
Lean Six Sigma Black Belt (according ASQ)

Fast Lane to Lean Six Sigma Black Belt

You are aiming for a Lean Six Sigma Black Belt certification. Combining is worthwhile. You go through our 20-day combined certificate training "Lean Six Sigma Green & Black Belt" according to ASQ standards). We have planned the training dates so that you can complete your training within four to six months. The training takes place in classroom and live-online format.

- ▮ You invest less compared to the 20-day Lean Six Sigma Black Belt certification and receive a price advantage compared to booking Lean Six Sigma Green Belt and Lean Six Sigma Black Belt - Advanced Training for Green Belts individually.
- ▮ Project benefit: You lead a complex Six Sigma project at Black Belt level in parallel to the certification instead of two projects (Green Belt project, Black Belt project).
- ▮ Additional project coaching at special conditions:
Our individual project coaching service is available for you as a Black Belt candidate. Our Master Black Belt coaches you personally and individually. You may order an online project coaching of 60 minutes. You can call up the coaching individually during the qualification. The smallest coaching unit is 30 minutes.

In the first 4 modules of the Lean Six Sigma Green Belt training, participants learn about the overall system of a Lean Six Sigma organization and understand their role as a project manager in this complex network. They learn to use alternative Six Sigma methods or Lean principles to realize their improvement goals. After the training, they master the basic rules of project management and can structure their approach into the DMAIC phases according to Six Sigma.

In the following 3 modules, the participants' qualification as successful project managers is deepened to Black Belt level. This includes elements of team leadership and rational analysis of the project environment. In addition, advanced methods from the LEAN toolbox are used by the Black Belt to systematically identify and consistently eliminate waste. During the training, participants work intensively on case studies and practical examples, thus sharpening their Six Sigma skills. In-depth statistical and software-based possibilities are presented that go beyond normal distribution and enable the Black Belt to crack even the hard statistical nuts. In addition, the participants in the training deal in depth with the methods of experiments and tests (Design of Experiments). In addition, there is the comprehensive use of process control with control charts (SPC) and the mastery of control loops. As a final element, the necessary steps for the successful implementation of changes are covered.

Target Group

Process owners and engineers, project managers and specialists for quality, process optimization and improvement in the company.

Requirements

Certification as a Lean Six Sigma Black Belt requires passing both the Green Belt and Black Belt exams.

Your Benefits

- ▮ You will get to know the overall system of a Lean Six Sigma organization and understand your role as a project manager in this complex network.
 - ▮ You will learn to use alternative Six Sigma methods or Lean principles to realize your improvement goals.
 - ▮ After the training, you will have mastered the basic rules of project management and will be able to structure your approach into the DMAIC phases according to Six Sigma.
 - ▮ You will acquire in-depth statistical and software-based capabilities that are beyond normal distribution
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- | You will master the use of process control with control charts (SPC) and control loops.

Methods

- | Interactive impulse lectures with the opportunity for discussion and exchange
- | Group work and learning exercises that are fun to do
- | Practical project studies
- | Examples from the trainers' consulting practice
- | Individual feedback
- | Collegial consultation and practical transfer

Key Features

Green Belt Level Focuses:

Basics

- | Lean Six Sigma Guiding Principle and History
- | What is Six Sigma? What is Lean?
- | Lean systems and methods
- | Six Sigma improvement methods
- | Lean Six Sigma experiences and successes in other companies
- | Six Sigma organization and performers in the process
- | Identifying improvement potentials
- | The DMAIC project phases

Project management

- | Understanding the role of a Green Belt
- | Stakeholder Management
- | Change management - dealing with resistance
- | Effective team leadership

Define-Phase: Project definition und Project assignment

- | The voice of the customer
- | Translating customer needs into project objectives
- | Narrowing the scope of the project - SIPOC
- | Creating the project brief
- | Evaluation and follow-up of the definition phase

