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BEST PRACTICE

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Are You the Weakest Link in Your Company's Supply Chain?

by Reuben E. Slone, John T. Mentzer, and J. Paul Dittmann

Included with this full-text *Harvard Business Review* article:

Reprint R0709H

Are You the Weakest Link in Your Company's Supply Chain?

The Idea in Brief

Do you know how your company's supply chain is performing? If not, you risk alienating customers and suppliers, eroding shareholder value, and losing control of your fixed costs. These are dangerous mistakes, especially in manufacturing, retail, or distribution, where a poorly managed supply chain can put you out of business.

To turn your supply chain into a powerful competitive weapon, you need to apply six key practices, advise Slone, Mentzer, and Dittmann. These include hiring only top-notch supply chain professionals, staying current on supply chain technologies, and establishing rewards and incentives that encourage employees and vendors to support your supply chain goals.

Supply chain management is a complex, technology-driven discipline that reaches across functions, business processes, and corporate boundaries. Master these authors' recommendations, and you deftly handle that complexity, ensuring your supply chain delivers as it should.

The Idea in Practice

Slone, Mentzer, and Dittmann suggest these practices for smart supply chain management:

Pick the right leaders. Supply chain management can't be competently managed by the uninitiated. Ensure senior supply chain executives have a background in SCM, through formal education, significant experience, or both. Extend this best-and-brightest principle down to entry-level hiring.

Initiate benchmarking and select metrics. Conduct external best-practice benchmarking on key aspects of supply chain performance, such as inventory turns, availability of goods, and SKU system costs. Set goals for metrics based on benchmarking. Define metrics in ways that generate useful information; for example, "good availability" means orders delivered to customers on time.

Set incentives. Establish rewards encouraging suppliers and employees to support your supply chain goals.

▶ Example:

A manufacturer's CEO created an annual million-dollar bonus pool to reward employees who contributed to saving $3 million a year through reform of the company's supply chain. The first year of the plan, employees' cooperation netted savings of $3.75 million. The company also gained suppliers' support for the reforms by sharing, 50/50, savings attributable to suppliers' efforts.

Keep up with technology and trends. Stay current with supply chain technology advances (such as software and devices supporting production planning, inventory management, and warehousing) and process tools (such as Six Sigma) applied to the entire supply chain. Understand how your firm is currently using technologies, and ask challenging questions before adopting new tools.

Factor supply chain management into business plans. Make supply chain considerations core components of operations, sales and marketing planning, as well as contract negotiations with customers and partners. Watch for inconsistencies undermining your strategic aims.

▶ Example:

A railroad's terminals are evaluated only on how many railcars are moved with each available locomotive. Terminal managers are not encouraged to think strategically about where their high-value orders are. If the railway's most profitable customers' materials happen to be on shorter trains, they sit. In one case, goods shipped by a $100 million customer regularly missed delivery because locomotives were diverted to longer trains loaded with marginally profitable goods.

Resist the tyranny of short-term thinking. Discourage use of deep discounts at quarter's end to "make the numbers." Discounts train your supply chain partners to delay buying until the end of each quarter. That triggers low sales in the first two months of the next quarter, which prompts more discounts. The cost to you: overtime during heavy buying, wasted labor during slow months, and higher inventory costs before the next "surge."

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A supply chain executive walked the long hallway to his CEO's office one afternoon, quickly marshaling the arguments he would use to advocate for a global sales and operations planning, or S&OP, process. The goal: Convince the CEO that S&OP is indispensable to creating a world-class global supply chain, which in turn would become a major competitive advantage for the company. It seemed like a straightforward exercise, and the supply chain executive was prepared for any questions or challenges the CEO might throw at him. But as he neared the boss's office, questions of his own leaped to mind: "Why do I have to sell this plan? Why is the CEO not demanding it from me? I ought to be explaining why we're not moving faster rather than justifying S&OP in the first place!"

