

# LEAN THINKING IN WHOLESALE DISTRIBUTION...



*Are You Ready For Little Miracles?*

## **Introduction**

When athletes train, they focus on the fundamentals, first and foremost. They go through a series of concentrated efforts to trim fat, increase flexibility and hone their efforts. The end result is a lean, agile body — ready to take on the rigors of competition. When a team sport is involved, athletes must work together to prepare for any situation that might crop up during a game.

A similar process applies to all aspects of what we do in wholesale distribution. In those organizations that “get lean”, management works with its team of employees to develop a tightly coordinated system – one that is agile, synchronized and responsive to customers. When put into action, “lean” allows companies to serve customers faster, with less space and inventory, lower transaction costs and greater accuracy.

Lean practices are not something most of us adopt intuitively. In fact, many wholesale distributors do not know what their underlying cost structures are, related to order costs, delivery costs, and line-item transaction costs, as well as other key metrics. Sometimes, necessary team-building skills and experience may be lacking.

If “lean” is an approach that appeals to you, understand that it will not be an overnight process. Your first instinct may be to throw automation and technology at the problem rather than manage. Instead, you’ll need to re-evaluate your way of thinking, your management style and most likely your processes.

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## **A Whole New Approach**

***A series of processes new to many wholesale-distributors based on successful lean and continuous improvement implementations with our clients have paved the way toward a different approach to performance improvement.*** These are essential to success, both across the organization and for long-term results – and are driven by a desire to improve key company metrics such as order fill rates, delivery costs, warehouse transaction costs, and inventory levels.

The lean and continuous improvement process is an extension of the Lean Manufacturing concepts that have, for several years, provided a framework for improvement at giants such as Toyota and Ikea where less human effort, less capital investment, less time, and fewer facilities and inventories are the Holy Grail.

Originally known as the Toyota Production System (TPS), it has morphed into the movement known as Just-In-Time (JIT) and then transitioned into Lean Manufacturing, the precursor for what has now become Lean Thinking.

Why the change in nomenclature? No, it’s not some consultant selling a new bill of goods! Rather, it suggests a different twist – a good one - that lean thinking concepts can be applied to a variety of sectors such as warehousing, distribution, retailing, order processing, sales, quoting and customer service. Our experience indicates that with Lean Thinking in place, performance, as measured by output, improves on the order of 30 to 50 percent.

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## What is Lean Thinking Really?

The best starting point is to recognize that only a small fraction of the total time and effort in any organization actually adds “value” for both internal and external customers.

All non-value activities - or waste - can be targeted for removal, step-by-step. We’ve found that often as much as 60 percent of the activities performed add no value at all!

Eliminating the non-value-added activities is the greatest potential source of improvement in a wholesale distributor’s performance.

Further, not all value is provided by your organization alone — think suppliers! The reduction of non-value-added activities has to be pursued throughout the whole “Value Stream” - the entire set of activities across all the organizations and departments, internal and external, involved in delivering product or service. Only then can a wholesale-distributor understand the real cost structure contained within the “Value Stream” and focus on optimizing the whole, ultimately resulting in a “Benefit Stream”.

Lean thinking is exactly what it implies: the conscious effort, tightly focused, to objectively examine one’s own workplace and working environment. The goals are searching out waste, increasing productivity, lowering total cost and increasing throughput. As part of this search, one must look for evidence of “capacity-constrained resources” - bottlenecks - which limit output, create unneeded inventory or manpower, or use unnecessary resources that get in the way of smooth, accurate and timely operations.

Bottlenecks may seem obvious and easy to spot. For instance, the long lines we encounter for airport screening. Many of them, however, are hidden and unrecognized. What we assume to be a bottleneck may really be an “unconstrained resource” where output is actually thwarted by a complex or slow process where the impact has never been fully assessed. Quite often, this type of bottleneck is a bureaucratic, paperwork or procedural issue. It may not necessarily be a physical impediment, just an old practice, taken for granted. Using lean thinking as a tool to assess one’s own shop often generates surprising outcomes and can turn constraints into constructive paths for change. Lean thinking provides an operational foundation for service excellence and low total costs.

