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Retail

Charting a new course

The retail
merchandising-supply
network



IBM Institute for Business Value

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Charting a new course

The retail merchandising-supply network

Executive summary

A new model for merchandising and supply chain management is emerging; it is about to transform the way in which retailers do business and deliver the customer experience. Many retailers see the supply chain simply as a means of moving goods from one place to another. In fact, a fully integrated merchandising-supply network can help companies achieve greater, sustainable growth by becoming more innovative and differentiating themselves in the marketplace.

New market forces and internal constraints explain why most retailers still struggle to manage their merchandising and supply chain functions very effectively. But, if they are to satisfy their target customers, they must make fundamental changes. They must build networks in which the various merchandising and supply chain functions are fully integrated and supported by systematic business intelligence, including a much more detailed understanding of the customers they serve. They must also tailor their operations to suit different products, customer segments, markets and timeframes. It is the complete integration and optimization of the merchandising-supply network that makes it one of the key levers in delivering a customer-centric shopping experience.

So what, precisely, does this transformation entail? We believe that there are four key steps:

- *Craft a fully integrated merchandising and supply organization.* Retailers will have to create common planning mechanisms, processes, systems, metrics and information flows to connect employees sitting in separate merchandising and supply chain functions. Only then can their staff work as teams, share expertise and skills, and synchronize their activities. They will ultimately have to include external suppliers and partners to leverage the full potential of this integrated organization.
- *Use analytics and systematic data to improve decision making.* Retailers will have to nurture a culture that embraces the widespread use of data, implement the technologies and tools required to collect and analyze that data efficiently, and develop methodologies and practices to encourage data-based decision making.
- *Align the product/service offering with actual customer demand.* Retailers will have to know what different customer segments value, and how those values shape what they want when they shop. They will have to give employees in their merchandising-supply networks dynamic access to this information, so that they can make decisions which take the needs and preferences of specific customer segments into account. In addition, retailers will have to measure their performance by how well they are satisfying their customers.
- *Tailor operations to create the most effective and efficient paths to market.* Retailers will have to reconfigure their merchandising and supply chain processes and infrastructure to meet the needs of different products, customer segments and markets. They will also have to tailor their service levels, sourcing strategies, transportation methods, distribution centers, stock levels and replenishment cycles accordingly – as well as their relationships with their suppliers and partners and their approach to IT investments.

This new operating model will enable retailers to cater to different customer segments, make their product/service offerings more novel and appealing, display those offerings more effectively, and help ensure that they are available in the right amounts and the right channels at the right times. As they improve their performance and meet the needs of customers more effectively, they are positioned to generate greater value for all their stakeholders.

Introduction: The opportunity

A new model for merchandising and supply chain management is emerging; it will transform the way in which retailers do business and deliver the customer experience. Many retailers still regard the supply chain as the back end of their business, but the modern supply chain has a much bigger contribution to make. It can help companies differentiate themselves from the competition and achieve greater, sustainable growth.

In 2004, over 80 percent of the chief executives participating in a survey conducted by IBM said that growth was the main item on their corporate agendas, and that they believed innovation through products and services was the key to that growth.¹ Today, most chief executives say that multiple market forces have precipitated the need for fundamental changes, and they have responded by widening their definition of innovation. They now place as much emphasis on innovations in their business models and operations as they do on the development of new products and services.²

This change in perspective is particularly relevant in the retail sector, where pronounced shifts in demographics, attitudes and consumer values have polarized the marketplace.³ Retailers competing in a “world of extremes” will have to become much more innovative. They will have to restructure their business models to concentrate on their key differentiating capabilities; improve the effectiveness and efficiency of their core operations; and focus on their target customers to deliver a tailored offering.

The merchandising and supply chain functions are, together, one of the most important levers they can use. Creating a fully integrated merchandising-supply network, and using customer insights to drive decision making, enables a retailer to deliver a differentiated experience that keeps customers shopping longer and more often.

The current state of the retail industry

One of the core goals of retailers is to run their merchandising and supply chain functions as cost-effectively and efficiently as possible. This is understandable, given the expectations of shareholders and the competitive pressures they face. Yet most retailers are currently failing to realize the full potential of those functions; their financial performance is lagging, and they are providing a shopping experience that leaves much to be desired.

The IBM Institute for Business Value, together with FinListics Solutions, recently conducted financial analysis which shows just how far such companies still have to go. We evaluated the performance of 795 large retailers based in North America, Europe and Asia Pacific, using three key measures which excellent merchandising and supply chain management has the potential to improve: revenue growth, operating income margin and days inventory.⁴ The companies in our sample covered six retail subsectors and collectively generated revenues of more than US\$2.5 trillion.

Our research shows that there is a big gap between the industry leaders and those that are merely average. The best companies saw their revenues grow at more than double the median rate, enjoyed operating income margins that were one-third larger, and carried almost one-third less stock.⁵

These gaps have huge financial implications. If every company in our sample performed as well as those in the first quartile in their respective regions and subsectors, they would collectively generate an additional US\$6.8 billion in revenue benefits and US\$56.5 billion in operating income. They would also improve their cash flows by US\$76.8 billion as a result of reducing their inventories (see Figure 1).

Figure 1. The total value of operating performance gaps, 2005.

