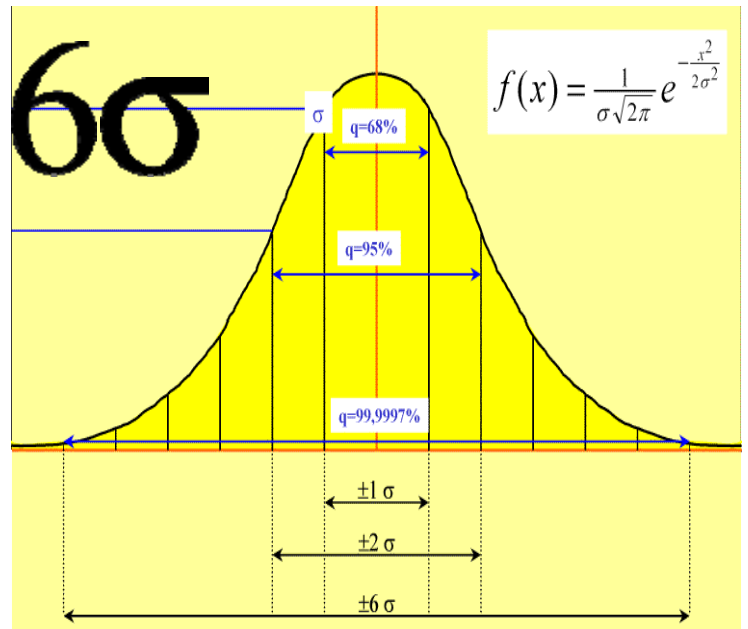
(Target Audience : Team member advanced)

What is a Six Sigma and how will it help my workplace?

6 Sigma is a statistical term that measures deviation from the process mean or target. The figure of six was determined statistically by looking at the current average performance levels of most business enterprises. Six sigma programs are applicable to any business process in any industry. It has proven to be successful for telcos, utility companies, financial services, energy, transportation and manufacturing enterprises. Six sigma programs utilized efficiently will reduce defects, produce superior quality and ultimately ensure long term profitability of any enterprise. Typical ROI (return of investment) scenarios are between 1:10 and 1: 50.

Overview:

- ✓ Leadership Jumpstart - To align the Six Sigma Business Improvement Campaign with your overall business strategies and goals. The result of the Jumpstart is a set of high impact projects for implementation and your Six Sigma Campaign Plan
- ✓ Champion Training – Six Sigma champions receive intensive training that prepares them for managing resources in a six sigma environment and conducting ongoing project reviews
- ✓ Yellow Belt – An Introductory session to statistics and covers a subset of the Green Belt Program.
- ✓ Green Belt – Green Belt training cascades Six Sigma approaches and techniques throughout your organization. Green Belts receive training that covers a subset of the comprehensive
- ✓ Black Belt program – Black Belts are experts in applying statistical process control techniques to improvement opportunities. The program is four weeks over a four month time frame and is constructed upon the DMAIC methodology. As participants complete each segment of training, they will immediately apply the concepts and tools learned to the projects you've identified



You can never change something,
By fighting the existing reality!

History of Six-Sigma

Developed by Motorola in the 1980s, Six-Sigma has proven itself to be a practical, robust and through scientific approach to process quality improvement and control. Through their internal Green Belt and Black Belt training, Motorola reported savings of \$2.2 billion dollars in a four-year time frame after implementation, and subsequently released the methodology openly, resulting in many corporations such as Texas Instruments and General Electric becoming champions for the ability to achieve huge successes. Six-Sigma has continued to grow becoming one of the most widely adopted quality methodologies in all types of businesses worldwide.

Six-Sigma is the scientific study of a process, through the capture and analysis of data, with the desire to more accurately control the process to achieve a more consistent output. Six-Sigma follows the DMAIC process, which provides a step-by-step problem solving framework. The problem is first Defined, then a Measurement is taken, the data is then Analysed, and Improvements are devised and implemented and then the new process must be Controlled to ensure the improvements are locked in.

The most effective implementation of Six-Sigma is to processes that are:

- very repetitive,
- are standardised,
- are relatively stable or have the need to become stable, and;
- have outputs and inputs that can be measured.

You can see from the above process definition why the highly complex, highly automated, fast moving, data driven manufacturing processes of creating mobile communication equipment at Motorola gave birth to the Six-Sigma methodology.

As well as a highly effective problem solving methodology, the Six-Sigma process places a large emphasis on the Control of processes. Statistical Process Control (SPC) is a tool within the Six-Sigma toolkit which allows processes that have been brought into control to be monitored, to ensure that when an abnormal change is detected, an appropriate reaction is taken early enough to prevent the creation of defective product.

The Six-Sigma process is very powerful, but it takes a significant amount of training and experience to ensure that the tools are used correctly, and hence the subsequent conclusions are valid. Every project and every process has a different set of requirements for the application of the Six-Sigma toolkit, so the Six-Sigma professional continues to improve his skills in every project he is involved in. A belt framework exists (Yellow, Green, Black, Master Black) to define levels of Six-Sigma understanding, but there can still be a significant amount of variation in capability between individuals within each belt.

The most successful examples of Six-Sigma implementation are from organisations that have a controlled structure of professionals within each belt, and have a culture of support for the Six-Sigma methodology at all levels of management. Six-Sigma projects are continually assessed, monitored and reported and individuals are supported to build their skills, while delivering cost savings for the business.