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## IMPLEMENTING LEAN THINKING

### The Starting Point

New relationships are required to eliminate intra- and inter-company waste and to effectively manage the value stream as a whole. Activities across the company need to be better synchronized. Instead of managing workload through successive departments and organizations, processes are reorganized so the product or service flows through all the value-adding steps without interruption, using a toolbox of lean techniques to successively remove obstacles. This requires first focusing on the fundamentals and re-engineering individual process steps so that continuous improvement gains are made one by one. These become significant as the individual improvements are linked together.

Are we looking for perfection? At a theoretical level, that is the end point - every asset and every activity adding value for the customer. More importantly, though, lean thinking represents a path of sustained performance improvement that is lasting, not just another program implemented that eventually fades out with time.

### The Lean Thinking Team

Let’s consider some examples. At several clients over the past year, cross-functional teams of employees were formed to focus on specific areas needing improvement. The choice of team members is extremely important. The team must be truly cross-functional and made up of personnel willing to challenge existing norms. Results can be optimized with the right choice of a team facilitator. With the right team composition, each participant will have an opportunity to walk in the other members’ shoes.

As we facilitated these teams to develop a direction, issues arising within their warehouses and distribution centers cropped up most often. When strong sales growth and resultant rising inventories were in the picture, reduced productivity occurred. This was measured by lines processed per man-hour, increased picking error rates, unreliable storage location identification (product not where it is supposed to be), inventory inaccuracy (over and short), missed deliveries (product never got on the delivery truck) and other related miscues. Each company had already come to the realization that just adding more people wasn’t a long-term solution.

### Baseline Measurements

Before heading to where we would have liked to be, it was important to establish baseline measurements. For instance, if warehouse picking productivity was one of the issues, we measured what the current productivity level was, in lines picked per man-hour. If inventory accuracy was the culprit, we measured the percent of line items accurate from recent physical inventories, or took a valid sampling. This way, we had measurements to compare to as we proceeded on our journey to continuous improvement and becoming lean.

# Identifying the “Barriers To Improvement”

## *What Are The Root-Causes & Effect?*

Then we introduced “Kaizen”, meaning gradual and orderly continuous improvement, another innovation from Toyota. Our teams broke down each and every warehouse/distribution center activity – what I often call the “touch points”. In some cases they actually mapped the processes on paper, and examined each one for value - what it lent to the overall process and how it was conducted. In other words, they began to identify the barriers to improvement, or the root causes. These barriers were prioritized through team consensus, based on their perceived impact. In some cases, we did allow “low hanging fruit” to be given higher priority so the team would have an opportunity for some quick wins. Among the first barriers identified were issues such as:

- Lack of personnel training, cross training, and teamwork*
- Too many storage locations for the same product*
- Poorly sized storage locations*
- Too many picking exceptions, i.e.; can't find product, insufficient product, wrong product*
- Lack of product security, for certain products*
- Inadequate material handling equipment*
- Fast moving products not easily accessible and poorly located, i.e.; long pick-paths*
- Poor vendor/transportation, delivery scheduling*

### **Soon after, these obstacles were noted:**

- 'Sell quantity unit of sale' nomenclature versus 'buy quantity unit of measure' nomenclature was confusing*
- Work hours inconsistent with daily workload*
- Lack of timely stock put away and then misplaced*
- Errors in receiving*
- Too many backorders*
- New products can't be readily located*
- Vendor short shipments*

***This is not an exhaustive list — in our experience, it is not unusual for each team to be able to come up with 30 to 40 or more barriers!***

## Develop A Corrective Action Plan

### *The “Little Miracles”*

For each of the barriers, in priority order, the team developed corrective actions. As solutions were sought, tried, and in some cases tried again, and found to be successful, the “kaizen” approach resulted in several little miracles. These individually, and then collectively, had significant positive impact on overall performance:

