

Operational Guide to Implementing Lean in Retail Distribution

Introduction

Imagine a distributorship in which all employees took responsibility for improving the business. Teams of smart, trained employees solving the most important and difficult problems each day. A business that continuously worked at eliminating waste and, more importantly, satisfying customers each day. Technology linked into business processes to simplify, automate and implement strategic goals management. Imagine processes so lean, flexible and efficient that assets could be reduced, customer demand increased, and customer satisfaction sent soaring. Imagine employees empowered and encouraged to try new ideas. Lean can be the vehicle to unlock profitability, growth, and customer and employee satisfaction for distributors. But to implement lean requires clarity of principles, so that all decisions made by the distributor favour a lean value stream. This article is intended to be a guide for distributors to implement and integrate lean into their businesses, with step-by-step procedures on how to successfully implement lean. Lean itself is a collection of simple, **easy-to-understand concepts that can be applied by any size distributor. Lean comprises common-sense ideas** that may not be visible to the naked eye, but once understood, offer obvious ways to improve businesses.

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History of Lean

The use of lean has grown in almost every industry over the past 20 years. Lean was developed by Kiichiro Toyoda and Taiichi Ohno in the 1960s for Toyota. They received their inspiration not from the American automotive industry, which at that time was the world's largest industry, but from visiting an American grocery store—Piggly Wiggly. They were impressed by how the supermarket only reordered and restocked goods once they'd been bought by customers—the precursor of the just-in-time (JIT) inventory system. Toyoda, Ohno, and others at Toyota developed innovations to achieve both continuity in process flow and wide variety in product offerings. They dubbed their method the Toyota Production System or “Lean.” For distributors, this means having a wide range of inventory while achieving high inventory turns and profitability—exactly what wholesalers have been trying to figure out for years. What Is Lean?

Describing lean is difficult because it is not just a tool, but instead, a culture, philosophy, process and methodology. Lean in its simplest form is turning waste into value. More importantly, it involves getting employees thinking and motivated to make processes better. “Kaizen” is the Japanese word for continuous improvement. Lean challenges employees to think about kaizen every day in every distribution function, training their eyes to spot waste not previously visible. Lean even encourages employees to compete to identify and eliminate waste, and to halt processes if they detect errors or defects. Lean analyses end-to-end processes and determines how to deliver more to the customer with much less. Lean means being more organized than ever before, to free up capacity that can improve customer value. Lean is a never-ending journey—it gets better, but no business can ever be completely lean. Lean becomes a way of life, to become more efficient and profitable at every iteration. Most importantly, it is striving for perfection in every process, customer order, and dollar invested in the business.

Typical improved results from lean distribution include: 1. Increased Profits 2. Higher Sales Revenues 3. Improved Delivery Performance 4. Lower Operating Costs 5. Better Customer

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Satisfaction 6. Better Supplier Relations 7. Decreased Purchasing Costs 8. Shorter Lead Times 9. Inventory Reductions 10. Higher Inventory Turns 11. Increased Working Capital For New Projects 12. Increased Space Capacity 13. Greater Employee motivation and engagement.

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Lean Principles

For the purposes of this article, lean principles define our lean vision. They are the high-level goals that we will strive to attain through the use of kaizen and lean tools. Let's discuss the five lean principles as laid out by Womack and Jones in the book *Lean Thinking*, and how they fit into distribution.

Value This involves identifying what customers see as value. For distributors, the value that they provide is having the right items, at the right time (often now), at the right price. Increasing anything that customers see as important will increase value. For example, if a distributor added an extra morning delivery, customers may see that as value because they may be receiving their items faster—which could be a competitive advantage over other distributors.

Value Stream The value stream includes the activities that a customer would be willing to pay for. For example, picking, packing or order entry are part of a distributor's value stream. The value stream is important because it can identify potential waste. Just a note: just because all steps are not deemed as "value" or "value-added," does not mean that they can be eliminated. Accounting, for example, is not considered value-added, but is certainly necessary. However, we should look to drive out any waste in accounting, and use those savings to invest in value-added activities such as buying more inventory, investing in a Web site (for order entry), or adding an additional delivery truck. The most common and powerful tool for identifying value in processes is a "value stream map," which we will explain in more detail later.