The answer to the supply chain executive's question is a surprisingly common one: He was not being pushed to move faster because his CEO didn't appreciate the business-critical nature of the supply chain operation. This lack of awareness was almost incomprehensible to the executive—yet there it was. (Perhaps, he thought, it was a failing of his own skills as a leader and advocate.) He knew, of course, that many worthy priorities compete for the CEO's attention and that not all of them manage to gain it. Still, in an industry where supply chain excellence is decisively important for operational efficiency, working-capital management, and ultimately the bottom line, a CEO ought to be fully engaged in this part of the business. Naturally, in some industries, supply chain excellence doesn't matter nearly as much. "But this isn't one of them," the executive thought.

Every conversation with the boss has the potential to be a turning point, to produce a long-awaited eureka moment. So, armed with the rich and persuasive vocabulary of business opportunity, the supply chain executive proceeded into the CEO's office, ready to make his case.

We have a case to make as well. In this article, we advise CEOs not to become unwitting weak links in their companies' own supply chain strategies. The costs of neglecting important matters of supply chain management are damaging to any type of business for which SCM is potentially a competitive differentiator (most notably, manufacturing, retail, and distribution). CEOs should get involved.

We have divided the supply chain domain into seven key areas where CEOs can exert either a positive or a negative influence. Each area is illuminated with real-world examples, taken largely from our confidential conversations with CEOs, supply chain executives, and other business leaders. We also illustrate the increase in return on assets that a CEO-led reform of the supply chain activity can yield (see the exhibit "The Supply Chain Value Chain"). Finally, we present a self-evaluation tool, encompassing the seven key areas, that CEOs can use to assess their level of engagement in and understanding of SCM issues.

Picking the Right Leaders

A CEO would never appoint a person with little or no manufacturing background to become the senior leader responsible for manufacturing. Nor would on-the-job training ever be appropriate for the head of sales or finance. Yet, we know of several large companies where the senior supply chain person came into that role with no supply chain background whatsoever.

We conducted an informal poll of 27 supply chain executives working at large manufacturers and retailers, and found that five had majored in supply chain management as undergraduates, four others had earned MBAs in the field, and five more had taken SCM executive development courses. The other 13 supply chain executives had no training or experience in the discipline before they took on their assignments.

What explains this misguided trend? We believe that many CEOs fail to realize that supply chain has become such a complicated set of activities—touching many business functions and processes, reaching beyond the enterprise, powered by fast-changing technologies, and presenting a range of strategic opportunities—that it can't be competently managed by the uninitiated, no matter how generally capable they might be. Senior supply chain executives need to have a background in SCM: formal education, significant prior experience, or both.

Consider the following unexceptional illustration of the risks when CEOs don't recognize this need. At a major durable goods company, one of the very talented rising stars moved from marketing to lead the supply chain function. He was being groomed for a much larger role in the corporation, and this assignment was deemed to suit his background well. Unfortunately, shortly after he took over, an abrupt swing in demand, coupled with a major problem in introducing a few new products, triggered a crisis that put the supply of an entire product line at risk. An experienced supply chain person would have seen the problem immediately and reacted aggressively. In this case, however, no appropriate action was taken for nearly two months—far too long to avert a major disruption in supply for the firm's customers. The impact on performance was severe, and the new leader of the function found himself climbing a near-vertical learning curve in the midst of a major crisis—clearly a prescription for disaster. Within a year the rising star, now tarnished, was moved to another area. The CEO learned from this experience and brought in a seasoned SCM expert from outside the company to set matters right. Within another year's time, the supply chain area had been turned around.

Only a CEO who is up to date on supply chain practices and trends can properly evaluate a supply chain executive's performance. We know of CEOs who, lacking this insight, have retained executives whose knowledge is years out of date. As long as SCM remains a black box to the CEO, so too will a supply chain leader's possible deficiencies.

Enlightened CEOs should insist that only the best supply chain professionals be hired—and should review new hires, not just at senior levels but possibly at lower ranks, where top-notch supply chain talent is also needed. Companies that understand this reality benefit from it. For example, when I was at Whirlpool, we had the opportunity to hire 13 new people for its supply chain organization. I set out to recruit the brightest supply chain MBAs from leading schools such as the University of Tennessee and Michigan State (read the details in "Leading a Supply Chain Turnaround," HBR October 2004). Leaders at Whirlpool viewed this cohort as its supply chain future—a true renaissance of talent.

