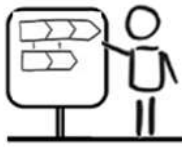


## Lean Six Sigma Black Belt Training

The Black Belt training provides the broadest portion of techniques and skills in the area of process improvement with LSS methodology.

All tools and techniques are discussed in great detail. An enormous emphasis is placed on practicing data analysis, process analysis and statistical process control tools (by means of simulation and Minitab applications). A Black Belt must be a top facilitator, which is why great attention and practical exercises are devoted to this role, as well as to the part of focusing on communication with key managers, process “stakeholders” and on techniques for change implementation and management. The training is completed with certification and the granting of a LSS Black Belt diploma.



**Black Belt training is the most comprehensive training program in the field of process optimization.**

### Typical cases

- You need to train Lean Six Sigma professionals for your company.
- You need to be an expert in data analysis for your process.
- Green Belts showed value and now you want to develop them.
- Your company already uses some process improvement tools and you want to set a structured framework to it.

### You will learn to

- Deploy process improvement into organizations
- Manage large process improvement projects
- Create, lead and motivate a dedicated project team
- Identify potential root causes of problems
- Analyze collected data and identify key root causes of problems
- Suggest the best solution, proceed with the pilot and implementation of process improvements
- Evaluate financial benefits of the project
- Communicate project results to stakeholders



## Modules and project management approach



The training course is divided into 2 to 3 months during which instruction and work on real projects is combined. This method provides assurance that a Black Belt will be 100% ready to optimize processes in a company and will deliver considerable financial benefits.

For the detailed agenda of the training, please see next page.

## Certification

After completing the Lean Six Sigma Black Belt training and successfully passing a final test, we will give you a certificate of successful completion of the Black Belt course. A candidate can continue on with a “Certified Lean Six Sigma Black Belt” certification. The certification process is already included in the course price.

## Basic training attributes

<b>Duration</b>	13 days
<b>Target group</b>	Process managers, project managers, process owners
<b>No. of participants</b>	10 – 15
<b>Language</b>	English, Czech

## References

Vodafone | Škoda Auto | GE Money | RWE | Bombardier | Societe General | Fritzmeier | Czech Railways | Kapsch | Panasonic | Continental | Ab Inbev | O2-Telefonica | ČSOB – KBC Group | VUB bank | ČEZ | Miele | Raiffeisen Bank | Ozbrojené sily Slovenskej republiky

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## Black Belt Agenda

### Intro to Lean Six Sigma

- Lean Six Sigma Methodology
- Project approaches - DMAIC and DMADV, 8D
- Process opportunity identification (VSM, Process Models, Audits, KPIs, Balanced scorecard)
- Process problem definition – Advanced
- DFSS – Process Design – principles
- Change Management
- Lean Six Sigma deployment – how

### 1. DEFINE

- Work with the team
- Facilitate kick-off workshop
- Project planning
- Stakeholder analysis
- Scoping the project, Quad of aims
- Project objectives, VOC and CTQ
- Process requirement analysis (KANO)
- Project risk, P-FMEA
- Cost of poor quality (Business Case)

### 2. MEASURE

- Process Mapping - Advanced
- Value Stream Mapping (VSM)
- Identification of Root causes -Advanced
- Working with data – Statistics
- Preparation of data collection
- Sampling theory, Rational subgroups
- Measurement System Analysis (continuous, discrete Gage R+R)
- Capability Indexes Cp a Ppk, Yields

### 3. ANALYZE

- Graphical analysis (Plotting the data)
- Hypothesis testing – procedures, types of the tests, practical simulation
- Correlation Analysis
- Regression analysis (Linear, MLR, discrete)
- Process Analysis (Time, Value, Takt Time)
- Productivity analysis, People, Machines
- Hidden factory

### 4. IMPROVE

- KAIZEN workshops
- Creative techniques for problem solving
- DOE – Design of experiments –
- Process balancing
- Solution selection
- Implementation plan

### 5. CONTROL

- Process FMEA – risk control RPN
- Dashboarding – KPIs
- Control plans, QC charts
- Control charts – SPC Advanced
- Process documentation
- Transfer to process owner