		Revenue growth ^A	Operating income margin ^B	Days in inventory ^C
North America	First quartile	16.6%	7.2%	52
	Overall median	8.1%	5.0%	77
Value of gap →		US\$4.3B	US\$25.4B	US\$39B
Europe	First quartile	9.2%	5.1%	33
	Overall median	3.1%	3.4%	51
Value of gap →		US\$827MM	US\$13.3B	US\$15.9B
Asia Pacific	First quartile	17.3%	5.5%	29
	Overall median	6.8%	2.9%	43
Value of gap →		US\$1.6B	US\$17.8B	US\$21.9B
Overall impact →		Revenue benefit loss US\$6.8B	Operating margin loss US\$56.5B	Excess inventory US\$76.8B

Note: A size effect (smaller companies exhibiting higher revenue growth resulting from a lower base; larger companies displaying higher profitability from economies of scale) was examined separately for each of the financial metrics using 1) regression analysis, 2) intraquartile analysis using revenue size ranking, and 3) revenue size x financial metric scatter diagrams. The results did not reveal a consistent relationship between financial performance and revenue size.

(A) The revenue growth gap measures the value of the gap if a company's growth rate is the same as the first quartile. It assumes that net working capital (NWC) will change at the same rate and that fixed assets will remain the same. A cost of capital is applied to the NWC and subtracted from the revenue gain. The net figure is displayed.

(B) The operating income margin gap measures the value if a company's operating income margin is the same as the first quartile, holding other factors the same.

(C) The days in inventory gap measures the value of the gap if a company's days in inventory is the same as the benchmark, holding other factors the same.

Source: FinListics Solutions; IBM Institute for Business Value.

However, underperforming merchandising and supply chain functions can not only reduce a retailer's effectiveness, they also directly affect the shopping experience – and, ultimately, the satisfaction and loyalty of customers. Research shows that out-of-stock rates in the grocery sector typically range from 7 to 10 percent worldwide; and that 70-75 percent of out-of-stocks stem from poor store and shelf-restocking practices. Predictably, consumers are unhappy when they cannot find what they want. The same study estimates that 31 percent of customers responded by going to other outlets, while 9 percent did not buy anything at all.⁶

The American Customer Satisfaction Index likewise shows that customer satisfaction with U.S. retailers (excluding online retailers) fell from 75 to 72, on a 100 point scale, between 2001 and 2005. The study suggests that many retailers have emphasized productivity at the expense of customer service.⁷

An ongoing struggle

Most retailers recognize the importance of improving their performance and satisfying their customers. Certainly, no executive is happy leaving “money on the table” through poor returns or losing unhappy customers to other retailers. Unfortunately, however, several issues – both external and internal – have contributed to the industry’s showing to date.

An increasingly difficult marketplace

We have already touched on the fact that consumers have become much more selective, and how the marketplace has fragmented in response. But this is only one of the many market challenges with which retailers must now contend.

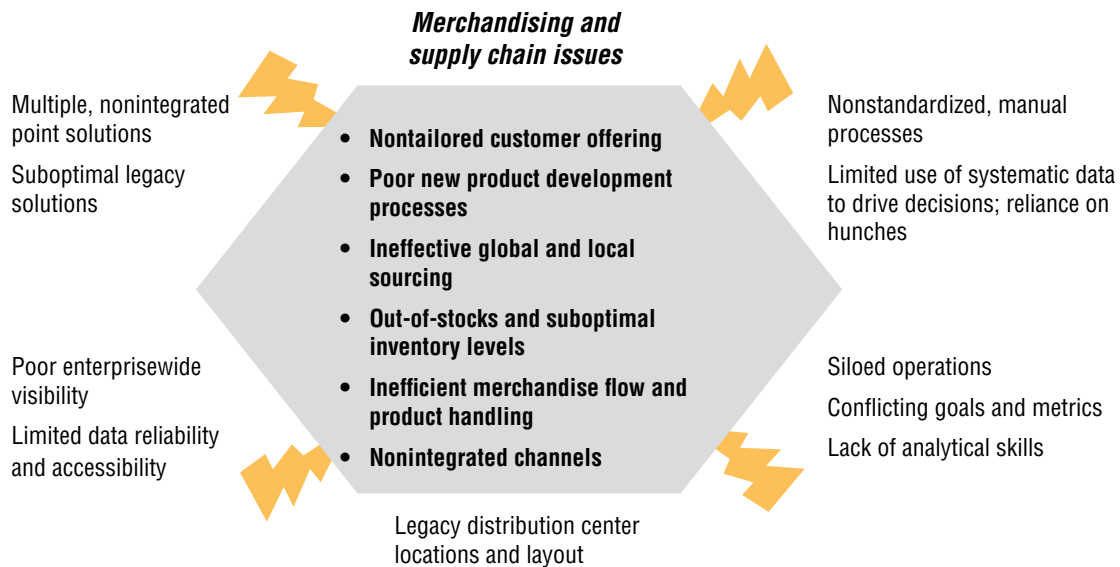
Multiple channels, increasingly global supply chains and bigger networks of business partners have effectively rendered the traditional concept of the supply chain, with its emphasis on linear processes, obsolete. There are also greater regulatory pressures and new forms of competition which may cause retailers to re-examine their core value propositions.

