



## Achieving Assurance of Supply in an Omni-channel World



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# Introduction

In Greek mythology, Sisyphus was a King punished by being compelled to roll an immense boulder up a hill, only to watch it roll back down just as he was about to reach the top of the hill, and to repeat this action forever. Many supply chain executives can empathize with Sisyphus as they face challenges day in and day out to balance supply with demand. Due to stock-keeping unit (SKU) proliferation, the increased pace of innovation, changing consumer preferences, and unforeseen supply disruptions, their best efforts may still result in backorders, excessive inventory, strained third-party relations, loss of consumer confidence in the brand, and perhaps reduced sales and shareholder value. Technology has placed information and increased buying power into the hands of consumers who seek a consistent, seamless experience through all available channels ("omni-channel"). Companies are now facing unforeseen strategic risks from an increasingly complex global supply chain network that may not be optimized for an omni-channel world.

# Omni-channel challenges and opportunities

Omni-channel is defined herein as a direct to consumer (D2C) business model where all sales channels ranging from online, mobile, telephonic, mail order, self-service, and physical retail establishments are aligned and fulfillment processes integrated to provide consumers with a seamless shopping experience in alignment with the company's brand proposition. The underlying benefit to retailers (including restaurant, foodservice, hardline and softline merchants) is the opportunity to use multiple channels to market their products and increase sales by accessing customers across all segments and levels of technological sophistication who place orders via their preferred channel(s) on a 24x7 basis.

However, the multitude of channels greatly increases the importance of supply chain management, particularly the ability to assure supply and manage supply chain risks to decrease disruptions. In essence, omni-channel increases demand planning complexity due to difficulties in obtaining real-time demand signals across all channels, synchronizing the captured data to account for timing differences, and holistically analyze impacts on sourcing, procurement and operations planning. Balancing supply and demand real-time across all available channels in a world where consumers expect rapid fulfillment and delivery, including the increased desire for same-day delivery within a specified hourly window is a significant challenge. Omni-channel retailing also increases the complexity of managing inventory and assuring supply in an environment where some or all aspects of the supply chain are outsourced and operational requirements span multiple global geographies. Retailers that operate in an omni-channel environment without an optimized inventory and distribution capability may encounter such risks as stock outs, expedited freight charges to reposition inventory, and reduced profits which impacts their objective of assuring sales are at the highest possible margin.

A robust supply chain risk management program that addresses the strategic risks impacting the ability to provide a seamless consumer experience should be the cornerstone of any omni-channel strategy if consumer businesses (defined as D2C retail, consumer product, hospitality and foodservice providers) want to reduce disruptions, enhance enterprise value, grow revenues, protect brand reputation, and provide a heightened customer experience.

This white paper provides an overview of strategies that can be considered when developing a supply chain risk management program that improves assurance of supply, reduces the complexity associated with seamless inventory management, and enhances omni-channel supply chain resiliency.

# Omni-channel supply chain challenges

Effective omni-channel strategies commonly align supply with demand to satisfy customers and create a consumer experience that is consistent with overall brand proposition in an ever interconnected world of e-commerce enabled through multiple technology platforms and interfaces. Technology, from Smartphones and apps that allow on-the-go shopping, to the use of social networking to create demand, is revolutionizing retail and driving the increased push into omni-channel. While there is high-quality opportunity to increase brand awareness, Omni-Channel retail can also exacerbate the basic struggle to maintain high customer satisfaction. As the number of channels increase, retailers may attract new customers. Gaining visibility into this new customer base, predicting demand generated through each channel, and designing your supply chain network for flexible fulfillment are key elements to meeting customer expectations and maximizing use of resources.

Consumer businesses should have clear visibility to all inventory levels for all supported sales channels to confirm that they can facilitate delivery to the customer of any particular item, color and size, when and where desired. This means relations with suppliers are quickly migrating from low-cost supplier selection to strategic, collaborative, assurance of supply agreements. In addition, there also needs to be a proactive approach to identifying and assessing risks at various points in the supply chain in the light of demand variability, limited visibility to tier 2+ suppliers, global logistics operations and an interconnected network of suppliers. Demand sensors, predictive risk analytics, supplier verification programs, and logistics control towers are key measures organizations are employing to reduce supply/demand variability and the impact of disruptions; thereby improving assurance of supply.