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The CEO of one textile manufacturer extends this best-and-brightest principle down to entry-level hiring: "Supply chain management philosophy so permeates our organization that…if we can just get quality supply chain management MBAs to join our company, they'll move quickly through the decision-making hierarchy and never be tempted to leave us." This company regularly recruits at major supply chain management schools—most productively during recessions, when other companies cut back on hiring and top talent can be recruited more easily.

Initiating Benchmarking and Devising Metrics

The most effective supply chains achieve the greatest possible availability of goods at optimal levels of inventory, transportation, and warehousing dollars. Specifying goals for improvement in these areas requires knowing where you stand now. A CEO ought to be able to list and explain the factors affecting availability, working capital, and cost; she should push the organization to do supply chain benchmarking and best-practice analysis—and should review the results personally.

However, many firms fail to conduct external best-practice benchmarking. For example, a large pharmaceutical company was comfortable with inventory turns of about 2.0—even though its competitors were doing much better, freeing hundreds of millions of dollars in cash by aggressively managing inventory and overall working capital. Other firms develop and report unrevealing, internally focused supply chain metrics that may actually conceal problems by neglecting crucial information. For instance, one construction materials manufacturer reported "good availability" if inventory to fulfill a new order was simply somewhere in the system, whether or not the order was actually delivered to the customer on time. OfficeMax used to report in-stocks at an SKU, or company-wide, level—not at the store level. When I arrived as the new supply chain executive, we gradually instituted a process of measuring and reporting store in-stocks the way the customer experiences them: daily and by specific store location.

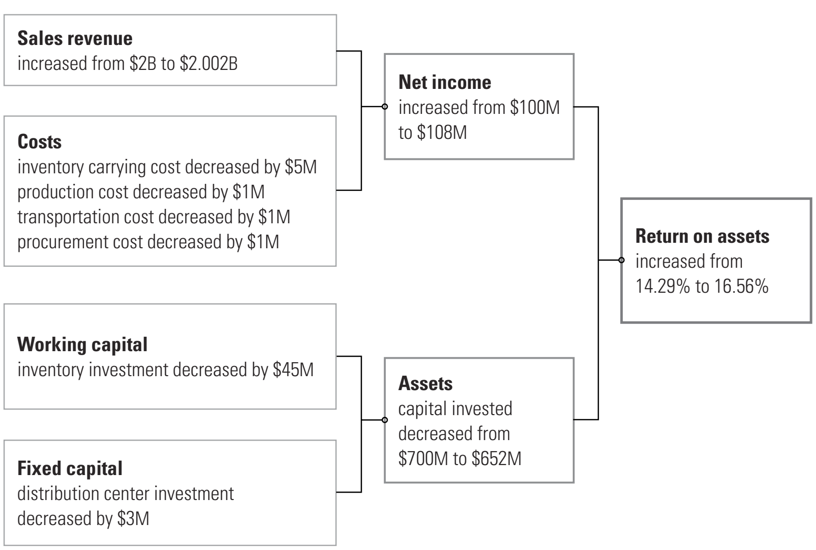
Many firms measure only what they can assess easily. Few of those we work with know the total system cost of the SKUs they carry or take the trouble to measure the true cost of obsolete inventory. Likewise, we know of few companies that put inventory carrying cost on internal sales financial statements. Even those that include this measure typically count only interest cost, ignoring the other inventory costs of obsolescence, of warehousing, and—most serious of all—of draining investment capital away from other, more profitable projects.

When metrics are accurate and functionally aligned, magic can happen. Whirlpool, for example, put in place a set of metrics to track the effectiveness of SCM in reducing working capital. As a result, the company dramatically reduced working-capital DSO (days sales outstanding) and now is a leader in the appliance industry on this metric.

