

Lean Six Sigma -Black Belt (duration 77 hours)

Description:

Interest in Lean Six Sigma has been growing steadily over the past few years. But what is Lean Six Sigma? This course will introduce you to the fundamental concepts of the Lean Six Sigma philosophy, its process, and will enable you to understand and use the concepts, principles and tools of Lean Six Sigma and the DMAIC methodology.

It will help you to successfully participate in your organization's Operational Excellence program. First, you will see how a lack of quality can affect your organization. You will learn the meaning of Lean Six Sigma and the essential elements of its approach.

The "Lean Six Sigma - Black Belt" training will allow you to approach a clear and simple framework, oriented towards customer satisfaction, expense reduction, better performance and a higher level of quality within your organization. Since we believe in "training in action", we have integrated in the training a practical simulation workshop allowing you to "live" the different concepts of continuous improvement and waste elimination.

Upon completion of the course, you will have acquired a thorough understanding of Lean Six Sigma. You will be able to identify processes requiring improvement and lead improvement projects within your organization. You will know how to respond to the Six Sigma challenge and develop a culture focused on its use, playing a central role as a catalyst to achieve this target.

The goal is to provide participants with training in the recognized concepts, tools, and fundamentals of Lean Six Sigma at the Black Belt level and to prepare participants who are interested in taking the American Society of Quality (ASQ) Lean Six Sigma Black Belt certification exam, an internationally recognized certification.

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Objectives and Content

- Context
- Objectives
- Target audience
- Content
- Procedure

Context

Interest in Lean Six Sigma has been growing steadily over the past few years. But what is Lean Six Sigma? This course will introduce you to the fundamental concepts of the Lean Six Sigma philosophy and process, and will enable you to understand and use the concepts, principles and tools of Lean Six Sigma and the DMAIC methodology.

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Objectives

Our "***Lean Six Sigma-Black Belt***" training approach is distinguished by the following objectives:

- Increase customer satisfaction
- Increase the sense of belonging of both customers and employees
- Improve the quality of the services and/or products offered by their company
- Optimize current processes
- Create a culture of continuous improvement
- Preparation for the internationally recognized American Society of Quality certification exam.

The application of our business process improvement intervention approach is distinguished by the integration of our project management, benefits realization and change management approaches.

This has the effect of encouraging process optimization, with a view to overall performance, which favors end-to-end solutions based on the recurring business issues that we want to address.

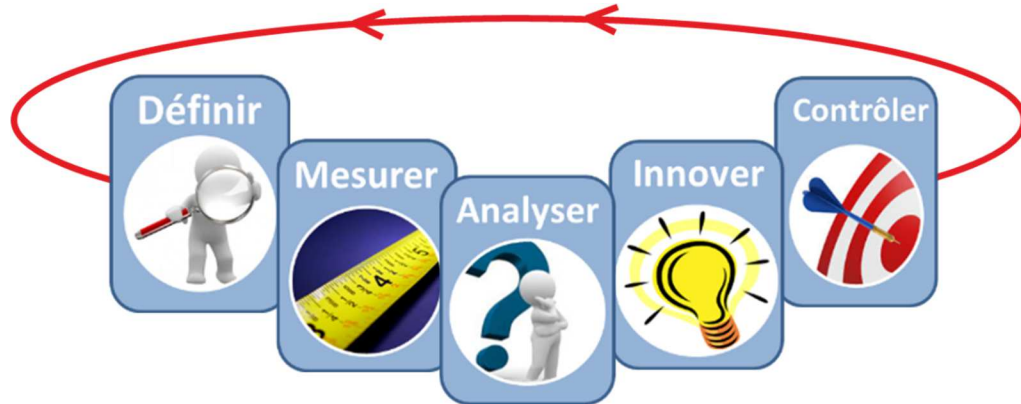
This also ensures that interventions are not limited to achieving the expected benefits, but also to developing a culture of continuous improvement among our clients.

Our working methods and our frameworks are reinforced by the application of the following principles in each of our interventions:

- We favor the Define - Measure - Analyze - Innovate (Improve) - Control (DMAIC) approach because of its simplicity and rigor;
- We encourage the mobilization and involvement of tradespeople in the analysis of problems and the development of solutions;
- We value the client's autonomy. We make sure to transfer our knowledge throughout the projects;
- We believe that it is essential to adapt the planning of DMAIC activities to the operational context of the teams carrying out the optimization projects;
- We believe in "training in action". We integrate a practical simulation workshop to "live" the different concepts of continuous improvement and waste elimination.