Statistics

- | Introduction to Statistics
- | Introduction to MINITAB®

Measure-Phase: Prozesse verstehen und bewerten

- | Detailed description of the process in the critical areas
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- | Adding Lean related metrics to the process flow
 - | Determine current process performance
 - | Determine the process capability related to the performance target

Analysis phase: Analyze process and determine parameters

- | Analyze the process for lean potential
- | Capturing the process with the value added analysis
- | Analysis of potential waste
- | Cause and effect to identified problems (Ishikawa diagram, 5-W method)
- | Correlation analysis, cause and effect relationships in data
- | Analysis of variance with the multi-vari diagram

Improve phase: Improve processes

- | Finding creative solutions with brainstorming
- | Developing the new ideal process flow
- | Selection criteria for improvements
- | Risk analysis of improvements - FMEA
- | Implementation plans
- | Piloting the change

Control phase: Ensuring sustainable improvements

- | Documenting the change
- | Active change management
- | Establishment of process control
- | Lessons learned analysis

Black Belt Level Focuses:

Company impact

- | Corporate perspective and leadership
- | Organizational goals and motivation
- | History of process improvement - The foundation of Six Sigma

Business Process Management

- | Process vs. organizational structure
- | Voice of the Customer (VoC) - collect, analyze data and determine critical customer requirements
- | Business results: Key performance indicators, benchmarking, financial benefits

Project management

- | Project assignment and planning
 - | Team management
 - | Team dynamics and performance
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- | Change agent - managing change - dealing with resistance
 - | Management and planning tools

The lean company (LEAN+)

- | The LEAN concept: Theory of Constraints (ToC), value creation and waste, lead time reduction.
- | The LEAN tools: Visual factory, SMED, Kanban, Poka-Yoke
- | Total Productive Maintenance (TPM)

Define-Phase: Project definition and project assignment

- | Project definition and delimitation
- | Project parameters (Q, K, L)
- | Project description

Measure phase: understand and evaluate process

- | Process representation and documentation
- | Probabilities and statistics
- | Collecting and summarizing data
- | Properties and application of value distributions
- | Measurement system: measurement methods, metrology
- | Process capabilities

Analysis phase: Analyze process and determine parameters

- | Descriptive data analysis: Multivariate studies, describing relationships between variables.
- | Hypothesis testing including statistical vs. practical significance; point and interval estimates, comparison test, goodness-of-fit test, ANOVA

Improve-Phase: Improve processes

- | Design of Experiment (DoE)
- | Effect Area Diagram. Design and organize experiments, design principles, single factorial and full factorial
- | Design and analyze experiments, the Taguchi robustness concept, mixing experiments.
- | Concept of evolutionary change (EVOP).

Control-Phase: Ensure sustainable improvements

- | Statistical Process Control
- | Advanced Processcontrol
- | Measurement system post analysis

Design for Six Sigma (DfSS)

- | Quality Function Deployment (QFD)
 - | Robust design and robust processes: Calculate noise strategies, tolerance design, tolerance and process capability.
 - | D-FMEA vs. P-FMEA and business process FMEA
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Design for X: Cost, manufacturability, quality, test

Final day and certification

A passed Six Sigma Green Belt test and a passed Six Sigma Black Belt test, as well as the successful completion of the own Black Belt project will be certified with a Black Belt certificate.

The written Green Belt exam takes place on the 9th day of the training.

The written Black Belt exam takes place on the last day of training.

A project was successful if it clearly reflects the application of Six Sigma methods and if the improvements were successfully, i.e. profitably, implemented in the company. The Black Belt certificate requires a training-accompanying, documented project work.

The training procedure and the training contents of our qualification correspond to the model of the American Society for Quality (ASQ).

The qualification meets the requirements of the international Six Sigma standard "Quantitative Methods in Process Improvement - Six Sigma":

Part 1: DMAIC Methodology - ISO 13053-1:2011.

Part 2: Tools and techniques - ISO 13053-2:2011

Duration

20 days

additional time for homework and project hours

Certificate

Certification by GRUNDIG AKADEMIE