Flow. Flow is a logical but slightly less relevant concept for distribution. Flow really refers to continuous flow in very small, or ideally, single piece flow—which means in general, batching should be avoided when possible. A lean flow means orders should be received, picked, packed and shipped all day long, as opposed to having large batches of picks, items for packing and single large shipments. In general, a lean distribution flow would purchase smaller quantities, and receive, put away, pick, pack and ship with such efficiency that batching does not save significant time. A lean picking process would be so efficient that picking few or single orders would take about the same or less time than batching orders.

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Pull. Pull is a simple but key concept for distribution and supply chain management, outlining how distributors need to plan their inventory and order processing. Pull refers to actual customer usage and replenishing exactly what was ordered by customers. This stands in contrast to most push-type forecasting models. A simple example is if in the last three months, a particular item had the

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following number of orders: 3, 4 and 5. Many forecasting models would project that 6 would be ordered next month. Pull would say 5 would be used next month (based on actual usage). Pull says to replenish as best as possible to whatever is purchased by customers. Obviously, this can be problematic with minimum buys, quantity discounts and relatively inexpensive items. Inventory levels, safety stock or buffer stock are reviewed periodically (about every 3-6 months) but, except in rare instances, not changed by actual usage until the regular review cycle.

Perfection. Perfection refers to driving waste out of every process and meeting customer expectations in every way. Perfection is elimination of mistakes in every shipment. It would equate to zero late orders, and having every item that customers need, at a price they are happy with, in stock. Obviously, it is not attainable on every order, but it should be the goal of every distributor. Trying to achieve perfection requires metrics to track the journey, such as fill rates, shipping performance to customer promise dates, wrong shipments and lost orders.

Lean Tools

There are many lean tools that can be effectively used in distribution, but tools by themselves provide little value. Lean is more about achieving a culture of improvement in employees' minds, and building a flexible system to drive out waste and better meet customer expectations. Tools should be thought of as examples of lean activities that may be applied to processes. Many times, the best lean tools are unique to a particular business. Examples can include customer software development, wireless warehouse capabilities, special carts to increase picking speed, moving desks and tables to allow for faster processes, and activating ERP system capabilities not yet utilized. However, basic lean tools are the way to begin a lean implementation; here are several of the best ones that fit well in distribution. 5S - 5S is a way to organize distribution functions to eliminate waste and errors, and increase efficiency and employee morale. 5S is a great tool to start a lean implementation because it is easy to use, makes a visual improvement and is usually successful. 5S stands for Sort, Set in Order, Shine, Standardize and Sustain. The layman's view of 5S would see it as "cleaning up." However, 5S is much more powerful than first impressions. 5S is about eliminating waste that is slowing processes down. It is about becoming more organized and standardizing work areas. Utilizing 5S allows distributors to see waste and therefore eliminate it.

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Do your workstations maintain after 5S. Notice the organization, labelling, work instruction and assignment of colours by days of the week for sales orders. Every workstation should be standardized and set up identically to reduce any wasted time.

Lean Warehousing - Lean warehousing is designing a distribution system to create efficiencies and eliminate wastes. Basic lean tools for warehousing include: 1. Moving Similar Products Together. 2. Storing by Amount of Product Usage 3. Having a Separate Location for each Item Number. 4. Storing Product Vertically when Possible. 5. Storing Product within Easy Reach of Workers. 6. Storing Heavy Product Low The lean tools above are combined with basic distribution best practices such as dock-door assignment, advanced shipping notice, cross-docking, system- directed put-away, and

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automated scanner and bar coding practices. Basic lean warehousing is a key step to gaining an efficient and stable distribution environment.

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Visual Management - Visual Management is a way to monitor and adjust daily operations to assure that daily distribution goals are achieved. With the advent of complex ERP packages, there has been a loss of touch with the actual warehouse, or a separation between the office and the warehouse. If a distribution owner were to walk out to the warehouse, could they tell how things are going? Is everything going to ship on time today? Are we behind in putting inventory away? How many shipping errors happened this week? The answers may be difficult to find in the distribution system. The graphic below shows a detailed analysis of distributor performance in Epicor's Prophet 21 system.

What if every employee knew how the day was going? That is, they knew exactly how fast they needed to work in order to get everything shipped. Everyone knew when picking or shipping errors occurred and who was responsible. Visual management is about everyone understanding and striving to meet daily operational goals. Standardization - Taiichi Ohno declared that without standardization, there could be no improvement. Standardization should use employee consensus to determine one best process, to assure that everyone does things the same way and the best way. This eliminates variation and errors as part of the process. It also allows individuals to present their best practices to form a standard that comprises the best ideas of all employees.