# Setting the strategy: Omni-channel as a growth enabler

Contrary to what some may assume is a critical first step for embarking on an omni-channel path, *it is not to make investments in technology*. Rather, it is in setting the omni-channel strategy, evaluating strategic risks to the strategy, and appropriately aligning supply chain objectives and capabilities to the strategy. Omni-channel strategies vary based on a company's aspirations and capabilities, and merit a separate discussion. Outlined below at a high-level are some considerations when determining an omni-channel strategy that will impact supply chain:

- Listen to the voice of the customer. What motivates your customer to buy from you?
  - Your omni-channel strategy should reflect how your customer wants to buy, not how your company is organized. If the company isn't currently structured to capitalize on the synergies of omni-channel, organizational change should be considered to improve alignment.
- Internal collaboration is a key success factor. Representatives from sales, marketing, technology, merchandising, finance, supply chain (sourcing, logistics, etc.), and operations should collaborate to answer the following questions:
  - What is our winning aspiration?
  - Where will we focus?
  - What capabilities need to be in place?
  - What are possible scenarios and what disruptors may we face?
- Holistic approach to pricing and trade promotions across all channels:
  - Customers may become frustrated and lose trust in the brand when the same item is priced differently on-line vs. in the store, unless the strategy calls for in-store promotions to increase traffic. Providing transparency is key to maintaining trust.
  - Scenario planning and modeling can be utilized to identify how to reduce supply chain network costs across channels, which will aid in price-setting.
- Consider flexible fulfillment processes with technology as an enabler.
  - Inventory optimization technology can provide real-time visibility into the locations of all products across all channels enabling flexible fulfillment.
  - Providing a single view of available inventory improves inventory management, capacity planning, and maximizes sales potential.

A successful omni-channel supply chain strategy should focus on constructing a business model that addresses customers' needs, and leverages the power of analytics to monitor supply chain performance and continually sense demand signals across channels.

# Strategic supply chain risk considerations

The topic of risk may sometimes be overlooked by corporations when discussing omni-channel retailing. Refining supply chain operations to keep pace with ever-changing customer demands and omni-channel trends requires constant vigilance. Such environments inherently introduce additional, and potentially unforeseen, supply chain risks than in traditional models.

**Supply chain objectives can typically be characterized as follows:**

Assessing gaps in supply chain capability to support the omni-channel strategy can provide direction for investments in talent, technology, and process improvement needed to achieve the supply chain objectives. The following questions can be utilized as a guide when evaluating your omni-channel supply chain:

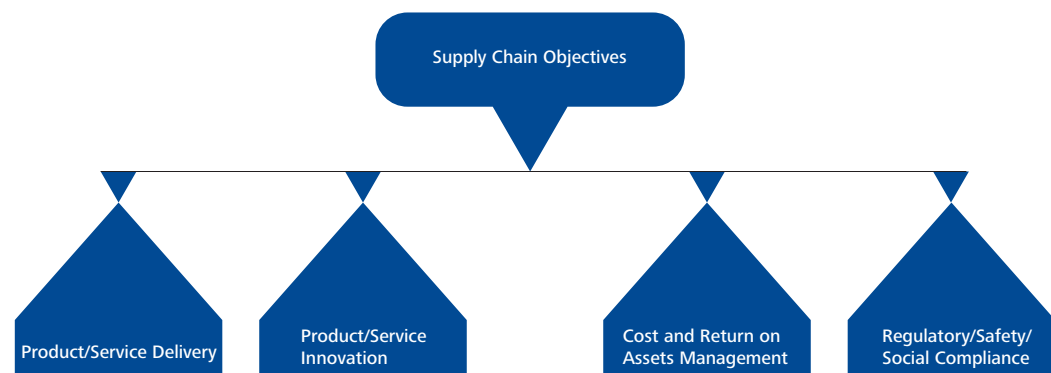
1. Is your supply chain IT infrastructure and application capability sufficiently flexible to support multiple channels and unpredictable fluctuations in transactional volume?
2. Do you have the right collaborative supplier relationships in place to provide the scalability required to assure supply in an omni-channel environment?
3. Do you have sufficient visibility into Tier N supplier capacity and current baseline performance in meeting customer demand within your supply chain network?

