

# Charting the Course

Four Key Strategies for Achieving a Profitable-Agile Supply Chain

BY KELLY THOMAS



One of the fundamental goals of any enterprise is to deliver an adequate return on investment for its investors or owners. This goal is typically reflected in a return-on-investment equation such as return on assets (ROA), return on invested capital, or economic profit.

Supply chain practitioners play a critical role in this process, as they manage the people, processes, metrics and technologies that support various aspects of the ROA equation (see Figure 1). Yet, it has become increasingly difficult for companies to reliably deliver an adequate return in today's continuously changing business environment.

Figure 1 – Return on Assets Equation

$$\text{Value/ROA} = \frac{\text{Sales} - \text{COGS and SG\&A}}{\text{Assets}}$$

## Key Challenges in Achieving ROA

There are four key challenges companies face in continuously delivering their return-on-investment goals as shown in Figure 2:

- Demand uncertainty and volatility:** Customers are increasingly fickle, making demand difficult to forecast. In recent years, markets have been disrupted by product innovation, the rise of private-label products, the Internet and social networking, and rapidly growing emerging economies. Events such as the global economic downturn, earthquakes, hurricanes and political instability have also contributed to demand volatility.

For example, in consumer electronics, the emergence of smart phones and tablet computers has completely shifted the industry dynamics. In configurable product industries, customers demand more customization and shorter delivery windows; in fashion industries, demand uncertainty is a given, as the demand for a short-lived fashion is nearly impossible to predict. All of this contributes to the need to integrate supply chain strategy, demand management, supply planning and response management.

- Globalization:** Companies have scrambled to open channels and form joint ventures to capture demand in emerging economies; at the same time they have moved rapidly to develop supply capabilities from the same low-cost countries. This has led to a complex mishmash of channels downstream and supply capabilities upstream. In this environment, companies are struggling to achieve end-to-end visibility, optimize production and inventory assets, and continuously synchronize the dynamics of downstream channels and upstream supply. Recent events such as the earthquake and tsunami in Japan and floods in Thailand have highlighted the risks associated with these complex global networks.

- Escalating customer expectations:** Information transparency brought on by the rapid adoption of the Internet and social media have shifted the value chain power to customers. Today, 70 percent of purchase decisions are made online, prior to a customer visiting a retail store.<sup>1</sup> In business-to-business companies, customers are driving for tighter delivery windows and increasing end-product configuration flexibility. These customers expect continuous product availability along with a unique response experience from the supply chain.

- New product introduction:** Continuous product innovation is critical to success in most industries. This is particularly true in short-lifecycle industries such as consumer electronics, but is also important to longer lifecycle industries such as automotive, industrial and consumer packaged goods.

Furthermore, studies have shown that 30-40 percent of products across a typical company's portfolio are unprofitable.<sup>2</sup> Profitability is not only dependent on the features, functions and design of the product; it is also dependent on how successfully it is phased into and out of the supply chain across its overall lifecycle. It is also highly dependent on ensuring each product is set up with a supply chain that provides a profitable and reliable response to a given customer.

Figure 2 – Four Key Challenges



<sup>1</sup> SymphonyIRI Group, 2009.

<sup>2</sup> Jonathan L. S. Byrnes, *Islands of Profit in a Sea of Red Ink*, October 14, 2010.



### The Common Denominator

Demand uncertainty, globalization, escalating customer expectations and new product introduction all have one thing in common: they increase complexity and variability. Variability is simply the statistical distribution of outcomes one can expect from a process. For example, a one-step process with 99 percent consistency will produce the expected result 99 percent of the time; however, a ten-step process, with each step having 99 percent consistency, will produce the expected result about 90 percent of the time. This increased variability requires buffering, which costs money and must be managed. For instance, sourcing a part via a 10,000 mile journey from southeastern China to an assembly operation in Ohio has a fundamentally different variability profile than sourcing the same part via an 800 mile journey from Alabama.

While increasing complexity is a common topic in supply chain management, the reality is that every year since the existence of mankind the world has become more complex. Competitive leadership depends on effectively managing this variability. If a company has robust business processes and technologies that enable it to stay ahead of the complexity/variability curve, then it will have competitive advantage.

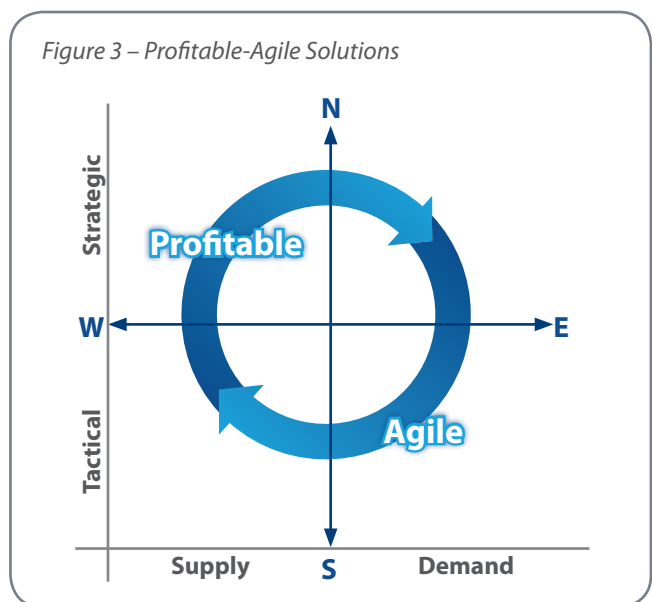
### Supply Chain Management That Focuses on Profitability and Agility

To thrive in this environment of increasing variability, effective supply chain management is critical. Manufacturers must deploy solutions that enable profitability and agility. These profitable-agile solutions must ensure that customer commitments are profitable and supply chain operations have the flexibility to maneuver uncertainty to meet these

commitments. In today’s environment, profitable-agile solutions require a new level of synchronization across the two-dimensional spectrum of strategy and operations, and demand and supply (see Figure 3).

