

Institutionalizing Lean Six Sigma

Alessandro Anzalone, Ph.D.
Hillsborough Community College, Brandon Campus

HILLSBOROUGH
Community College
www.hcc.edu

Agenda

1. Introduction
2. Institutionalization
3. Planning for Each Business Unit Launch
4. The Executive's Role
5. Emphasizing the Ultimate Goals
6. References

Introduction

Lean Six Sigma can deliver increased operating margins and growth that will drive the intrinsic value of the company. But the key to having the stock market recognize that value is to sustain the growth in ROIC and revenue. And that means institutionalizing Lean Six Sigma so that the company can continue to improve performance year in and year out.

One of the biggest concerns heard is “How do we make sure that our people don’t think this new initiative is just the latest flavor of the month?” This telling comment reminds us that nearly every company will have tried to implement a change program or two at some point in the past. In many cases, these programs faded away and the initiatives became “flavors of the month.” The experience tends to create an immunity in the company to making change.

Introduction

This immunity to change is not because people are opposed to doing the right thing. In fact, many of the skeptics of the program probably have tried to do the right thing many times in the past. The immunity is created by the conviction that this initiative is merely wasting time and committing effort to an initiative that is destined to fade away.

Institutionalizing the new methods encompassed within Lean Six Sigma will prevent it from becoming another flash in the pan. *Lean Six Sigma is institutionalized through the CEO’s visible commitment, management’s resolve to use the Lean Six Sigma infrastructure as a means to improve their business, and the design team’s efforts in upfront planning.* Lean Six Sigma is institutionalized through the black belts’ success in generating quick results from projects and an organizational commitment to extending Lean Six Sigma into everything the company does, from its customers and suppliers into every facet of the company (including Design for Lean Six Sigma).

Introduction

The approach that Caterpillar has taken is an example of an effective approach to institutionalizing Lean Six Sigma. Caterpillar sees institutionalizing the process in four major phases: Comply, Commit, Embed, and Encode.

- ✓ Comply. This is the up-front process in which the executive team must be willing to make the necessary investments and, to some degree, enforce their will on the company to give Lean Six Sigma a try.
- ✓ Commit. Commitment comes from a true belief that all of this work is paying off, personally and organizationally. This second stage in the process can come only as a response to seeing valuable results from Lean Six Sigma. That is why it is so critical to establish and publicize project successes as early as possible and to reward those who established this success.

Introduction

- ✓ Embed. Lean Six Sigma must become embedded in everything the company does. The philosophy must be embraced and the actions of the organization must reflect this. This includes ensuring that Lean Six Sigma is the process that drives improvement across the company, in manufacturing, in transactional processes, in customer-facing processes, and in new product development. Embedding Lean Six Sigma also includes driving the process beyond the four walls of the company into customers and suppliers.
- ✓ Encode. Some companies like to talk about making Lean Six Sigma part of the company DNA. When Lean Six Sigma is in the DNA, you probably won't even have to call it by name. It will just become the way that the company thinks. Encoding takes time. Very few companies have made Six Sigma part of the DNA in the company. GE and AlliedSignal (now part of Honeywell) are probably the most notable.

Institutionalization

So, how can you lead an organization through these phases? Clearly, institutionalization will take time and will meet with barriers along the way. I like to think about institutionalization in three “steps,” listed here in priority order:

- A. Start the process on the right foot.
- B. Build confidence that Lean Six Sigma is here to stay.
- C. Extend and institutionalize Lean Six Sigma.

Institutionalization

- A. Start the Process on the Right Foot

If you don't start off right, you put your company at a tremendous disadvantage and all of the effort applied to the other elements of institutionalization will be diluted enormously. Here are three essentials to starting off right:

- ✓ Dedicate black belt and champion leadership positions full time. Deploying Lean Six Sigma (especially in its infancy, the first one or two years) is not a part-time job—it requires highly respected, highly talented, full-time leadership and management.
- ✓ Select the best people for these roles. Employees will be watching closely to see if management has the conviction to dedicate their best resources (who are most likely currently in important roles).