Are additional investments in facilities required or will a flexible fulfillment design provide a more optimal solution?

4. Have you conducted supply chain network, inventory, and transportation optimization to identify the optimal supply chain for meeting customer demand across all channels?
5. Do you have well-designed reverse logistics programs in place capable of managing returns regardless of the channel?
6. Do you have complete visibility across the supply chain?
7. Have you conducted SKU analytics to evaluate the impact of increased SKU count on warehousing, distribution, and fulfillment?
8. Do you have a robust Assurance of Supply strategy in place that minimizes potential risk while maximizing profit potential through SKU availability?

Although not a comprehensive listing, the questions listed above are essential in terms of gaining an understanding of 'As-Is' vulnerabilities within your organization and across the value chain. Optimization, analytics, and a supply chain risk management program can provide the foundation for closing the gaps in the future state of your omni-channel supply chain and provide continuity of supply.

**Figure 1: Deloitte's Supply Chain Objectives Framework**





# Developing a supply chain risk management program

In order to be effective in an omni-channel world, each channel should be profitable and be able to meet customer demand. However, certain channels may be entered into to attract new customer segments (e.g., Gen-Y) or improve the overall customer experience, even if at a loss. Increased competitive pressure from pure online retailers are pressuring traditional brick and mortar consumer businesses to implement strategies that maintain market share at the expense of operational cost increases. Regardless of the reasons, customer satisfaction and increased sales remain key priorities, which can only be achieved through a properly designed supply chain that mitigates disruption risks and allows the sufficient flow of supply to meet demand.

As a result, leading companies are developing business models that focus on maximizing customer satisfaction by achieving an optimal balance between performance (e.g., accurate fulfillment), cost (e.g., minimizing transportation expense), and risk (e.g., providing safe, unadulterated products). Companies may source from new or untried suppliers as a stopgap measure when facing supply shortages, and may inadvertently expedite products of inferior quality; thereby, increasing the risk of product

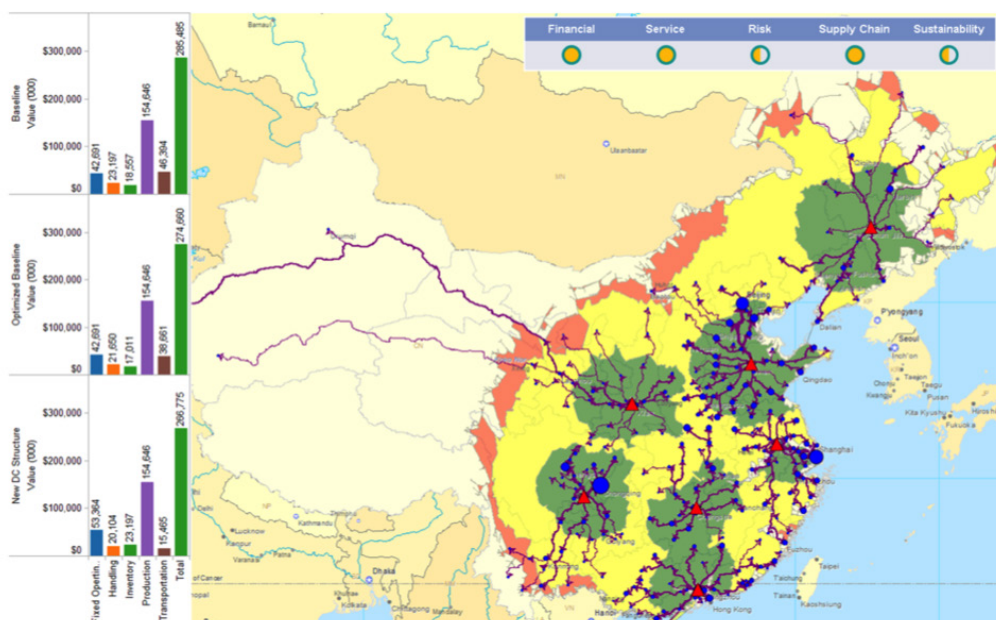
returns even though cost and service objectives may have been met. Brand reputation risks, recall costs, and any additional regulatory scrutiny would likely outweigh any benefits derived from the product sales.

