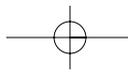# Six Sigma— The Initiative, the Deployment, the Technology

As Larry Bossidy, with whom I worked while at AlliedSignal (now Honeywell), points out in his excellent book, *Confronting Reality* (with Ram Charan), one of the most important competencies an organization can develop is that of driving change. Most organizations find leading change is a very difficult proposition. Larry asserts that, for a company to become good at driving change, it must train itself to drive change.

The change initiative is the building block to driving change. Your company will be reinvented one initiative at a time if each initiative is launched successfully. Larry Bossidy, while CEO of AlliedSignal, preceded the Six Sigma initiative with two smaller initiatives: Total Quality Management (TQM) and Total Quality for Speed (TQS). Using these first two initiatives, he taught the $14 billion company how to launch initiatives. But even Larry would probably admit that the Six Sigma launch was the quickest and deepest of the initiatives launched in AlliedSignal at the time.

The purpose of this chapter is to provide you with an overview of the different dimensions of Six Sigma. I will present the following dimensions:

- Six Sigma—the initiative
- Six Sigma—the alignment
- Six Sigma—the discipline
- Six Sigma—leadership development
- Six Sigma—the methodology
- The Six Sigma playbook

I assume you are interested in deploying Six Sigma for a number of reasons. First, you are interested—perhaps because you are the senior leader—in launching a Six Sigma program to transform your organization. Or, maybe you have recently been chosen to lead this mysterious program for your company, and you want to know more about it. You may want to sell the idea of launching Six Sigma to your senior leadership team and you need more specifics. You've read about Six Sigma and talked to peers in other companies about it. You've got a lot of unanswered questions to be answered before you can feel comfortable. You want to understand the resources required, your time requirements, and the cost of the program. You want to clarify the milestones and actions necessary to produce a model program launch.

I will assume you have a reasonably good strategy. You've surrounded yourself with good people and you have a good instinct about what needs to get done. But you can't quite get your organization to turn the corner. This book is meant for you. Launching a Six Sigma initiative will serve as the impetus your company needs to start the journey from being good to being great. But, even more importantly, following this roadmap to launching Six Sigma in 90 days will ensure a very quick implementation with a 99.99996 percent (i.e., Six Sigma accuracy) chance for success.

And, finally, you want a forecast of the potential measurable impact on your organization's growth and productivity. You also understand that undertaking a major initiative aimed at redefining your organization is a very risky business. You certainly don't want to be known as a leader who has produced yet another program of the month (though every program I've seen has lasted more than a month—shoot, sometimes up to six months).

You are an organizational leader who struggles to move your organization to a new level of performance. Your company's productivity does not represent the typical productivity in your markets and is not where it needs to be. To add to all that, you're not growing fast enough. You are facing challenges ranging from global competition in the corporate arena to greatly reduced government support in the nonprofit arena. Your organization does many things well, but there seems to be something missing on which you can't quite put your finger.

Understanding that you're paid to make money for your company, defeat your competitors, and stimulate them to play in other markets, every good leader dreams of creating a culture that will do just that. You probably did not rise to where you are in your organization by allowing your competitors to hammer you day in and day out. The global rate of economic change is so intense that you feel you must prepare your organization to quickly recognize market changes and react quickly to invent new business models to achieve competitive advantage.
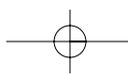
In the heat and pressure of competitive change, you must build an organization that will drive change quickly. You would love to create a new core competency that would allow your company to quickly invent and execute new business models. Because competition is hot and winning is important to the livelihood of all your employees, I have created a playbook with which you can launch a major performance-enhancing initiative—Six Sigma.

But, at the end of the day, your vision embodies the idea of leaving a legacy of an organization where

- Every employee understands the company's business, goals, and vision.
- Every employee knows how he or she contributes to the company.
- Every employee knows how to improve their processes.
- Every employee knows how to solve problems.
- Every function works together seamlessly.

This book is based on over 17 years of direct Six Sigma experience and work with over 45 corporations over the last 8 years. We have experienced the entire continuum ranging from world-class Six Sigma launches (AlliedSignal, 3M, Cummins, and Celanese) to launches bordering on the mediocre.