How should a CEO get involved in a program of metrics? First, ensure that any tool purporting to evaluate customer service assesses the company's performance from the customer's viewpoint. Then, make sure the metric's effectiveness is confirmed directly with several of the company's best customers. True cost to serve, determined on an activity basis, should be part of the CEO's metrics

The Supply Chain Value Chain

One measurable benefit of improving supply chain management is an increase in return on assets. A major global chemical company substantially increased its ROA by aligning functional activities with supply chain strategy. Here are the hard numbers associated with the firm's function-related improvements in SCM.



Return on assets was calculated as follows: $100M / $700M = 14.29%; $108M / $652M = 16.56%.

dashboard. Total assets employed, including both physical and working capital, should be measured and analyzed in relation to supply chain performance. Furthermore, the CEO should see evidence that goals are based on benchmarks of best practices and that they are shared cross-functionally.

Setting Incentives for Supportive Behavior

Armed with the confidence that best-practice benchmarks have been used to set appropriate goals and to effectively measure the progress toward them, CEOs should also establish reward and incentive programs to encourage employees to behave in ways that benefit the overall firm, not just their own functions. At one retail business whose supply chain executive spoke with us, the purchasing, logistics, and merchandising managers work in cross-functional teams and are measured—and rewarded—according to supply chain metrics that assess purchasing costs, logistics costs of getting the product to the store (also called "landed costs"), and the selling price in the store. Not surprisingly, these cross-functional teams drive supply chain performance to earn their bonuses.

The CEO, and sole owner, of a grocery products manufacturer saw even more dramatic results when he led the organization through an extensive analysis of its supply chain processes. The result was an ambitious strategic plan to take advantage of SCM throughout the firm and also with its partners. The overall goal—to save the company an estimated $3 million a year—directly targeted the bottom line. The only challenges to the strategic plan were requirements for significant collaboration with six key suppliers and three key retailers, and for major changes in how the manufacturer managed various aspects of its internal operations. The strategic-planning process culminated when the CEO met with the executive team to review the plan's rollout over a two-year horizon. In the middle of this meeting, he paused to observe, "You're talking about putting $3 million a year in my pocket, and it's just occurred to me that I'm the only one in the room excited about it." On the spot, he pledged to create a special annual million-dollar bonus pool above and beyond the company's normal bonus system. Any employee who could demonstrate having played a significant role in the success of the supply chain plan would get a portion of the pool. The CEO defined success as achieving the $3 million bottom-line improvement.

"Any year in which that happens, the special bonus pool exists," he said. He then instructed his three direct reports to devise a metric-and-compensation system (which he would review) for measuring individuals' contributions to the success of the plan and to determine how bonuses should be paid out. Suddenly, everyone in the company became an SCM enthusiast.

The owner of this company was a very clever man. How do you make certain you can clear a $3 million hurdle? You aim far above it. In the first year of implementing the supply chain reform plan and its special bonus, the bottom line improved not by $3 million—but $3.75 million. Employees were so intent on achieving the $3 million goal that they actually overachieved, in effect paying for three-fourths of their own bonuses.

As for those six key suppliers, the CEO of the grocery products manufacturer met personally with the CEOs of each, explained the strategy thoroughly, and pledged that for any year in which a supplier fully cooperated and the improvement goal was achieved, the company would not press the supplier for price cuts. Moreover, any savings to the firm directly attributable to the supplier's efforts would be shared 50/50. In essence, the suppliers were now being paid to help the company make its supply chain strategy work. Similar arrangements were made with the retailers. As a result, the manufacturer now had a supply chain whose six key suppliers and three key retailers all worked in concert—and were rewarded for doing so—to make the strategic plan succeed. Not surprisingly, it did.

Keeping Up with Supply Chain Technologies and Trends

Many of the most-promising supply chain opportunities are made possible by sophisticated technologies that a CEO should take the time to understand. Supply chains today are often densely complex. They entail cross-functional participation (and deliver cross-functional benefits), and they therefore deeply permeate the firm. As we have just seen, supply chains are most successful when they inspire the cooperation of external partners. Major new software advances have enabled companies to optimize distribution and production planning, inventory management, warehousing, and transportation systems. Assorted new technologies—RFID (radio frequency identification) chips and systems, used in ever-more innovative ways; advanced bar codes; and other machine-readable coding schemes—have emerged to make SCM more sophisticated. Moreover, powerful process tools such as Lean and Six Sigma are now being applied to the entire supply chain. Nonetheless, the warehouses of many large companies still operate with 20-year-old technology, producing incomplete and unintegrated information flows and resulting in higher costs, higher inventory, impaired supplier relations, and declining customer service. All of this puts a company in jeopardy.

