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The Lean Book of Lean

A Concise Guide to Lean Management for Life and Business

John Earley • Wiley © 2016 • 272 pages

Management / Management Concepts / Lean Management

Take-Aways

- Achieve more with less by following the “core lean principles.”
- Being “customer demand-driven” means doing only what your customer wants.
- To “maximize flow,” find your constraints and track them. “Declare war on variation” and seek ways to “eliminate waste.”
- Lean is not merely a set of tools and techniques; it is also a mind-set.
- While Lean is an “intuitive” approach for detecting and eliminating waste, Six Sigma is more “data-driven,” with roots in statistical analysis.
- Identify the level of “Lean understanding” in your organization by developing “principal thinkers,” “practitioners” and “Lean aware people.”
- Assemble your Lean toolbox with “diagnostic tools” and “implementation tools.”
- To make your Lean transformation sustainable, use “transformation maps.”
- Set up a “best practice reference visit” to a Lean company; take notes, document what you learn and debrief your colleagues.
- Your Lean journey will include financial and “nonfinancial improvements.”

Recommendation

Supply-chain consultant John Earley argues that your people make or break your firm's transformation into an organization that "maximizes flow" and is "customer demand-driven." Using informal language, Earley outlines commonsense do's and don'ts for your Lean journey. He rambles a bit through this potpourri of helpful ideas, and concludes his guide with an excellent glossary. *getAbstract* recommends Earley's overview to consultants and business practitioners who are learning about Lean, operational excellence and continuous improvement.

Summary

"Core Lean Principles"

Your most important Lean manufacturing objective is to achieve more with less by following these "principles":

- **"Be customer demand-driven"** – Do only those things your customers want.
- **"Maximize flow"** – Finish everything you start and avoid holdups.
- **"Eliminate waste"** – Identify overage in "materials, time and resources"; eliminate it.
- **"Declare war on variation"** – Allowing variability creates unnecessary uncertainty. Find the cause of variation and get rid of it.
- **"Organize people around outcomes"** – Make your colleagues accountable for delivering customer demand-driven products or services, and create an organizational structure that supports your mission.
- **"Equip people" with necessary skills** – Establish and maintain skills training as a foundation for organizational development.
- **Implement "simple measures and controls"** – Things happen fast in Lean environments, so install "warning indicators" at "critical points" before something fails.
- **"Paint a clear and compelling picture"** – Make sure everyone sees the "Ideal State" that is your goal. Continuously communicate what the future looks and feels like.

"Flow"

One of the most straightforward, basic principles in Lean manufacturing is flow. With flow, you keep everything moving at a constant pace from the beginning to the end of the manufacturing process.

"Lean production' is 'lean' because it uses less of everything when compared to mass production."

Keep a steady stride; don't try to hit the fastest speed possible. Consistent operations make your output more reliable. For instance, you could confirm shipping dates to customers with greater certainty. Reliability brings increased service levels and improved product quality, since you won't need to rely on rush orders.

"Any medium-to-large company worth its salt needs a tool like this to keep track of what it's doing and committing to if it's going to survive in the modern world."

To improve your flow, figure out where your constraints or holdups are and start tracking them. Next, define “buffers and sequencing” to direct your manufacturing flow through this obstacle course of constraints. Last, review your design choices periodically and adjust your buffers whenever you have significant changes in your production layout or customer-demand structures.

“Don’t jump on the first idea and run with it. Take some time to consider a few solution options.”

Traffic roundabouts are excellent examples of flow: They are open around the clock, they structure how drivers cross intersections and they keep cars in motion. Contrast this to a not-so-Lean traffic light system, where one flow of cars has to stop to let another flow of cars go.

Lean versus Six Sigma

Lean and Six Sigma developed individually, and each offers a distinct method for using specific tools and techniques for continuous improvement. The methods work well together in your continuous improvement program. Lean is an “intuitive” approach to finding waste and eliminating it. Six Sigma is rooted in statistical analysis and is more “data-driven.” Lean takes a holistic view of implementing “transformational” change in your organization. Six Sigma looks for “incremental” gains you can achieve through improvement projects.