Standardization brings process stability, facilitates organizational learning and training, and makes kaizen possible. Work Procedure Documentation is a key standardization tool used in lean distribution. Work procedures also allow new employees to be trained faster and more efficiently, by ensuring that they are doing processes correctly from day one. The work instruction below depicts a standardized process for storing inventory to assure that anyone determining inventory locations uses the same criteria.

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VSM – Value stream mapping is perhaps the most effective tool for seeing and eliminating waste in distribution. Value stream mapping is similar to process mapping, but adds several powerful layers of analysis. Value stream maps not only chart process steps, but more importantly, give insight into the overall value of a process. Before-and-after value stream maps are utilized, with the goal of increasing value. Value stream maps help distributors re- design processes to gain measurable efficiencies. The value stream map shows three levels of analysis: the system level (top), process level (middle) and value assessment (bottom).

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The Operational Steps to Lean Implementation

Implementing lean can be a daunting task unless someone in the organization has experience in it. We will now turn our attention to the major steps in distribution lean implementations. This nine-

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step process covers major milestones that distributors need to know: 1. Assuring Commitment by Management 2. Selecting or Hiring a Lean Manager 3. Training the Manager in Lean 4. Establishing Monthly Kaizen Meetings 5. Selecting the Kaizen Projects and Team Members 6. Teaching Lean Tools and Principles to Teams 7. Completing Kaizen Projects and Holding Gains 8. Celebrating Success 9. Repeat steps 5-8

Management Commitment

After 20 years of working in continuous improvement, I can state as a fact that improvement programs simply cannot succeed without management's unequivocal, open support of the program. By management, we mean all management—everyone must be on board to proceed. No single factor is more important for determining the success of a program. The good news for management is that giving support can be a relatively simple, non-time-consuming exercise, with returns far greater than any other management activity, including sales! ☐ Let's break down what management must achieve into three parts: ☐ Mindset ☐ Major Activities ☐ Mentoring Mindset is the most important. The lean improvement team should be considered as a solution for every operational decision made by management. There should no shortage of directives from management to the improvement team. Management should be continuously looking for improvement opportunities to assign to the lean improvement team. The lean team should lead all improvement activities, in conjunction with appropriate functional leaders. Every member of the management team must convey a positive, go-forward view of lean. One very helpful tool is a pre-determined elevator speech that every member of management must be able to convey to any employee or customer. For example, if an employee asks management, "Do you really think lean is the answer?" management would respond, "Lean is about designing the best possible distribution processes. Lean tools are the best known way to eliminate waste and drive customer value." This answer or "elevator pitch" should be consistent across all management.

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Major Activities are the second of management's lean responsibilities, which can be broken into three parts: Prioritizing Projects, Approving Projects, and Celebrating Success. Management determines the focus of kaizen events by prioritizing projects according to ROI, customer needs and business needs. For example, a distributor could have problems with picking accuracy, inventory turns, sales and shipping costs. Management would help prioritize by high-level analysis of return and maximum benefits to customers and the overall business. Areas for lean projects are certainly not just limited to the warehouse. In fact, most of the high return on investment projects are accomplished in the office. Project areas that are touched many times per day can have larger overall benefit. For example, removing just 10 seconds from the order entry transaction can save thousands of dollars per year, because it is done so many times over the course of the year. Below is a list of several major initiative areas. Each of these areas could yield several major kaizen events:

Sales Lean Relationship Management. Lost Sales. Sales Growth, Pricing New Products

Purchasing Supplier Reliability Supplier Relationship Management Lead Time and Variability Reduction Lean Transportation Global Product Movement Supplier Defect Reduction

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Logistics Inbound and Outbound Logistics Costs Packaging Reuse/Reduction Shipping Defect Reduction

Warehouse Lean Warehousing with Slotting Inventory Accuracy Picking, Packing and Shipping Time Reduction RFID Wireless Warehouse Once the project areas are selected, the lean kaizen team would discuss appropriate tools, scoping, costs and leaders of the project. Management

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would give final approval and agree to its support of the project and all related costs. Management needs to be an active leader in celebrating success. Personal contact with the team members is imperative. Simply having the CEO or President take the team out for lunch or pizza can give the program a huge lift. Rewarding success will yield success. Mentoring is the final lean responsibility of management. Leadership needs to assure that the lean leader has all the tools, support and business knowledge that they need to succeed. The finance leader specifically can play a key role in mentoring, giving P&L perspective for project selection and valuing project success. Management responsibilities are limited but extremely important. Total management time dedication to the program should be under two hours per month. The monthly kaizen meeting must be prioritized as high as any other meeting (e.g., sales, S&OP, Financial). The president or CEO's schedule should determine the meeting schedule, to ensure their attendance. The meeting should be rescheduled if the president or CEO is unable to attend.