All these market forces have created competing priorities. Retailers must simultaneously become more differentiated, more integrated, more efficient and more rigorous. Yet they must still satisfy their stakeholders and generate healthy returns on investment. Moreover, shareholders can be very unforgiving when something goes wrong. One study shows that when companies acknowledge a glitch in their supply chains, their share prices fall by an average of nearly 9 percent on the day of the announcement, and by another 9 percent in the following 90 days.⁸

Internal constraints

In addition to facing such external challenges, retailers continue to be hampered by some longstanding internal constraints (see Figure 2). They typically operate with manual processes, legacy systems and facilities, and unreliable data. They also treat their merchandising and supply chain operations as unconnected functions, with different – sometimes conflicting – goals and measures.

Figure 2. Internal constraints impair retailers’ ability to be responsive.



Source: IBM Institute for Business Value.

These constraints affect retailers' ability to address their core merchandising and supply chain challenges effectively – and that impairs their operating performance and the quality of the customer experience they provide. We have listed some of the most important challenges below.

- *An undifferentiated customer offering.* Reliance on demographic data rather than multidimensional customer insights, together with limited systems to capture and share data across the value chain, frequently prevents retailers from tailoring their offerings. In addition, assortment planning and space allocation that is static and often in conflict with store operations creates a misalignment among product ranges, packaging, displays and customer demand. This results in an unexciting shopping experience and constant “sales” to move unwanted goods.
- *Weak new product development processes.* Poor internal and external collaboration and insufficient use of metrics and milestones elongates lead times. Similarly, lack of integration among the product development team, merchandising functions and store operations, together with lack of realtime demand data, makes it difficult to respond rapidly to changes in demand. The result is a product range that is infrequently updated and often lacks novelty.
- *Ineffective global and local sourcing.* Traditional sourcing strategies, which focus on cost rather than balancing costs with product margins, often produce a mismatch between demand and supply, increasing the need for markdowns. Limited performance measurement systems also prevent retailers from selecting and managing their vendors properly, while poor systems integration among retailers, their suppliers and carriers restricts their ability to track orders and manage exceptions. Goods of the wrong quality then end up on the shelf at the wrong times and prices.
- *Out-of-stocks and suboptimal inventory levels.* Excessive reliance on “rule-of-thumb” forecasting and historical data, multiple inventory databases and limited planning integration make it hard to manage inventory levels, promotions and replenishment effectively. Poor store replenishment procedures, manual ordering systems and conflicting goals and metrics also contribute to out-of-stocks and order errors. Collectively, these problems mean that the shelves are filled with goods customers do not want, while the products they require are out of stock.
- *Inefficient merchandise flow and product handling.* Weak flow-through strategies, ill-fitting delivery models and poorly located distribution centers all reduce the efficiency of retailers' logistics networks. Manual warehouse processes, inadequate packaging and ineffective in-store logistics processes also increase their distribution costs and replenishment lead times. As a result, it is difficult for customers to find the products they want, because those products are poorly displayed, or to determine when out-of-stock products will be available again, because the retailer does not know.
- *Nonintegrated channels.* Different applications, systems and customer data repositories across divisions and channels prevent retailers from creating a single view of customer orders and tracking inventory on a realtime basis. Multiple fulfillment/distribution systems increase the complexity and costs associated with managing a multichannel supply chain. These difficulties produce inconsistent experiences as customers shop across channels, and prevent them from enjoying conveniences like access to realtime inventory availability on the Web.

The new merchandising-supply network

If retailers are to fulfill the needs and preferences of their target customers, they will have to rethink how they operate. They will have to integrate their merchandising and supply chain functions, core processes and systems across channels, suppliers and partners to create fully interconnected networks that provide them with an end-to-end view of the products and services in their pipelines.