Assuring the supply of goods entails far more than providing the correct products at the right time via the requested channel at the desired margins. Identifying, assessing and managing strategic risks that can disrupt your supply chain and erode consumer (not just customer) trust in your brand are critical components of an omni-channel strategy.

Developing a supply chain risk management program that incorporates the use of supply chain network optimization and risk quantification techniques will assist in designing an optimal omni-channel supply chain that balances cost, performance and risk. Figure 2 below presents a visual display of results from a supply chain network optimization modeling engagement for a company expanding their operations in China.

The purpose of the modeling was to identify the lowest cost and lowest risk logistics network to meet customer demand taking into account projected sales increases over

Figure 2: Deloitte Supply Chain Risk Modeling leveraging LLamasoft, Inc. technology





a five-year period. The graph pictorially presents where distribution centers should be located to meet demand across all service level requirements, while minimizing transportation costs from ports to distribution centers, distribution centers to stores, and direct-to-consumer using a combination of dedicated fleet, common carriage, parcel, and third-party delivery carriers.

Financial analysis was conducted to evaluate strategies for reducing duties, taxes, transportation costs, and working capital requirements through optimal inventory management. Sensitivity analysis was conducted to evaluate sourcing options that minimize the risk of disruptions and provide greater assurance of supply.

Incorporating performance, cost, and risk impacts into a comprehensive model allows companies to make enhanced strategic decisions related to their omni-channel supply chain requirements, as well as market entry and/or expansion across developed or emerging markets.

This balanced approach to managing the three pillars of performance (service), cost, and risk (e.g., global trade, product safety or environmental compliance/sustainability) in the supply chain can drive improved customer satisfaction. A supply chain risk management program should include mitigation plans that help decrease the severity of supply disruptions throughout the value chain and provide the analytical insights required to develop a flexible supply chain to support each channel. A supply chain network design that doesn't take into consideration assurance of supply strategic risks will be considered sub-optimal and can result in:

- Excessive safety stock resulting in potential obsolescence, additional carrying costs, and sub-optimal use of working capital
- Over-reliance on costly air-freight logistics due to lack of flexible demand fulfillment
- Inefficient use of resources or capital applied towards one channel over another

- Supply disruptions of longer duration or severity
- Loss of sales (order cancellations) or increased cost of sales (expediting orders)
- Damage to brand reputation resulting from unsatisfied customers.

The ability to manage performance, cost and risk is becoming ever more complex as omni-channel businesses strive to meet the expectations of the modern consumer. The evolution of omni-channel shopping is having a significant impact on how supply chains are designed, driving a greater need to understand cost-to-serve and protect margin erosion as channels and SKUs increase. Demand fluctuations during seasonal peak or promotional periods are particularly challenging and taxing on supply chains, requiring networks to be designed with greater flexibility and control. It is our view that consumer businesses should place increased focus on transforming supply chain networks to align with their omni-channel strategy.

Channel variety increases consumption and success awaits omni-channel businesses that can provide variety *and meet demand*.

The harsh reality is that omni-channel is rapidly moving away from something to be considered, to being a must-have for surviving and thriving. The recommended approach is to embrace the new reality of omni-channel while also investing in more in-depth analysis on consumer demand, and aligning supply chain objectives with corporate strategy to create a competitive advantage.

