

Preface

Six Sigma is best described as a journey—a journey for business professionals who are truly committed to improving productivity and profitability. Six Sigma isn't theoretical; it's an active, hands-on practice that gets results. In short, you don't *contemplate* Six Sigma; you *do* it. And doing it has proven to be the fast track to vastly improving the bottom line.

The Six Sigma story began in the 1980s at Motorola, where it was first developed and proven. In 1983, reliability engineer Bill Smith concluded that if a product was defective and corrected during production, then other defects were probably being missed and later found by customers. In other words, process failure rates were much higher than indicated by final product tests. His point? If products were assembled completely free of defects, they probably wouldn't fail customers later.

This is where Six Sigma took off. Mikel Harry, Ph.D., the founder of the Motorola Six Sigma Research Institute, further refined the methodology, to not only eliminate process waste, but also turn it into growth currency—regardless of the specific type of service, product, or market sector. The rest, as they say, is history.

Six Sigma statistically measures and reflects true process capability, correlating to such characteristics as defects per unit and probabilities of success or failure. Its value is in transforming cultural outlooks from complacency to accomplishment across the spectrum of industry.

Most companies function at four sigma—tolerating 6,210 defects per one million opportunities. Operating at six sigma creates an almost defect-free environment, allowing only 3.4

defects per one million opportunities: products and services are nearly perfect (99.9997%). Eliminating defects eliminates dissatisfaction.

This all sounds good in theory, but how do you put it into practice? Well, Six Sigma is about arming your human “assets” with the training, resources, and knowledge to solve problems. It’s also about taking a leadership journey to guide those assets toward ever-increasing achievement. Six Sigma asks hard questions about your processes and gets the data that supports them. It provides solutions that fit your unique processes.

And that’s why I wrote this book—I want to share the Six Sigma story to show you how to achieve greater growth and improved customer service. Intense, results-driven, and ultimately exciting, Six Sigma eliminates wasteful variation, changes business cultures, and creates the infrastructure you need to initiate and sustain greater productivity, profitability, and customer satisfaction rates. In the following pages, you’ll find out *what*, *why*, and *how* Six Sigma works, so you can start on your own Six Sigma journey.

Chapter Highlights

In Chapters 1 and 2, you’ll learn the basics about Six Sigma and why you should put them into practice. I’ll show how Six Sigma makes you more competitive at every level—from streamlining internal processes to improving your external market position. You’ll also learn how to engage employees as you transform cost into growth.

Building on this base, Chapter 3 introduces the key role of business metrics in your Six Sigma initiative—demonstrating the value of hard data vs. opinion when analyzing the productivity of a given process. It will show you in factual terms just what your cost of poor quality is and how you can begin to correct it.

Chapter 4 gets into kicking off your Six Sigma initiative. It provides the essential guidelines, tips, and planning phases you need to get it right. By properly readying your organization, you can lay the best foundation for a successful implementation of

Six Sigma. And here's where the power of people comes in—Six Sigma is predicated on educating and using your people to direct and make phenomenal changes and sustain the benefits.

Everyone has a role to play in Six Sigma, from executives to line workers, and Chapter 5 gives you an overview of who does what to get Six Sigma under way. From champions to black belts, green belts to project teams, you'll get a good understanding of the scope and "mind share" of Six Sigma. This is not a sidelined, occasional quality program. Six Sigma is an all-out effort involving every single person in the organization in a full-time, front-and-center focus on your operations.

Chapter 6 gets into the specific phases that Six Sigma uses to dig deep into identifying the causes of waste or defects in organizations. The four-phase approach known by its acronym, MAIC—measure, analyze, improve, and control—is the heart of any Six Sigma initiative. Within each step are specific actions and directions that systematically point you toward identifying the vital few variables that determine your quality outcomes. Once you complete MAIC, you will have the necessary data and answers that solve problems and return hidden dollars to your bottom line.

