

# HOW TO IDENTIFY & REDUCE WASTE IN THE SUPPLY CHAIN

or distributors, maximizing net income is a daily challenge. Strategies to increase sales and customer satisfaction are frequently discussed and deployed. Inventory maximization initiatives get attention too as distribution best practices are applied to the warehouse layout to maximize the picking of high velocity items and to stocking levels to support service level goals.

Often overlooked are parts of the supply chain that limit order processing efficiency and speed before orders get to the warehouse. Invoicing and accounting process after the shipment can also be inefficient. These processes can be greatly improved via Lean techniques. However, many experts agree that only 25 percent of companies have adopted Lean initiatives.

Key concepts in Lean such as value, pull, just-in-time, and one-piece flow all have one common goal; to fully meet the needs of each customer on each order. You can apply these concepts by using value stream analysis, which often shows that well over 80 percent of the time in a process is waste from the perspective of the customer. The old saying "time is money" means that wasted time is wasted money.

It helps to think about it from your own personal perspective. When you purchase an item, you want it to meet your expectations for function, quality, price and delivery time. You really don't care about the internal processes of the store, distributor or the manufacturer. You are not concerned about how many departments, process steps, meetings, shipping channels, or computer systems these companies have. You make your personal "sourcing" decision based on your perception of the best overall value available.

Your potential customers are no different in that mindset when they choose a distributor.

#### **TOOLS FOR CONTINUOUS IMPROVEMENT**

Lean value stream analysis is a powerful method to use because there are so many activities throughout the distribution process that do not add customer value. Consider that all your internal processes and those of your supply chain partners are perceived by your customer as one single "service."

For this reason, it is vital that you include analysis (and ideally participation) of your external supply chain partners CONTINUED ON PAGE 132

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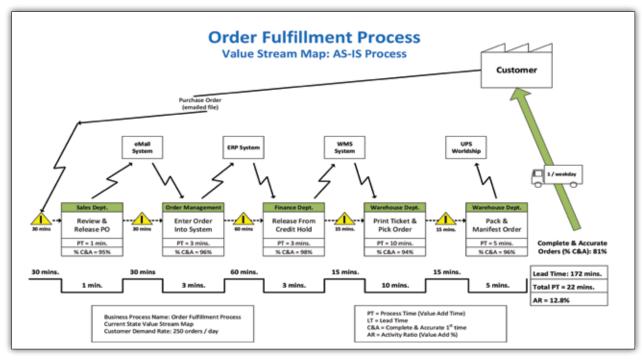
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In value stream analysis, you measure the average time that each order spends in each step, including the in-process inventory steps.

in your value stream analysis and continuous process improvement efforts. Process improvements that benefit your customers will increase sales, which also will benefit your suppliers and your delivery partners.

In Lean, the ideal process is when your customer orders an item, you pick and ship it immediately and order another to replace it. In reality, you must maintain adequate stock levels and excess fulfillment capacity to be able to fill orders that meet customer expectations at or above what your competitors can deliver. The goal is to do this as efficiently as possible given that net income in wholesale distribution is often below five percent.

The traditional approach is to maximize fill rate by increased levels of inventory, however, this increases costs and reduces net income. Inventory levels will always need to be actively managed, but they can be set to lower levels as your total supply chain becomes more Lean.

In value stream analysis, you measure the average time that each order spends in each step, including the in-process inventory steps. The sum of the times is your total lead time and the "value added" portion of that is typically very low. Let's look at an example, illustrated on the preceding page.

Here, the total lead time per order is 172 minutes (2.9 hours), while the sum of the value-added steps for process time is 22 minutes. The value-added time as a percent is called activity ratio and is only 12.8 percent, so over 87 percent of the time is non-value add. Using the average quality at each step (%C&A), we see that only 81 percent of orders get through the process completely and accurately filled. That means almost 20 percent of orders have defects, which is another form of waste, and the time to resolve those issues is also non-value added time.

The goal is to reduce total lead time by multiple rounds of attacking the slowest step as you work toward the one-piece-flow concept. The more Lean your process becomes, the faster it can respond to daily customer demand and the lower operating costs you will have from unneeded inventory and the other forms of Lean waste.

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#### **GOT PROBLEMS?**

Are there parts of your distribution business that are in need of improvement? Do you have an old software system or many isolated systems? Do you have major process steps people perform with Excel? Do you have backlogs of anything such as orders, products, returns or invoices? Does it take too long to close the monthly books? Do you have a high number of errors that all have to be fixed? Does your current process fail to accurately measure process performance and defects?

If the answer is "yes" to any of those questions, then in the words of Apollo 13 Captain James Lovell, "Houston, we have a problem." The impact of these types of problems includes the specific costs such as for software licenses and document scanning and storage as well as the total FTE cost for people to perform the work. This often adds up to several hundred thousand dollars per year that can be saved.

Visit the STAFDA Tech Fair to meet software vendors that can help to automate most of these outdated ways of doing business. These systems can provide a single

integrated solution to these types of problems. Then you can free up your staff for more important work that can't be automated but is needed to help your business grow.

By calculating the full cost of your current process including waste — the business case can be made that Lean processes deliver a high return on investment and a short payback period. Consider a process improvement project to analyze your current processes and the opportunity for improvement or a software selection project to evaluate the available choices for replacing existing systems. cs

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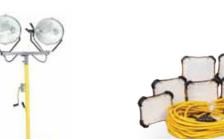
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