Manufacturers, Retailers Look to Adaptive Supply Chains to Increase Revenue, Cap Costs, Boost Productivity

Changing market dynamics and emerging technologies enable players across the consumer goods value chain to revisit their supply chain strategies to propel growth and gain operational efficiencies.
Executive Summary

The last several years have been challenging for companies across the manufacturing, retail and consumer goods industries. But despite relentless and continuing cost pressures, companies in these sectors are now shifting focus to innovations that fuel revenue growth and maintain, if not extend, hard-earned productivity gains. To do this, these companies need to revisit and reformulate their supply chain strategies. This starts with understanding various technological developments and market trends, including:

- The challenges of meeting the instant gratification needs of digital natives and those with millennial-generation mindsets.
- The rise of mobile and social technologies, and their effect on everything from demand planning to research and development practices.
- Shrinking product lifecycles, which are placing more pressure on supply chains to deliver next-generation products more quickly.
- The need to address the risks inherent in supply chain globalization, such as compliance exposure and variable logistics costs.
- Shifting supply chains and organizational effects of multi-channel commerce.
- The move from traditional on-premises computer systems to those that reside in the cloud, enabling cost savings and operational flexibility improvements.

Technology is fundamentally changing the supply chain equation. Virtual platforms are enabling real-time collaboration between team members, regardless of time or place. The emerging SMAC stack, consisting of social, mobile, analytic and cloud capabilities, is reshaping the organizational computing model and transforming marketplaces and supply sources. (For more on SMAC, read our white paper, “SMAC: The New Enterprise IT Model.”)
Adoption of this new technology model is enabling manufacturers and retailers to create more adaptive supply chains that rapidly adjust to changing requirements based on real-time demand signals generated by conventional systems of record, as well as non-traditional sources, such as social media. To begin with, companies are infusing their new product development and field service processes with near real-time information collected from customers and prospects.

A truly adaptive supply chain requires a shift in approach. For most organizations, this means:

- **Rethinking supply chain strategies** to accommodate new and varied market forces to grow revenues.

- **Reinventing supply chain operations** to achieve or retain optimal cost efficiency and create new business capabilities.

- **Rewiring supply chain systems** to leverage technological advancements that help organizations deal with ever-changing market dynamics — reflected by spikes in volume and information variety — while boosting productivity.

This white paper, the first in our three-part Adaptive Supply Chain Series, discusses ongoing market changes and reveals how companies need to adapt their supply chain strategies to simultaneously accelerate revenue growth and productivity while containing costs. Parts 2 and 3 will cover supply chain planning and supply chain execution.
Forces Driving Change

As is true in virtually every industry the world over, companies in the manufacturing and retail industries are at a crossroads: They need to simultaneously grow revenues, reduce costs and boost productivity to be competitive. These imperatives have see-sawed over the past decade due to ever-changing market and technology forces, forcing companies to adjust their supply chain strategies on the fly. For example, cost-cutting was the order of the day amid the global recession, whereas today, as the economy slowly rebounds, growth and productivity are paramount.

Our clients in these sectors tell us their supply chain strategies are changing – and need further refinement – given the technological and market developments detailed above.

When formulating strategy, supply chain executives for decades have faced the following perennial questions:

- “How can I grow revenue and exploit new markets?”
- “What processes should I keep as core, and which ones can be sourced?”
- “What kind of a distribution network should I use?”
- “Where should I place inventory and in what quantities?”
- “How best can I leverage technology?”

The context against which we examine these questions has radically altered in the last few years. Companies are rethinking their strategies in terms of new fulfillment models (such as “omni-channel,” “site-to-store” and free second-day delivery). They are also attempting to reinvent their operations and rewire their systems with SMAC and other technological advancements.

Several related technological developments and demographic shifts are now playing out that will directly affect supply chain strategies for the foreseeable future:

- **The preferences of the millennial generation** are affecting supply chain speed, as most consumers seek instant gratification. Today’s connected shoppers routinely access more product information than ever prior to purchasing, including product and price comparisons. Millennials (and older consumers who have adopted this mindset) demand that their chosen products meet a high level of design, along with ease of use, reliability and timely fulfillment.

