

The New Strategic Six Sigma

“If you think about Six Sigma as another quality program, then it deserves as much intensity as all of the other initiatives that can go on in a big company. [But if] you see Six Sigma as a culture changer—something that will profoundly affect the organization—then, by definition, it takes the passion and obsession of the CEO to make it happen. We saw Six Sigma—in particular, Raytheon Six Sigma—as a way to profoundly change our culture. Therefore, it starts with me and ends with me. I include language on it at almost every meeting that I have—to the extent that people’s lips move almost in synch with mine on this subject.”

Dan Burnham, chairman and CEO of Raytheon Corporation

Six Sigma, the highly statistical quality improvement technique born in the manufacturing bays of Motorola in the mid-1980s, is often used at an operational level to help cut costs, improve processes, and reduce business cycle times. Its value in that regard is well understood by business leaders and has been the topic of numerous business books and articles. Less well known is the potential of Six Sigma to help companies formulate and deploy business strategies and bring about broad transformational change—to serve as a high-order leadership approach, philosophy, and change methodology. Strategic Six Sigma principles and practices can help companies

- formulate, integrate, and execute new and existing business strategies and missions
- deal with constantly changing and increasingly complex customer requirements
- accelerate innovation, globalization, and global integration efforts
- facilitate mergers and acquisitions

- ensure effective implementation of e-business ventures with their associated strategies and infrastructure
- drive revenue growth and systemic, sustainable culture change
- enhance and condense the corporate learning cycle—the time it takes to translate market intelligence and competitive data into new business practices.

Deploying corporate strategies

A growing number of companies are beginning to realize the full implications of Six Sigma—especially as an engine to accelerate corporate strategy and organizational transformation. Former General Electric CEO Jack Welch said that Six Sigma forever “changed the DNA” of how GE operates. Before his first retirement as Honeywell’s CEO, Larry Bossidy used to tell employees and shareholders alike that Six Sigma was the key to the company’s annual 6 percent gains in productivity. Citibank recently implemented Six Sigma to accelerate its customer care approaches around the world. Dupont and Dow Chemical are using Six Sigma to propel sustainable

By Dick Smith and
Jerry Blakeslee

The old standby quality approach, Six Sigma, can change your organization’s culture to drive strategy deployment and business transformation.

What Is Sigma?

In the world of Six Sigma companies, the term *sigma* has come to signify how well a business process, product, or service is meeting the requirements of the marketplace. Six Sigma connotes 3.4 defects for every 1 million customer requirements.

Six Sigma as a Catalyst

Six Sigma is a high-performance, data-driven approach to analyzing and solving the root causes of business problems. It ties the outputs of a business directly to marketplace requirements. At the strategic or transformational level, the goal of Six Sigma is to align an organization to its marketplace and deliver real improvements and dollars to the bottom line. Strategic Six Sigma provides a framework that can be used to bring about large-scale integration of a company's strategies, processes, culture, and customers to achieve and sustain breakaway business results.

At the operational or transactional level, Six Sigma's goal is to move business product or service attributes within the zone of customer specifications and dramatically shrink process variation—the cause of defects that negatively affect customers. It provides specific tools and approaches (process analysis, statistical analysis, lean techniques, and root cause methods) that can be used to reduce defects and dramatically improve processes to increase customer satisfaction and drive down costs.

growth and to position themselves in an industry notorious for static product prices and thin operating margins.

Caterpillar's CEO Glen Barton and top leadership team have embraced Six Sigma as the critical success factor driving achievement of the company's major business objectives. Even hotel chains, such as Starwood Hotels and Resorts, are using it to overhaul their corporate cultures, create blissful customer service experiences, and radically alter the nature of their hospitality services.