Yellow Belt training is a 1 day introduction to Six-Sigma with participants intended to participate in projects (Yellow Belts are not expected to lead projects).

Green Belt level is where the Six-Sigma journey really begins. Green Belt training is facilitated over 3 days, with the highest quality students having had an experienced (Master) Black Belt deliver the training face-to-face, and participating in a simulation to allow them to practice the skills immediately for better understanding and retention. Green Belts lead smaller improvement projects, with support from Black Belts.

Information Sheet

What is ... Six Sigma: Black, Green & Yellow Belts

Black Belt level is where the true power of the Six-Sigma methodology is able to be unleashed. Black Belt training is facilitated over 15 days which must be provided face-to-face by an experienced Master Black Belt. The coaching provided by a Master Black Belt through a simulation exercise during the training is invaluable as it allows the translation of theory into real action and provides the student with a stepping stone to build their confidence to tackle issues outside the classroom. Black Belts are usually dedicated full time to the training and mentoring of Green Belts and their projects in addition to leading 4-6 Black Belt projects per year that save companies approximately \$230,000 per project.

Master Black Belts are very capable individuals which have had a number of years full time experience in leading Six-Sigma projects and have a thorough understanding and ability to apply statistical methods. Master Black Belts would usually be dedicated full-time to the training and mentoring of Green and Black Belts and the management of Six-Sigma projects within the organisation.

What is the difference between Lean & Six-Sigma?

Lean is based on the Toyota philosophy from the 50s and Six-Sigma is the Motorola philosophy from the 80s. Both approaches have their own strengths and both have a fair amount of overlapping principles. Sometimes the terms Lean and Six-Sigma are used separately, sometimes interchangeably, and sometimes they are combined as "Lean Six-Sigma".

The most common overlapping principle is the holistic continuous improvement mindset. Both methodologies teach the necessity in having a vision and goals to improve business systems, and then a trust in the methodology to deliver the savings. Most importantly, management must invest time, resources and trust in its people to allow them to learn the methodology, do the analysis, and implement the improvements, as only after this cycle is complete will the payoffs begin to flow.

The Lean and Six-Sigma streams also require the fundamental skill of the ability to identify the customer, and recognise that any process that does not add value to the customer is waste. After this knowledge is established, the Lean and Six-Streams move to teach more advanced tools as to how to eliminate this waste. Lean and Six-Sigma are different toolkits that are used to improve different types of processes.

Traditionally, Lean training is less structured, as a person working in a Lean organisation such as Toyota would be surrounded by systems, people and a culture of Lean. Just like being in a foreign country and having to adopt a new language, Lean becomes a language that each person learns and continues to develop as they implement it on a daily basis. In contrast, and due to the complexity caused by the focus on data and statistics, Six-Sigma practitioners are given formal training, are assessed, and progress through structured levels (Green, Black, Master Black).

One advantage to Lean is its ease and speed in implementation. This means paybacks are often seen sooner than Six-Sigma projects. This also means that in the same period that one Six-Sigma project can be completed, many Lean projects can be completed to make many smaller improvements.

One advantage to Six-Sigma is its extremely robust conclusions due to its use of statistical methods to analyse real data.

Vative's material and certification standards were developed with the help of Motorola Australia, and Vative were previously a Motorola University certifying body, before the Motorola University was discontinued. Vative also has a number of ex-Toyota employees which has ensured our Lean standards capture the essence of the Toyota Way. We continue to work closely with Motorola on defining Lean and Six-Sigma standards for both their organisation and the LSSSP (an international certifying body).

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What is ... Six Sigma: Black, Green & Yellow Belts

I have seen a company that provides certification for \$199! What is the difference between different certification providers?

The benchmark implementation of Six-Sigma in an organisation is for internal experienced Six-Sigma experts to provide face-to-face training and simulation in a classroom to new belt candidates, and then continue to provide coaching and support while these belt candidates implement their first projects, and build their skills. A certification is given to these candidates after they have successfully delivered a number of projects, and demonstrated their ability to apply the theory.

Since Motorola developed Six-Sigma, and its effectiveness has been proven in many large firms worldwide, many more companies have become interested in using the methodology to achieve their own savings. Unfortunately there have many more businesses that fail at Six-Sigma then succeed, and it is often because they underestimate the amount of knowledge and experience required to apply Six-Sigma tools effectively and efficiently. There is no short-cut to Six-Sigma savings as the further away you move from the benchmark model described above, the less successful you are likely to be.

Developed in conjunction with Motorola, the LSSSP structure is based on the benchmark model developed by Motorola which requires both an exam and a demonstration of skills through project implementation.

The Six-Sigma theory is available in hundreds of different books. Vative's mission is to improve people, businesses, and society; not to simply provide training material. As an external provider, Vative tries to best replicate the benchmark model of Six-Sigma implementation, by using experienced Six-Sigma facilitators, simulations, certifying through the LSSSP structure, and providing coaching and support to the certification candidate.

Vative welcomes any suggestions as to how an external provider could better transfer the knowledge, skills and experience required to an aspiring Six-Sigma professional. Visit the Lean Six-Sigma training section of our website to find out more on how to do Yellow Belt Training, Green Belt Training or Black Belt Training.