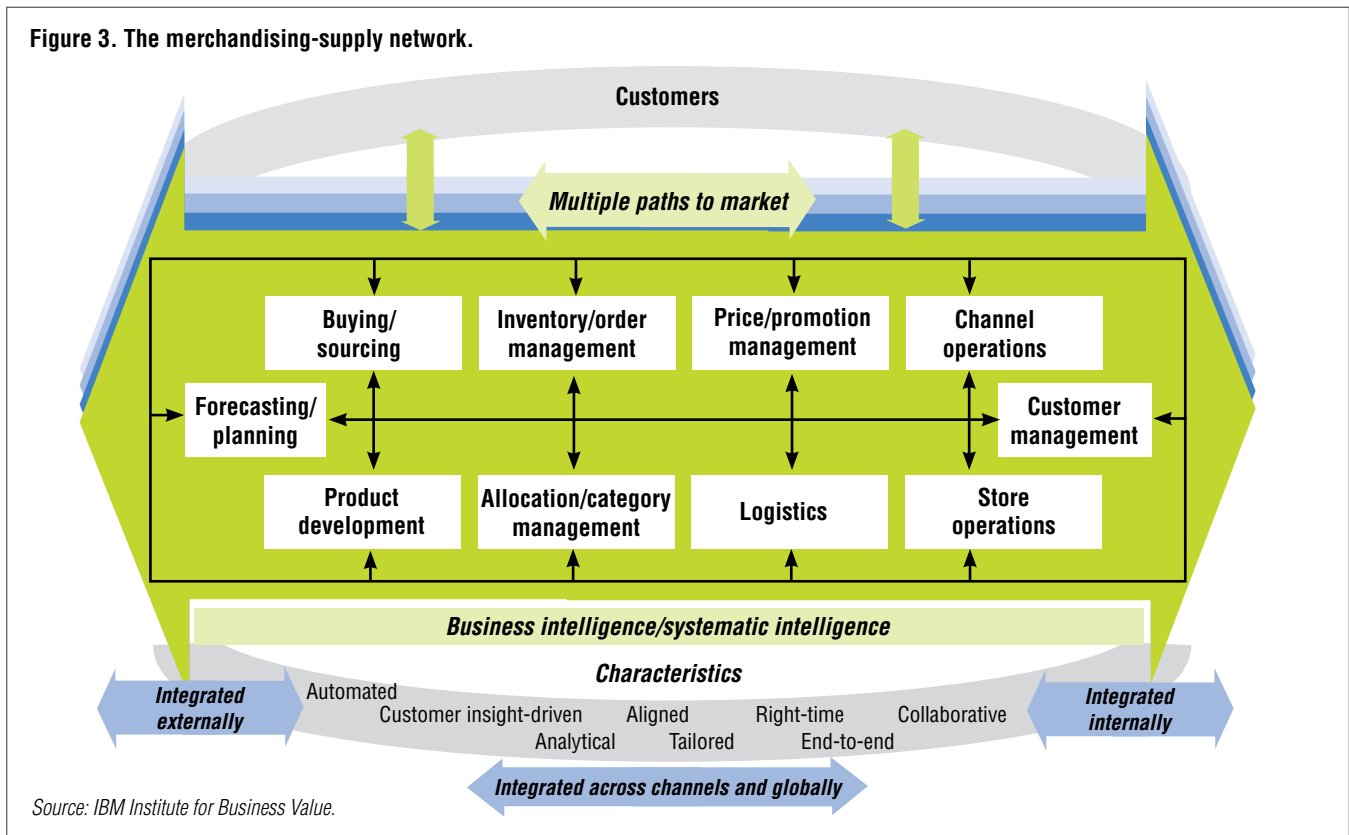
They will then have to forge much closer connections with their customers by using demand data and multi-dimensional insights to drive all decision making and synchronize every activity. That means they need to support their merchandising-supply networks with systematic business intelligence – data that is dynamic, easily accessible and up-to-date, and that has been rigorously analyzed with the help of optimization tools. They also need to automate their core processes to reduce errors and redundancies, and improve their efficiency. Lastly, they need to tailor their processes and infrastructure to suit

different products, customers, markets and timeframes. Figure 3 shows how all these elements come together.

With merchandising-supply networks that are integrated internally and externally, retailers can successfully conceive, design, source, price, package, promote, deliver and replenish products for specific customer segments. And by creating unique offerings for their target customers, they can differentiate themselves more effectively in the marketplace

The merchandising-supply network: Four strategic imperatives

In the world of extremes that is now emerging, it is essential to carve out a distinctive market presence. Yet many retailers are saddled with merchandising and supply chain operations that limit their ability to respond to new challenges with sufficient speed and agility – let alone distinguish them from their rivals. We believe that senior executives at such companies must focus on



four strategic imperatives, which serve as the means to address these challenges and provide a context for action. They must:

- Craft a fully integrated merchandising and supply organization
- Use analytics and systematic data to improve their decision making
- Align their product/service offerings with actual customer demand
- Tailor their operations to create the most effective and efficient paths to market.

We discuss each of these imperatives in more detail below.

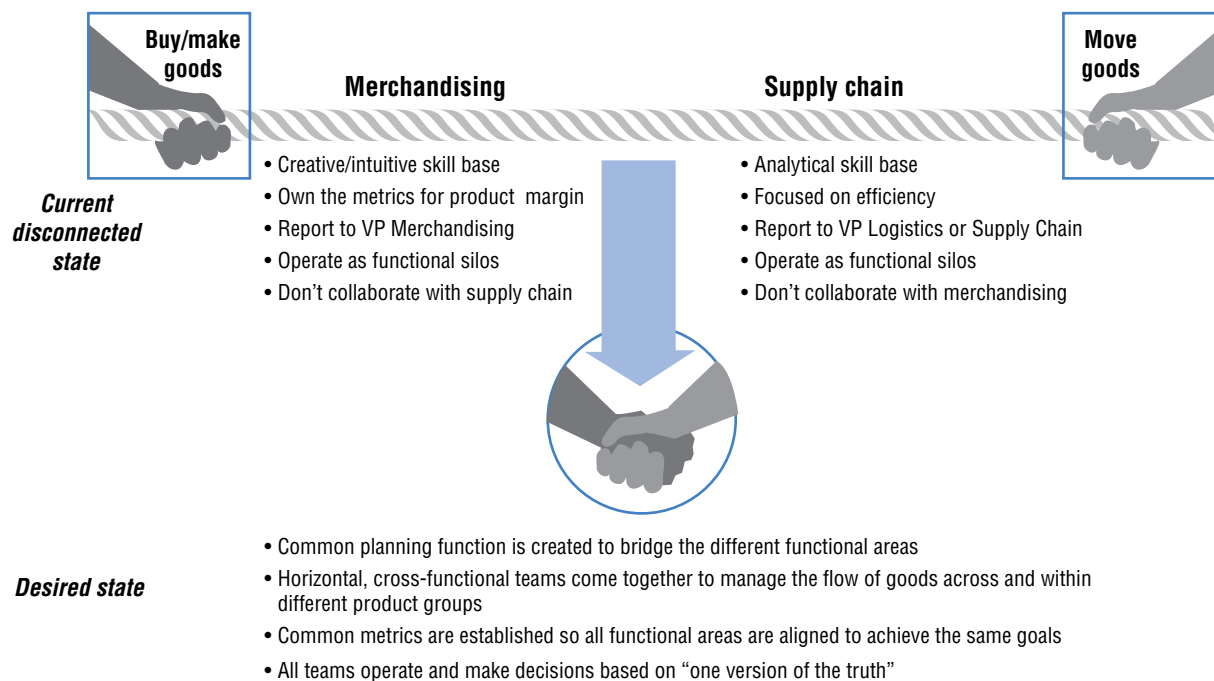
Craft a fully integrated merchandising and supply organization