A CEO who understands new technologies can play the important devil's advocate role by challenging the business case for technology adoption. Most firms that have bought leading-edge supply chain systems acknowledge that they use only a fraction of the software's functionality and an even smaller fraction of the promised capability. An attentive CEO can lend authority to the change-management process, helping to foster user buy-in and making certain that proper vendor support, adequate training, and other resources are in place.

Moreover, CEOs who fully appreciate the challenges of deploying complex and costly systems can help their companies avoid classic missteps. The CEO of an industrial equipment manufacturer admitted that her company had fallen into one such classic trap: "We spent $18 million getting an ERP package up and running in our company, and all we did was bring more modern technology to bear on supply chain processes that are 40 years out of date. I expected this technology to bring supply chain costs down dramatically, and nothing has changed. My mistake was expecting technology to solve a process challenge." She is now leading the company through a major effort to understand existing processes, identify opportunities to improve them, and adapt the new system to support the reengineered supply chain processes.

A large global chemical company uses its S&OP software as a communications hub for everyone in the business and for selected supply chain partners. The system allows for real-time access to demand plans, inventory levels, and the transportation status of various different deliveries—information that in turn can be coordinated with demands from supply chain customers and inbound materials from supply chain providers. Anyone in the supply chain can have read-only access to these real-time data, but only selected individuals have the rights to make changes to forecasts, plans, and deliveries. This system, which sits atop the supply chain processes developed jointly by the company and its supply chain partners, is fully exploited as a competitive tool to deliver product faster and cheaper than rivals' supply chains do. In essence, sharing information with supply chain partners creates breakthrough improvements in performance.

For the company to excel in the technology area, the CEO should be briefed regularly about and have high-level knowledge of supply chain technologies. She should also demonstrate a thorough understanding of how the firm is applying these technologies and be capable of asking challenging questions—and getting the right answers—before any new technology is specified, purchased, and rolled out.

Eliminating Cross-Functional Crossed Wires

Can you explain the role of each of your company's functions in driving results in cross-functional areas? At a large manufacturer of consumer durables, the CEO tasked the VP of marketing with reducing SKUs by 20%. However, the VP believed that other objectives—growing market share, for example—were more important than the SKU goal, so he made no progress toward achieving it. As he put it, "The CEO was not really serious when he said that. If I keep growing market share, he won't bother me about SKU count." Even though the CEO believed strongly in SKU reduction (it had paid big dividends at his former company), he did not know how to make it an equally urgent objective for the VP of marketing. In part, this was because the CEO didn't understand supply chain operations well enough to know *why* it had paid off for his former company. That deficit compromised his ability to persuade the marketing VP of his seriousness.

Inventory is another cross-functional sinkhole. We have seen many cases where the

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sales unit will not use markdowns to move obsolete inventory because the CEO has allowed sales metrics to exclude the costs of carrying that inventory. The firm then pays the carrying costs and—sometimes years later—the cost of the inevitable markdown.

To avoid such needless inefficiencies, the CEO should be personally involved in developing a mature S&OP process. SKU complexity should be tracked and decreasing, as should obsolete inventory. The operations and supply chain function should be held equally accountable with the sales and marketing function for customer service and inventory. The CEO should also thoroughly understand—so that he can help to harmonize—the interplay of cross-functional and supply chain priorities.

Adding Supply Chain Insight to Business Planning

The old saying that the loss of a horseshoe nail can lead ultimately to the loss of a kingdom applies to business initiatives when key information is missing from the planning stage. Supply chain considerations (and expertise) should be core components of business planning, including sales and marketing promotions, and of contract negotiations with customers and partners. That's because unforeseen disjunctions can undermine the best strategic intentions.