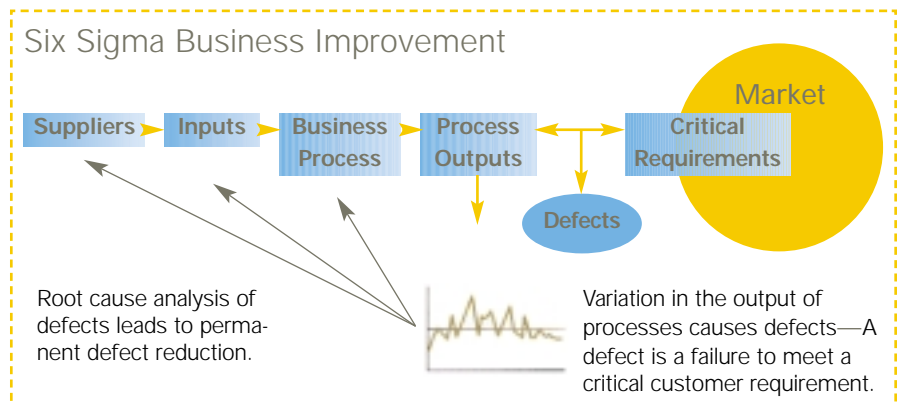
The potential of Strategic Six Sigma to serve all-encompassing purposes has profound implications for CEOs and leadership teams. It also presents training professionals, including change consultants and OD practitioners, with enormous opportunities to play transformational roles in their companies or with the clients they serve.

Fortune recently noted that one of the biggest causes of business failures is the inability of companies to execute their strategies, however sound, effectively. At its core, Six Sigma relies on factual data, statistical measurement techniques, and robust feedback mechanisms to drive decision making. Those elements unify leaders behind a common language and set of data points—making strategic planning and execution more efficient and success-

ful. Because Six Sigma aligns a company's people and processes behind commonly agreed-to goals, it helps them achieve new levels of profitability and corporate performance in less time than traditional strategy implementation. Strategic Six Sigma increases organizational speed and resilience as it helps companies respond quickly to changing market conditions, move in new business directions, and improve customer responsiveness—thus enhancing customer relationships while increasing shareholder value.

Creating the cultural conditions for strategic use of Six Sigma calls for strong change leadership and attention to project implementation.

- A company's top leaders must be in agreement to drive deployment of Six Sigma approaches at all organizational levels.
- Individual leaders must develop competencies in statistical data analysis and process redesign, and be able to cascade those approaches to other levels of leaders inside the organization.
- Leaders must drive employee engagement in Six Sigma projects and work practices, using sophisticated communications techniques and creative incentives.
- Top leaders must integrate Six Sigma approaches into the organization's business planning and strategy deployment processes.



Strategic steps

Training practitioners have a huge opportunity to be involved in coaching their companies' leaders on how to deploy Six Sigma successfully and in helping to transform the culture and operating systems of their organizations. The training needed to give leaders Six Sigma skills is intensive, but the payoffs are enormous. Companies that have instituted Strategic Six Sigma—such as Dow, Caterpillar, Raytheon, Bombardier, and Lockheed-Martin—have, radically and quickly, improved business performance across a wide array of performance indicators, from return-on-assets (an internal business indicator) to customer satisfaction and timely order fulfillment (external performance metrics).

The best way to help your company's CEO and top leadership team implement Six Sigma on an enterprise-wide basis starts with making sure they understand the seven key steps to deploying Six Sigma in any organization. They are as follows:

1. Develop a committed team of leaders to support Six Sigma initiatives.
2. Integrate Strategic Six Sigma thinking and best practices into strategy planning and deployment.

3. Emphasize establishing close connections with customers and the larger marketplace in which the company operates.

4. Ensure that leaders view the company not as a set of isolated functions or independent silos, but as a family of closely related business processes that support the business's value chain.

5. Develop quantifiable measures and demand tangible results from people in their work.

6. Develop incentives, create accountability, and reward performance based on customer requirements and the ability to bring a strong, data-driven approach to business goals and work objectives.

7. Commit full-time to all of the above.

Introducing Strategic Six Sigma principles and work practices into an organization requires rigorous training of executives and line managers—not just in Six Sigma statistical and analytical principles, but also in the equally important tasks of articulating business goals, driving culture change, and leading people in new, more accountable and measurable ways. The role of training as a change driver in this process is crucial. Change acceleration studies show that providing people with the right training

can dramatically accelerate change efforts.