Failure to build a resilient supply chain across channels is a significant strategic risk that can impact enterprise value.

Several risk events can impact the end-to-end supply chain across nodes, such as those listed in Figure 3, and can prevent companies from meeting their supply chain objectives:

**Figure 3: Deloitte's Supply Chain Risk Framework - Disruptors**



A supply chain risk management program will include a discovery process that assesses the likelihood, velocity (speed of onset) and severity of these disruptions on your omni-channel supply chain and appropriate mitigation strategies. Once “unknown known” disruption risks are more easily understood and a risk response strategy developed, the organization can develop a supply chain risk management program that enhances supply chain resiliency and improves assurance of supply. Resilient

supply chains address critical vulnerabilities and improve the organization’s ability to design greater visibility, flexibility, collaboration, and control in their supply chain.



# The inventory challenge

Achieving assurance of supply in omni-channel requires the ability of consumer businesses to master their supply chains, especially cross-channel inventory management. Without effective cross-channel inventory management, assurance of supply is disrupted, which may lead to one of several scenarios:

- Orders go unfulfilled leading to lost sales, customer dissatisfaction, and potential negative coverage across social media impacting brand reputation
- Suppliers reduce the amount of product allocated or manufactured due to lack of confidence in sales plans and fear of financial losses (e.g., inventory obsolescence)
- Channels within the organization may operate in silos and hold inventory for fear of not meeting customer demand within their channel
- Increased risk of losing market share to companies that can efficiently meet demand.

As more channels are added, accurate sales forecasting and inventory management become more challenging, particularly if a company's products are seasonal or if there is suboptimal internal coordination with marketing and innovation on limited time offers and promotions. Demand planning for example, becomes especially complex due to the need to capture and analyze dynamic demand signals across multiple channels, suppliers, and nodes. Flexible fulfillment is an improved method of maximizing inventory utilization within the network to meet customer demand and complete sales. Flexible fulfillment strategies can add cost to the business; therefore it's critical to incorporate learnings from flexible fulfillment back into the demand forecasts to improve inventory planning.

If an omni-channel retailer gets cross-channel inventory management wrong, supply chain and financial performance will be negatively impacted.

A key requirement for effective cross-channel inventory management and assurance of supply is confirming that the required physical supply chain assets are available to meet customer demand. Prior to omni-channel, many companies placed their focus on building large distribution centers (DC) whereby suppliers shipped directly to each

DC within a customer's network. In a single-channel DC to store environment, investing in large DCs was a viable strategy as retailers could consistently replenish store shelves with scheduled deliveries. However, as channels increase and customers are seeking immediate gratification from their purchases, such as crowd-sourced delivery services that offer the promise of nearly limitless flexible scheduling and delivering, more time-sensitive options are required above and beyond traditional DC to store (or consumer) logistics. Crowd-sourced delivery services introduce new risks to the business, and can elevate both reputational risk and financial liability risk in the event of a mishap. This is an emerging business model, not dissimilar to subcontracting, that is only now beginning to raise awareness around potential risks that on-demand flexibility provides. Ordering on-line and fulfilling in store is also becoming a commonplace business practice to accommodate the customer need for convenience. However, this requires accurate real-time cross-channel inventory data and places a burden on store employees to fulfill online orders slated for customer pick-up. Customer satisfaction in the store may also suffer at the expense of online customers unless dedicated store employees are designated to fulfill online orders.

Consumer businesses and suppliers may lack the internal resources required to assess strategic risks, conduct supply chain risk modeling, and optimize their network to improve assurance of supply as outlined in this white paper. *Establishing a supply chain omni-channel strategy that doesn't address the strategic risks impacting assurance of supply may put executives in a situation not dissimilar to Sisyphus', struggling to push a boulder up a hill.* Leveraging external expertise to assist organizations with taking proactive, strategic measures to manage supply chain disruptions and improve assurance of supply can bring significant value. Sisyphus was a mythological figure, but the challenges associated with omni-channel strategies and the opportunities that can be realized from building resilient supply chains to assure supply are real.



