

The Massive Profit Impact Of Vendor Performance Improvement

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A hallmark trait of successful companies in any industry is their ability to do things—even the simplest, most basic things—better than their competition. This usually requires a willingness to do such things differently, to shrug off the notion that the inefficiencies of standard operating procedures are a cost of doing business, to wring as much error and anomaly as possible out of the operation—no matter how mundane.

In retail, opportunities to find competitive differentiation are perhaps nowhere more plentiful than in the complex and variable supply chain.

Inbound transportation logistics are affected by a number of factors that have a large, direct, yet difficult-to-measure impact on retail profitability. Lead time, on-time delivery, order accuracy, and fill rates are among the many levers that impact store performance, yet these complex variables that present opportunity are often the very challenges that stifle its pursuit. If a retailer can't specifically measure the cost of out-of-stocks and lost sales due to variables such as vendor error and noncompliance, vendor performance improvement doesn't make the short list of supply chain investment priorities.

Recent initiatives focusing on vendor performance and its impact on retail operations—and ultimately profits—are shedding new light on the massive and measurable vendor performance management opportunity. In this paper, we'll explore in detail how vendor performance improvements positively impact inbound logistics, and we'll illustrate the direct correlation between reduced supply chain variability and retail profit margins.

Anticipating Order Inaccuracy: The Safety Stock Dilemma

The fact that less than 100% fill rates are problematic isn't lost on any retailer. It's a simple assumption that if an order for 1000 t-shirts is only filled to 90%, the 100 T-shirts lost to the supply chain equate to lost sales potential. But, lost sales potential is just the first link in a costly chain reaction. Order inaccuracy also causes allocation disruption, requiring the recalibration of distribution of the 900 received shirts across the entire store base. Anticipation of order inaccuracy also results in the buildup of safety stock in an effort to avoid out-of-stock scenarios.

By its nature, safety stock is designed to protect retailers from supply chain variability and prevent shelf-level stock problems. In an ideal, automated world, safety stock isn't necessary—when the last item on the shelf is sold, a new shipment arrives for replenishment. In the real world, however, that ideal is lost to demand, lead-time, and fill rate variables. Safety stock is inevitable. The challenge is not how to eliminate the necessity of safety stock, but how to efficiently manage and effectively minimize it.

Safety stock management begins with policy assessment. Acknowledging that in-stock inventory position can't be 100% protected due to demand variability, a SKU-level risk tolerance policy must be calculated and applied. For instance, a retailer's A-level products—those top-selling and high-margin items that contribute to the majority of its sales—should have a lower risk-tolerance than its B-level products. The retailer might aim for 98% in-stock positioning for its A-level products, 97% for its B-level products, and so on. These risk tolerances will dictate the necessity for and quantity of safety stock at each

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merchandise level. They will also be adjusted for demand, based on the demand levers within the context of the specific retail business (seasonality, fashion trends, promotions, etc.).

Vendor substitutions cause the same trouble that sub-par fill rates do, and then some. When an ASN (advance shipping notice) indicates a vendor substitution, the chain reaction causes retailers to focus time and effort recalibrating promotions, often on lower-margin and/or lower-demand merchandise.

While the impact of these inaccuracies is felt and its financial impact assumed, connecting the dots between order inaccuracy and profit and margin at the store level hasn't historically been a data driven, fact-based exercise. Today, the value of reduction in supply chain variability and its impact on the necessity for excessive safety stock is becoming more measurable.

The High Cost Of Supply Chain Variability

To illustrate the direct impact of supply chain variables on retail profit, let's look at the math. In a typical scenario, a vendor supplies several products to a retailer over a one-week replenishment cycle. Assuming the vendor's lead-time is ten weeks and lead-time variability is 20 percent, the retailer assumes 2 weeks of lead time variability (20 percent of 10 weeks). Thus, the retailer needs one week's worth of inventory for sales, plus two more weeks of safety stock to protect it from that lead time variability. This brings the retailer's on-hand supply necessity to 21 days. To keep the math simple, let's assume the weekly inventory cost is \$1,000,000.00. Improving lead-time variability by a single point to 19 percent, the retailer lowers its on-hand supply necessity to 20 days, thereby reducing its inventory cost by \$33,300.00 with a single one-point improvement.