“If you start a change program without a clear destination, when you get ‘there’ it probably will not be where you really wanted to be.”

Choosing Lean or Six Sigma depends on the state of your organization and its priorities. For example, if you generate a lot of subassemblies, but still can’t meet your customer delivery windows, you might want to improve your flow and apply Lean first. Or, if you suffer unexplained variation in your manufacturing operations, start with Six Sigma initiatives to attack variability before optimizing flow.

“Making a change is one thing, sustaining a change is quite something else...”

Your company is likely to merge these improvement approaches into a “Continuous Improvement” or “Operational Excellence” program. Don’t let Lean and Six Sigma compete. Instead, integrate and apply them according to your capabilities and current business priorities.

“The Lean Mind-Set”

Lean is not only a technique; it is also a mind-set. Being expert in Lean concepts and tools doesn’t make you a Lean master. You also need “to see” how and where to apply those tools.

“These human factors of Lean are the difference between making long-lasting change in a business and merely cost cutting, which can only ever be a short-term fix to buy you time.”

Observe the people in your organization and identify its level of “Lean understanding”:

- **“Principal thinkers”** know Lean tools inside out and can apply them in a range of situations. These people have a “Lean wired” mind.
- **“Practitioners”** understand tools and techniques and can lead Lean projects and improvement events. They can evolve into principal thinkers.
- **“Lean-aware people”** understand the ideas behind Lean and support the Lean process. You can train them easily and quickly.

“Lean is a quite intuitive approach; it is based on the practitioner being able to just ‘see’ where the issues and waste are from experience and having a brain ‘wired for Lean’.”

Before you start your Lean implementation, make sure a critical mass of people fall into one of the three categories. If about one-fifth of your total workforce has a Lean mind-set, they can form your “Lean critical mass.” Keep investing in training and coaching; question the status quo, and ask how to simplify your processes.

“Success and Sustainability”

About three-quarters of Lean implementations fail for various reasons, including superficial implementations by evaporating project teams and halfhearted support from senior leaders who have unrealistic expectations and rotate jobs too quickly.

“A well-designed and implemented Lean supply chain will deliver on time and in full better than an un-Lean one.”

Build in steps that lessen the risk of failure. For example, get “buy-in at all levels” by explaining Lean’s “what,” “how” and “why.” “Get the fundamentals in place” by first reducing variability using Six Sigma tools, and then applying basic Lean tools. Choose your targeted area of improvement wisely. Make sure senior leaders notice the impact you are having. Use a “transformation map” to show how your Lean changes will improve your firm’s procedures, organization, leadership, skills and technology. As with value stream mapping, begin with the customer in mind and work backward. Start small, set a solid foundation and aim for ambitious change to make transformation sustainable.

“Key Tools”

Differentiate between “diagnostic tools” and “implementation tools” to help put Lean and Six Sigma programs in place.

“Flow is about keeping everything moving at a steady pace through the process from start to finish.”

These diagnostic tools help you understand what’s going on in your business:

- **Five “Whys”** – Apply this simple technique to delve more deeply into a problem. Ask “why” several times to eliminate “preconceived ideas and beliefs” and find root issues.

- **“Value stream mapping”** – Identify waste in your network. Map your chain from source to customer so you understand your process, information flows and required lead times.
- **“Root cause analysis”** – Structure the process of problem solving into four distinct steps, from defining the problem to making sure your solution is sustainable. Apply the 5 Whys in support of your root cause analysis.
- **“Voice of the Customer” (VoC)** – This expresses everything you do regarding customer value. First establish “Critical to Customer Requirements” (“CCRs”), and then adjust processes accordingly.

“The primary basis for cost reduction in Lean is that you stop doing stuff you can’t sell.”

