

The Sentient Retail Supply Chain

To deliver on 21st century consumer expectations, retailers must transform to a new supply chain operating model that is characterized by the key qualities of flexibility, intelligence, awareness and precognition. Together these qualities enable a supply chain that is capable of making optimized decisions for the business, and dynamic enough to support a multi-faceted retail operation in an increasingly globalized marketplace.

Retail has experienced seismic shifts, both from a macro and industry structure perspective, and even more changes are ahead. 21st century customers' expectations and supply-side dynamics will have profound impact on the retail supply chain. In this new operating environment, retailers that emerge as leaders will have transformed their supply chains beyond the reactive, linear models of the current era—to a model that is *flexible, intelligent, aware of real-time changes* and *better able to predict product demand*. Taken together, these four qualities define the operating principles of the **Sentient Supply Chain**: a supply chain that is capable of making optimized decisions for the business, and dynamic enough to support a multi-faceted retail operation in an increasingly globalized marketplace.

The 21st Century Retail Operating Environment

The globalization of retail has produced some natural roadblocks for retailers who are not prepared to plan and react deftly. Specifically, three macro trends are deeply impacting retailers from an operational and market perspective: **Worldwide demographic shifts** are opening doors for retailers who react quickly, and are posing major risks for those that stand by and do nothing; **Falling trade barriers** are creating opportunities for retailers to source product in parts of the world where production is significantly less expensive; **Geopolitical uncertainties** and a shifting world order in the post-cold war era have created unstable conditions in consumer and commodities markets.

Structural trends also are playing a primary role in molding the new supply chain: the **value retail store formats** are dominating the playing field by creating super-efficient supply chains while closing the perceived quality gap in customers' minds; **channel blurring** and SKU proliferation are making it harder than ever for retailers to differentiate themselves from competitors, and have overwhelmed the consumer.

Additionally, **core market oversaturation** of stores means many retailers will have exhausted a traditional growth strategy. Also, with the ubiquity of mobile communication technologies, the Internet as part of consumers' daily lives, and technology-enabled social networking - **trends come and go faster**. Retailers are forced to very quickly react to these trends to get out in front of their competitors before they steal customers, and they must also know when to get out of the trends quickly in order to avoid being stocked with inventory customers no longer want.

Defining the Principles of the Sentient Supply Chain

Macro trends and industry structure changes, combined with a new set of consumer and market criteria, define the needs of the Sentient Supply Chain. Mobile, well-informed, consumers expect competitively priced, innovative and fresh assortments that are customized to increasingly specific tastes.

Retailers will be faced with increasing costs of transporting goods, and the price of raw material will rise as developing markets reach critical mass and place additional burdens on natural resources. Additionally, retailers will need to scour the world for inexpensive sources of supply and unique products – creating a constantly changing supply base.

Increasingly short product lifecycles, SKU proliferation and customization will make the task of matching supply with demand from introduction to obsolescence more complex, and more critical than ever.

While adequate for the previous era, current retail supply chains were not designed to answer to this new set of criteria. The new retail supply chain must incorporate the following operating principles:

- **Flexibility** – Retailers must be quick to market with new products, ready to expand into different geographies, have the ability to support the multiple unique processes associated with a diversified portfolio of brands, and be able to accommodate multiple fulfillment strategies across multiple channels.
- **Intelligence** – The 21st century retail supply chain will be able to resolve inventory imbalances with respect to customer service and inventory productivity goals. To make this proposition feasible, the retail supply chain must be able to act on its own and call for human intervention on an exception basis.
- **Awareness** – To enable such intelligence, the retail supply chain will require a broad awareness of operations and business conditions both inside and outside the four walls of the enterprise. Accurate and real-time information about inventory, demand, suppliers, channels, and capacity must flow freely. Most importantly, the retail supply chain must be aware of its constraints, and be informed by other essential processes in the retail enterprise, such as the planning process.
- **Precognition** – In a business environment where supply and demand dynamics will play out at faster rates, it will be essential for retailers to have greater ability to anticipate the resources required to efficiently service shifting demand. This concept extends to also predicting demand utilizing the right forecasting method based on product type versus using the same method across the board.

Did You Know?

- **17 of the top 20** global retailers depend on Oracle Retail Applications & Technology
- **9 of the top 10** North American retailers use Oracle Applications to run their business
- **8 of the top 10** food and drug retailers rely on Oracle Applications

Building the Sentient Retail Supply Chain

Strong leadership and a commitment to transformation will be the key for retailers working to achieve the Sentient Supply Chain. This transformative journey must be supported by retail leaders who possess courage, strength and the fortitude to trail-blaze.

To support these operating principles retailers will require a supply chain platform capable of:

- **Integrating disjointed and fragmented workflows** and data sources, and converging siloed business processes
- **Embedding intelligence** throughout united workflows in the form of advanced constraint-based optimization and forecasting algorithms
- **Accommodating multiple languages and user roles** and becoming process-centric and flexible to accommodate the unique and distinct business processes that promote competitive advantage
- **Delivering measurable value** at every step of the transformation process

Next Steps to Achieving the Sentient Supply Chain

Each retailer's journey towards supply chain sentience will vary based on lifecycle phase, segment, core value proposition, competitive landscape, and ability to allocate financial and human capital to the cause. Regardless of these distinctions, to catalyze supply chain transformation, retailers should begin with these initial steps:

- **Audit the architecture and performance of critical supply chain processes.** Examine how the supply chain processes utilize input from other functional areas (for example, the merchandise planning process), and identify weak interface points or situations where faster, earlier information sharing would benefit supply chain planning and performance. Work to move away from a siloed approach to merchandise, promotion, and supply chain planning, and operate these processes in a more cohesive manner. Also, identify those supply chain processes that require decisions and analyses that have grown in scale and complexity to the point that automated systems should replace human decision-making.
- **Identify opportunities to apply advanced optimization technologies.** Look for implementations that will harvest fast, bottom-line paybacks at the early phases of the project. These "quick win" savings can be used to fund subsequent steps of the initiative with longer payback horizons, and the early successes help build organizational support for the transformation as a whole. Optimization technologies have proven to be very effective in providing rapid, meaningful payback – particularly when applied to replenishment strategies and inventory planning. For example, one general merchandise retailer achieved a two-point improvement in in-stock positions, and reduced inventory by \$25 million by applying advanced inventory planning optimization technology.
- **Develop a plan for building an integrated supply chain technology architecture, and proceed in a modular fashion:** A highly cohesive set of technologies is required to achieve a Sentient Supply Chain, built out in a targeted, modular fashion. This approach ensures a gradual transition that allows for staging change management, leverage of pre-existing technology investments, and prioritization of those processes most in need of improvement.

The Sentient Retail Supply Chain

The world is changing quickly and retailers must embrace the operating principles and capabilities required to compete in the contemporary operating environment. By subscribing to the Sentient Supply Chain principles, and developing the supporting capabilities, retailers will have the means to confront the complexities and demands of serving 21st century consumers.

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