A five percent improvement to lead time variability (15 percent from 20 percent) reduces the retailer's inventory carrying cost to \$833,000.00, freeing up \$166,000.00. In this example, a 5 percent lead-time improvement results

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in a significant 15 percent reduction in inventory necessity—on a single SKU (see chart on the following page).

Clearly, most retail supply chain executives can anticipate at least a single-point reduction in supply chain variability through improved vendor performance. More importantly, any retail CFO will reason that a single-point improvement is justification for the effort, which will typically reach far beyond a single percentage point. Extrapolated across many SKUs, the inventory carrying cost improvement easily reaches into the millions of dollars.

In real terms, a \$3 billion multinational retailer with a lead time of 13 weeks and 12 percent lead time variability recently reduced that variability 7 points over a 24-month period of intensive vendor performance management initiatives. As a result, its 18 days of on-hand inventory, which rang in at \$12.4 million, was reduced to 12 days, or \$7.9 million, without any degradation to its in-stock position.

When implemented across a sampling of several vendors—some with very accurate performance records and some very volatile—this retailer applied a weighted average to measure holistic improvement. Across the

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Vendor Performance Profit Impact: Single-SKU Example Cases

Real-World Case

	CASE 1	CASE 2	CASE 3	\$3 Billion Global Retailer	
Lead Time:	10 Weeks	10 Weeks	10 Weeks	13 Weeks	13 Weeks
Lead Time Variability:	Original	Improvement	Improvement	Original	24-Month Improvement
Variability:	20%	19%	15%	12%	7%
Safety Stock Requirement:	14 Days	13.3 Days	10.5 Days	18 Days	12 Days
Sales Inventory Requirement:	1 Week	1 Week	1 Week	1 Week	1 Week
Sales Inventory Cost:	\$1,000,000.00	\$966,700.00	\$833,000.00	\$12,000,000	\$7,900,000
Total On-hand Inventory (sales inventory plus safety stock):	21 Days	20 Days	17 Days	25 Days	19 Days

board, it improved lead-time variability 12.4 percent and fill rate 9.8 percent, resulting in inventory cost savings of approximately \$200 million.

In any event, vendor performance management begins with vendor performance measurement. Upon measuring its vendors' on-time shipping performance, an apparel retailer that engaged in a Compliance Networks vendor performance management initiative realized a 51 percent improvement in its first year.

Vendor Performance Management Reduces Trouble Shipments

As illustrated herein, the first and most rewarding steps toward minimization of supply chain variability are improving lead time and on-time shipments. There are simply more retailer-controlled supply chain management and logistics levers available to inexpensively improve on-time performance and velocity, and the payback is almost assuredly great enough to fund the next focus areas, which include fill rate and trouble shipment improvements.

Trouble shipments are those that present problems at the DC for various reasons; mis- and un-labeled cartons, mis-packed merchandise, substitutions, and missing ASNs among them. A trouble shipment is any anomaly that requires intervention to rectify, thus disrupting the flow of goods from the DC to fulfillment. In high-velocity cross-dock environments, a day or two delay due to the necessity of manual intervention results in a day or two delay in getting merchandise to the store, which is often the difference between just-in-time inventory accuracy and a revenue-impacting out-of-stock situation. Out-of-stock scenarios only serve to exacerbate the chain reaction, causing consumer demand for substitute products, which, like vendor substitutions, force the retailer to recalibrate promotions, apply brand damage control, and quite often sell at lower margins.

When trouble shipments are reduced, retailers see a corollary improvement in velocity and out-of stock improvement. In one case, a Compliance Networks customer was able to reduce its trouble shipments

65 percent through implementation of a vendor performance management system. But, efficiently reducing trouble shipments, improving fill rates, and increasing on-time shipments isn't just about identifying outliers and poor performers. Key to achieving this kind of improvement is visibility into which vendors are performing well. Identification of those who provide proper ASN documentation and accurate, on-time orders enables the retailer to focus audit and vendor performance management resources where they're needed most, while speeding merchandise from best-performing vendors to the point of impact without disruption. In today's resource-constrained retail environment, minimizing intervention on best-performing vendors is integral to maintenance of supply chain velocity.