These implementation tools help you deliver and sustain your Lean transformation:

- **“Standard work”** – Ensure that you and your colleagues do a job the same way every time. Find the “one best way” and roll it out companywide.
- **“Center-lining”** – Indicate the “nominal settings” employees should use on complex equipment by physically marking those positions on the machines. This reduces variance and produces reliable results.
- **“IS-IS NOT thinking”** – Use the process of elimination to narrow the scope of a problem. “Once you eliminate the impossible, whatever remains, no matter how improbable, must be the truth.”
- **“Kaizen events”** – Kaizen is the Japanese term for “continuous improvement.” In a Kaizen event, employees who work on a process meet to discuss better ways to conduct that process and then put their solutions into practice. These gatherings nourish Lean implementation because they drive engagement and ongoing improvement. Kaizen events can run several days. Use your value stream map as a starting point.

“Rhythm”

Rhythm is a powerful tool for diagnosis and Lean implementation. Rhythm draws from the original “Lean Planning Wheel” and works with the idea of reducing the downtime during changeovers. The rhythm tool covers four main processes and helps you smooth the loads on your production lines during times of variable demand. It’s based on using a simple inventory planning and scheduling process to produce the right amounts of the right product at the right time. You can use rhythm’s basic rules to improve supply chain efficiency and effectiveness.

“Getting Help”

You can get help with your Lean implementation several ways. For example, you could form a partnership with another company that’s also working on Lean implementation. Your interactions can vary from a “casual relationship” featuring site visits to a more formal arrangement with regular sharing and learning. Carefully select the right partner organization. Find a company which is at a similar stage of its Lean journey facing parallel business issues and strongly motivated to share. Conducting this exchange with an organization in your industry probably won’t work, since competition might impede an open, sharing relationship.

“Success in Lean leadership is about instilling the right mind-set, staying the course and having the right conversations.”

Get support by organizing “best practice reference visits” to companies at the forefront of Lean improvements. Your goal is to see and hear how another company successfully implemented Lean tools and processes, and to bring that information back home. Come in with a basic understanding of Lean implementation so you can link the processes you watch to how you would apply them in your business. Consider how relevant this company’s activities are to your organization and which parts of the operation you should see. Strategize how to prepare for this visit and what team members you should bring along. Plan how you will retain what you learn. Collate your notes into a “Learnings document” to debrief your colleagues.

“Lean and Six Sigma are both valuable sets of tools and ways of thinking to help you transform and improve your business at both a tactical and strategic level.”

Some well-known organizations can support your Lean journey. Reach out to the Lean Institute, the Lean Six Sigma Institute, the Demand Driven Institute and the Lean Enterprise Academy. Join their discussion groups or tap into their informational resources. Consider whether you want to hire a Lean consultant and how you would justify doing so. Remember that “a consultant is not there to do your work for you” but to give you guidance.

“Results, What to Expect and What Is Possible”

Having a Lean supply chain will enhance your revenue potential. Lean will help you stop doing things you can’t sell to your customers. This brings cost reductions. Since one of Lean’s primary goals is to boost your working capital, your cash flow will improve. Additionally, “nonfinancial improvements” include increased “safety,” heightened job satisfaction and less impact on the environment, since Lean reduces waste.

“We all do some Lean in our everyday lives and we don’t even think about it.”

These reasons alone can help you make a case for a Lean transformation. Businesses experience these typical outcomes after they embark on their “Lean journey”:

- Inventory levels reduced by 30-50%.
- Factory lead times shortened by 50-70%.
- Overall cost of goods sold reduced by 15-20%.

Lean is about simplifying things. Paint a picture of where you want to take your business, and lead your colleagues through Lean’s processes. Apply the tools and, if you get stuck, ask for help – plenty of resources are available to support your Lean journey.

About the Author

John Earley is a founding partner of SmartChain International and a consultant to large companies undergoing supply chain transformations. He formerly held positions at Rolls Royce Aero Engines, PriceWaterhouseCoopers and AstraZeneca.



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