

Applying the Science of Six Sigma to the Art of Sales and Marketing

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Dedication

This book is dedicated to everyone who helped make it possible. Thanks to Steven Jackson and Tom McFarland for their advice, support and editorial expertise. Thank you for the guidance and understanding of ASQ and the input of my reviewer team, especially David Foxx. I am also grateful to the multiple Six Sigma professionals with whom I have had the pleasure to work, especially Mark Gardner, Joe Magro, Jeff Naglestad, Thom Fish, and many other individuals too numerous to list.

Finally I would like to thank my wife, Cara. She gave me the encouragement and support to complete this and possessed the understanding and patience required to endure the trial of getting this book written, edited, and published. She and our children have my deepest gratitude and love.

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Preface

Six Sigma is a highly flexible methodology and tool set, but few practitioners have successfully transferred the early successes Six Sigma enjoyed in manufacturing to sales and marketing. The opportunities to use it exist, but the expertise on how to apply it is lacking.

This book provides step-by-step instructions on how to use data and measures to tackle common business challenges. An analysis of the territory planning process provides tools and techniques to improve the effectiveness of salesforces that suboptimize their efforts by calling on the wrong customers. It shows sales leadership how to use readily available data to ensure that the “right” customers are receiving the attention they need. It also quantifies the real cost of spending time with customers that are not improving the bottom line.

A historical analysis of product promotions takes the guesswork out of developing future sales campaigns. This is accomplished by taking the time to define a specific goal and develop metrics that will allow side-by-side evaluations of the effectiveness of past promotions. Once armed with this knowledge, future promotions stand a greater chance of achieving their goals.

Other chapters cover projects on improving product launch sales, improving the effectiveness of the sales rep/sales manager field-visit process, sale representative hiring profiles and sale representative training. Ultimately this book is intended to provide answers to those who question the applicability of Six Sigma in Sales and Marketing.

Ultimately, this book answers those who are skeptical about the usefulness of Six Sigma in sales and marketing. It addresses these skeptics with step by step instructions on how to apply Six Sigma to common sales and marketing challenges.

If management is willing to apply the same rigor and measurement to sales and marketing processes as are applied to other business processes, then sales leadership can refine their focus and improve the returns on for their efforts.

Introduction

“You cannot open a book without learning something.”

Confucius

Since its introduction at Motorola in the late 1980's, Six Sigma has assumed multiple aliases—these include: Operations Excellence, Business Process Improvement, and Process Excellence. Regardless of the moniker used, the goal of Six Sigma companies has remained consistent: to encourage continuous process improvement by utilizing a standardized, documented, and repeatable problem solving methodology.

Six Sigma provides a common language and method to address business opportunities and solve business problems. It provides a roadmap that guides problem solvers where to start and what to do next. Although common tools and language are utilized, Six Sigma is flexible enough to be applied to different challenges throughout business, wherever they may arise—manufacturing, finance, procurement, sales, marketing, or any other functional area. The five common steps for applying Six Sigma are captured in the acronym “DMAIC”. DMAIC stands for Define, Measure, Analyze, Improve, and Control. These five simple steps have driven incredible results at thousands of companies.

During the Define phase of a Six Sigma project, issues are accurately and precisely defined, the scope of the work is determined, and the metrics that will track the progress of improvement are identified. The Measure phase sees the collection and preliminary analysis of the data that describes the process. The Analyze phase focuses on identifying the underlying causes of the problem or the key driver of an opportunity. During the Improve phase, the effectiveness of improvement is tested. Finally, during the Control phase, the improved process is fully integrated back into the business and safeguards are set into place to ensure that it does not regress back to the state that required the initial improvement effort.

Since the earliest adoptions of Six Sigma, there has been an unfortunate but common perception that Six Sigma can only improve pure manufacturing processes, and that a fact-based problem solving methodology does not transfer well to transactional processes, specifically in sales and marketing. This attitude is especially common among many sales and marketing professionals. Most of the non-believers question the ability and effectiveness of applying a standardized problem solving method to the “art” of sales and marketing. They believe that theirs is such a dynamic and sometimes nebulous environment that a structured approach requiring processes, metrics, and data would only hinder the creative magic that is required to be successful. This is simply not the case. Six Sigma does not suppress creativity; rather it provides a framework to channel it. Just as a painter’s creativity is revealed in a finished work, he does not protest standard paints, brushes, or canvas. Six Sigma provides practical guidance on how to begin the process of solving a problem and provides questions to ask along the way. Creativity flourishes in the content and throughput of a successful solution, not necessarily in the tools used to achieve the outcome. Six Sigma is the engine that drives results; creativity is the fuel. Practitioners of Six Sigma, especially those that truly understand and embrace the concept, are confident that it is indeed appropriate and extremely useful in unlocking the enormous potential benefit in re-fined sales and marketing processes.