MANY DIMENSIONS OF SIX SIGMA

Six Sigma has many faces. Surprisingly, little of the benefits of Six Sigma have to do with the statistical techniques that are often associated with it. While in its simplest definition—a methodology that focuses on processes to improve growth and productivity—Six Sigma is much richer than a set of advanced statistical tools. Let's look at the value proposition for Six Sigma from your point of view, that of a leader. I will address Six Sigma as a

- Change initiative.
- Method of aligning actions to strategy.
- Driver for operational discipline.
- Leadership development program.
- Methodology.
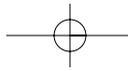
SIX SIGMA—THE INITIATIVE

Even with the success of the Six Sigma launch, the CEO, Larry Bossidy, kept the pressure on AlliedSignal to change by launching a technology initiative (Technology Excellence), an initiative to connect to our customers (Customer Excellence), and an initiative to reduce paperwork, a Digitation initiative. So, playing on the success of previous initiatives, AlliedSignal developed a core competency to drive change. This book uses that learning cycle as the foundation of the launch methodology.

Because Six Sigma has been so successful in accelerating the performance of so many companies, this book focuses on the process of launching the Six Sigma initiative within a very fast 90 days. The evidence clearly shows that many senior leaders who departed Six Sigma companies and who have moved to other companies have introduced Six Sigma as one of their first change initiatives. Fred Poses (American Standard), Jim McNerney (3M), David Weidman (Celanese), Jim Sierk (Iomega), Paul Norris (WR Grace), Bob Nordelli (Home Depot), Wes Lucas (Sun Chemical), Dan Burhnam (Raytheon), and Ed Breen (Tyco) all left the Six Sigma companies AlliedSignal, GE, and Motorola to drive Six Sigma early in their new assignments—and successfully, I might add.

By learning how to launch the Six Sigma initiative, you will also learn how to launch any initiative quickly and efficiently. You will launch Six Sigma using the same milestones required to launch any initiative. In fact, our launch methodology follows John Kotter's of Harvard University change model, as described in his fine book, *Leading Change*. This model will be explained in further detail in a later chapter.

Therefore, you will have a well-documented theoretical framework within which to launch follow-on initiatives. You will successfully launch Six Sigma, and you will gain fuel-injected performance as a result. As a result, you will achieve the twofold benefit of earning the impressive results of Six Sigma and completing a learning cycle in launching successful initiatives. Success in your Six Sigma launch will ensure that your organization will have the core competency to embark upon future change initiatives with confidence and speed.

SIX SIGMA—THE ALIGNMENT

Six Sigma allows an organization to align its processes, people, and strategy with the economic market (voice of the customer). This alignment is not easy to attain, but is imperative for success in today's marketplace. In Stephen Covey's recent book, *The 8th Habit*, he reports the results of a Harris Interactive poll addressing an organization's ability to
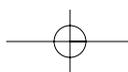
focus and execute their highest priorities. Some 23,000 employees were polled, with some surprising results:

- Only 37% said they have a clear understanding of what their organizations are trying to achieve and why.
- Only 1 in 5 are enthusiastic about organizational goals.
- Only 1 in 5 said they had a clear line of sight between their tasks and their organizational goals.
- Only 15% felt their organization fully enables them to execute their goals.
- Only 10% felt their organization holds people accountable for results.

My consulting practice has worked with over 50 corporations in launching Six Sigma. I would say the preceding results were typical of most companies before Six Sigma was launched. I will show in Chapter 5, "Strategy: The Alignment of External Realities, Setting Measurable Goals, and Internal Actions," how to use Six Sigma to align your organizational activities to your strategies, people, and processes with your company's external realities and financial targets. A sound Six Sigma launch will be the first step to improving the connection between your people, their actions, and their impact on your company's performance.

Six Sigma will establish a clear link among the Six Sigma projects you identify each year with the external realities of your business, your strategic objectives, and metrics. Your organization's population will view with clarity how their actions impact their organization's performance, from the lowest level to the executive office. Six Sigma will be the tool with which you bring your strategy to reality—one Six Sigma project at a time.