- Changes in the system of warehouse/distribution center warehouse storage
- Re-slotting inventory in order to shorten picking travel time
- Rearranging some of the footprint of the warehouse facility
- Providing improved storage media and materials-handling resources
- Multiple order picking process capability
- Personnel assignments and work hours

Where inventory accuracy was a major lean initiative, as a start, a control group of 10 to 20 products were designated to be counted each and every day. This simplified finding the root causes of inventory inaccuracy, and helped measure the impact of the corrective actions required.

In very few instances significant capital investment was required. Where warehouse productivity was the issue, increases in picking productivity were on the order of 45 to 50 percent. Inventory accuracy would jump fairly easily and quickly to 90 percent when the identified root causes were eliminated. Most of the companies we work with have an objective of 98 percent plus accuracy, and they continue to identify additional barriers until that objective is met.

## Continue To Measure

### *The “Visual Work Place”*

As the team conducted its work and implemented changes, each week a new measurement was taken and compared to the baseline. The results were posted in the warehouse and emailed each Monday morning to the entire team and management personnel, in both numerical and graph form. There was often great anticipation waiting for the new measurements and a lot of opportunity for satisfaction. Just as importantly, measuring should not stop after objectives are reached!

As with anything new and different, some team members and other employees viewed the approach with skepticism, some with reluctance. But because key people were so heavily involved in the processes, and the company had some quick successes with the “low hanging fruit” especially, the approach won over the naysayers.

The participants quickly recognized that the quality of company life improves when you share ideas, implement successful change – and then obtain results! Some of the companies incorporated in this article have now begun to roll out this lean approach to other areas of their organization: customer service, product procurement, accounts payable, return goods processing, credit and collections. Some are working closely with suppliers, grasping the concept that the full benefits of lean thinking cannot be achieved until it reaches suppliers. They are addressing issues related to improving the flow of goods, including inventory replenishment cycle time, order quantities, and transportation. Still others are looking at their relationships with customers and seeking lean opportunities for partnership and collaboration rather than the traditional relationships.

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## Technology

It is difficult to obtain leading edge performance without technology. If you are tempted to just add technology, you haven't solved anything. While there is certainly nothing wrong with using appropriate technology, you will find that processes must be figured out first. Only then can it be determined how the technology will help.

## Your Company's Mindset

### *The Lean Distribution Vision*

**For a successful lean approach, the mindset throughout your company needs to be one of challenging existing practices, readiness for change, jumping on the opportunities as they present themselves, and measuring key performance metrics.** A lean approach is an acknowledgement that someone can figure out a better way. It's a road of discovery to understand operational parameters and maximizing flow.

**The Lean Distribution vision should be built on a solid definition of desired business outcomes linked to operating process changes.**

The starting point is assessing, quantifying and agreeing on the barriers to improvement. Nothing should be left to gut instinct. Lean methods avoid the “black-box” approach that hides how change will occur, fails to disclose what the implications to various organizational units will be, or conceals what the business will look like in the future. With Lean methodology, the shifts are clear, the process approaches are well tested and transforming organizational structures and reporting relationships become less of a challenge. What remains is tailoring your lean practices to your markets and operating environment.

Once the lean shifts are agreed upon, assessing and quantifying the key performance metrics, especially those with the most impact on the business is key. Understand the importance of the organization in this process. If appropriate levels of the organization are not involved – be prepared for failure.

Have a realistic sense of how long achieving a lean environment is going to take. A true lean thinking organization doesn't happen in a straight-line fashion. It's a combination of all the little miracles that will fit together.

**Lastly, acknowledge when you need help.** Look for help in someone with experience in team building and helping a company change - not just someone who knows lean techniques. Maybe you will need an outsider to objectively look at and work with your organization. Olympic caliber athletes all need coaches; the same holds true for companies seeking to be lean.

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