

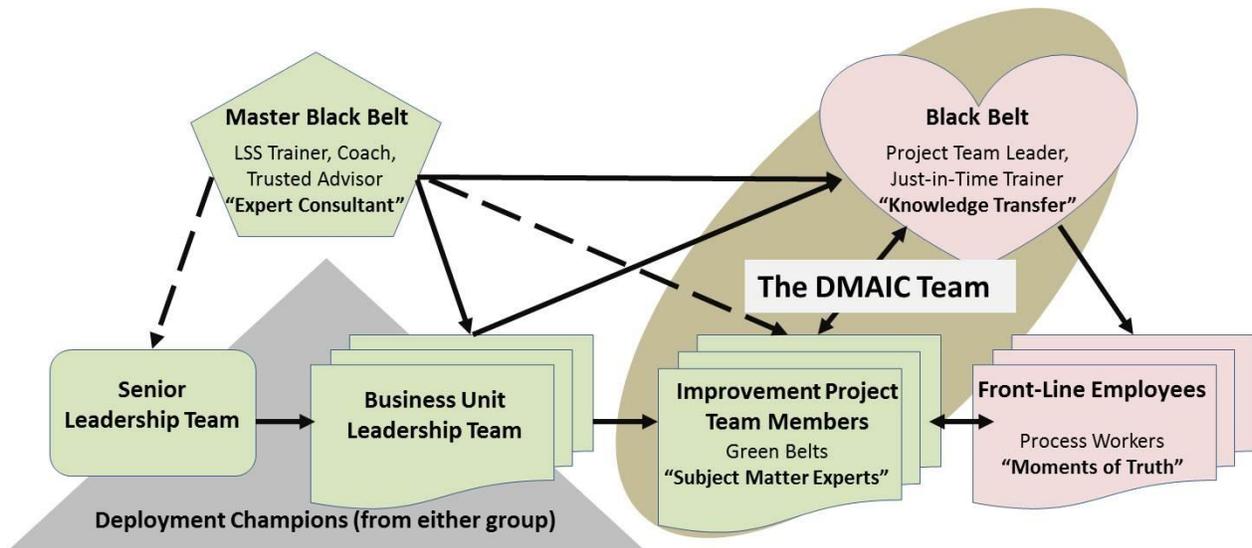


**The Importance of the Black Belt in Process Improvement** By  
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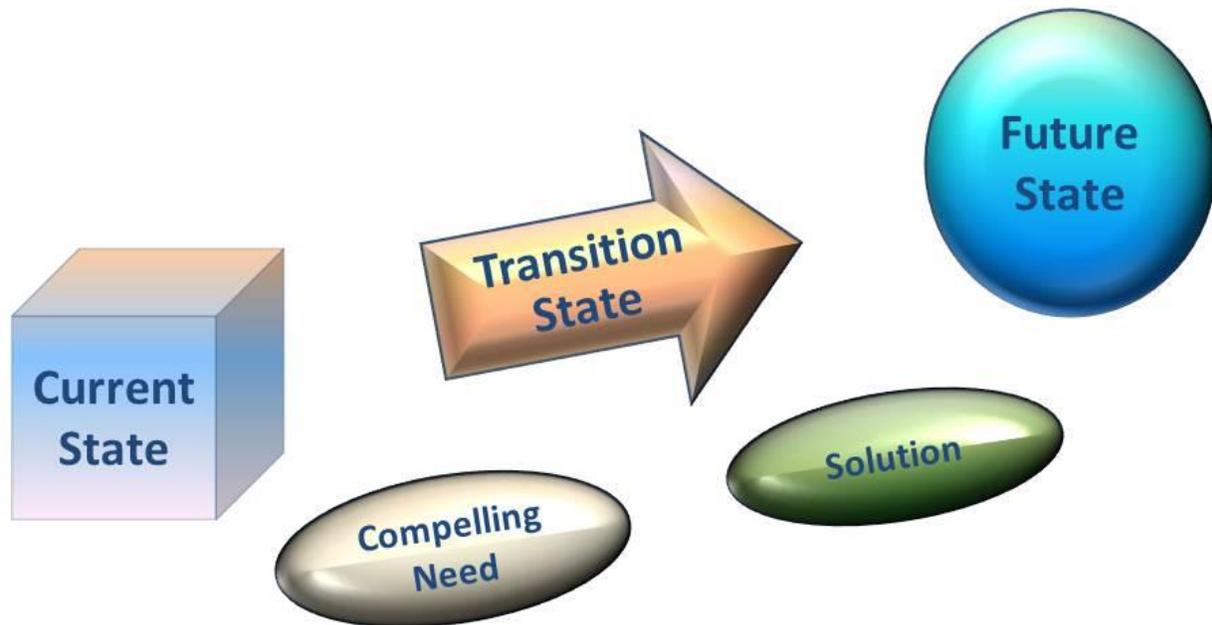
When used to their optimum potential, Black Belts serve as trained, full-time team leaders in Lean Six Sigma (LSS) organizations. Considered to be the “heart” of process improvement and process design/redesign, they implement process improvement by leading projects using the methodology and tools of Lean and Six Sigma. While many successful Black Belts (BBs) have good statistical skills, the most effective BBs possess a positive, “can-do” personality and excellent interpersonal skills. Typically, BBs complete four weeks of LSS (DMAIC) training. Included in this training:

- The DMAIC problem-solving model: Define → Measure → Analyze → Improve → Control
- How improvement projects are selected and prioritized
- Understand how to address conflict and resistance to change to implement solutions effectively.

