

Lean Six Sigma

Green Belt Certification

The pursuit for excellence.



benchmark **6**ix sigma
Inspiring Minds, Facilitating Excellence

All About Six Sigma

What is Lean Six Sigma?

Lean Six Sigma at many organizations relates to pursuit of perfection and waste elimination. Lean Six Sigma is a set of practices to systematically improve processes by eliminating defects. A defect is defined as failure of a product, process or service in meeting requirements of internal or external customers.

Benchmark Six Sigma asserts:

- It is important to understand Lean Six Sigma as a set of extra-ordinary techniques that improves decision making in a wide variety of situations.
- Lean Six Sigma techniques are not rocket science and can be learnt in a down-to-earth daily application oriented language.

This is accomplished through the use of two Lean Six Sigma sub-methodologies:

- The Lean Six Sigma DMAIC process (define, measure, analyze, improve, control) is an improvement system for existing processes falling below specification and looking for incremental improvement.
- The Lean Six Sigma DMADV process (define, measure, analyze, design, verify) is an improvement system used to develop new processes or products at Six Sigma quality levels. It can also be employed if a current process requires more than just incremental improvement.

Why Lean Six Sigma?

Lean Six Sigma is nothing but a compilation of world-best tried and tested management techniques used for bringing business / process improvements.

With changing dynamics and growing demand to achieve excellence, reduce waste, decrease defects and enhance productivity, organizations worldwide seek professionals who understand the strategic objectives of businesses, critical requirements of day-to-day business and operational goals.

Lean Six Sigma is a management methodology that uses a structured approach which has helped organizations world over to reduce cycle times, increase productivity and improve quality and delivery of processes.

Lean Six Sigma helps a professional approach a problem (or "defect") in a data driven, structured & systematic manner that ensures success.

How is Lean Six Sigma different?

Lean Six Sigma differs from traditional performance improvement programs in its focus on input variables. While traditional methods depend on measuring outputs and establishing control plans to shield customers from organizational defects, a Lean Six Sigma program demands that problems be addressed at the root level, eliminating the need for unnecessary inspection and rework processes.

Also, while other programs mention philosophies, ideas, and requirements (e.g. ISO 9001 specifies requirements) Lean Six Sigma provides a structured roadmap on how to bring benefits.

Lean Six Sigma as a strategic tool is customer focused and is ultimately designed to increase profits through enhanced customer satisfaction.



Green Belt
is the beginning of an
exciting journey.

Who can get benefit from Lean Six Sigma?

Benefits for professionals, organizations, students and institutes, can be studied at our website.

- Case studies from 41 industries.
- Applications in 13 functions and areas of interest.

Visit www.benchmarksixsigma.com/globalnews

Why Choose Benchmark Six Sigma ?

- Most experienced and respected trainers and consultants.
- More than 15,000 Belts trained.
- Highest recognition and respect across sectors.
- Updated programs with latest inputs.
- Unique training and facilitation methodology with Multisensory impact.
- Complete Range of programs up to Master Black Belt Training.
- Regular programs in eight cities. Programs since 2001.
- Unique after training support through very active web based forum and group activities.
- Project completion support and certification at no additional cost.
- Trainers have crossindustry implementation and leadership experience.
- Follow-up programs available for initiating drive within organizations.
- Recruitment & job support for companies and individuals.

For a detailed discussion on usefulness of Six Sigma, you may post queries and view discussions at our open forum (with more than 45,000 members) at <http://www.benchmarksixsigma.com/forum/>

Your Journey with Benchmark Six Sigma

Carrying out
team exercises
in a Green Belt Program



Post training
online support
from Master Black Belts

1 Choose a format

All Benchmark Six Sigma programs are offered in two formats. Public training and In-company training. Public training is cost effective for self sponsored and company sponsored participants. Incompany training can be customized as per the needs.

2 Complete the Foundation Course

As the body of knowledge is vast, some theoretical elements are covered through pre-course material which is provided to participants on registration. This ensures that you have the right basic knowledge to have an effective start with Green Belt training.

3 Learn in teams during Green Belt

You will be assigned to a suitable group for team exercises and discussions to help you learn. Teams are selected carefully so that members have similar focus area.

4 Carry out a Practice Project

During the Green Belt training, topic specific case studies are used to help participants in understanding. You shall get complete data to work on a real project to practice your learning and compare your results with the Master Black Belt trainer. Case studies and analysis outputs serve as useful reference for application at the work place.

5 Have fun while learning

We believe that learning should never be stressful or boring. Stories, anecdotes and relevant jokes keep the class alive and provide easy methods to retain learning. Interactive quiz, role plays, group exercises keep your brain cells working.

6 Learn with Minitab Software

You learn to carry out analysis with the help of globally used Minitab software. The result oriented application of software is explained during the entire program.

7 Get Certification

Global recognition of the program ensures that certification that you receive is accepted internationally.



8 Network and continue learning

Free membership allows you to network with thousands of Six Sigma trained professionals through our unmatched online alumni network available at a PRIVATE FORUM (log in provided only on enrolment in a Benchmark Six Sigma program).

9 Get FREE support for project

Online support from Master Black Belts is provided for the first real project that you carry out at your workplace. Collaborative online forum helps in exploring multiple view points. Example projects on the forum provide guidelines. Online discussion provides useful clues and direction.