Although Six Sigma has been very popular in manufacturing for over a decade, sales and marketing leaders have only recently started to utilize it. This delayed appreciation is the result of four main factors: the facility with which Six Sigma can be applied to manufacturing processes, the background of most Six Sigma professionals, the relative strength in consumer purchasing over the last several years, and existing sales culture.

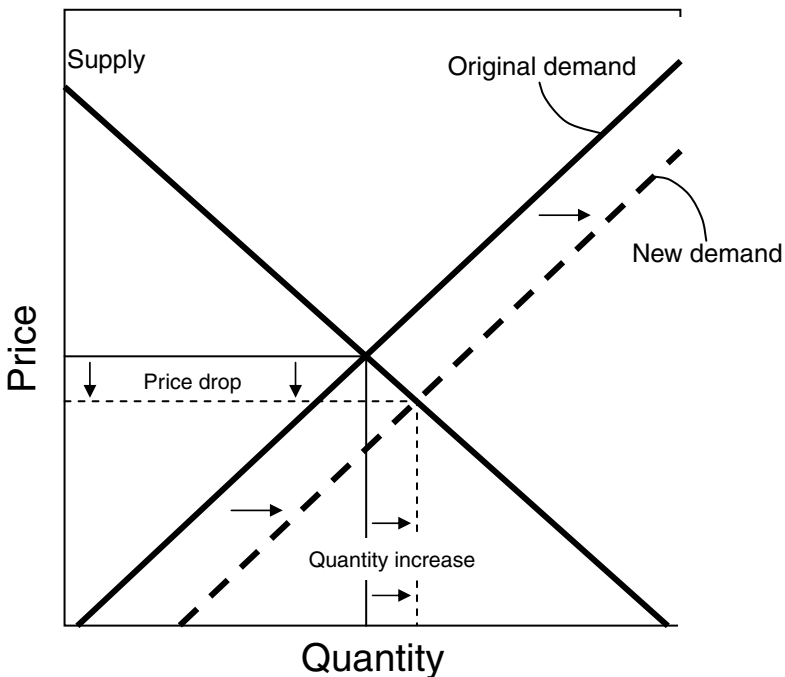
In most manufacturing processes, almost every variable can be precisely controlled. Reducing defects and improving efficiency is already ingrained into the psyche and culture. Manufacturing facilities provide fertile soil for the application of problem-solving methods that focus on measuring processes and tight control of input variables to achieve optimal outcomes. Forerunners of Six Sigma, such as statistical process control (SPC), Total Quality Management (TQM) and ISO 9000 methodologies, have been used for years in manufacturing settings. In fact, one of the primary drivers of the American industrial revolution was the ability to mass produce relatively defect free products. The process efficiency efforts of Henry Ford and Alfred Sloan at General Motors allowed their companies separate themselves from their competition to become industrial giants. Unfortunately, their more recent inability to maintain efficiency parity with their competitors has been a seed of their downfall.

A second element that has hindered the spread of Six Sigma into sales and marketing is the background of most Six Sigma professionals. For years, the majority of Six Sigma professionals hailed from manufacturing. These individuals are often less familiar with transactional processes and

may not recognize the potential for applying Six Sigma there. This lack of understanding is significant, since to successfully apply Six Sigma one must be familiar with both the Six Sigma tools and the environment in which they are being applied. After all, an auto mechanic would certainly feel more comfortable using a new set of pliers in a garage than in an operating room, even though the tool is appropriate in both environments.

The third factor that may have slowed the application of Six Sigma to transactional processes has been the relative strength in consumer purchasing patterns in the last few years. In order for a company to dedicate itself to any improvement effort, there must be a strong cause for action. Manufacturing had that cause for action. The globalization of the world economy has removed barriers of entry for low cost manufacturers into established markets. These new entrants competed directly with established manufacturers. These new, low-cost, high-quality competitors forced traditional manufacturers to search for opportunities to improve their operations. The result of this increased competition was a commensurate increase in the supply of most products at reduced prices. As captured in the figure below, this upward shift in supply and downward shift in price drove additional demand—therefore sales increased across multiple industries.

This increase in sales drove record revenues that masked any need for improved sales and marketing efficiencies. Fat bottom lines drove many sales and marketing professionals to ask: “why should we worry about process improvements while sales and revenue are increasing at record



levels?” This attitude, though logically achieved, prevented the arrival of the required cause for action in sales and marketing. Interestingly, this same logic originally delayed Six Sigma in many manufacturing environments.