Institutionalization

- A. Start the Process on the Right Foot
- ✓ Select the projects most important to the business. Utilize Net Present Value justification; do not blindly manage to budget. If one dollar invested today returns two dollars tomorrow, go to the P&L manager, get approval, and spend the dollar!

Each of these actions is an important test of up-front management conviction in the process. If Lean Six Sigma is executed well, the rest of the organization will begin to believe.

Institutionalization

- B. Build Confidence That Lean Six Sigma Is Here to Stay

Making Lean Six Sigma part of the fabric of your organization involves a lot of actions, at many levels of the organization, carried out consistently and repeatedly. It's not easy to be consistent, especially when you are just learning a new way of conducting business. Here are few reminders on how to walk the walk:

- ✓ Get and publicize results. If Lean Six Sigma ends someone's frustration, it's suddenly made a friend for life! So first, use what you can learn from this book to make sure that you do get results. Then, as gains start accruing, be sure they are shared throughout the organization. Write up stories in the company newsletter. Post charts in the work areas that show increasing profit, reduced costs, and improved quality.

Institutionalization

- B. Build Confidence That Lean Six Sigma Is Here to Stay
- ✓ Leaders must articulate what Lean Six Sigma means clearly, simply, and frequently. Communicate often, frankly, and with many different media to ensure key messages are received by all potential audiences (both internally and externally):
 - ✓ Clearly and frequently communicate the need for the change. Why is change necessary and urgent?
 - ✓ Clearly explain the need for change and the potential benefits (and risks) to those constituencies that will be affected in the process of transition.
 - ✓ Describe what will change, how and when the changes will occur, and what individuals need to do in order to succeed.
 - ✓ Involve employees in all aspects of transformational change.

Institutionalization

- B. Build Confidence That Lean Six Sigma Is Here to Stay
- ✓ Recognize and reward positive change behaviors and skills.
 - ✓ Integrate leadership training (including change management best practices) into the Lean Six Sigma curriculum. Lean Six Sigma involves changes to behaviors, as well as technical changes, and all change involves a disruption. Natural discomfort and resistance must be expected and managed.
 - ✓ Launch Lean Six Sigma by leveraging existing organizational strengths (e.g., use existing training modules and existing best practices whenever appropriate). If Six Sigma has already been launched, Lean can be added as an enrichment with no name change.

Institutionalization

- B. Build Confidence That Lean Six Sigma Is Here to Stay
- ✓ Plan and enforce a focus on transactional processes. We recommend that at least 50% of all improvement projects should be directed toward transactional processes. This will involve many segments within an organization that might have been left out of improvement processes in the past. This percentage may be high in manufacturing companies during the first year, but manufacturing cycle efficiency can be improved to 25% only if the transactional areas that surround manufacturing are streamlined.
 - ✓ Reinforce existing corporate values (e.g., integrity customer focus, teamwork) during implementation. This reinforces that Lean Six Sigma is part of your existing value set, not some independent short-term program.

Institutionalization

- B. Build Confidence That Lean Six Sigma Is Here to Stay
- ✓ Create accountability through visibility. Often companies deploy project tracking software to collect and publicize the financial wins and losses of the Lean Six Sigma effort. These tools have been indispensable in the deployment of large-scale corporate programs.
 - ✓ Proactively plan for Lean Six Sigma communication events. Do not reactively schedule around existing leadership commitments.
 - ✓ Share best practices and lessons learned across the business. Celebrate the successes openly and frequently.

Institutionalization

C. Extend and Institutionalize Lean Six Sigma

As people in your company become more comfortable with Lean Six Sigma, look for ways to extend its use:

- ✓ Enforce a common language. Make terms such as DMAIC, metrics, dashboards Net Present Value, Lean, variation, and cycle time part of your everyday language when discussing existing operations or future improvements.
- ✓ Integrate Lean Six Sigma plans with business plans. Ensure that Lean Six Sigma is incorporated into existing strategic plans, operating plans, and budgets. In this way, Lean Six Sigma projects will all directly align with existing business strategy and existing business needs.