Some BBs may be selected to take additional training in the Design for Six Sigma (DFSS) methodology, which is used when designing new products or services, or when the leaders realize that completely broken processes need re-designing on a “clean sheet of paper.”



BBs provide “just-in-time” training to team members (known as Green Belts). Beyond the formal training, they receive organizational guidance from a middle-management sponsor; and they receive LSS-specific support from a certified Master Black Belt (Lean Six Sigma trainer and coach).



On occasion, an organization may find it difficult to identify and interest internal employees who possess the proper characteristics to function as a LSS Black Belt (see the ProcessGPS article *“Selecting Effective Team Leaders for your Process Improvement Projects”* for detailed guidance on specific skills required). Consider the basic skill set for a potential BB candidate:

- Demonstrates a passion for improving products and processes
- Possesses good interpersonal and soft skills
- Has experience and ability to manage projects (though project manager certification is not required)
- Has or can easily pick up basic analytical skills through training.

In many companies that ProcessGPS has worked with, the ideal BB candidate also is a “high-potential” employee: a future leader of the organization. Even better are the organizations that back up that assessment by assuring the candidate that he/she will return after a stint as a full-time BB with a job in the organization that carries greater responsibility than they had had previously. A virtually guaranteed promotion (based on satisfactory performance as a BB) can be a tremendous motivator.

The most effective organizations implementing LSS learn the importance of creating a prioritized, strategy-aligned pipeline of projects to be tackled by its well-trained BBs leading part-time GB team members.

Primary responsibilities of a Six Sigma Black Belt are:

### **Change Agent**

The overriding responsibility of a Black Belt is to be a change agent, initiating and completing process improvement projects and seeing to it that the team not only carries out the necessary tasks, but also that the organization accepts the new processes. The Black Belt's role as a change agent has various components: zealot/evangelist, cheerleader, motivator, translator, messenger. BBs work closely with management (often senior leadership) and advise them on current status, plans, and immediate next steps for their Lean Six Sigma projects. They also work with LSS project team members to execute the projects. A BB has an excellent ability to present solutions that embrace new ways of thinking and doing things.

### **Customer Advocate**

BBs are consummate customer advocates. They are knowledgeable and highly skilled in the use of Lean Six Sigma methodologies and tools, in addition to group dynamics, meeting facilitation and change management. They understand inherently the resistance to change that undermines many process improvement efforts, and they use their expertise to increase customer satisfaction levels and business productivity. BBs know that customers are the ultimate beneficiaries and recipients of the outputs of processes. They know also that customers ultimately judge the quality of products and services. The BB's customer advocate roles are first, to develop a clear understanding of what customers want; and second, to determine what requirements are critical to quality for the customer (commonly referred to as CCRs, Critical Customer Requirements). CCRs are the key measurable characteristics of a product or process output whose performance standards must be consistently met in order to satisfy the customer.

### **Technical Leadership**

The next major responsibility of a Black Belt is that of technical leader. At this point let us clarify a common misconception: It is not necessary for Black Belts to be experts at higher-level mathematics or statistics. By the same token, however, a BB should have the necessary training and appreciation for collecting data and for performing basic analysis of data using a variety of relatively common technical tools. Effective BBs must have the ability to identify which tools are appropriate to use in a given situation, depending on the specific circumstances. The BB must have sufficient knowledge to select the appropriate tools from the Lean Six Sigma "toolbox," depending on the process under focus and the characteristics of the data measures. For example,

- Some process improvement efforts may be able to achieve challenging goals through quick-win approaches (Kaizen) when root causes are obvious and solutions are straightforward.
- Another BB may determine that the Design of Experiments approach is useful when factors that affect the output are not clear or when some process characteristics or outputs interact with each other.
- A key skill for the BB is the ability to determine the potential for a set of solutions to address a tightly-focused project scope may be replicable to other identical or similar processes. By the way, this often allows a BB to multiply the financial benefits of a small-scope project by implementing the solutions in other processes.

Any representative sample of trained and certified BBs would include some with a background in college-level mathematics. While useful, the effective BB knows that he/she is rarely required to fly solo on process improvement efforts. Often there are statistically savvy team members; always there is a Master Black Belt available to help in applying more statistically rigorous tools. As long as a BB has the know-how to determine what type of data to collect and what techniques will likely be the best approach to analyze that data, there is always further technical guidance available. Thus, the critical components of the BB's technical leader role are: knowledge of the Lean Six Sigma principles, ability to manage projects, and a basic knowledge of statistical tools. All of these skills are provided in any competent BB training curriculum.

## **Summary**

In their roles as the heart of the Lean Six Sigma team, Black Belts are catalysts for change within their organizations. Considering their responsibility for project success and for training Green Belts, Black Belts must possess strong leadership qualities and a positive personality. Though they receive broad management direction from Sponsors and Master Black Belts, BBs are able to function effectively with minimal guidance.

ProcessGPS is a readily available resource for training and developing your BB project leaders to Guaranteed Project Success. We encourage you to inquire further in your ongoing quest for customer focus and performance excellence.



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