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"This book is a must-read for anyone in the C-Suite interested in applying Lean or Six Sigma Concepts," Larry D. Stern, Editor, Lean Six Sigma: Practical Bodies of Knowledge, author of Global Mergers and Acquisitions and The Lean CEO.

Lean Six Sigma: Practical Bodies of Knowledge provides the following:

- A comprehensive overview of Lean Six Sigma
- Strategies to identify and implement successful projects
- Simplified explanation of popular techniques and tools
- Detailed understanding of the DMAIC model
- Easy to grasp statistical information
- Lean Six Sigma project examples

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Lean Six Sigma: Practical Bodies of Knowledge



Terra Vanzant Stern

Lean Six Sigma: Practical Bodies of Knowledge



An Accelerated Approach to Lean Six Sigma

Lean Six Sigma Master Black Belt Primer

Lean Six Sigma Black Belt Study Guide

Lean Six Sigma Instructor's Manual

Terra Vanzant Stern, PhD., PMP
Six Sigma Master Black Belt

Lean Six Sigma

Practical Bodies of Knowledge

by

Terra Vanzant-Stern



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**Lean Six Sigma:
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Terra Vanzant-Stern

ISBN-10: 1-59682-256-2

ISBN-13: 978-1-59682-256-6

Library of Congress Control Number (LCCN): 2011931772

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Special Thanks to

American Society of Quality (www.ASQ.org)

Project Management Institute (www.PMI.org)

SSD Global Clients, Partners and Students (www.SSDGlobal.net)

Lean Six Sigma Professional Association (www.Lean6.org)

Afterword

Buy-in for Lean Six Sigma Projects is Built into the DMAIC Process

When project managers begin studying Lean Six Sigma, the first question asked is often, “How will I get buy-in?” Although the core concepts and methodologies may make sense to project managers, the question of buy-in sometimes overshadows this powerful methodology for process improvement. There are many root causes for why people are reluctant to lend support to a process improvement project. The most popular reasons include:

- Misunderstanding the purpose of the improvement.
- A lack of understanding of the current processes and/or a belief that the process is not flawed in its current state.
- Misunderstanding the logic behind the proposed solutions.
- Belief that a better solution exists.
- Belief that the process may be improved but is not sustainable.

However, if implemented properly, the DMAIC model itself is structured in such a way to create and sustain support of Lean Six Sigma.

Eliminating Uncertainty

One of the first forms of resistance project leaders face – individuals not understanding the purpose of the improvement – can be tackled immediately in the Define phase of DMAIC. The overall purpose of Define is to determine the problem statement by use of a project charter and process map. Project managers should not leave Define unless they are absolutely sure everyone involved with the process improvement understands the problem being explored.

Another key intention of the Define phase is to provide enough information for those involved in the improvement to, at the very least, agree that the issue merits exploring. Getting to this point is not particularly easy. However, many tools and strategies that are often deployed during the Define phase can provide assistance. These

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would include cross-functional teams that involve the process owner, and the use of graphics for a clearer picture.

Performing a SIPOC (suppliers, inputs, process, outputs, and customers) analysis and spending time identifying critical-to-quality (CTQ) factors are examples of two helpful tools in creating understanding. The SIPOC is a structured brainstorming model that is used to collect information on all elements involved in a process improvement. CTQs are any internal parameters that relate to the wants and needs of the customer. A detailed SIPOC chart and a list of CTQs helps project managers present a compelling and logical argument for why the process should be explored.

Agreeing on the “As Is”

Another reason that process improvement projects experience push back is that some people involved in the improvement may not understand the current process, or they believe that the current process cannot be improved. This resistance can be eliminated in the Measure phase of DMAIC.

The intention of Measure is to ensure that everyone involved in the project agrees on how the process is currently performing – the “as-is” picture. This understanding not only mitigates resistance but is necessary for success. Without a clear as-is picture, project leaders can have trouble proving that the process improvement, implemented later in the DMAIC model, made a difference.

Once a project leader has approval to move forward and everyone understands the improvement being explored during Define, the next step under Measure is to take a closer look at the current state of the process by adding a sufficient amount of detail to the process map. Sometimes taking a detailed process map and creating a swim lane chart is enough to prove that issues exist. A swim lane chart divides all the activities into segments, such as individual departments. This enables those involved in the process to see potential process bottlenecks and various handoffs in a graphical fashion.

Often, another successful strategy is to create a control chart, which captures the upper and lower control limits of how the process should perform. In many cases, the core reason people don't believe that a problem exists is that the process has been performing within the control limits. However, the process could still be showing erratic

behavior within the control limits that needs to be handled. Without the application of control charts, it is also possible that there are outliers in the data that may go unnoticed.

Pointing Toward Solutions

The Analyze phase takes all the information from Measure and looks for things such as root cause, correlation, variation and impact. This key information is necessary to develop potential solutions, and is also the first step in building a logical argument as to why the solution would work. In solution development it is important to consider things such as sustainability – i.e., would the current organization be able to support the process improvement? This is as essential to success as reviewing other obvious considerations such as time, budget and resource availability.

Analyze helps with the resistance of the people involved who do not understand the logic of the proposed solution. Project leaders should not consider the Analyze phase complete unless three to five possible solutions for the process improvement have been proposed. If these solutions are difficult to understand project leaders should repackage the information with simpler models.

Adding Options for Solutions

The first activity in the Improve phase is to list the solutions discovered in Analyze and present evidence that the solutions are valuable. Although the Improve Phase has a number of activities that need to be facilitated prior to project rollout, this first task neutralizes another potential obstacle – resistance from people who are told there is only one choice. When people are told that a particular solution is “the only game in town,” they naturally start thinking about other options. This is true even when the option is a brilliant choice. By presenting several strong solutions, the dynamic of the activity shifts away from buy-in and becomes more about consensus building about which solution should be piloted.

Sustaining Improvements

Finally, one of the last remaining hurdles is to counter resistance from those who do not believe the improvement is sustainable, also known as the “Why bother” factor. People involved with the process are

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convinced that, even if the effort is made, things will go back to the way they were, within a short period of time. The Control phase addresses this issue by putting sustainability models in place that are easy to use and explain. Keep in mind that the sustainability of the project was already considered and decided in Analyze. It is the belief that things will revert to the way they were, that must be debunked during Control, by showing the actual models for sustainability.

Fighting Resistance on Five Fronts

Though it seems like a static model, the DMAIC is actively concerned with the topic of buy-in and sponsor support. The model addresses the most common resistances to a legitimate process improvement:

- **Define** considers the resistance of misunderstanding the problem.
- **Measure** considers the resistance of misunderstanding the as-is state or the seriousness of the issues.
- **Analyze** considers the resistance of misunderstanding the solution.
- **Improve** considers the resistance that comes from individuals needing choice.
- **Control** considers the resistance that the proposed process improvement might not be sustainable.

When project managers first learn about the DMAIC model, they would be well served by learning the activities, strategies and tools for each of the five DMAIC phases. Simply learning the tools presented in the DMAIC model, and understanding how each step inherently encourages buy-in, will help project leaders do projects better, faster and more cost-effectively.

Student Recognition

All students are important to SSD Global, however, we would like to recognize the following students and thank them for their contributions and thoughts for this particular text.

Lois Rodgers
Dennis Sieminski
William Wilson
Cameron Erickson
Donald Michaud
Bart Flewelling
Russ Perdomo
Jamie Paul
Kenneth Lee
Jose Gandara
Gary Gibson
Atma Kainth
Michael Bist
Maria Swart
Steve Shakiba
Leo Parado
John Huie
Claudio Lanza

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