Six Sigma Green Belt Training

Target group

Employees *from all business sectors*, who successfully want to execute the project to solve quality issues with a systematic problem-solving approach.

What is Six Sigma?

Six Sigma is a systematic methodology to reduce process variation in order to solve quality problems, improve process capability and to obtain robust processes.
As a first step customer requirements and needs have to be truly understood, after which they can be converted into measurable criteria that are to be met by the process.
By the use of different tools and techniques possible factors are determined, analysed with data and following their effects verified and quantified.
Simultaneously, the variation of the measurement system has to be checked and quantified.
Not until the critical factors and their effects are known, possible solutions can be collected and assessed. Possibly a test run is performed before the implementation of the final solution is planned, executed and monitored in order to ensure measurable and long-term results.

Besides the classical application of the Six Sigma methodology in the area of manufacturing, Six Sigma finds more and more usage in all organisational processes, like administrative and service processes.
Everywhere, where mistakes are made and quality as result of a process is not satisfactory or acceptable, Six Sigma can help to understand the true causes causing the variation.

The Six Sigma training and the improvement projects are conducted according the DMAIC-methodology.

Preconditions

Definition of a process improvement project within the organisation of the participant for the application of the learned Six Sigma methodology and tools. Project work between the modules and presentation of the project's progress is expected.
We expect participants to be able to work with a PC (Excel, PowerPoint) and to bring a laptop with the installed software Minitab to the course. Affinity to application of statistical methods is advantageous.

Learning objectives

After this training, participants

- understand the systematic approach of the Six Sigma methodology,
- are able to apply the Six Sigma tools,
- can solve problems in a systematic, analytic way,
- can autonomously conduct Six Sigma projects.

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Training

- This course has a duration of 9 days (split in modules of 4 days– 3 days – 2 days) over a period of 3 - 4 months. The training consists of a unique mix of theory, practical applications and room for project related case studies.
- The course and the materials can be provided in English or German language.
- A written exam on the last day of the training measures how well the Six Sigma training content and application of tools have been understood.

Investment

The investment per candidate is CHF 5‘900.- (excl. VAT) for the training, printed course material, catering and training facilities.

Project Coaching

The participants are expected to present during the modules the progress of their projects. This enables project coaching of the trainers and the other course participants. Between the modules, the participants have the possibility to contact the trainer via telephone or email for questions regarding the application of Six Sigma tools on their project. Additional project coaching can be offered on request.

Certification

After attendance to the course, the participants receive the Six Sigma Green Belt training certificate. The Six Sigma Green Belt certification can be provided by Bcos, in case all below mentioned conditions are met:

- personal participation to all course days,
- successful passing of the course exam,
- the application of the Six Sigma methodology on a project within the company or organisation of the participant, examined by a Bcos Six Sigma Master Black Belt and
- long-term project results confirmed by the company.

Training content

Define

- Project Charter
- SIPOC
- Stakeholder analysis / VOC / CTQ

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Measure
- Flow Chart
- Ishikawa
- Priority Matrix
- Data Types and the fundamentals of statistics
- Normal Distribution
- Graphical analysis (Histograms, Dotplot, Boxplot, Time Series Chart, Pareto Chart, Scatterplot)
- Control Chart
- Data collection plan , sampling and confidence interval
- Measurement System Analysis
- Process Capability Analysis

Analyse
- Hypothesis testing (mean, variance, median)
- Regression analysis (simple linear)
- Multi-variance analysis
- Design of Experiments (Trial and error, OFAT, full factorial, fractional factorial)

Improve
- Generate solutions, creative techniques
- Solution evaluation matrix
- FMEA
- Implementation plan

Control
- Standardisation
- Monitor the results
- Project completion and documentation

The training meets the requirements of the American Society for Quality „ASQ“ and the quality standards for training and certification of Green Belts and Black Belts, of the European Six Sigma Club Deutschland e.V. and exceeds the requirements of the ISO Norm „Quantitative Methods of process optimisation - Six Sigma“ part 1 „DMAIC Methodology“ (ISO 13053-1:2011-09) and part 2 „Tools and Techniques“ (ISO 13053-2:2011-09).