10 Project Completion Certificate

If you complete a real project within three years of training, you get a project completion certificate (optional) at no extra cost

11 Move to next level when ready

Explore Black Belt, Lean Management, Master Black Belt certification at the right time.

12 Make Six Sigma a way of life

Six Sigma is a relentless journey towards fewer defects, higher efficiency and higher benefits for individuals, organizations and society at large. This program is a stepping stone to a new way of life.

Benchmark Six Sigma Green Belt Course Outline

Our Six Sigma programs are not just about learning DMAIC methodology. Importantly, they are about learning scientific decision making techniques which are extremely useful even if you are not doing a six sigma project.



Importance of Six Sigma

- History of Six Sigma
- Philosophy of Six Sigma
- Key Business Drivers
- Statistical concept behind Six Sigma
- Overview of DMAIC, DMADVz

Lean Principles

- Kaizen, Poka Yoke, 5S, Seven Wastes

Change Management

- Identify resistance to change
- Implement a plan to counter resistance
- Team formation (Team Stages)
- Team tools
- Stakeholder management

Define Phase

- Sources of project ideas.
- Project selection
- Finalizing the CTQ
- Project Charter
- Team Roles and Responsibilities
- Project scoping with SIPOC

Measure Phase

- CTQ performance characteristics
- Measurement systems analysis
- Process mapping (with VA/NVA Analysis)
- Sampling
- Data types & collection plan (Continuous & Discrete, Sampling)
- Basic statistics (mean, median, standard deviation, quartiles)
- Process capability analysis

Analyse Phase

- Identifying X's using Cause & Effect analysis (Ishikawa diagram)
- Identifying critical X's using cause and effect matrix
- Hypothesis testing (Null & Alternate, Types of Errors, P values)
- Relationship between variables (Correlation, Scatter diagram)
- Tests of means, variances, and proportions (t-Tests, ANOVA, Chi-Square)
- Finding critical X's using graphical techniques like Pareto's analysis, Box plots
- Failure modes and effects analysis

Step 1: Generate Project Ideas

Step 2: Select Project

Step 3: Finalize Project Charter, High Level Map

Step 4: Finalize Project Y, Performance standards for Y

Step 5: Validate Measurement System for Y

Step 6: Measure Current Performance and Gap

Step 7: List All Potential X's

Step 8: Identify Critical X's

Step 9: Verify sufficiency of Critical X's for the project

Step 10: Generate and Evaluate Alternative Solutions

Step 11: Select and Optimize best solution.

Step 12: Pilot, Implement and Validate the solution

Step 13: Implement Control System for Critical X's

Step 14: Document Solution and Benefits

Step 15: Transfer to Process Owner, Project Closure

Improve Phase

- Idea generation (brainstorming, creative Thinking, benchmarking)
- Comparing alternative solutions
- Solution selection tools like Pugh matrix
- Introduction to Design of Experiments
- Validation and Implementation of improved process

Control Phase

- Elements in a Process Control Plan
- RACI matrix
- Statistical process control (IMR, Xbar-R, C, U, P, NP Charts)
- Mistake Proofing
- Sustaining improvements (Creating Control Plan, Documentation)
- Project closure

The course content meets international criteria.
Contact content@benchmarksixsigma.com for any queries about course content

Partial List of Clients



Here is What our past participants say about Green Belt Certification

The Green Belt Six Sigma Course is informative and instructional. The flow of the course makes it easy to assimilate various types of best practices. Learning is conducted in an interactive fun way making it easy to remember new ideas and methodologies for future recall.

- Suzanne Da Costa, Vice President, HSBC India

The training has got a systematic approach in solving problems with best statistical tools to gain complete confidence.

- A.S.Chakravarthy, Associate General Manager, GMR HIAL Airport

This course improves your analytical ability and thinking process towards any business problem or personal problem.

- Rahul Singh Jhara, Deputy Manager, Accenture

A GB from BSS is like exploring an unknown personal growth vertical. Simply put, unless I had pursued it, I would never have come to know what all am I missing and the tremendous potential of these methodologies in every industry.

- Abhishek, Student, MBA-Marketing, IBS Gurgaon

I appreciate the way the instructor conducted the training in 4 days with practical examples for the participants to understand it in a better way.

- Balasubramanian.Sk, Deputy General Manager, Aditya Birla Retail Limited



Want to see Six Sigma success stories in a specific industry or function?

Visit Our Website

www.benchmarksixsigma.com

About Benchmark Six Sigma

Founded in 2001, Benchmark Six Sigma leads the change management workshops in India, Benchmark utilizes a wide variety of management techniques that have evolved over centuries to help client organizations and professionals address challenges and chart extra-ordinary growth paths.

Benchmark workshops have evolved as Industry best offerings in two formats. In the public workshops format, we offer globally recognized programs with content and methodology that can be used in practically any domain. In the customized in-company workshops format, Benchmark is known for its ability to design and deliver highly valuable programs with demonstrated applicability. Our in-company workshops are offered with or without consulting support.

While Benchmark has already initiated conduct of workshops in certain other parts of the world, years 2011 and 2012 are earmarked for initiation of Benchmark programs in continents across the globe.

Benchmark has industry experience across 41 industry sectors.

Benchmark Six Sigma Job Portal

- Explore jobs and gain competitive edge.
- Recruit people for your Six Sigma team at no cost. Get short listing support at nominal fee.

Public Training Locations



Regional Offices

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