Maximizing The Impact Of Vendor Performance Improvement

As the aforementioned examples illustrate, removing as little as a day's worth of safety stock frees up working capital, and the liberation of working capital improves the organization's working cash flow. There's an opportunity cost tied to that capital—it's not simply a matter of removing inventory carrying cost, it's a matter of what the retailer could be doing with that capital to make more money. How can that cash be applied to turn a profit faster? How can it be compounded by creating more cycles of profit, and thus, more sources of operating cash flow? The financial implications of vendor performance improvement are significant enough to warrant welcomed supply chain finance discussions with the CFO.

With that said, even after sources of supply chain variability are identified, improved, and the immediate financial benefits realized, retailers often fail to take the steps necessary to carry those benefits beyond the immediate performance improvement. For the eradication of supply chain volatility to remain sustainable, the retailer's new operating parameters (i.e. less safety stock) must be communicated to buyers and inventory management professionals in a way that effectively changes their daily routine. Vendor performance affects replenishment policies, thereby requiring the simultaneous involvement and calibration of many teams, including supply chain, inventory, merchandising, and promotions.

In the rare, entirely automated environment, cultural change issues are of less concern, but for most retailers, training and repetition are paramount to establishing

trust among associates. Creating incentives for retail buyers associated with lead-time, inventory, sales, and gross margin improvements and illustrating the links between these KPIs and vendor performance will speed adoption. As volatility is driven out of the supply chain, these benefits must be demonstrated to associates to build their comfort level with the new parameters.

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Conclusion: Reduction In Supply Chain Variability Drives More Sales, Better Margins

Despite the many moving parts of the supply chain, the relationship between supply chain variables and store performance is increasingly understood thanks to increased data visibility and measurement capability. The impact of inbound shipping performance at the shelf and POS level is no longer a vague inference, much less an all-out enigma. Diligent attention paid to vendor performance KPIs such as lead time, fill rate, and problem shipments translate to a reduction in out-of-stocks, saved sales, and higher margins/profitability.

For more information on vendor performance management, visit Compliance Networks at www.compliancenetWORKS.com

Calculating the actual Safety Stock requirements is not an easy task.

It depends on a combination of multiple risks, such as demand variability, forecast error, Lead time variability, Vendor compliance (fill rate, etc.).

Retalon Predictive Analytics helps to calculate this number accurately in order to only add the safety stock where it is required (for example, important products are at risk of not being in-stock).

About Compliance Networks:

Our Vision

Be the recognized leader in supply chain software solutions that enable our customers to discover and leverage hidden value in their organizations and their extended supply chain, so that we maximize revenue and stakeholder value for our customers, their trading partners, our business partners, and Compliance Networks.

Our Mission

Compliance Networks will implement and deploy the most effective technology solutions and retail best practices to enable lean retail supply chains.

Our Core Values

Integrity

We will conduct business ethically, honestly, and with high moral standards. We will only promise what we know we can reliably deliver.

Customer Focus

We will understand our customers needs, deliver the most effective solutions to meet those needs, and exceed customers' expectations.

Quality

We will deliver the most reliable, effective and affordable solutions and services of which we are capable.

Performance

We will, to the best of our abilities, deliver solutions to our customers that provide them the highest possible value.

Leadership

We will be supply chain thought leaders, business partner role models, and leaders in the supply chain solutions industry.

About Retalon:

Retalon is a leading provider of Retail Predictive Analytics solutions for supply chain, inventory management, pricing, merchandising, planning, and marketing operations. All Retalon products, from task-oriented modules to the complete Integrated Solution for Intelligent Retailing, are based on a common predictive analytics platform. This results in tangible optimization and significant measurable benefits for the entire organization.

For more information, visit www.retalon.com or call 1.888.837.0268

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