A major North American railroad is currently struggling with this concept. Although the CEO has clearly articulated who the railroad's most profitable customers are, this directive isn't reflected operationally by individual terminal managers, who are measured on how many railcars they move with the available locomotives. This performance metric motivates terminal managers to assign priority status to longer trains, even though that might leave the shipments of the high-value customers languishing for days in the terminal. The terminal managers aren't thinking about where the high-value orders are. If they happen to be on shorter trains, they sit; if not, they move—simple. In one case, goods shipped by a $100 million customer regularly missed delivery deadlines because locomotives were consistently diverted to longer trains loaded with marginally profitable goods that didn't require expedited shipment but got it nonetheless.

Another company's marketing organization ran a big promotion while its own factory was in the midst of a major, complex tooling changeover and couldn't provide the needed volume of product. At a third company, during pricing negotiations, a large customer was promised that all of its product would be served through the regional warehouse network rather than directly from the factory. This added a $15-per-unit cost for the company with no concession won from the customer in return. Why? The negotiators, coming from the sales function, didn't understand the added supply chain costs of the agreement.

The takeaway message: CEOs, if fully engaged, demand that relevant business planning and negotiations anticipate and explicitly address important supply chain ramifications.

Resisting the Tyranny of Short-Term Thinking

Sometimes a near-term focus leads to tactical decisions that conflict with one another, creating unintended—and sometimes costly—consequences in the supply chain. CEOs should guard, in particular, against allowing quarterly pressures to dictate unprofitable long-term trends.

Consider how unnecessary quarterly variability disrupts the flow of goods to the marketplace. In some cases, sluggish sales for most of a quarter are capped by an end-of-quarter surge. In others, goods move briskly for most of the quarter only to slacken in the final month. Both phenomena are caused by sales tactics that are misaligned with supply chain–planning objectives. Sometimes the unintended beneficiary is a wholesaler or large retail customer; one retailer confessed, "I'm building two new warehouses to take advantage of my supplier's end-of-quarter push."

Take the case of a large manufacturer of consumer products whose quarterly demand from many retailers followed a three-month sales pattern of low, low, high. In a meeting with the CEO, the head of supply chain pointed out the extreme costs and supply disruptions created by a quarterly cycle consisting of overcapacity and inventory buildup for two months, followed by rush production and delivery in the third month.

The CEO doubted that anything could be done about it—after all, wasn't that the natural demand pattern? Well, not exactly. The CEO learned that the product in question was disposable diapers, and the fluctuations were

Evaluate Your Level of Supply Chain Leadership

Answer the seven questions in the left-hand column. For each question, assign yourself a score from 1 to 9, according to your current level of supply chain leadership (9 is the best). The statements within each column will help you decide where you fall on the leadership spectrum. If you score 3 or lower on a question, a remediation effort is in order—your firm may be in jeopardy in the low-scoring area. Conversely, a score of 7 to 9 on a question suggests you have a world-class opportunity to leverage. If your total score is 56 to 63, you are poised to drive your supply chain to a true competitive advantage. A score of 21 or lower should be a red flag, especially to a manufacturing, distribution, or retail CEO—your lack of supply chain focus may damage your company's interests. An interactive, multiple-choice version of this tool is available at www.hbrreprints.org.