- **The nexus of mobile and social technologies** – the heart of the SMAC stack – enables consumers to make educated purchase decisions and compare almost anything immediately, while studying peers’ purchases. Manufacturers are working hard to leverage these technologies to optimize consumer interaction – often for the first time – while retailers often use these tools to deepen customer relationships.

- **Meanwhile, the other two components of the SMAC stack, analytics and cloud**, are fundamentally changing the organizational computing model. The explosion in information increases the potential to mine transactional and interactional data with emerging analytics tools and services to create actionable insights and foresights. And the slow but steady embrace of cloud computing is enabling much greater operational flexibility and cost savings. The ubiquitous availability of remote connectivity is dramatically transforming supply chain delivery mechanisms and enabling suppliers to utilize persistent connectivity to discern more visible demand signals and make collaborative decisions. This can result in accelerated service levels, improved productivity and reduced cycle time, and therefore costs, across the value chain. But the loss of direct control over IT assets required by cloud creates new risks, which must be addressed.
• **Social and mobile networking** have affected consumer expectations, helping to shrink product lifecycles, especially in areas like high tech. This places enormous demand on supply chains, which already operate at maximum speed and efficiency. Being first to market with a ground-breaking product yields untold advantage (though it may be fleeting). The challenge is to identify where the next speed and innovation breakthroughs will lie, and to create a supply chain strategy that facilitates their discovery.

• **The globalization and componentization of the supply chain** — rapidly accelerating through the last decade — is a maturing essential practice in manufacturing and retail. But while globalization is accelerating, sourcing from disparate locations overseas introduces an array of implications, such as greater need for visibility, the need to align and synchronize supply lines, the potential for quality issues, issues associated with regulatory compliance and managing the risk of variable logistics costs.

• **New consumers, the proliferation of tailored products to micro-market segments and the ensuing complexity of managing so many SKUs simultaneously has led to significant pressure on the supply chain.** Even the process for bringing new products to market is undergoing significant change as companies of all types seek to use social feedback and trending data to more closely match customer preferences with the next generation of products.

• **Manufacturers are feeding R&D processes** with real-time launch, delivery, service, repair and quality data from the field, reducing the chance of flaws propagating forward.

• **Manufacturers are leveraging online sentiment analysis tools to generate early warnings,** potentially preventing human injury and loss of brand reputation while ensuring greater quality. For example, a car manufacturer might use analytics based on social media data for scoring or detecting early warning

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**Using Social Media for Generating Early Warning Alarms**

- **Social Media Analytics Module**
  - Advanced Web crawlers
  - Text matching algorithm
  - Symptom and vehicle configuration mapping dictionary

- **Integration of social media alarms with existing systems**

- **Rationalized and Organized Data**
  - Model
  - Model Year
  - Symptom Codes

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**Figure 1**
issues associated with dissatisfaction with a particular car model or model year. By now, everyone is familiar with the sticky accelerator pedal that cost a manufacturer as much as $1 billion in recalls, as well as lawsuits. To head off a future problem of this magnitude, a carmaker could use social media analytics and sentiment analysis to surface the potential issue, check it against defects that have generated warranty claims for the affected model and use social media to send warnings to affected customers in advance of a formal recall (see Figure 1, previous page).

- **Demand-planning processes are changing** as companies gain insights from analyzing social and Web data and pull forward more precise demand signals related to trending patterns in near real time.

**Creating an Adaptive Supply Chain**

New technologies promise to transform marketplaces and supply sources while enabling an adaptive supply chain, one that is flexible and resilient enough to recognize and assimilate new forms of unstructured data. Figure 2 (next page) illustrates a three-pronged approach for creating an adaptive supply chain.

**Rethinking Supply Chain Strategy to Grow Revenues**

Revenue growth is a top priority on corporate agendas today. Companies are grappling with challenges such as learning how to enter new markets and attract new customers, identifying which new channels to tap in each segment and geography, and determining how to penetrate deeper and wider into the existing customer bases. Retailers are experimenting with novel store formats and fostering new, more intimate relationships with consumers.

Additionally, manufacturers — in particular, consumer packaged goods companies — are interacting with consumers and discovering new prospects via mobile apps and social media. Identifying the most profitable approach and determining the most loyal/productive customers and the most advantageous products are important supply chain-related tasks.