Institutionalization

C. Extend and Institutionalize Lean Six Sigma

Extend Lean Six Sigma into your entire supply chain. Your suppliers and some intermediate customers are part of the larger value stream. If necessary, train black belts for your customers/suppliers or lend them one of your own if they will commit to the process.

Address the need for Lean Six Sigma in the design process. Lean Six Sigma can both speed up your product design/development processes and help you improve the designs of products and processes. Since the majority of cost associated with a product is determined in the design stage, applying Lean Six Sigma in those areas can have a dramatic effect on reducing costs.

Planning for Each Business Unit Launch

Deployment isn't finished until every business unit is using Lean Six Sigma. However, completion of your deployment plans requires knowledge of the issues raised above and in all the intervening chapters as well, such as ...

- ✓ The resource and project selection processes.
- ✓ Management team alignment and commitment to projects that get selected.
- ✓ What it will take to develop a cadre of trained black belts and champions.
- ✓ How to build toward true institutionalization.

Planning for Each Business Unit Launch

In the broadest terms, launch planning happens when the projects are reviewed by the business unit manager and the selected projects, black belt assignments, and resource commitments are pulled together into a coherent package. The business unit manager and his or her team should review the list of selected projects and verify that the range of projects are linked to, support, and will achieve the goals set forth in the strategic plan. They should also review the unit champion's recommendations for project measurements and review mechanisms.

As you complete your deployment plans and contemplate the business unit launches, think about ways to inform everyone in the unit that one or more Lean Six Sigma projects are about to begin within their world and how those projects will be supported. Provide the historical context and explain why these projects have been selected above other projects (including many "pet projects" that weren't chosen). That will help set the stage for successful completion of the first projects.

Planning for Each Business Unit Launch

It is important as well to exhibit management's commitment to the program and to the projects being undertaken, and to answer any questions or concerns that arise from the new course the company is charting. Additional training may be provided to team members and the management staff to broaden the base of Lean Six Sigma knowledge and ensure alignment of individual perceptions with the overall program goals.

The Executive's Role

Everything starts with leadership, and leadership starts with the executive team. The executives in your organization must lead the way. They must continually link their strategy's execution to Lean Six Sigma and continuous improvement; they must frame Lean Six Sigma as "transformational change"—something that requires hard work over the long haul, not a short-term improvement effort. Lean Six Sigma should be presented as the way the business will be transformed with large-scale integration of fundamental changes through- out the organization—including processes, culture, and customers— to achieve and sustain results.

The Executive's Role

The CEO and other leaders must also act in ways that support the importance of having the best people fill black belt and champion positions. The experience of being a black belt or champion provides a process view of the corporation that is a very valuable experience in the preparation of the future leaders of the firm. For this reason, it is important that the black belts and champions be selected with this in mind; hence they must be among the best and brightest. They will have an experience of increasing operating profit, reducing lead times, etc., that will make Lean Six Sigma a tool they will employ for life. If the next generation of P&L managers have this experience, the institutionalization of the process and the sustainability of results are ensured. *Thus the insistence of the CEO on getting the best and brightest assigned as champions and black belts is the most important aspect of institutionalization.*

Emphasizing the Ultimate Goals

One characteristic of successful Lean Six Sigma efforts is that the CEO and his or her P&L managers think of Lean Six Sigma as a culture, a way of life, and "the way we operate." Lean Six Sigma is the instrument of transformational change and, ultimately, all improvement efforts should fit under the umbrella of Lean Six Sigma. In the nervous trials of reality Lean Six Sigma should be looked on as a resource that provides continuity of conception and organic development of strength and that can be applied to solve any business problem. In summary:

- ✓ Lean Six Sigma is a key enabler of corporate strategy.
- ✓ Lean Six Sigma is driven by both business and customer needs.
- ✓ Competitive pressures only increase with time, and Lean Six Sigma enables a competitive advantage.

Emphasizing the Ultimate Goals

The ultimate goal is for Lean Six Sigma to become part of the “warp and woof” of the company. (In weaving, as you may know, “warp” is the long threads that provide the structure and “woof” is the crossing threads that provide design and color.) You will know that you have reached this goal when Lean Six Sigma is no longer referred to as a program. In fact, it may not even be referred to by name. It will simply be the way that your organization solves problems and improves processes, all the time.