Upon completion of the ***Lean Six Sigma-Black Belt*** training, participants will be able to:

- Increase the speed of operations and reduce non-value added activities
- Identify the needs of its customers and deliver the required service, regardless of the sector of activity.
- Improve operational efficiency and increase the performance and competitiveness of its business
- Understand and apply the concepts of Lean and Six Sigma in their work environment and apply these concepts to continuous improvement projects
- Explain and use the concepts, principles and tools of Lean and Six Sigma and the DMAIC methodology
- Coach yellow belts and green belts in smaller projects and become a reference point.
- To approach a clear and simple framework, using the DMAIC methodology oriented towards customer satisfaction, expense reduction, improved performance and a higher level of quality within their organization



Target audience

Anyone who needs to understand and wants to apply Lean Six Sigma concepts in their work environment and apply these concepts to the continuous improvement projects they will be responsible for, to reduce non-value added activities, increase process performance while improving the customer experience. The training will also prepare the manager to take an internationally recognized LSS Black Belt certification exam.

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Content

The training consists of 9 modules.

The reference manual used during the course is in English as it comes from the "Book of Knowledge of the American Society of Society". However, the course is given in French and English for the terms used and several other documents in French and English are shared with the participants.

- These days of training in action are based on an alternation of theoretical learning and practical applications.
- A practical simulation workshop of a kaizen allowing to "live" the different concepts of continuous improvement and waste elimination is integrated in the course.
- During these trainings, with the help of examples, practical case study exercises, and sample ASQ exam questions, the participant will practice the application of commonly used tools to illustrate the concepts, ensure their understanding and confirm their mastery.
- The preferred animation style is based on :
 - The sharing of individual experiences.
 - Interactions between participants.

Module 1 - Deployment in the company

- Vision of the company
- Leadership

Module 2 - Organizational Process Management and Measurement

- Impact on stakeholders
- Project follow-up

Module 3 - Project Management

- Project definition
- Team leadership
- Team dynamics and performance
- Change agent
- Management and planning tools

Module 4 - Team Management

- Training
- Facilitation
- Dynamics
- Time management
- Decision-making tools

- Management and planning tools
- Performance evaluation and reward

Module 5 - Lean Six Sigma methodology -Defining

- The voice of the customer
- Critical characteristics for satisfaction
- Project development and FIPEC-SIPOC
- Project control

Module 6 - Lean Six Sigma methodology -Measure

- Process characteristics
- Data collection
- Measurement systems
- Descriptive statistics
- Process capacity
- Tools: brainstorming, cause-effect diagram, quality function deployment, etc.

Module 7 - Lean Six Sigma Methodology -Analysis

- Measure and model the relationships between the different variables
- Identification of factors to be improved
- Failure analysis
- Mapping of value added flows
- Natural and assignable variation
- Additional analysis methods (Whisker Chart, Interrelationship Chart, etc.)
- Probability and statistics
- Design of experiments
- Design for six sigma
- Analysis of variance ANOVA
- Regression
- Parametric and non-parametric distribution

Module 8 - Lean Six Sigma methodology -Innovate

- Determination and choice of solutions
- Improvement tools and methods
- Evaluation of scenarios
- Elimination of waste
- Cycle time reduction
- Cause and effect diagram, 5 Why's
- Kaizen method
- 5S organization method and visual control
- Quality and Foolproof (Poka-Yoke)
- Theory of constraints
- Pilot and implementation
- Risk analysis and mitigation method

Module 9 - Lean Six Sigma Methodology -Control

- Statistical process control
- Other control tools
- Implementation of the controls
- Maintain improvements
- Design for six sigma
- Robust design
- Signal to noise ratio

PROCEDURE

The training will take place over a period of 6 months:

- 66 hours of training
- 1.5 hours for the exam
- 1.5 hours for in-class review of the exam
- 8 hours of group coaching and simulation workshop

At the end of the training, if you wish to carry out a process improvement project (DMAIC method) in your organization and you would like to obtain individual coaching during your project, you can add 10 hours of individual coaching to the training.