For example, one of the most visible and successful retailers in recent years, Amazon, has captured and now owns the relationship with an enormous portion of the global online consumer market. Amazon, an early adopter of SMAC tools and
A Three-Pronged Approach to Reimagining the Supply Chain

Figure 2

**Reinvent** operations to boost or maintain cost efficiency by continuously seeking out lower-cost supply sources.

**Rewire** supply chain systems to better handle spikes in volume, increased velocity of processes and greater variation of information, while boosting productivity.

**Rethink** supply chain strategy to grow revenues by tapping new channels, geographies and store formats.

techniques, has achieved dominance by virtue of its versatile and super-efficient supply chain, which combines features such as breadth of offering, quick fulfillment and immediate feedback on order status. All three are fundamental elements of a modern integrated retail supply chain.

Amazon announced last August that it now ships more orders via its two-day Amazon Prime service than with its free Super Saver shipping. This offering would not be possible without a virtuoso supply chain. Most companies will not be able to replicate Amazon's staggering success, but the giant e-tailer is a role model to emulate in its advanced distribution capabilities and warehouse management practices, as well as its innovative delivery models.

Retailers such as Amazon are raising the bar when it comes to speed of delivery, and other companies must take advantage of the opportunities here. We are helping our clients develop similar programs, including two-day delivery anywhere in the country for a drug retailer, flexible fulfillment for a home improvement retailer and “ship from store” and/or “pick up today from store” capabilities for a large retailer. Enabling these programs involves creating a single centralized view of inventory, establishing global available-to-promise capabilities, creating shipping capabilities from the store and constructing an efficient distributed order management capability.

In our experience, retailers that want to achieve breakthrough improvements have had to redesign some of their core warehouse processes, optimize store backroom processes and modernize their IT infrastructures in order management, warehouse management and transportation management. Most importantly, along with these process and IT changes, retailers need strong change management initiatives to ensure a successful transformation for these new approaches to fulfillment.

Beyond new fulfillment and retail models, many manufacturers are leveraging social media to pioneer a new relationship — and revenue source — with their end customers. (See sidebar, next page, illustrating our partnership with a tile manufacturer to engage with consumers by leveraging social media.)
We recently advised a global flooring manufacturer that prioritized revenue growth as a critical part of its business strategy. Accustomed to selling to the market through distributors, this company recognized it was critical to establish a relationship with consumers, directing them through a B2C e-commerce site, onward to a local distributor for installation. The company also wanted to capture customer preferences to help shape future flooring products.

We developed a roadmap for the company’s B2C journey, including how to engage with consumers via social media, as well as the necessity of a multi-channel approach. This shift will require some rethinking and rewiring of the company’s supply chain operations in order to accommodate these customer conversations.

Notable business process implications for the company’s supply chain include:

- **The need for master data management** in order to reconcile and consolidate disparate terminology and data across systems to achieve “one version of the truth.” Closer alignment and integration through front-end technical applications requires closer operational integration and alignment with R&D, marketing and manufacturing, as well as collaboration with outside partners. To enable these closer relationships, standardized terminology was needed to reduce confusion both within and beyond the four walls of the organization.

- **The need for mobile applications**, both consumer-facing (i.e., decision-making tools and square footage calculators for estimating materials costs) and for interacting with installers (i.e., calculators to estimate labor, supplies, tax and other information).

- **Sales and operations planning teams** can tie the latest demand signal streams to forecasting and planning processes. This, in turn, creates more accurate planning data. With this information, operations can create better production schedules, plan more closely and schedule supply orders more closely to the time when supplies will be needed. This all helps improve fulfillment of stocking supplies to local dealers, enabling them to operate more efficiently and profitably. It also creates more accurate supply stores for production materials, thereby lowering storage costs and direct material costs and returning working capital to other more productive or efficient processes.

The expected benefits include:

- **Revenue growth**. The project is forecast to deliver a 15% to 20% increase in sales by directly reaching end customers for the first time. The team also projected greater sales to consumers through the dealer and distribution network. Adding value to the dealer network via loyalty programs is a prime agenda item for this manufacturer, thereby securing competitive advantage and positioning the brand as “preferred” by dealers.