Who Should Lead Lean?

The question of who should lead lean is a trick question. The answer is, "everyone." Before any lean program is initiated, senior management needs to determine that they have full and unwavering support for the program. Senior management needs to announce their support and dedication to the business in no uncertain terms. More importantly, senior management needs to communicate a vision of continuous improvement and goal of perfection to the employee base. It is absolutely critical that the program continues, once started. Expectations need to be set that at least one lean project will be targeted over periods of time (e.g., each month). If the program is started and stopped or delayed, restarting the program will most likely be unsuccessful. Monthly meetings should be scheduled to decide the target area, lean tools and goals of the project. Monthly reports to management need to be established to ensure the program proceeds. Lean can start small and be focused on specific functions or transactions like picking, order entry or shipping. The advantages of starting small are that it takes less resources, skills can be honed, mistakes are generally more minor, and everything learned can be applied to the rest of the business. In smaller distributors, the lean manager has other functions and works on lean part-time. Larger distributors often dedicate a full-time resource because of the obvious ROI of the initiative. Senior management should lead lean, but it should be managed by a designated leader. Should distributors hire outside consultants to lead the program, or select someone internal? The best person to manage a lean program is typically an inside employee who is a well-respected leader and exhibits strong communication and change management skills. The best leaders are enthusiastic, naturally positive, have led other successful initiatives, and have the time dedicated to ensure success.

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Training the Leader

We have said that lean concepts are easy to understand. However, lean is a skill similar to riding a bicycle. If a great athlete with tremendous speed and strengths had never ridden a bicycle before, how do you think that athlete would do in a bike race against a 10-year-old who had been riding for five years? You need to see lean work, fail a few times, and succeed a few times, and observe as many other people as possible trying lean, to fully understand the concept. One obvious solution is to hire an employee who has been through lean cycles. Another is use a consultant with lean expertise. The problem is, lean in distribution may not be the same as lean in manufacturing. To adequately perform the task of lean leader, the individual should be knowledgeable in lean and distribution, and understand the distributor's business system. Many distributors utilize an internal leader who understands distribution and business systems, then bring in a distribution lean consultant to teach the tools. Many of the primary tools can be taught by focusing on one small function of the business such as picking, packing or order entry. Because they are fairly straightforward and easy to understand, the initial tools for the focused area can generally be taught in less than two weeks.

Establish Periodic (Monthly) Kaizen Meetings

We discussed the importance of leadership attendance and the monthly kaizen meetings, including scheduling the meetings to ensure that the CEO or President attends. All heads of functions should be invited and encouraged to attend. Regular kaizen meetings are the lifeblood and single most important way to sustain and project manage the lean initiative. They are an opportunity to strategically plan, showcase success, demonstrate commitment and plan each of the monthly kaizen events. Kaizen meetings should be no more than one hour long. They should be robustly packed with an aggressive agenda structure similar to:

- ☐ Previous Month Kaizen Events—everyone who is involved in lean kaizen attends (10 Min)
- ☐ Celebration Rewards and Recognition with team (10 Min)
- ☐ Next Month Kaizen Events—attended by only leadership and lean manager (20 Min)
- ☐ Longer-Term Strategies for Future Initiatives—attended by only leadership and lean manager (20 Min)

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Selecting the First Lean Kaizen Project and Team Members

The first actual kaizen event is a major event. The success and the way the event is facilitated have a significant effect on the overall lean program. The first project should be a success and “over celebrated.” How can we guarantee that the first project is a success? We stack the deck in our favor. Below are the criteria that should be used for selecting the first project:

- ☐ Strategic Objective – What is management's largest concern in the business
- ☐ Project – A project of limited scope should be selected, with a nearly 100 percent chance of success and an improvement that will be obvious to all
- ☐ Stability – The process for any kaizen project should be somewhat stable before attempting improvement
- ☐ Scope – The first project should be relatively easy in scope and take about four hours

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to complete 5S Tool – 5S or standardization work are obvious tools. They yield great benefits and obvious results, and have a nearly 100 percent chance of success