In a marketplace that demands operational excellence, retailers can no longer afford to retain merchandising and supply chain silos. Lack of integrated processes and planning can, for example, result in backrooms overstocked with unwanted items and shelves empty of the products customers really want. That, in turn, produces poor margins and unhappy customers.

In reality, the merchandising and supply chain functions are highly interdependent. They require the constant exchange of data and decisions across various processes, and, by managing them as an integrated organization, retailers can more effectively deliver a customer-centric experience. This, of course, is not easy because employees at either end of the chain typically have different skills and objectives, use different data sources and report to different people. Those who are responsible the production or buying of goods tend to be more creative, for example, while those who are responsible for moving the goods tend to be more analytical. So they pull in different directions.

The key to a fully integrated merchandising and supply organization is the creation of common processes, systems and information flows, together with a common planning mechanism, to connect the people sitting in the different parts of the business. With shared processes and systems, data that is accurate, consistent and easily available, and seamless information flows, formerly isolated functions can work as one. These groups can operate as virtual or actual cross-functional teams, share expertise and skills, and synchronize their decision

Figure 4. Transitioning from tug-of-war to cross-functional teamwork.



Source: IBM Institute for Business Value.

making to find the best paths to market for the goods and services a retailer is selling (see Figure 4).

This integrated organization should cover every channel and geographic location in which the retailer operates. It should ultimately incorporate every key supplier, carrier and partner. It should use common metrics to help ensure that the goals of different individuals or groups do not override those of the company. And it should include metrics which capture the responses of customers to make certain that their needs are being met.

Use analytics and systematic data to improve decision making

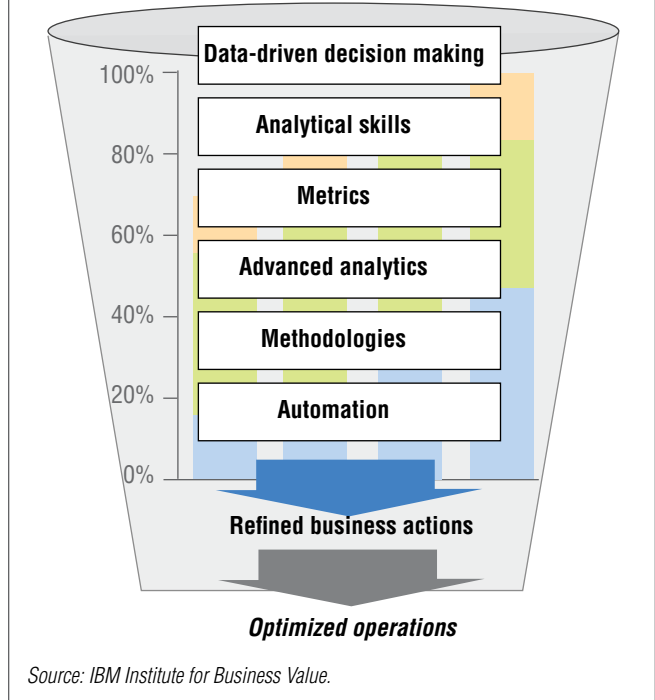
With limited or historical information and manual processes, retailers are forced to rely on know-how and make educated guesses rather than decisions based on facts. This can often cause forecasting errors and diminish the customer experience, with correspondingly poor financial results.

A more analytical approach helps to eliminate such mistakes and can provide retailers with a competitive advantage, because they can make more granular decisions. But making the switch to systematic analysis requires a major cultural shift, since it entails new perspectives, skills, processes and technologies. Senior management must embrace the widespread use of data, and spread word that it is doing so. It must also support the development of methodologies and practices to encourage data-driven decision making. These should include measures for evaluating how systematically individual employees use data to make decisions – both internally, across the network, and externally, as in the assessment of suppliers or partners (see Figure 5).

“We use database marketing and decision-science-based analytical tools to widen the gap between us and casino operators who base their customer incentives more on intuition than evidence.”

– Gary Loveman, Chief Executive, Harrah’s⁹

Figure 5. Refining business actions through analytics and systematic data.



