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Sign up

Lean Six Sigma Green Belt Certification Training

ALL-IN-ONE: EXAM INCLUDED IN PRICE

5 days (35 hours)

Presentation

Lean Six Sigma Green Belt is an intermediate-level certification in continuous improvement. It enables you to manage process optimization projects by combining the rigor of Six Sigma methods with the agility of Lean tools.

Our Lean Six Sigma Green Belt training course will enable you to master the entire DMAIC approach and use analytical and statistical tools to solve complex problems in a technological or IT environment.

You'll be able to measure process performance, analyze the root causes of variability, generate sustainable solutions, and implement a control plan to guarantee the sustainability of the gains achieved.

Lean Six Sigma Green Belt prepares you to structure high value-added improvement projects, to manage Yellow Belt employees, and to actively contribute to your organization's operational performance.

Following this course, you will be able to manage a DMAIC project from start to finish, and pass the internationally recognized Green Belt certification.

Like all our training courses, this one is based on the latest Lean Six Sigma practices.

Objectives

- Understand and apply the DMAIC method to structure improvement projects
- Use Lean and Six Sigma tools
- Reduce variability, lead times and defects in a tech process

- Map, measure, diagnose and optimize high-value processes
- Manage a Lean Six Sigma Green Belt project independently
- Pass the Green Belt certification exam

Target audience

- IT project managers
- Data Analysts
- Product Owners
- DevOps

Prerequisites

- Experience in data analysis
- Yellow Belt certification is a plus but not mandatory

Introduction to Lean Six Sigma

- Origin and evolution of Lean and Six Sigma
- Common objectives: performance, quality, customer value
- Role of the different belts (White, Yellow, Green, Black)
- Lean Six Sigma in technological environments
- Overview of the DMAIC cycle
- Scope of Green Belt action within the company

Performance culture and continuous improvement

- Lean thinking: value, flows, waste
- Six Sigma: variability, defects, data
- Operational performance vs. perceived performance
- Incremental improvement vs. radical transformation
- Importance of data in decision-making

Launching a Lean Six Sigma project

- Identify improvement opportunities
- Define project scope
- Draw up a Project Charter
- Identify stakeholders and sponsors
- Analyze the Voice of the Customer (VoC)
- Identify CTQs (Critical To Quality)
- Workshop: Creating a project charter based on a real or simulated case study

Understanding and describing processes

- Defining a business process
- SIPOC mapping (Suppliers, Inputs, Processes, Outputs, Customers)
- Visualizing flows and responsibilities
- Introduction to Value Stream Mapping (VSM)
- Identifying waste in a tech process
- Selection of process performance indicators
- Workshop: SIPOC or VSM mapping of a tech process (support, dev, deployment)

Measure phase: measure current performance

- Data collection plan: what, how, how much
- Differences between continuous and discrete data
- Validation of measurement systems
- Basics of descriptive statistics
- Presenting data: histograms, Pareto, box plots

Descriptive statistical analysis

- Mean, median, mode, standard deviation
- Normal vs. abnormal distribution
- Control charts (X-bar, R, p...)
- Process capability measurement (Cp, Cpk)
- Tracking performance over time
- Preparing data for analysis
- Workshop: Statistical analysis of a business dataset (response times, incidents, etc.)

Analyze phase: root cause analysis

- Systemic root cause approach
- Ishikawa diagram (cause-effect, 5M)
- 5 Whys technique
- Correlation between variables: visualization and calculation
- Introduction to hypothesis testing (t-test, chi²...)
- Selection of critical causes (vital X's)
- Workshop: Diagnosis of a quality problem or bug using the 5 Whys and the Ishikawa diagram

Validation of hypotheses and data

- Formulating statistical hypotheses
- Use of a simplified experimental design (DoE)
- Notion of p-value and interpretation
- Checking cause-and-effect relationships
- Avoiding analysis bias

Phase Improve: generating and testing solutions

- Idea generation techniques (brainstorming, 6-3-5...)
- Sorting and evaluating with the Effort/Impact matrix
- Launching pilot projects
- Notion of PDSA / PDCA
- Selection of robust, measurable solutions
- Workshop: Designing an improvement plan for an unstable process

Variability reduction and reliability

- Types of variation (common vs. special)
- Process standardization
- Implementation of standard operating rules
- Example: integration of checklists, automatic logs, DevSecOps
- Impact of standardization on quality

Phase Control: sustaining results

- Drawing up a control plan
- Follow-up of post-project indicators
- Statistical process control (SPC)
- Facilitating performance routines (obeya, daily, visual chart)
- Change and resistance management

Lean Six Sigma project management

- Green Belt roles and responsibilities
- Project communication (A3 sheet, pitch, summary)
- Tracking costs, gains, deadlines, ROI
- Project dashboards
- Relationship with Yellow Belts and Black Belts

Business applications and tech use cases

- Improving a technical backlog
- Reducing bug and rollback rates
- Optimization of an IT support or MCO process
- Reduce delivery cycles or SLA response times
- Improved stability of dev/test/prod environments

Green Belt certification preparation

- Exam structure (CSSC, IASSC, ASQ)
- Types of questions, classic pitfalls
- Simulators and mock exams
- Review by DMAIC theme
- Logistical organization of the exam

- Workshop: Mock exam + group debriefing (corrections with arguments)

Post-training follow-up and skills upgrading

- Formalization of your 1st Lean Six Sigma project
- Reporting tools for sponsors
- Roadmap to Black Belt level
- Access to Green Belt / Lean communities
- Resources, additional certifications, mentoring

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced IT technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the forthcoming course, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical training: 60% hands-on, 40% theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Certification

A certificate will be awarded to each trainee who has completed the entire course.