

Introduction

There are now many excellent books on Six Sigma. Many of these emphasize the deployment issues of Six Sigma, providing valuable insight into the big picture issues required for successful implementation of Six Sigma at an organizational level. These issues, including management responsibility, resource allocation, and customer focus, are summarized in Chapter 1.

Successful Six Sigma Deployment involves continual success of projects, each incrementally moving the organization closer to its strategic goals of shareholder return and customer satisfaction. Each project, in turn, progresses from its initial definition through the DMAIC cycle to maturity of financial reward. This project evolution requires much attention to detail by the project team, including its Black Belt, Green Belts, and Sponsor. Unfortunately, many Six Sigma books fail to develop the detail of the tools necessary for practical use, or cover only a small handful of the tools required for an organization's projects. Readers are not provided clear benefits for the tools or may wonder if the tools may be applied to their specific processes and projects.

I am often asked by clients, “How does Six Sigma apply to us?” It is almost as if we are all part of the AI Franken generation, from the 1970s-era *Saturday Night Live*, where nothing means anything if it can't be put in the context of your own personal existence. Each different industry tends to approach problems as if no other market segment has ever experienced the same problems, now or ever. Even if the problems were the same, the solutions certainly can't apply across industries.

Some books provide far too much statistical background for the tools. Readers are

forced to endure academic derivations of formulas or statistical tests that have limited use in today's computerized world. This tends to force the focus away from the practical use and limitations of the tools.

Demystifying Six Sigma is written to address these needs. It includes a variety of tools useful to Six Sigma teams, each presented within the context of an objective for a particular stage of DMAIC. Since many tools have applications within multiple stages of DMAIC, each tool description includes a “When to Use” section relating to the DMAIC methodology and its objectives. Detailed interpretation of each tool is also provided, with reference to other tools that should be used in conjunction with that tool for full effectiveness. Calculations and assumptions are provided as needed, as are detailed examples of their use in popular software such as *MS Excel*, *Minitab*, and *Green Belt XL*. To attract interest from the widest audience, many examples are provided for service processes. Each chapter concludes with study guide questions to challenge the reader. Detailed solutions are provided at the end of the book.

This book may be used for training groups of Black Belt and Green Belt or for self-study to master the tools and methodology of Six Sigma. I hope you will find this book useful in your Six Sigma journey.