Question	Scoring Spectrum			Your Score
	1 2 3	4 5 6	7 8 9	
Is supply chain leadership a valued career path in your company?	• You do not get involved in career planning for supply chain personnel. • You do not understand why your supply chain leader must have a supply chain background.	• You are establishing a plan to develop or enhance supply chain talent in your company. • You see the major impact of the supply chain on your firm's success.	• You have chosen an experienced supply chain professional to lead the supply chain organization. • You are involved in the hiring of key supply chain personnel.	
Do you have a program of customer-focused metrics and best-practice benchmarking that drives cross-functional alignment?	• No benchmarking of best practices is done. • Customer-focused metrics are not in place. • Metrics are not shared across functions.	• Some metrics are shared across silos. • Customer-satisfaction metrics for fulfillment exist. • You understand how each function affects fulfillment and shares accountability for it.	• You consistently push for benchmarks of best practices and for sharing customer-fulfillment metrics across functions. • Customer service is the primary metric; activity-based costs and total assets are also measured.	
Do employee and customer behavior reflect your supply chain strategies? Are the strategies clearly articulated? Are strong reward and incentive plans in place?	• You are not involved in function leaders' formulation of incentives and goals. • You do not know whether supply chain partners have been enlisted to support your supply chain goals.	• You have some understanding of how compensation, bonus, and commission programs might inadvertently harm supply chain and profit performance.	• You actively support efforts to reward employees, suppliers, and customers who contribute to your supply chain efficiency.	
Do you understand important supply chain technologies and IT-powered trends?	• You have little interest in new supply chain technologies and leave that to the experts.	• You periodically become aware of—and are curious about—advances in supply chain technology.	• You have a good knowledge of supply chain technologies, can ask challenging questions about them, and have plans to apply them in your firm.	
Do you play a constructive role in resolving cross-functional disjunctions, including those that influence the ability to sell inventory at market price?	• Your company has no sales and operations planning process. • Product complexity is increasing or unknown. • Obsolete inventory is increasing or unknown.	• An S&OP process exists and is maturing. • Product complexity and obsolete inventory are tracked and periodically addressed.	• You are personally involved in the S&OP process. • You hold operations/supply chain and sales/marketing equally accountable for customer service and inventory. • Product complexity is decreasing, as is obsolete inventory.	
Do you demand that supply chain expertise be factored into business initiatives and planning, promotional programs, and customer-contract discussions?	• Customers and vendors all are treated equally. • Negotiation with partners focuses on price and product, not supply chain issues. • Internal groups routinely formulate plans without seeking input from supply chain managers.	• Supply chain collaboration with suppliers and customers sometimes occurs. • Some cross-functional planning takes into account supply chain requirements.	• Supply chain collaboration involves both customers and suppliers and is cross-functionally aligned. • You stress that all negotiations with partners should include supply chain issues.	
Do you ensure that short-term thinking doesn't sabotage supply chain management strategies and opportunities?	• If it takes an end-of-period surge to make quarterly and monthly EPS goals, you do it regardless of the costs. • You have not requested an analysis of the effects of this practice.	• You have a plan to reduce or eliminate end-of-period spikes. • You are gaining a good appreciation of the negative effects of such spikes.	• You have eliminated end-of-period spikes and now clearly see the resulting financial and operational benefits.	

caused entirely by his pushing the company toward the "urge to surge." By accepting and managing to the quarterly sales numbers, the CEO was subtly signaling to retailers that when the company was falling short of its quarterly target, it would offer deep price discounts to make the numbers. Thus, retail customers regularly bought a three-month supply in the third month of each quarter, triggering low sales in the first two months of the next quarter, which would cause another discount surge.

As the CEO put it, "This was a real revelation for me. Babies pee at a constant rate, but our demand was fluctuating wildly. We had trained our retail 'partners' to take advantage of us and order only in the third month of each quarter, when we were trying to make our numbers." The CEO subsequently drove the supply chain to offer consistent price and delivery terms each month, saving tens of millions of dollars in supply chain costs. (These costs had consisted of the combined impact of overtime during the surge, downtime and wasted labor during the slow sales months, and higher inventory costs in anticipation of the coming surge.) The company shared its savings in supply chain costs with the retail partners, effectively netting them better prices than they had enjoyed under the old high-cost, urge-to-surge supply chain game.

Another manufacturer of consumer products illustrates a variation on the urge to surge: the urge to hold back. Demand from retail customers followed a quarterly pattern of high, high, low. This triggered greater production capacity and expenses in the first two months, then inventory buildup during the third. Predictably, it also created operational disruptions for the company's suppliers. The CEO was at a loss to explain this quarterly seasonal pattern, which seemed to affect all of the company's products. Like diapers, the products were staple items in grocery stores, and there was no logical explanation for the strange pattern in consumer purchasing behavior. In fact, analysis showed that annual demand at the consumer level was fairly stable month to month.