The final element that stymied the growth of Six Sigma in sales and marketing was the existing sales culture. This entrepreneurial spirit actively resists standardized processes and encourages independence and freedom. If Six Sigma is misconstrued as negatively impacting this spirit, it will be opposed.

Applying Six Sigma requires altering both processes and attitudes. When everything seems to be working well, it is difficult to convince people that change is needed. Only recently have many CEOs started to investigate the potential for trying to apply Six Sigma to non-manufacturing processes.

This book is intended to provide a brief overview of Six Sigma and present several examples of how Six Sigma can be applied to transactional processes. This book is not intended to teach the Six Sigma methodology or even sell its utility. By purchasing this book, you have already declared your belief in the value of Six Sigma and its potential benefit to sales and marketing processes. This book covers the DMAIC approach exclusively. Lean, DFSS (Design for Six Sigma), and DMADV (Define, Measure, Analyze, Design, Verify) are also very useful and popular process improvement methodologies, but outside the scope of this book. The examples presented cover a spectrum of Six Sigma tools and applications. Some of the examples in this book are classic Six Sigma projects that closely follow each step of the DMAIC process. Some are not “projects” but are rather the application of Six Sigma tools to common sales and marketing challenges.

This is not a statistics book. Some common statistics tools are used, but this is by no means intended to be the authoritative guide on which statistical tools to use in specific situations. Oftentimes, multiple statistical tools can be applied to any particular problem. The ones utilized here are the choices of the author.

The intended purpose of this book is to simply answer the question: “Where can Six Sigma be successfully applied in sales and marketing?”

1

The Evolution of Six Sigma

Utilizing Six Sigma to improve business processes evolved from shop floor applications of statistical process control to the current state of applying processes and measures to all business processes. This progression can be perceived as advancing through three main stages, with the third stage currently underway. The genesis of Six Sigma, and, in the opinion of many, still the most fertile soil, in terms of ease of application, is in manufacturing. Manufacturing facilities are usually led by engineers who are inherently familiar with the DMAIC concept—whether they have been formally trained or not. There is little need to convince them of the advantage of tracking defects back to their sources; trying to identify the root causes of failure, and then implementing a controlled solution. Other factors that have facilitated the success of Six Sigma in manufacturing, other than those already discussed, include:

1. Defects in a manufacturing process are usually obvious, such as a busted widget or a machine that doesn't work. Obvious problems often have obvious solutions. Even if the solution is not obvious, it is usually easy to gain the support needed to launch an effort to eliminate the defect.
2. Relatively short manufacturing cycle times can quickly validate or invalidate process improvements. If a machine produces 500 parts per day and a certain percentage of them are defective, any improvement to the process can be quickly authenticated. On the other hand, improvements to a sales process may take months to produce measurable results.
3. A final advantage for Six Sigma practitioners in the manufacturing environments is that a majority of the variables that impact the processes are controllable. A plant manager can control his vendors,

the speeds of conveyer belts, the RPM, of drills, and the temperature of ovens. Since all of these process inputs can be so closely controlled, a manufacturing Six Sigma Black Belt or Master Black Belt¹ can achieve very precise improvements. For example, if the owner of a bakery started receiving complaints about cookies being burned, he could easily follow each step of the manufacturing process to determine the root cause of the problem. Once the root cause was identified, the oven was too hot, the baker could modify the process—reduce the temperature of the oven—and future defects would be averted. Unfortunately, few transactional processes are so straightforward or as easily controlled.

As business leaders became aware of the improvements Six Sigma was driving in manufacturing, they rushed to apply it to other business functions in hopes of reaping similar benefits. The next logical place for Six Sigma was in other data-rich environments that mirror manufacturing's need for repeatable processes minimal defects. This led to its introduction of Six Sigma into finance and information management. The finance department requires a robust and defect-free process to effectively close the books, pay royalties, track expenses, and pay salaries and commissions. The recent introduction of Sarbanes-Oxley regulations mandate documented, repeatable financial processes. The opportunities to optimize these processes have resulted in the recent embrace of Six Sigma by multiple financial service companies, including Bank of America, Merrill Lynch, and American Express. Imagine the money and effort that could be saved if the finance department could accurately close the quarter in a few days versus two weeks.

Information management also needs robust processes to efficiently and effectively provide software, deliver hardware, and manage data. Six Sigma provides tools to help accomplish these tasks.

Finance and information management are usually led and staffed by process-oriented individuals who recognize and appreciate the advantages of standardized processes. Six Sigma has fulfilled this need for structure in both functions. Hundreds of books have been dedicated to the application of Six Sigma in manufacturing, information management, and finance. Thousands of Green Belts, Black Belts, and Master Black Belts¹ call these functions “home.” The first two steps in the evolution of Six Sigma from manufacturing to finance and information management are well established.