SIX SIGMA—THE DISCIPLINE

Six Sigma provides one very clear benefit within the scope of process improvement—the creation of a disciplined organization. This does not mean you will create a bureaucracy to support Six Sigma. You will, however, create a straightforward, comprehensive, and comprehensible system by which strategic projects are identified, prioritized, resourced, tracked, and completed. While you will create an infrastructure and systems to support your Six Sigma program, this infrastructure will not in any way obstruct your organization from becoming excellent in business execution.

As Jim Collins says in his book, *Good to Great*, "Sustained great results depend upon building a culture full of self-disciplined people who take disciplined action." The goal is to create a culture of discipline with an ethic of entrepreneurship. The infrastructure
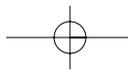
you create to support Six Sigma will ensure you are getting the return on investment in dramatic business results that you deserve.

By training your people to follow the Six Sigma process improvement methodologies, you will create a disciplined organization around problem solving and process improvement. This strategy makes sense because everything your customers see from you of value is the output of a set of business processes. You will see consistency in the way your organizations select, prioritize, resource, and complete strategic projects. You will see projects that are consistently aligned to your strategic goals. You will create a new core of process improvement experts—Master Black Belts, Black Belts, and Green Belts. And you will see serious accountability for results. With all that, you will see enormous growth in creativity and innovation. You will also allow for each of your businesses to apply Six Sigma to the problems that are unique to them.

While the Six Sigma methodologies provide a standard, disciplined roadmap for attacking problems, the tools within the roadmaps provide the insights that stimulate creative solutions. With the Six Sigma enterprise support systems you implement, you will be able to track the impact of your new Six Sigma capabilities to the bottom line in terms of earning per share, productivity improvements, and organic growth.

SIX SIGMA—LEADERSHIP DEVELOPMENT

Smart leaders are constantly trying to surround themselves with the right people. You will find that Six Sigma is a great developmental process for your future leaders. James Kouzes and Barry Posner in their book, *The Leadership Challenge*, say great leaders

- Challenge the process.
- Inspire a shared vision.
- Enable others to act.
- Model the way.
- Encourage the heart.

Challenge the Process. You will train Master Black Belts, Black Belts, and Green Belts— hereafter referred to as Belts—to challenge (and improve) the process by the very nature of Six Sigma. Any shortfall in performance can always be tracked back to a poorly executed business process. Six Sigma provides a set of roadmaps that specifically delineate the steps with which to challenge any process.
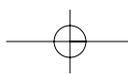
Inspire a Shared Vision. You will also train your Six Sigma Belts to become dynamic team leaders. They will learn the value of inspiring a shared vision with respect to the projects they are assigned. They will enable others to take action by teaching their teams the tools of Six Sigma.

Enable Others to Act. Each person on a Six Sigma team will be able to walk away and solve some of their own problems. Your Six Sigma Belts will model the way by leading their teams from the front to successfully solve problems. They will always be the leader their team looks to for guidance. As they progress through their career ladders, as midlevel and senior-level leaders, they will set clear expectations because it will be obvious they have already done Six Sigma and they know what they can get out of Six Sigma.

For example, while working with Jim McNerney of 3M in launching Six Sigma, Jim drove one of the fastest launches of Six Sigma on record. But it worked because it was obvious when he spoke that he knew what he was talking about. In fact, he taught me a thing or two about Six Sigma. He had launched Six Sigma into two divisions of General Electric successfully and it showed.

Model the Way. Six Sigma provides the perfect leadership training experience. The Six Sigma Belts demonstrate their capability in leading through well-defined, well-resourced projects with quantitative goals for accountability. The good leaders will be easy to identify. Poor leaders will become evident as well. You will rely on a quantitative measure to select your high-potential people during your succession planning—by tracking how much money they brought to the bottom line in their Six Sigma projects.

Encourage the Heart. And, finally, your Six Sigma Belts will know how to encourage the heart. They will show their teams that they can win against the odds. They also will show their teams that they can accomplish amazing things if they keep the goal in sight and follow the discipline of Six Sigma roadmaps.

Every company has a method to identify and groom high-potential employees. The problem with the identification process is the lack of quantifiable qualifications. There is error in the selection process no matter how good it is. Real A-players are missed and lower potentials are sometimes selected. With Six Sigma, it's easy. If a project leader brings in $1 million to the bottom line, chances are good that he or she has a lot of potential. You will find quite a few "sleepers"—high-potential people who have been flying under the radar, but who flourish within the discipline of Six Sigma.