In our work, we typically introduce a company's CEO and top leadership team to Strategic Six Sigma leadership principles in a three- to five-day Six Sigma Champions workshop designed to

- build leaders' awareness of Six Sigma methods and tools and how best to apply them in a transformational way on an enterprise-wide basis

- foster leaders' understanding of the key elements of Strategic Six Sigma, including process management and the methodologies of DMAIC (design, measure, analyze, improve, and control), used to redesign existing work processes, and DFSS (design for Six Sigma), used to design new business processes to operate at a Six Sigma level of efficiency (3.4 defects per 1 million business transactions or operations)

- help top leaders understand the individual roles they must play as leaders in cascading awareness and knowledge of Six Sigma principles and practices throughout the organization

- build leadership consensus about the goals and strategies of the organization and quantify strategies and business objectives as clearly as possible

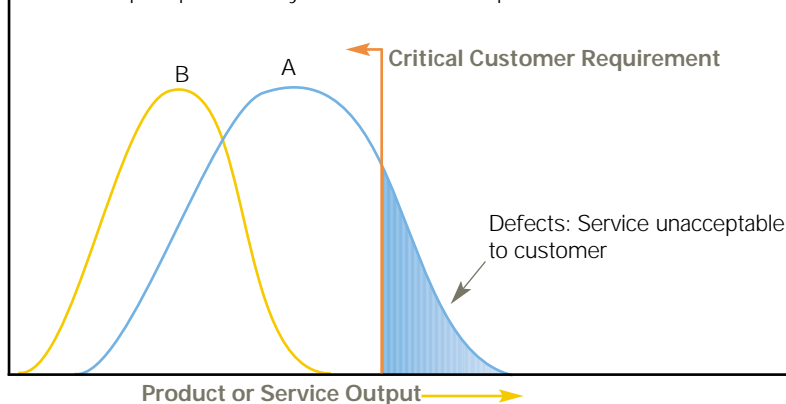
- identify strategic improvement goals and specific Six Sigma projects that can be undertaken to meet strategic improvement needs

- help leaders build the infrastructure of systems, people, skills, processes, and metrics necessary to effectively identify, launch, and complete Six Sigma (DMAIC and DFSS) projects.

Strategic Six Sigma leadership training provides a setting in which a CEO and top leaders can articulate and quantify their business strategies, outline the challenges that lie ahead for the business, and identify strategic improvement goals to improve performance, profitability, productivity, or customer satisfaction. The specific goals can be anything that's important to the company and its top

Six Sigma Reduces Variation in Business Processes

An objective of Six Sigma is to reduce variation and move product service outputs permanently inside customer requirements.



leaders. For example, a goal might be to increase product, service, plant, or process performance; reduce defects or transaction errors; condense cycle times; or streamline the supply chain.

- From there, participants go forward to
- select potential Six Sigma projects to support achievement of the business strategy
 - undertake initial infrastructure development to identify the resources, people, systems, and processes that will need to be controlled or managed to support project completion
 - introduce the essentials of business process management and why it should guide the selection and completion of Six Sigma projects
 - discuss voice-of-the-customer and voice-of-the-market approaches relevant to moving forward to attain Six Sigma process improvement goals
 - manage continuous organizational change as part of spearheading the ongoing selection and completion of Six Sigma projects.

The modules

Let's now look at each of these workshop stages in more detail.

Module 1: Executive Awareness. The first part of Strategic Six Sigma Champion training includes outlining and emphasizing the critical roles leaders play in effective

deployment of Six Sigma. We typically focus on the tasks of successful Six Sigma deployments and the importance of top executives playing vigorous, visible hands-on roles as Six Sigma champions. Because Six Sigma's a team effort, we often deal with top leadership team issues that need to be resolved if the members are to work effectively together. Everyone in the room needs to understand that although they retain key functional roles in the organization, they must now also begin to work more closely in concert and give up rivalries and turf issues to adopt a common approach to strategy deployment and building a business process framework. Finding consensus isn't easy, but it forges a strong top team focus on key business issues, strategies, and priorities. It also serves to catalyze group energies towards pursuit of common goals, using an agreed-upon set of metrics to get there.