- **Productivity gains** will emerge from marketing and sales force enablement. Consumer mobile applications are expected to transfer former sales and marketing work to direct consumer involvement, such as calculating square footage of a particular size tile for flooring or visualizing how a particular carpet color will look in the consumer’s home using online (or mobile) graphics manipulation.

- **Greater market penetration** will result from digital marketing campaigns that create greater leverage with supply chain partners through loyalty programs, incentives and promotions. By using online partners such as Groupon or Living Social, specific campaigns can drive more traffic to dealers. These promotions can be driven by specific locale, through dealers known to be loyal to the brand, thereby assuring the manufacturer of greater return on promotional investments.

- **Deeper dealer penetration** and connection allows more directed stocking programs to fulfill available demand, providing an offset of working capital of 8% to 12%.

- **Responding to more discrete demand signals** helps by placing inventory at specific dealers that are fulfilling known orders on the front end, while the manufacturer automatically restocks that dealer for the same amount of inventory, thereby decreasing the cycle time for restock.
Reinventing Operations to Reduce Costs

Retailers are among the most skillful cost-cutters in business today and the most adept at making quick changes to their operations to save money. Unlike many other types of companies, retailers have not had the recent luxury of operating “fat and happy.” Competition is always fierce, and in recent times, “everyday low price” has been the message to consumers, an expectation that has grown in global proportions. Maintaining maximum cost efficiency is now a strategic imperative, as failure to keep prices at rock-bottom levels can threaten a retailer’s longevity.

Manufacturers, meanwhile, are equally adept at cost-cutting, although they traditionally have not been as flexible as retailers and have not had as many levers to pull. A retailer may close a store or lay off employees to weather a temporary financial pinch, but manufacturers must dig deeper to squeeze ever more waste (and, therefore, cost) out of production lines and prices from suppliers that are already supremely efficient. The struggle for both types of companies is to continue to maintain the lowest possible cost structures, while simultaneously finding ways to innovate and grow revenue.

Companies that survived the global recession are now concentrating on novel ways to expand cost-reduction initiatives, using methods such as continuously revisiting sourcing strategies for new, lower cost supply sources.

Rewire Supply Chain Systems to Improve Productivity

Automation of any supply chain task is likely to produce a faster process and enhanced productivity, along with the ability to scale. This is another area in which manufacturers and their suppliers shine. Years of continuous process optimization have paid off. U.S. manufacturing output in 2010 was 16% higher than a decade earlier, despite the impact of the recession.

To take this to the next level, supply chain systems across industries are going through some fundamental changes. They need to accommodate the “3Vs”: volume, velocity and variety. Specifically, they need to:

- Manage significantly higher amounts of market/consumer information (volume).
- Adapt to an increased pace of business (velocity).
- Manage a greater breadth of information sources (variety).

Here are a few examples of how companies use modern supply chain systems:

- Leveraging consumption, point-of-sale and demand signal data repositories to improve planning.
- Leveraging multi-echelon inventory solutions to set inventory targets more dynamically.
- Leveraging new automation technology to reduce handling costs.
- Utilizing new track-and-trace technology to reduce transportation costs.
- Replacing costly legacy technology applications with more efficient systems.
- Adopting cloud-based applications to reduce operating costs by shifting spend from Cap-Ex to Op-Ex budgets.

(See sidebar, next page, on our recommended technology changes to a consumer packaged goods company that will help it increase and maintain productivity.)
Looking Ahead

As companies in manufacturing and retail strive to create adaptive supply chains, they need to identify the best supply chain strategies that will allow them to operate with maximum speed, efficiency and flexibility.

Given the dynamic nature of business, the timeframe for coping with ever-changing supply chain imperatives is compressed, while the pace of technology innovation continues to accelerate. There is substantial urgency for C-level executives to address these shifts. The market is moving faster than most organizations have the ability to change and transform.

As we have detailed above, an adaptive supply chain is a critical weapon in responding to these market pressures. Parts 2 and 3 of our Adaptive Supply Chain Series will build on this foundation by detailing new and more innovative ways of enacting supply chain planning and supply chain execution.

Footnote

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