Emphasizing the Ultimate Goals

“A bad system will defeat a good person every time.” – Deming (1900 – 1993)

“We are what we repeatedly do. Excellence, then, is not an act, but habit.” – Aristotle (384 – 322 BC)

“Tell me and I will forget, show me and I may remember, involve me and I’ll understand.” – Chinese Proverb

“Quick and Crude is better than Slow and Elegant” – John R. Black, William F. Christopher, from *A World Class Production System: Lessons of 20 Years in Pursuit of World Class*

“We will win and you will lose. You cannot do anything because your failure is an internal disease. Your companies are based on Taylor’s principles. Worse, your heads are Taylorized too. You firmly believe that sound management means executives on the one side and workers on the other, on the one side men who think and on the other side men who only work.” – Konusuke Matsushita (1894 – 1989)

Emphasizing the Ultimate Goals

“Lean is not a program, it is a total strategy.” – Alex Miller, Professor of Management at The University of Tennessee

“Due to the set-up times, the tendency is to produce in batches that are larger than the order quantities. This supposedly utilizes the equipment more efficiently, reduces set-up costs, and reduces unit product cost. But any production in excess of immediate market demand ends up as finished-goods inventory. The result of producing these large batches in today’s competitive marketplace is poor customer service despite high levels of inventory.” – M. Michael Umble and Mokshagundam L. Srikanth. Synchronous Management: Profit-Based Manufacturing for the 21st Century. Spectrum Publishing: 1997.

“Finished goods are products that we have made that no one wants.” “Raw materials are products that we have bought that we don’t need.” – Tom Greenwood, Director of the University of Tennessee Lean Enterprise Forum

Emphasizing the Ultimate Goals

“Implementing Lean concepts and principles is not a technological issue, it is primarily a management and human resource issue.” – Kenneth E. Kirby, Associate Professor in the Department of Industrial Engineering at The University of Tennessee

“We do not suggest that you throw your MRP systems away. MRP should be used for purposes of planning and pull mechanisms should be used as much as possible for purposes of execution.” – Kenneth E. Kirby, Associate Professor in the Department of Industrial Engineering at The University of Tennessee

“Many people think that Lean is about cutting heads, reducing the work force or cutting inventory. Lean is really a growth strategy. It is about gaining market share and being prepared to enter in or create new markets.” – Ernie Smith, Lean Event Facilitator in the Lean Enterprise Forum at the University of Tennessee

Emphasizing the Ultimate Goals

“Kanban is like the milkman. Mom didn’t give the milkman a schedule. Mom didn’t use MRP. She simply put the empties on the front steps and the milkman replenished them. That is the essence of a pull system” – Ernie Smith, Lean Event Facilitator in the Lean Enterprise Forum at the University of Tennessee

“If you do what you always did, you get what you always got.” – Gerhard Plenert and Bill Kirchmier. *Finite Capacity Scheduling: Management, Selection, and Implementation*. John Wiley & Sons, Inc: 2000.

“Failure to change is a vice” – Hiroshi Okuda

“There are three kinds of leaders. Those that tell you what to do. Those that allow you to do what you want. And Lean leaders that come down to the work and help you figure it out.” – John Shook

Emphasizing the Ultimate Goals

“We trained hard, but it seemed that every time we were beginning to form up into teams, we would be reorganized. I was to learn later in life that we tend to meet any new situation by reorganizing; and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization.” – Petronius, (c. 27 – 66 A.D.)

“Any man can make mistakes, but only an idiot persists in his error” – Cicero (106 – 43 BC)

“Take away the cause, and the effect ceases” – Cervantes (1547 – 1616)

References

1. Michael George, Lean Six Sigma : Combining Six Sigma Quality with Lean Production Speed, McGraw-Hill, first edition , 2002, ISBN-13: 978-0130176158.
2. <http://matthrivnak.com/lean-quotes/>