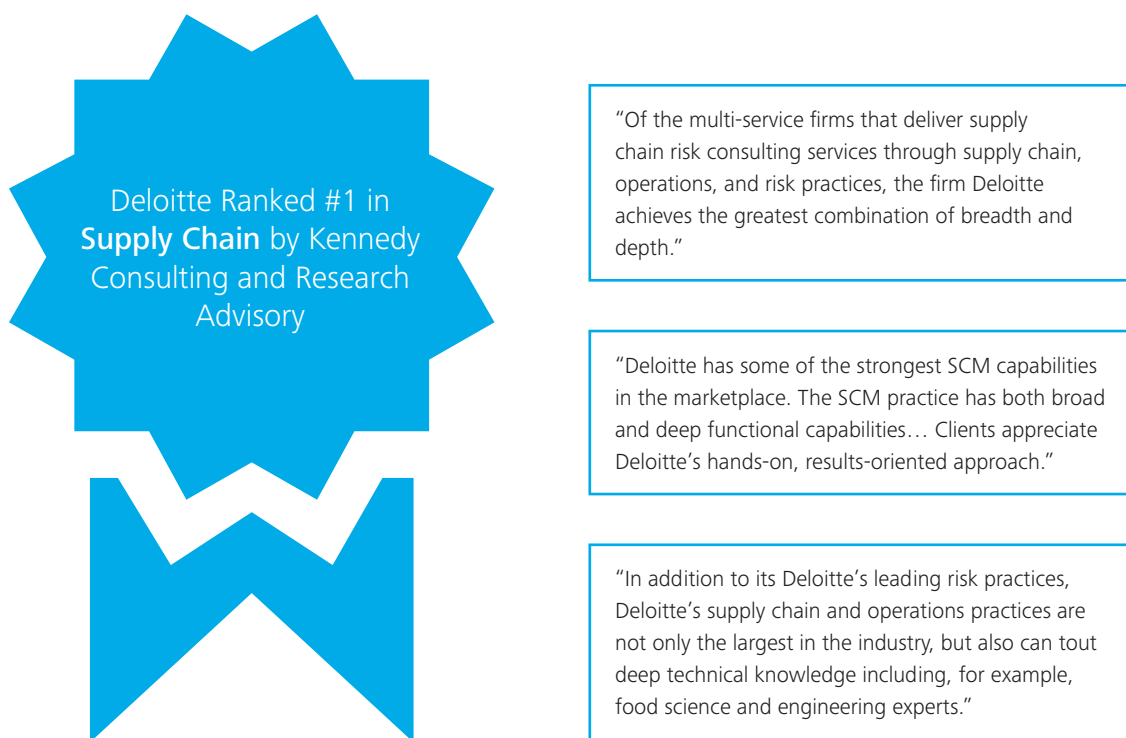
## Conclusion

Five short years ago, few consumer businesses had heard of the term 'omni-channel' and fewer companies ever believed they would be confronting the type of consumer revolution and empowerment that is now taking place. The risks associated with ignoring the exploding reach and requirements of omni-channel strategies cannot be ignored. Strategic alignment with supply chain objectives, designing supply chain risk management programs that enhance resiliency, and utilizing advanced analytics to provide greater insights and control are key elements for successfully achieving assurance of supply in an omni-channel world.

## About Deloitte's Supply Chain Risk Advisory Practice

We help clients transform how they manage supply chain risks by designing supply chain risk management programs, enhancing global supply chain compliance capability, and delivering solutions to improve assurance of supply. Deloitte also provides consulting services related to supply chain strategy & operations, sourcing & procurement, logistics & distribution, and sustainability in over 120 countries around the globe through the Deloitte Touche Tohmatsu Limited network of member firms.

Figure 4: Deloitte's Supply Chain Ranking by Kennedy Consulting and Research







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