A senior leader in Cummins said it best, "All our future leaders need to be experts in process improvement." Think of it—an outstanding group of young leaders who are not afraid of breaking paradigms, love driving change, and are experts in process improvement.
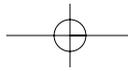
SIX SIGMA—THE METHODOLOGY

So what's involved with launching a Six Sigma initiative and what are the methodologies? This section presents a very high-level overview of the Six Sigma initiative. The following chapters will overlay the details that are necessary for a successful Six Sigma launch. The high-level steps in the Six Sigma methodology will include: (1) selecting the right projects; (2) roles and responsibilities of the primary players—Belts and Champions; (3) the right roadmaps and tools; and (4) the right results.

SELECTING THE RIGHT PROJECTS

Selecting the right projects sounds easy at first. The objective is to identify the set of projects that—if completed—will yield the most significant impact of growth and productivity. A good business strategy is the prerequisite to the process of selecting projects. Metrics (operational and financial) for measuring strategic progress is also a requirement. It turns out that the greatest challenge in the Six Sigma methodology is selecting and prioritizing the right projects. I will discuss this challenge in detail in Chapter 9, "Committing to Project Selection, Prioritization, and Chartering," but projects should reflect activities directly tied to either long-term business strategy (known as top-down projects) or short-term business results (known as bottom-up projects). Successful Six Sigma companies have created a disciplined process to select, prioritize, and scope projects. These companies create a vibrant dynamic between senior leadership driving for strategically important projects and everyone else driving for projects that will reduce immediate costs while improving quality or capacity.

Manufacturing companies select their Six Sigma projects around the general metrics of cost, quality, and capacity. Companies representing the service industries will likely be focused on speed and accuracy. Understanding how each metric relates to the business drives the prioritization process. If a business is capacity constrained, for example, the business will focus on improving capacity metrics.

ROLES AND RESPONSIBILITIES OF THE PRIMARY PLAYERS— BELTS AND CHAMPIONS

Six Sigma initiatives require the selection of people representing several roles in process improvement. These people lead and support Six Sigma projects and will become the process improvement engine of the organization. The roles—*Champions* (Initiative, Deployment, and Project), *Master Black Belts*, *Black Belts*, and *Green Belts*—have distinct responsibilities in driving Six Sigma.
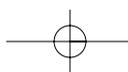
Two types of champions provide protective support for the Six Sigma program. The *Initiative Champion,* sometimes known as a sponsor, ensures that the program is institutionalized at the organizational level. He or she is accountable for measurable business results to a fairly high level in the organization. The Initiative Champions will reside at the Director or Vice-President level within the organizational structure. Many times, business leaders double as Initiative Champions.

The *Project Champions* work directly with the Belts to ensure that the Belts have the proper resources and organizational support to successfully complete their projects. Project Champions have the most critical role in a Six Sigma launch. They are most accountable for the successful completion of the company's portfolio of Six Sigma projects. An executive at Cummins said, "There is no such thing as an unsuccessful Black Belt, just unsuccessful Champions."

Companies internalize (i.e., become consultant-free) their Six Sigma programs by developing *Master Black Belts* (MBBs). The MBBs are expert in the process improvement roadmaps and tools. They will also be proficient in driving deployment strategies. They will ultimately replace external consultants and will provide mentoring and training required for the long-term success of the Six Sigma program. MBBs create value through the mentoring process (i.e., ensuring that Black Belts and Green Belts are successful) and secondarily through training new Belts in process-improvement skills.

For example, one of AlliedSignal's first Master Black Belts, Bill Hill, mentored 12 Black Belts who achieved some $30 million total for their first 12 projects. Clearly, Bill was a success in ensuring that each project was completed as quickly as possible. MBBs also work closely with the corporate leadership in project selection and Six Sigma deployment. The MBB is the Champion of the technical side of Six Sigma. They are experts in all the tools included in the number of Six Sigma roadmaps that are available.