Some companies may need to supplement their analytical capabilities, either by training existing staff or recruiting people with the right skills. When online retailer Amazon wanted to improve its global supply chain, for example, it hired an academic from the University of Texas, Austin, who is one of the world’s leading experts in optimization. He is now building a supply chain that optimizes Amazon’s management of product flows, deliveries, suppliers and customers.¹⁰

The technologies and procedures required to produce reliable, relevant and accessible data must also, of course, be implemented. Optimization tools, which use modeling and quantitative analysis to generate deeper insights into causal patterns and relationships and predict the impact of different decisions, can likewise enhance performance. Several retailers are already using such tools for demand planning and forecasting, inventory modeling and network analysis. U.S. clothing retailer Burlington Coat Factory is

one example; it uses ProfitLogic's Markdown Optimization solution to measure customer demand at its 360-plus stores and manage its inventory more effectively.¹¹

Align the product/service offering with actual customer demand

The gaps between what customers need and what the employees in merchandising and supply chain functions execute can result in lackluster merchandise assortments and unexciting shopping experiences. If retailers are to develop offerings that reflect actual customer demand, they must start with an understanding of their customers that goes beyond traditional demographics.

It is essential to know what different customers value – and how those values shape what they look for when they shop.

- What lifestyles, attitudes and beliefs do they have?
- What new products and brands do they prefer?
- What levels of quality and convenience do they want?
- What service standards do they expect?
- What prices are they willing to pay?

It is equally important to understand how these values vary by shopping occasion.

The next step is to drive these insights through the merchandising and supply network. Even when a retailer has the data, it is often trapped within the merchandising or marketing departments, which have traditionally conducted most of the customer analysis, or else it is scattered throughout the organization and difficult to access. Decisions that ultimately affect the shopping experience are then made without a complete understanding of customers.

It is therefore essential to give staff dynamic access to the insights that are relevant to their functional areas, so that they can make decisions which take the requirements of specific customer segments into account. Linking demand data to key processes such as distribution center layout management, space planning, assortment planning, promotion handling and packaging design, and then back into new product development, has numerous

advantages. For instance, it enables a retailer to narrow its product portfolio to reflect real demand. It also helps it to identify the most conveniently located distribution centers and most efficient flows for products that are tailored to customers at a particular store or cluster of stores, and to ensure that those products arrive in the right packages and sizes for the shelves and merchandising displays at each store.

In short, it produces a customer-driven network that enables retailers to keep their shelves filled with the items their target customers really want. This approach is epitomized by fast-fashion retailer Zara, now the world's third-largest clothing vendor with annual revenues of 2.8 billion euros (see sidebar, *Customer demand drives Zara's supply chain*).¹²

Customer demand drives Zara's supply chain

Zara's smart use of customer data enables it to translate today's couture fashions into tomorrow's must-have outfits in turnaround times of four weeks. Sales assistants at every one of the retailer's 864 stores use wireless organizers to transmit selling trends, orders and customer comments to headquarters. Realtime demand data is forwarded to Zara's team of 200-plus designers, many of whom are colocated with its network of manufacturers. The designs they produce are scanned into computers, and the fabric is colored, cut and finished using highly automated processes. The finished goods are then shipped to the stores via road or air, as appropriate. Thanks to this customer-driven approach, Zara can turn out 20 collections a year, when the industry average is just four. It has also won a huge following in the notoriously fickle world of high fashion.¹³

But building a merchandising-supply network that is truly aligned with customer demand also requires different measures of performance. Most retailers rely on internal measures, such as retail store inventory cover in days or lead times in hours, rather than external measures that reflect the impact on their customers. One exception is Argos, the largest catalogue retailer in the U.K. Argos uses a complex set of algorithms, based on the buying behavior patterns of customers across its multiple touch

points, to filter the demand data it collects and identify real demand. It compares that figure with actual sales on a daily basis to produce a “serviceability” index that measures how well it is satisfying its customers.¹⁴

This customer-driven approach to the management of the merchandising-supply network depends on the consolidation and sharing of data across the entire organization. Data from both internal and external sources must be consolidated in an integrated data engine to create a single view of the customer and identify the requirements of different customer segments (see Figure 6).