In this case, customers were being forced into ordering illogically by the company's sales force, whose compensation program was structured to pay a commission that included a bonus for forecasting accuracy. The sales force realized that their sales forecasts were used to set quotas. The CEO, whose background was in sales, wanted to motivate "rigor" in arriving at these de facto quotas. Motivation came in the form of commissions that were cut in half for any sales that exceeded the quarterly forecast. As the CEO saw it, this would train salespeople to forecast accurately. If they set the forecast too high, they'd lose the bonus offered for forecasting accuracy; too low, and their commissions on higher sales would be halved.

Human nature being what it is, the salespeople were motivated to aim low and then stop selling once they'd hit their cautious marks. Company lore had it that the salespeople were great forecasters. No doubt they appeared to be! The first two months of each quarter, they sold diligently until they hit their quotas, after which they refused to take any further orders from retailers. Why take orders that would earn them only half the usual commission and cause them to lose their bonuses?

The perverse incentives also had an impact on customer service and supply chain costs. Customer surveys revealed that retailers' major complaint about the company was the difficulty (if not the impossibility) of obtaining its products at the end of a quarter. Consumers cited the inexplicably cyclical lack of product availability. The CEO was, in effect, paying his sales force to disrupt the company's own supply chain and dissatisfy its customers—and all to achieve the illusion of forecasting excellence.

• • •

Now it's time to look in the mirror. We have developed a self-evaluation tool to help you measure the quality and depth of your involvement in supply chain strategy by assessing the programs you have—and haven't—put in place (see the exhibit "Evaluate Your Level of Supply Chain Leadership").

What should you do if you don't score well on the evaluation?

- Start by hiring the best supply chain professionals available.
- Get personally involved in cross-functional issues like S&OP, complexity management, and working-capital management.
- Lead the company away from quarter-end disruptions.
- Reward supply chain behavior that benefits the entire company.
- Invest personal time in learning about re-

cent advances, including new technologies, in the supply chain field.

- Use benchmarking and get advice from outside experts.

If you scored well, don't waste time gloating. Build aggressively on your company's supply chain strengths, and dedicate yourself to increasing your advantage over the competition.

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December 2004
Product no. 8487

This collection provides additional suggestions for developing a world-class supply chain. In **"The Triple-A Supply Chain,"** Hau L. Lee explains how to make your supply chain **agile** (responding quickly to sudden changes in supply and demand), **adaptable** (accommodating market changes), and **aligned** (rewarding all players for maximizing the chain's performance). For example, convenience store chain Seven-Eleven Japan achieves agility by using real-time technologies to detect changes in customer preferences at every store—and reallocating inventory accordingly. It ensures adaptability by mobilizing helicopters and motorcycles to deliver products if highways are gridlocked. And it fosters alignment by charging carriers a penalty when they fail to deliver inventory on time *and* by saving carriers time by not requiring store managers to verify delivery-truck contents.

In **"Aligning Incentives in Supply Chains,"** V.G. Narayanan and Ananth Raman focus on strategies for motivating supply chain players to act in the chain's best interests. For example, a Canadian bread maker discouraged deliverymen from overstocking shelves during rivals' promotions by introducing penalties for stale loaves in addition to their traditional commissions based on sales. Deliverymen were motivated to keep the shelves full—except on days when rivals offered shoppers deep discounts on competing products. And Campbell Soup realized that its deep discounts on chicken noodle soup were motivating distributors to forward-buy—and strain its supply chain. It began gathering data on distributors' sales to retailers and giving distributors discounts based on their sales—eliminating the incentive to forward-buy.

In **"What Is the Right Supply Chain for Your Product?"** Marshall L. Fisher explains how to link your supply chain to your product strategy. Is your product *functional*—a staple with a long life cycle, low margins, and stable demand? If so, design an *efficient* supply chain. Campbell Soup used electronic data interchange to get daily updates from retailers on demand for its products and to replenish stocks promptly. Is your product *innovative*—with great variety, a short life cycle, high margins, and volatile demand? If so, create a *responsive* supply chain. Skiwear company Sport Obermeyer solicited early orders from important customers, slashing demand-forecast errors from 200% to 10%. It also shortened lead time for delivery by expediting design information to production centers.

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