Black Belts (BBs) drive strategic (i.e., big and important) projects; companies consider Black Belts as strategic resources. They receive extensive training in the roadmap and tools discussed in later chapters and demonstrate clear expertise in solving complex chronic problems. Our successful clients allow their Black Belts to work full-time on their projects. The standard procedure within a Six Sigma deployment expects Black Belts, after they learn to use one of the several process improvement roadmaps, to drive two or three project teams simultaneously.

Green Belts (GBs) drive shorter-term tactical projects. Green Belts are widespread throughout the company, and use one of the process improvement roadmaps to solve problems within their area of the company. Green Belts are generally part-time on projects and carry out their usual responsibilities. The training of Green Belts is 50% or less of the training of a Black Belt, and they can be trained by Black Belts or Master Black Belts. Therefore, the Green Belt training program can be widespread and delivered locally and cost effectively. Green Belts always attend training with an important project.
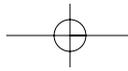
THE RIGHT ROADMAP AND TOOLS

Most companies do a good job of identifying important problems, identifying a team leader, and pulling the right team together. The teams, however, usually hit a wall when actually trying to solve a problem. Companies generally do not have a recognized, standardized, and systematic way of solving chronic problems. Companies now move away from relying on the top 10% (high-potential) employees to solve big problems and turn to the top 40% to solve problems. Six Sigma provides this inherent power.

Having common roadmaps and tool sets provides the problem-solving backbone for the company that yields a common language and set of expectations. For large, complex corporations such as Motorola, Honeywell, and GE, this common language ties the corporation together and also provides a way to easily assimilate new acquisitions.

THE RIGHT RESULTS

The final evaluation of the success of any Six Sigma program is the verification of quantifiable business results, usually measured in pretax income per annum. My favorite metric is dollars per trained Belt. Larger companies train hundreds of Black Belts and Green Belts, who are completing projects all around the company. In the process, companies invest significant resources and training to support their Six Sigma efforts. Companies successfully implementing Six Sigma expect a return-on-investment (ROI) of 30x to 100x over a two-year period.

Organizations will normally implement a centralized project tracking system to determine the effectiveness of the Six Sigma program. By systematically tracking project results, the program is constantly validated and improved. If done correctly, the financial analysts of the organization will be able to convert project results to earnings per share.

THE PLAYBOOK

As a leader, you face the ultimate challenge of driving dynamic change across your organization, resulting in the organization's long-term success. Virtually every organization—profit versus nonprofit; manufacturing versus services—meets significantly new challenges every day. These challenges attack you from every direction, both domestically and globally. As you make your way through the "fog of war," you try to determine the actions that, if executed properly, will transform your company into a high-performing engine. In short, you have a vision of what needs to get done, but you may not know exactly how to do it.
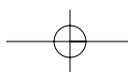
This is the playbook for launching a Six Sigma initiative in your organization. I will present a play-by-play plan to launch Six Sigma in 90 days. I define the first 90 days as the time interval starting with the first executive training session and ending with the first day of the first training wave of Six Sigma Black Belts (Black Belts will be your future process improvement leaders). This playbook is organized into three parts: (1) Pre-launch preparation; (2) Launch; and (3) Post-launch actions.

PART I: PRE-LAUNCH

The pre-launch preparation chapters provide you with the specific actions and milestones necessary to get to the starting line.

Chapter 2, **"The True Nature of Six Sigma: The Business Model,"** provides you with insights into the process of focusing on money (e.g., results), finding the money, and delivering the money. I also address the business model to ensure alignment between your Six Sigma activities and your balance sheet.

Chapter 3, **"Six Sigma Launch Philosophy,"** gives you an executive overview summarizing the nature of a typical Six Sigma deployment. My team and I have sifted through some 50 Six Sigma launches to find the best practices.

Chapter 4, **"Getting Early Support: Selecting a Six Sigma Provider,"** supplies you with the rationale for using an external support group and a list of requisites to consider when evaluating providers. I also provide a quantitative decision matrix and a draft of a request for proposal.

Chapter 5, **"Strategy: The Alignment of External Realities, Setting Measurable Goals, and Internal Actions,"** delineates the process by which projects are linked to the organizational strategy. This chapter describes the process by which projects are selected and prioritized to obtain a direct line of site to the strategy.