Following up on all you've learned so far, Chapter 7 takes a detailed look at all the necessary statistical tools and shows you how to use them to pull all your data together. This is where "the rubber meets the road" in Six Sigma. Statistics allow you to discover and isolate the vital few factors that are affecting your quality and performance. The tools presented in this chapter will help you find and then fix the streams of variation in your processes.

Chapter 8 delves into how you should select projects to get the most from MAIC. It examines "good" and "bad" projects, what they mean to you, and how to tell the difference. Chapter 8 also introduces you to a statistical strategy that demonstrates the optimal way to narrow down your search for projects, select the most appropriate one, and begin investigating the money trail.

Chapter 9 then takes you into the world of sustaining Six Sigma; it shows you how to keep the momentum going and

realize an ever-expanding return on investment. This is where knowledge transfer happens: as you and your teams transform theory into practice and become experts in the methodology, you will share the strategies that create an extraordinary “ripple” effect throughout the organization.

As you delve into Chapter 10, you will have the opportunity to review real case studies and final reports about Six Sigma projects. The object of this chapter is to further demonstrate that Six Sigma is not a passing fad, but rather a real-world business tool that returns positive financial results across the business spectrum. The evidence of its success is found in the proven results achieved by the companies profiled here.

Chapter 10 also introduces you to Design for Six Sigma, an extension of the basic methodology that shows you how to optimize your new design processes or products, to delight customers and return excellent financial results. From start to finish, this book is dedicated to one proposition—helping you explore and implement Six Sigma for better performance and profitability.

As a manager, you are uniquely positioned to unlock the extraordinary, untapped potential of your staff by introducing and initiating a Six Sigma program in your functional area. Employees are your greatest assets; Six Sigma knowledge and tools can give them almost limitless potential to transform your company—one project at a time.

Special Features

The idea behind the books in the Briefcase Books series is to give you practical information written in a friendly person-to-person style. The chapters are short, deal with tactical issues, and include lots of examples. They also feature numerous boxed sidebars designed to give you different types of specific information. Here’s a description of these sidebars and how they’re used in this book.



These boxes are designed to give you tips and tactics that will help you more effectively implement the methods described in this book.



These boxes provide warnings for where things could go wrong when you're trying to prepare for and undertake a six sigma initiative.



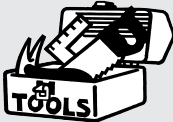
These boxes highlight insider tips for taking advantage of the practices you'll learn about in this book.



Every subject has its special jargon and terms. These boxes provide definitions of these concepts.



It's always important to have examples of what others have done, either well or not so well. Find such stories in these boxes.



This identifies boxes where you'll find specific procedures you can follow to take advantage of the book's advice.



How can you make sure you won't make a mistake when implementing six sigma? You can't, but these boxes will give you practical advice on how to minimize the possibility.

Acknowledgments

Doing Six Sigma requires a team effort, and writing this book was no exception. First, I thank my wife Kelly for her unflinching encouragement and support throughout the course of this project and my ongoing Six Sigma journey. I am indebted to my colleagues and staff, especially to Peggy Dolowy and Elisabeth

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About the Author

Since 1994, Greg Brue, CEO of Six Sigma Consultants, Inc. and Master Black Belt, has implemented Six Sigma methodologies for some of the world's most recognized companies.

Greg trains Corporate Champions and mentors CEOs, senior executives and company directors. A regular guest speaker at major business events and quality conferences, he also conducts Six Sigma seminars and monthly Executive Boot Camps. Greg supports numerous corporate Six Sigma implementations by maintaining direct contact with Black Belts, Master Black Belts, Champions, and senior managers.

Drawing on his considerable expertise, Greg developed the *Seven Principles of Problem-Solving Technology* to encapsulate and communicate the vision, purpose and results of Six Sigma. As a result, he has been instrumental in changing the mindset and infrastructure at major corporations—empowering organizations to achieve significant measurable results. Experienced and expert Six Sigma practitioners, Greg and his team provide the corporate community with the vision, velocity and quantum gains required to decrease defects and increase profitability.

For more information about Six Sigma Consultants, visit www.sixsigmaco.com.