The third, and ongoing, step in the evolution of Six Sigma is its application to transactional process, most notably in sales and marketing. This has proven to be the most difficult stage in the growth of Six Sigma as a cross-functional application. Some of the reasons for this challenge are in

¹ The colors of belts indicate Six Sigma expertise and capability. Green Belt is the most basic Six Sigma certification while Master Black Belt is the most advanced.

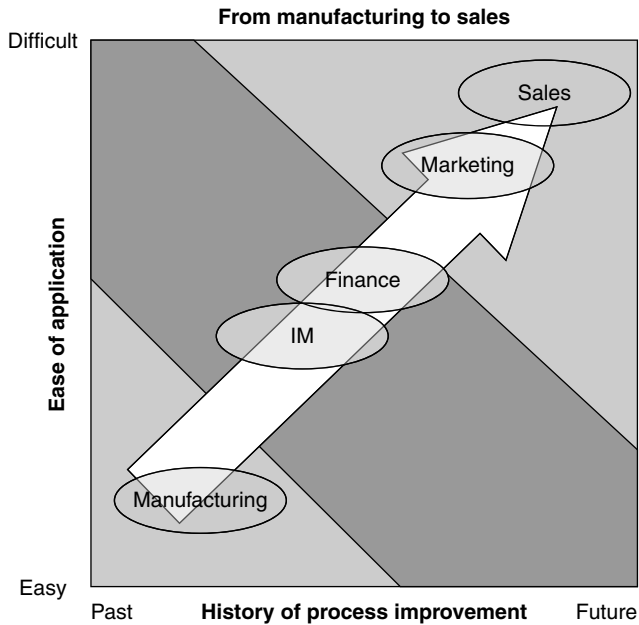


Figure 1.1 The evolution of Six Sigma.

identifying appropriate projects and driving the culture shift that is required for transactional leaders to embrace the concept. Driving this change is difficult, but worth pursuing. The potential savings that can be realized from improved transactional processes is significant because, unlike most manufacturing efficiency gains, improved sales processes directly impact top line sales and therefore bottom-line profit. Unfortunately, a lack of precise control over many of the variables in transactional processes has restricted the use of Six Sigma. There is an approximate inverse relationship between the ease of application of Six Sigma and potential savings it can drive.

As previously noted, it is fairly simple to apply Six Sigma to classical manufacturing processes due to the relative transparency of those processes and the ability to control most of the variables. However, years of manufacturing process refinements have eliminated most “low-hanging fruit.” On the other hand, there is a lot of “low hanging fruit” to be found in poorly controlled sales and marketing processes. It is this very lack of control that has allowed, and driven, the wide variation that exists in so many transactional processes. If this variation were easy to control, it would have already been done; but controlling sales and marketing processes is inherently more difficult than fixing manufacturing or finance processes. Unlike in manufacturing, the most important and least controllable variable in transactional processes is the human element.

In a manufacturing process, many of the process steps are automated and, once set, free of excessive human interference. Since these steps can usually be precisely adjusted and controlled, it is not unusual to achieve very high correlations² between process inputs to the quality of the process outputs. Human activities, on the other hand, are far less controllable or predictable. Therefore, processes that require high human input eschew control. The linkages between inputs and outputs are simply not as easy to adjust as they are in manufacturing processes. Additionally, in sales and marketing processes many important variables such as customers, competitors, and the weather are completely uncontrollable, but have a huge impact on process outcomes. Acknowledging these challenges should not be construed as reason to abandon the idea that Six Sigma can work in this environment—it is just recognition of the reality that fewer process variables are controllable.

Six Sigma should simply be applied to those variables that *can* be controlled. This may not lead to the near-perfect correlations that are seen in manufacturing projects, but correlations of over 50 to 60 percent³ can still be achieved. This provides strong directional accuracy that was not available prior to the implementation of Six Sigma. In a world where 20 percent margins and 10 percent growth is considered successful, making critical decisions with 50 or 60 percent certainty, rather than 0 percent is an enormous and profitable improvement.

² Correlation is the degree or extent of the relationship between two variables. If the value of one variable increases when the value of the other increases, they are said to be positively correlated. If the value of one variable decreases when the value of the other is increasing it is said to be negatively correlated. If one variable does not affect the other they are not correlated.

³ Correlation is measured by a variable known as the Pearson's correlation coefficient. This figure reflects the degree of linear relationship between two variables. Pearson's correlation coefficient (r) for continuous (interval level) data ranges from -1 to $+1$. A measure of $+1$ would indicate perfectly positive correlation. A measure of -1 would indicate perfectly negative correlation.

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