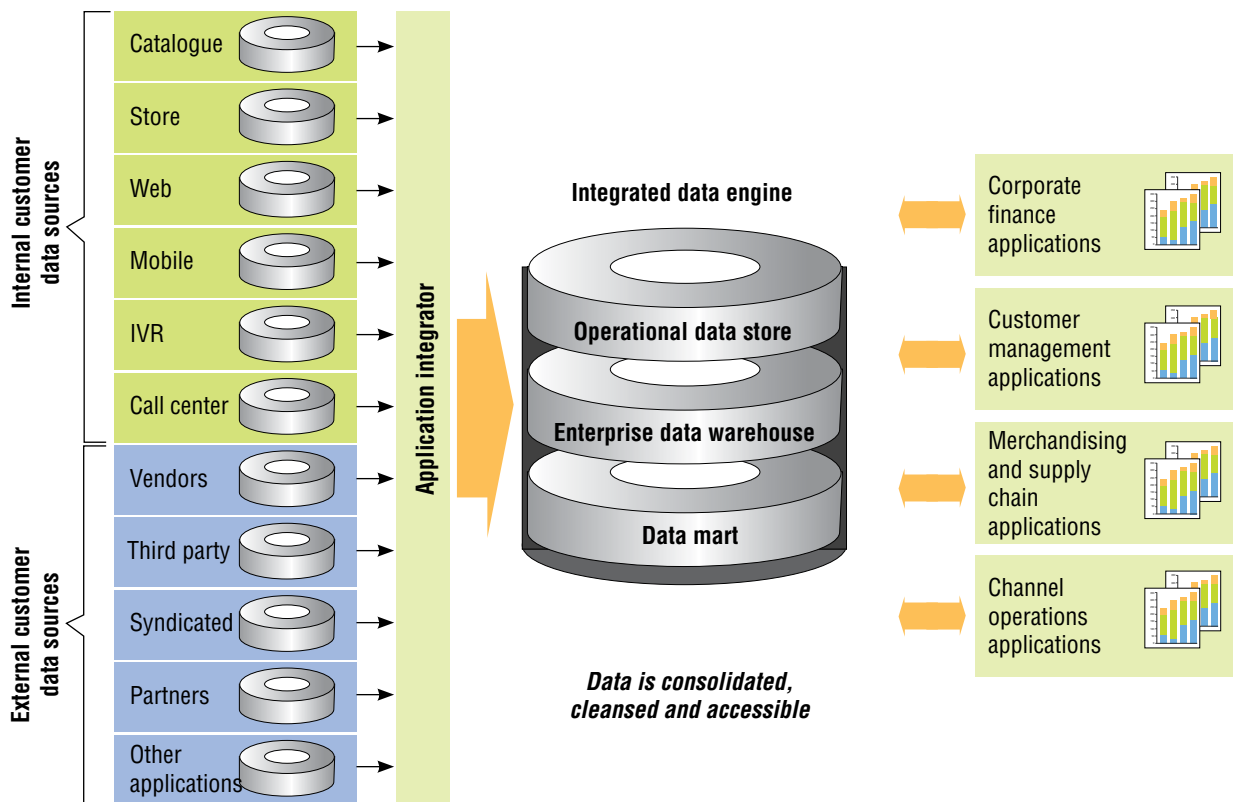
Moreover, it must be supplemented by a feedback mechanism to allow retailers to change the products and services they offer in line with the changing needs of their customers. Performance data is only part of the story;

what customers say to sales staff and customer service representatives is equally important. All this information should be fed back to the customer insights database, and used both to refine the offering and to deliver a more effective shopping experience across all channels.

Tailor operations to create the most effective and efficient paths to market

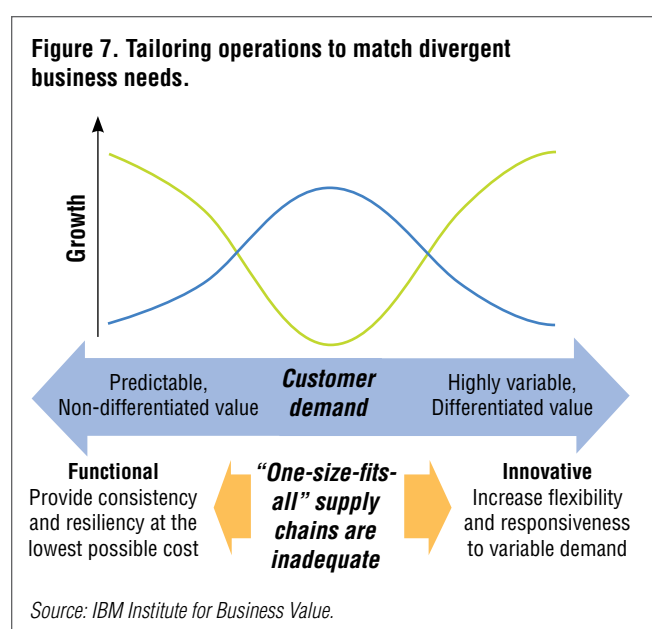
Lastly, if they are to survive in an increasingly polarized marketplace, retailers must redesign their physical networks and operations to meet the specific needs and preferences of different customer segments. As they expand across categories and products, they must also manage greater complexity in moving goods and services from idea conception to the shelf. A one-size-fits-all approach to the merchandising-supply network is no longer effective.

Figure 6. A consolidated view of customer data.



Source: IBM Institute for Business Value.

Broadly speaking, the features required of a merchandising-supply network fall into two categories: the “functional” and “innovative” (see Figure 7). The functional network caters to value-driven consumers buying low-margin, mass-market products. Since demand is predictable and lifecycles are long, it aims to provide consistency and resilience at the lowest possible cost. The innovative network caters to high-margin, premium items. Here, product lifecycles are short, so the goal is to maximize flexibility and responsiveness to variations in demand. In practice, however, these are the two extremes in a wide spectrum of different business needs, and few retailers can afford to focus solely on one end or the other.



Retailers must, instead, identify the most efficient path to market for different products, customer segments and markets. And they must include considerations that go beyond the characteristics of the products themselves, since a product that is a commodity in one part of the world may be a luxury item in another; it may be subject to seasonal variations in demand; and its desirability should, theoretically at least, increase during a promotion.

Companies must then build merchandising and supply chain processes – and sometimes even different networks – to meet these demands. They will need to consider, for example, what levels of service are required; from which supplier(s) and regions they should source; whether they should transport goods by air, ship, rail or road; how they should organize the location and layout of their distribution centers; how much stock they should carry in their stores and distribution centers; what replenishment cycles they should use; and how they should flow the merchandise to their stores. One company which successfully uses different processes for different products is U.S. clothing retailer Victoria’s Secret (see sidebar, *Victoria’s Secret of success*).