The workshop helps participants articulate their companies' business strategies, quantify those strategies to the extent possible by attaching specific metrics or timelines, identify required areas of business improvement, develop detailed and quantifiable strategic improvement goals, and attain group consensus. Amazingly, we often find that companies haven't quantified their business goals or operating strategies. The leaders may know (or pre-

sume to know) what they contribute to the bottom line, but in many cases they don't understand their roles and contributions with regard to their colleagues. Nor are there systems and mechanisms to help different components of the company operate within a common framework of key performance indicators.

Module 1 focuses on helping participants articulate the measures by which they'll gauge their own job performance—identifying key performance indicators for themselves, their business units, and the organization as a whole. We help them articulate business strategies (clear, measurable, and bounded by time) and come to consensus about how those elements must be put in place in a framework of how the business will be run.

We ask these questions:

- How do you define success in your business (the organization or business unit)?
- What will you tell your people they need to achieve for the business (and for them) to be successful?
- What are the metrics by which performance (business, team, and individual) is judged?
- Are those metrics quantifiable (specific, measurable, and bounded by time)?
- What is the state of customer satisfaction in your organization (customer size, revenue, and so forth)?



- How does your company assess customer satisfaction? Is it based on perceptions of customer requirements, anecdotal data, or the systematic and disciplined collection, analysis, and synthesis of customer data on a regular basis?
- What are the specific performance metrics used to link work and customer satisfaction levels back to corporate strategy or key business goals?

Module 2: Champion Simulation. Module 2 puts participants through an exercise to help them understand the various steps involved in planning and managing successful DMAIC projects. Leaders have to understand the process because, ultimately, they'll select and prioritize Six Sigma projects and ask staff to manage those projects to specific performance targets. So, the module introduces participants to process management and DMAIC concepts and tools, including project chartering, process mapping, voice-of-the-customer methods, sampling, statistical thinking, and root cause analysis. Other subjects include how process improvement ideas are generated, how project pilots are designed and implemented, and how process management is used to derive benefits from DMAIC (and also DFSS) projects.

Different companies are concerned with different projects. Some say cost-reduction projects are the most important, at least in the early stages of Strategic Six Sigma. With those results in hand, they feel positioned to make a broader business case for how Six Sigma can be applied to other areas of the business. Other executive groups focus on revenue generation through the use of DFSS tools.

Module 3: Alignment of Six Sigma Implementation to Business Strategies. In this module, participants identify and align Six Sigma projects to meet specific business strategies. The leadership team determines the final selection of Six Sigma projects based on their potential to affect strategic improve-

ment goals, financial goals, and business strategy. The exercise of mapping the connections that link projects to strategic improvement goals to strategy is a powerful group experience for executives, who begin to understand Six Sigma's horsepower in driving strategy. Module 3 is often a breakthrough experience for participants who have resisted Six Sigma. They suddenly get it and recognize its potential power to affect business performance dramatically.

Module 4: Infrastructure Development. This module helps participants determine the resources, tools, and people they'll need to implement Strategic Six Sigma.

- What kinds of organizational resources will be required?
- In what ways will leaders at different levels need to help sponsor the ongoing work of project teams and remove organizational roadblocks?
- Who in the organization should be enlisted as part of Six Sigma project teams? How will finance people be brought into the effort, and what will be company policy on tracing project benefits through to the bottom line? Teams should have broad, cross-functional representation so they can work easily across all functions of the organization in brainstorming solutions to specific problems.
- What recognition systems will reward performance and build commitment to new ways of working?
- What channels will communicate key messages to the organization as Six Sigma deployment proceeds?

Module 5: Introduction to Business Process Management. This approach enables Strategic Six Sigma improvement (DMAIC and DFSS projects) and can be strategically leveraged across the entire organization. It's based on the idea that a company is a framework of interrelated and highly interdependent processes—the effective operation of which helps the company operate at peak efficiency and meet customer requirements in reliable,

consistent, and highly measurable ways. This module helps participants identify and clarify the core processes whose improvement will yield the most dramatic changes and benefits for customers and the organization. Emphasis is also on helping leaders drive and align Six Sigma efforts strategically to get maximum leverage from all Six Sigma projects.