Chapter 6, **"Defining the Six Sigma Program Expectations and Metrics**," discusses how to measure the success of your Six Sigma launch with metrics that are directly tied to your strategic and annual operating plans. This chapter instructs you in how to develop your strategic metrics and, more importantly, how to develop aggressive but achievable goals.

PART II: THE FIRST 90 DAYS

This part covers the time from the initial executive training workshop to the launch of the first wave (class) of Belt training. This part provides specific actions and milestones that lead to a successful Six Sigma launch. Each chapter provides a step-by-step roadmap to accomplish a specific set of actions and provides recommended timing. Launching a
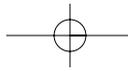
Six Sigma program in 90 days is realistic. Very large companies such as Honeywell and 3M have done so, along with several smaller companies. In fact, 3M beat the 90-day timeframe by about 60 days.

Chapter 7, "Defining the Six Sigma Project Scope," helps you decide what your Six Sigma deployment will look like. The chapter recommends how you tie Six Sigma to earlier initiatives, and compares the advantages and disadvantages of pilot projects versus full-scale organization-wide deployments. I discuss approaches that consider division to division and geographic deployments. In addition, the chapter reviews the multitude of Six Sigma and Lean programs that are available to you to deploy in your organization. Depending on your strategic requirements, this chapter advises you on which programs to launch and in what order.

Chapter 8, "Defining the Six Sigma Infrastructure," outlines the roles and responsibilities of the key players in a Six Sigma launch. It will offer selection criteria and timing. Data infrastructures are also addressed.

Chapter 9, "Committing to Project Selection, Prioritization, and Chartering," is one of the most important chapters in the book. This chapter provides a step-by-step methodology by which breakthrough projects are identified, prioritized, and chartered. By following the suggested methodology, you can learn the valuable core competency of strategic project selection.

Chapter 10, "Creating Six Sigma Executive and Leadership Workshops," recommends how these very critical workshops should be developed and formatted. This chapter presents several different approaches to each workshop, along with sample agendas. I discuss best practices as well. These workshops set the stage for the next step, which is to develop an overall, long-term deployment plan.

Chapter 11, "Selecting and Training the Right People," reviews the roles of the significant Six Sigma players and details the training required to fulfill these roles. The chapter also discusses the pros and cons of hiring personnel externally and developing personnel internally. And, finally, the chapter provides insights into the process of internalizing the Six Sigma training.

Chapter 12, "Communicating the Six Sigma Program Expectations and Metrics," provides ideas for developing a comprehensive communications plan. Emphasizing the who, what, when, where, why, how, and how much, this chapter discusses the coordination of various communication channels. This chapter provides you with the essence of marketing Six Sigma throughout your organization.
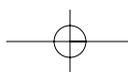
PART III: POST-LAUNCH

This part discusses the means and methods for institutionalizing your Six Sigma program for the long term. We provide a leadership roadmap, along with specific actions that must occur every year for the program to last. Milestones like compensation plans, career ladders, and software support are detailed.

Chapter 13, "Creating the Human Resources Alignment," provides guidance in aligning Human Resource systems to the Six Sigma program. This chapter discusses organization structure, succession planning, career planning, measuring Belt performance, and reward and recognition.

Chapter 14, "Defining the Software Infrastructure: Tracking the Program and Projects," provides an overview of the requirements of a project-tracking software system. The chapter also provides some examples of systems I have encountered over the years.

Chapter 15, "Leading Six Sigma for the Long Term," provides a detailed leadership roadmap that, if followed, ensures the long-term success of your Six Sigma program. This step-by-step approach is based on our work with over 40 companies over the last 15 years.

Chapter 16, "Reinvigorating Your Six Sigma Program," provides methods to assess your current deployment and reinvigorating it based on identified gaps in the deployment. Success in deploying Six Sigma provides the opportunity to launch successive change initiatives.

This playbook is designed to provide you with a turnkey method to launch a Six Sigma initiative in 90 days. By using this fast approach, you can quickly and effectively align your people to your strategy, processes, and customers. By doing it within 90 days, you ensure that you will have a different company within 12 months. These fast launches also demonstrate (require) the full commitment of your leadership team. These 90 days will be the most memorable of your career.