Complete Kaizen Project and Hold the Gains

Before beginning the kaizen, preparation is necessary. The major planning tasks for the kaizen project are: 1. Defining Goals 2. Developing a Timeline 3. Selecting Role Leaders 4. Training the Kaizen Team Goals should be somewhat difficult but attainable. One of the biggest mistakes made by kaizen teams is setting the goals too low. Normally, lean kaizen goals are set at about 40-50 percent improvement. Goals should be measurable to determine if the project has been successful; for example, decreasing shipping defects from 3 percent to less than 1 percent. Everyone needs to understand and agree to the goal before the project is started. Kaizen projects can seem overwhelming to a team that has been trying to improve a metric for years but has not been successful. Teams need inspiration and the belief that they can succeed. Confidence in the project's success must be communicated early and often. After the first few successful projects, teams gain more confidence in the success of lean. Each group should be given a specific timeline with milestones of what needs to be accomplished. For example, the 5S group could be required to complete the "Sort" portion one hour into the project. Timelines help assure that the kaizen projects are completed on time. Role leaders are assigned by functional knowledge and leadership skills. By role, we mean that they will handle specific tasks within the overall kaizen event. Less experienced employees can also be named role leaders if they have good overall leadership and communication skills.

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Training of the kaizen team is done only on the tools needed for the task and the expected results of the project. For example, if the kaizen project was to decrease shipping defects by 50 percent, appropriate training on tools such as 5S, Poke Yoke and Standard Operating Plans is necessary. One team, led by a role leader, may handle the 5S portion of the project, so that group would only be trained in 5S. Other teams could focus on Poke Yoke and Standard Operating Plans. Over time, all employees would gain training in all tools, but training the group on one specific tool can help keep the project focused and on time. Holding the gains is extremely important. Usually, a role leader is assigned the task of ensuring that the gains realized are held and do not revert to the previous levels. Trigger points should be set up to initiate action regarding key measurables. For example, if shipping defects, which had a goal of less than 1 percent, increased to greater than 2 percent for two consecutive months, the kaizen team would reconvene to discuss and understand the problems and develop further solutions. Follow-up kaizen activities are a regular part of lean programs and can include another full kaizen event.

The Lean Journey—Is It Worth It?

The lean journey is not an easy one. Lean implementations are filled with mistakes or changes that do not quite live up to expectations. However, in every way, it is worth the journey. Lean distributors struggle to improve, but they do improve. Epicor business consulting has been working with distributors for over 20 years, and is often selected because of our expertise in lean business

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consulting, and our years of distribution experience. Lean business consulting results have averaged 51 percent improved productivity per consulting activity. These engagements, on average, free up 5.1 FTEs that can be used to drive additional value in other parts of the business. More importantly, Epicor has successfully assisted distributors in taking their first lean steps and succeeding in their first kaizen. The single biggest gain is the excitement of employees as they become involved in improving the business. Turning waste into value is a very rewarding activity. Lean is a journey well worth taking by every business measure, including ROI, employee satisfaction, customer satisfaction and growth. We believe lean can do more to help distributors than any other single activity.

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Lean is no longer just for manufacturers. Taking a page straight from the lean playbook, forward-looking distribution companies are beginning to embrace the far-reaching value of lean business practices. Hardly surprising, given that every area within a distributor's department and business process—from order entry and processing, inventory control, finance, human resources, and purchasing to supplier management, customer service, customer relationship management (CRM), and sales and marketing—can benefit from lean principles. Proven principles that drive increased quality, reduced waste, and enhanced competitiveness.

Distribution companies bear the responsibility of delivering superior customer service while at the same time lowering operational costs. But trimming such areas as inventory, transportation, and service costs often results in a negative impact on the service they provide. Minimizing costs without affecting service—one of the distributor's most daunting challenges—demands a delicate balancing act.

Companies aiming to strike this difficult balance have a clear imperative: To improve the bottom line not only through cost cutbacks, but also by implementing new and better processes to strengthen productivity and service levels. Enter lean distribution—a dramatically different approach to business.

Experts concede that lean is a journey, not a destination—and that continuous improvements reside at the heart of a successful lean strategy. But creating a truly lean environment takes time. And it all begins by identifying barriers to success and then developing a solid action plan to turn these obstacles into real opportunities.

Gnosis delivers solutions that help retailers and distribution companies realize tangible business performance improvements by becoming a lean-centric operation. These organizations can also expect a higher, faster return on investment through these performance-driven improvements, a quicker time to value, and a lower total cost of ownership.