Our definition of core processes is “those that are closely linked to customers and the organization's key competencies and are at the heart of the company's identity with its customers and markets.” A core process for one company (an Intel, for example) might be its manufacturing processes. A core process for another company (a 3M) might be its reputation for innovation. We also identify core processes as those whose “overall improvement, redesign, or development has the most potential to help it achieve strategic objectives and are essential to satisfying shareholders' expectations of excellent financial returns.” Typical core processes in most organizations include marketing, sales, new product development, product manufacturing, and customer service.

Module 6: Voice of the Market/Customer. This module focuses on how to use voice-of-the-customer and voice-of-the-marketplace data to drive Six Sigma efforts. We take care to ensure that, as part of setting improvement targets for Six Sigma projects, executives pay close attention to meeting or exceeding customer requirements, benchmarking their competitors' performance, and assessing performance requirements the marketplace may require in the near future. We assess and discuss the effectiveness of current VOC-VOM processes and steps to make them more effective.

Module 7: Selection and Development. This module covers selecting appropriate Black Belts and Master Black Belts (key project leaders) to spearhead specific Six Sigma projects. MBBs work as expert consultants advising the senior leadership

team and business unit leaders on Six Sigma project selection and targets. BBs work at the level of project improvement teams, driving all stages of DMAIC and DFSS projects.

The blend

A constant thread running through the training is the importance of leaders being attuned to the change management dynamics associated with effective Strategic Six Sigma deployment. We argue that leaders can't afford to stop communicating the urgency of change. Otherwise, they run the risk that their organizations will fail to embrace the change principles and practices that are critical to sustaining Strategic Six Sigma. Consequently, training champions (executives and Black Belts) consists of change leadership training and specific technical training on Six Sigma tools and methodologies—the goal being to equip leaders with both the technical and people-process aspects of Strategic Six Sigma.

The challenge of change

The training we've described is primarily for CEOs and top leadership teams, but versions should be cascaded down to lower leadership levels—first to business unit leaders and then to mid-level executives, process owners, Master Black Belts, Black Belts, and Six Sigma project managers. The main aim is to build a highly competent population of Six Sigma leaders within an organization that can implement projects with sufficient speed and scale to drive massive transformation, while achieving concrete and measurable results from Six Sigma projects. Training Six Sigma leaders at all levels is also essential to embed Six Sigma principles—the quest for perfection, an intolerance for waste and inefficiencies in processes, and so forth—in the makeup of the organization and the approaches people use in their jobs every day. The training of Six Sigma leaders is vital to create consistent

leadership behaviors and align people, processes, and projects to support goals. It's also critical for continuous organizational learning, which is the prerequisite to ensuring ongoing process, product, and service improvement.

Kathleen Bader, group president and VP of quality and business excellence at Dow Chemical says, "The change challenges in adopting Six Sigma are in many ways similar to adopting any other initiative...but in some ways substantially different. They're similar in the sense that if you can't put in front of people the fundamental reasons for change, you're not going to get them to change. And if you can't show people what's in it for them personally and for the business...you won't get there. However, with Six Sigma there's an step: the adoption of a different way of thinking—looking at inputs versus outputs, intolerance for variation, focus on data, and absolute belief in the need for sustainability of results. People really need to change how they do their daily work in significant ways, and that creates an additional barrier to change."

Training professionals will want to consider how the rollout of Six Sigma training can be integrated with other initiatives, especially leadership development and employee development. Companies recognized as Six Sigma leaders link Six Sigma competencies and advancement from the moment a new employee walks in the door. That sends a clear signal about the priority of Six Sigma skills to the future health and vitality of the organization.

Training professionals must look for ways to get their companies' top leaders visibly and actively involved in spearheading Six Sigma training for all executives and managers. At leading Six Sigma companies such as Caterpillar, Dow, Raytheon, and Bombardier, CEOs and top leadership teams are personally involved in teaching Six Sigma leadership

and technical skills to others.

Training can be critical to such efforts. TD

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