Much value has been derived from individual functional supply chain solutions. These solutions typically address different areas of the planning spectrum from strategic to tactical, or different functional areas such as demand, supply or inventory. Recently, solutions have focused more attention on the ability to respond better, assuming planning is either not important or a given. The profitable-agile approach synchronizes profit-driven business planning with operational planning and scheduling to ensure that the profit motive is integrated into an agile response capability.

Figure 3 – Profitable-Agile Solutions



## Four Strategies for Achieving a Profitable-Agile Supply Chain

### 1 Segment for Profitable, Reliable Customer Relationships

Segmentation is the means by which companies create one-to-one profitable relationships between their customers and their supply chain. This means creating different supply chain response models for different product-customer intersections. Segmentation is important because one-size-fits-all supply chains are no longer competitive.

This does not mean, however, establishing separate physical supply chains to support different modes of supply. By creating multiple virtual supply chains across a single physical asset base, each of these virtual supply chains is tied to a different response model for different products and different customers. The response model is one that is both profitable and can be executed with a high level of reliability.

When segmenting a supply chain for profitability and reliability, understanding cost-to-serve is the primary consideration. Cost-to-serve is the supply chain cost associated with delivering a specific product to a specific customer. Since traditional financial systems are typically not structured to capture and report these costs, new processes and analytics are necessary for understanding these costs and keeping them up to date. Cost-to-serve is then used to make decisions on how best to serve a customer for reliability and profitability.

Once foundational cost-to-serve analytics are in place, associated policies can be introduced into various functions along the value chain from customer to supplier. These policies create the virtual supply chains across the single physical asset base that results in a differentiated customer response. This includes differentiated policies in the following areas:

- Order promising
- Allocation
- Customer fulfillment
- Inventory policies
- Forecasting techniques
- Demand priorities considered in core planning (master, distribution, transportation, factory)
- Supplier fulfillment

### 2 Drive Your Supply Chain From Real Demand

Driving the supply chain from real demand requires supply chain operations to function from a single view of independent demand. Real demand is typically downstream of most manufacturers. In most cases, manufacturers drive their supply chains from dependent demand, which comes in various forms, including forecasts and replenishment orders. This dependent demand has been distorted at various points along the value chain through separate forecasting and replenishment processes and metrics, resulting in the well-known bullwhip effect.

Leading companies today seek to eliminate these distortions by reaching downstream and applying analytics to gain an intimate understanding of what is happening with real demand. This knowledge is then used to drive upstream supply chain operations, including replenishment, forecasting and production.

For supply chains that include a retail store, manufacturers and retailers can collaborate to capture shelf-level point-of-sale data and perform data analytics to gain insights into shelf-level activity. These analytics form the basis for jointly determining replenishments. This capability has resulted in significant shelf-level in-stock performance improvement, while also significantly reducing channel inventories, resulting in a win-win for the manufacturer and retailer.



### 3 Synchronize and Provide Visibility

Visibility is a critical component of effective supply chain management. This means having a global view of demand and supply across the supply chain that enables strategic, tactical and operational decision making. The continuous, always-on visibility to changes in demand and supply provide companies with foundational insight into threats to the company's plan for making money.

Synchronize means integrating high-level business planning with operations along the north-south axis and demand with supply along the east-west axis (see Figure 3). The sales and operations planning process (S&OP), coupled with a feedback loop based on continuous visibility of demand and supply, synchronizes operations to the high-level financial plan. The feedback loop provides a continuous understanding of gaps or threats to the plan that allows supply chain managers to then run process playbooks to close the gap and stay on course. A process playbook is a prescribed set of resolution levers that are used to close the gap between actual performance and planned performance. For example, if a supply problem is identified with a certain component, this information can be immediately conveyed to allocation planners at the front end of the supply chain. These planners can then change allocations, in alignment with segmented policies established for profitable, reliable customer response.

### 4 Optimize the Use of Resources

Maximizing throughput across resources — such as people, production capacities, inventory, warehouses, trucks and other transportation equipment — is critical to success. While sophisticated optimization technologies for this were developed in the 1990s, they have been continuously improved since then. These technologies provide the ability to create constrained and optimized master production, distribution and transportation plans for equipment, people and materials.

Recently, some solution providers have promoted “good-enough” planning or tout that response capability is sufficient. As long as there are lead times associated with the delivery of product to channels and customers, planning will be just as important as response capability.

These strategies play a critical role as supply chain managers navigate the increased complexity and variability of today's business environment. Companies charting a new course are leveraging integrated capabilities along the north-south axis of tactical and strategic, such as network and inventory optimization, demand management, master and distribution planning, factory planning and transportation management. At the same time, they're relying on key capabilities across the east-west axis of supply and demand, including order promising, allocation management, replenishment, and S&OP — to ensure that they arrive at a profitable-agile supply chain. ■



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