Victoria’s Secret of success

Victoria’s Secret has created two different supply chains for the two sorts of products it sells. Its supply chain for high-fashion items like lingerie has been designed to get products into its stores as quickly as possible and maximize sales of short-lived, high-margin goods; its supply chain for basic items like socks has been designed to get products on its shelves at the lowest cost. It freights high-fashion items by air, because the cost of transporting them by ship is prohibitive in terms of the sales that would be lost if they were not in the store and the profit margins more than make up for the freight charges. It ships basic items by boat, since demand for such goods is predictable and they carry the same low margins, whether they take a few days or months to reach the store.¹⁵

In addition to tailoring their merchandising-supply networks to meet the needs of different customer segments and products, retailers will have to tailor their relationships with their partners and suppliers. They will first have to determine how important each supplier or partner is to their business, and what sort of services it provides. They will then have to determine the nature and depth of the relationships they require – including how much data (and what sort of data) to share, and the level of systems integration that would be most appropriate.

Similarly, retailers must tailor their investment in new technologies like radio frequency identification (RFID), product information management (PIM), guided selling and advanced materials handling to their merchandising-supply network strategies – and invest first in those technologies that will best serve the needs of the business and its target customers. So, for example, they should consider which stores, markets or products would benefit most from the implementation of RFID or which processes should be managed by inspection rather than exception. Recognizing that different goods require different degrees of visibility and automation to move them efficiently through the merchandising-supply network enables a retailer to focus its spending on new technologies in the areas where they will yield higher returns.

Building a merchandising-supply network: Next steps

Just as a one-size-fits-all approach to merchandising and supply chain management is ineffective in today's complex marketplace, so, too, is a uniform approach to transforming the supply chain. Each retailer must, rather, develop a plan that incorporates its particular value proposition and reflects the needs of its target customers. Our approach involves three key steps:

- *Determine your strategic vision and assess your current merchandising and supply chain capabilities.* Define the characteristics you want your future merchandising-supply network to possess, rate the maturity level of your existing merchandising and supply chain capabilities against those required to achieve that state. Use this assessment to highlight areas for further evaluation and improvement.
- *Evaluate the implications of any gaps.* Evaluate the impact of any underdeveloped capabilities on your financial performance *and* the customer experience you deliver. Identify the biggest “pain points,” using both internal and external metrics (for example, customer-centric measures). Establish the staffing, process and technological changes you will need to make, and determine which initiatives support the four imperatives: integration, systematic analysis, customer centricity and tailored operations.

- *Prioritize your initiatives and build a transformation plan.* Rank the list of changes that are required in order of priority, given your short- and long-term corporate objectives. Immediately initiate a change management and communication plan to help ensure that the transformation will be successful across the organization. Assign responsibility for the benefits to specific individuals to increase accountability. Finally, outline governance procedures to measure and manage the impact of the initiatives.

Conclusion

As the marketplace becomes increasingly polarized and competitive, and as the expectations of customers become ever higher, so the importance of finding the right levers to drive innovation is rising. Though it has traditionally been regarded as a means to move goods from one place to another, the supply chain can be one such lever, when it is melded with a retailer's merchandising activities and operated as a network rather than a chain; it can create greater differentiation and growth.

A fully integrated merchandising-supply network enables retailers to overcome longstanding operating problems and deliver a more compelling customer experience. It also ultimately helps retailers generate greater value for their key stakeholders. When customers are confident that a retailer sells what they want and will have the products in stock, they come back to the store more frequently. When employees have simplified business processes and access to the information they need, they work more effectively. When vendors and partners share data and can see what is happening throughout the network, they are more committed to working together for mutual gain. All these features improve the financial returns a retailer can deliver. And when shareholders get better returns, they reward the companies in which they have invested with additional capital and higher valuations. A new course is being charted in merchandising and supply chain management.

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- ⁴ We drew on 2005 fiscal-year data from the annual reports of 795 publicly-traded retailers with revenues of US\$100 million or more that operate in North America, Europe or Asia Pacific. Companies were segmented into regions and subsectors, based on their primary Standard Industrial Classification (SIC) codes. In all, our sample included 216 miscellaneous retailers, 91 furniture and home furnishings retailers, 142 apparel and accessories retailers, 143 food stores, 174 general merchandise retailers, and 29 building materials and supplies retailers with combined sales of US\$2.55 billion.
We used three key financial measures to assess the performance of the companies in our sample. (a) Revenue growth is the percentage change in revenue from fiscal year 2004 to 2005. (b) Operating income margin is operating income (revenue less cost of goods sold, including selling, general and administrative expenses, depreciation and amortization) expressed as a percentage of revenue. (c). Days inventory is inventory relative to cost of goods sold per day, calculated from $[\text{Inventory}/(\text{cost of goods sold}/365 \text{ days})]$.
- ⁵ We tested our results for any distortions arising from differences in size (i.e., that smaller companies may exhibit higher revenue growth than larger companies because they have a lower revenue base and that larger companies may be more profitable than smaller companies because they enjoy greater economies of scale), using regression analysis, intraquartile analysis of revenue size rankings and revenue size x financial metric scatter diagrams. Our research showed that there was no consistent relationship between financial performance and revenue size.



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