THE DESARA GROUP

Thursday, December 11, 2008

Six Sigma Black Belt Training

20 Days - 14 CEUs

Learn to Implement Six Sigma Methodology and Become a Six Sigma Black Belt

The Six Sigma philosophy brings together the best tools and techniques from the leading quality consultants over the last 25 years. That's why The DESARA Group's Six Sigma Black Belt training is so important. Our 20-day course is designed for individuals who are seeking Six Sigma Black Belt certification. We train individuals from project definition through process control. Six Sigma provides any size or type of organization with quality improvement and bottom-line results. Our current Six Sigma Black Belts have achieved as much as $1.4 million savings per project.

Program Overview

In the course of your Six Sigma Black Belt training, you study the five-phase DMAIC approach in detail, using a simulation experience as the foundation along with a combination of informal lecture, small group breakout sessions, and hands-on practice.

- Define - gain working knowledge of critical tools to ensure that a project is well defined in scope, expectations, resources, and timeline.
- Measure - learn and practice employing tools to quantify the "problem" using actual data.
- Analyze - learn to analyze the Six Sigma process map and apply statistical tools to validate root causes of problems.
- Improve - participants are introduced to various methods of solution identification, prioritization, and implementation.
- Control - develop process control systems to ensure that the process does not revert to the "old way" over time. Six Black Belt participants enlist the support of process owners to insure long term process success.

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www.DesaraGroup.com

Presented in a just-in-time fashion, the course is scheduled over a four month period to allow participants to learn the improvement tools at the pace their projects require them.

Certification Process Includes:

- Completion of a four week training program
  - 100% attendance
  - Passing score on all weekly exams
- 8 hours of coaching with an instructor
- Project completion
  - Project must be completed within 4 months of completion of training
  - Must obtain results as stated in project charter
  - Minimum savings of $75k or an 10x reduction in defects
- Written final exam with a minimum passing score of 80%
- Project defense
  - Demonstrate practical application of DMAIC methodology
  - Demonstrate proper use of Six Sigma tools and techniques
- Pass a project review with other Master Black Belts reviewing the project

Prerequisites

Participants will be expected to arrive at the training with a process improvement project already identified (and approved), which can be expected to generate at least $75k in savings for the company, a 10x reduction in defects, or both. Participants will also need to bring their own laptop computers, with MINITAB™ software loaded.

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Week One

Objectives

Week One will set forth the process to be followed throughout the training. Participant expectations will be established for each of the week-long training sessions, and the activities that should occur in participants' improvement projects during the time between each session will be defined.

Participants will complete a Six Sigma simulation as a means of experiencing the fundamental performance improvement principles. The DMAIC model for continuous improvement will be introduced, reviewed and linked to organizational strategy, critical business issues, and business performance.

The majority of the week will explore the first two phases of the DMAIC model in depth - Define Opportunities and Measure Performance. In order to define an opportunity, participants will learn how to validate and scope their improvement project, link customer requirements and business processes to the effort, and build an effective team to complete the project. In terms of measuring performance, participants will examine what is to be measured and how. Lastly, the MINITAB™ statistical software package will be introduced.

Upon completion of Week One, participants will be able to:

- Describe the phases of the DMAIC continuous improvement model.
- Define a business performance improvement opportunity.
- Create a charter for an improvement project.
- Describe the characteristics of effective teams.
- Develop and analyze process maps.
- Define customer requirements.

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Develop a data collection and measurement plan.

Utilize basic functionality of MINITAB™ statistical software.

Key Topics

Quality Overview: The Last 20 Years

DMAIC and DMADV Overview

Roles and Responsibilities

Linking Six Sigma to Continuous Improvement and Problem-Solving Methodologies

Week Two

Objectives

Week Two will begin with a review of the content covered in Week One. The homework assignment and project work (customer requirements, process maps, and data collection) will also be discussed and evaluated. Next, the final topics of the DMAIC model - Measure Performance - will be discussed including measurement system capability.

The week will then focus on the content, tools and techniques associated with the next phase of the DMAIC model - Analyze Opportunity. In the first two phases, you will have learned where variation and defects are occurring within processes and how these defects hinder the ability to meet customer requirements. During this phase, the goal of analyzing the opportunity further to start defining the potential causes of the variation will be explored. Participants will begin applying statistical methods to make single sample, two sample, and multiple sample data comparisons. Sources of variation studies for process and measurement systems will also be applied. A variety of tools and techniques will be presented for interpreting data displays, comparing data, determining root causes, and identifying sources of variation.

Upon completion of Week Two, participants will be able to:

- Perform Gage R&R studies to evaluate measurement systems
- Perform process stratification and data analysis
- Apply tools to determine root causes of defects
- Implement quality comparative methods
- Conduct sources of variation (SOV) studies
- Perform statistical analysis by using the MINITAB™ software
- Utilize MINITAB™ statistical software to analyze data

Week Three

Objectives
Week Three will begin with a recap of the content covered in Week Two and a discussion of project activity that has occurred since that time.

Then the focus will turn to Part 2 of Analyze Opportunity to provide more tools and techniques for the iterative analysis process. Design of Experiments (DOE) will be explored in detail to continue validating root causes. Full and fractional factorial design will be covered along with several screening designs.

Simulations will be used in a team environment to apply DOE in order to understand their practical applications. The last analysis technique presented will be an effective Statistical Process Control (SPC) program. Participants will construct control charts for variable data using three approaches under standard assumptions.

Upon completion of Week Three, participants will be able to:

- Plan, design, run and analyze experimental studies including
- Factorial, Fractional Factorial and Plackett-Burman designs
- Determine if a process is stable & capable
- Utilize MINITAB™ statistical software to analyze DOE data

Week Four

Objectives

Week Four will begin with a review of the content covered in Week Three. The homework assignment and project activity will also be discussed and evaluated. This final week will then focus one the last two phases of the DMAIC model: Improve Performance and Control Performance.

During Improve Performance, participants will generate and evaluate ideas for eliminating root causes of customer defects. You will be introduced to various methods of solution identification, prioritization, and implementation. You will also learn how to gain approval for the solution and plan for impacts the changes will have on the organization using change management techniques. Pilot planning will be covered and a pilot implementation plan will be outlined.

During the Control Performance phase, participants will learn how to execute against the plan by determining the approach to ensure achievement of the targeted results. Participants will discuss how to disseminate lessons learned, identify replication and standardization opportunities, and develop a process monitoring system, a process control system and a management plan to assure new process performance is sustained. We will also discuss how to close the project down and evaluate the team and project.

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Upon completion of Week Four, participants will be able to:

- Develop a pilot plan to test solutions
- Develop a plan to implement the improvement solution
- Develop and implement process control systems to hand over to the process owner
- Assess whether the process performance is sustained

What's Included in the Price

The course price includes:

- breakfast, lunch, and refreshments each course day -- special dietary needs are no problem
- a student manual developed by experienced instructional designers
- forms, templates, and worksheets for use back at the workplace (for auditing and other applicable courses)
- certificates upon completion of course requirements

Please note:

50% payment is required at the time of registration. The remaining 50% balance is required prior to the course begin date.

Training at Your Location:

Please contact us at 1-631-909-3570 for information about on-site pricing.

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