Supply Chain Metrics That Matter:

A Focus on Retail

Using Corporate Annual Reports' Financial Data to Better Understand the Retail Supply Chain

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Research

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Supply Chain Metrics that Matter will be a series of reports published intermittently throughout the year by Supply Chain Insights. Each report will focus on a different industry. Within the supply chain world, each industry is unique. The goal of this series is to share this understanding. These reports are intended for you to read, share and use to improve your supply chain decisions.

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Research Methodology

The basis of this report is publically available information from corporate annual reports from the period of 2000-2012. In this report, we use this data to understand the past trends and future projections of retail industry supply chains. To drive insights, we augment this financial data with information that we have obtained through interactions with retail clients and recent insights from our quantitative research studies. A retailer is not a retailer. It is not that simple. Each sector of the retail supply chain has a different set of challenges and growth potential. For ease of analysis, retail companies were sorted into five categories:

- **Drug Retailers.** The drug category includes pharmaceutical based retailers such as **Walgreens** and **CVS Pharmacy.**
- **Grocery Retailers.** Grocery retailers are those retailers selling perishable and non-perishable items. Examples include **Kroger** and **Sainsbury's.**
- **eCommerce Retailers.** eCommerce retailers have a primary presence through online channels. This industry group is led by **Amazon.com**.
- **Mass Merchants.** Mass merchants are defined by the *National Association for Retail Marketing Services* as "a discount retailer that carries a wide variety of merchandise."[1] In this report, we use this definition. Examples include **Wal-Mart** and **Target.**
- **Specialty Retailers.** Finally, specialty stores include niche retailers such as **Ross** and **Dick's Sporting Goods.**

[1] Chapter 7: Merchandising Terminology. NARMS International http://www.narms.com/careers/training/merchandising-proficiency-training/chapter-7-merchandising-terminology/

Executive Overview

For the retailer, supply chain matters now more than ever. However, companies cannot drive growth on the back of traditional and antiquated supply chain systems. The business environment has changed, and supply chain design must morph to enable delivery of the retail strategy. In this report, we share insights on these trends.

- **Growth Has Stalled.** Key financial metrics, such as revenue per employee and revenue per store are stagnating or declining. Retailers have ultimately been unsuccessful in driving corporate growth through increasing store size or expanding into new global regions. It is now apparent that for retail, the growth lever is the channel strategy. eCommerce strategies offer greater growth potential compared to traditional channels, but success requires more than just a digital marketing strategy. It requires a fundamental redesign of supply chain strategies for fulfillment and product availability. Most importantly, it requires rethinking the role of the store.
- **The Answer for Growth Is More Than a Front Office Imperative.** While many retailers turn to the front office (digital marketing, mobile commerce initiatives, and merchandising) to formulate growth strategies, the answer needs to be more holistic. It requires a redesign from the customer's customer to the supplier's supplier to answer the new brand promise of the banner. Leaders will use new technologies to redefine the brand promise of the banner. Laggards will continue to trudge through the old world of bricks and clicks.
- **New Technologies Offer Promise. But Few Are Ready.** In the supply chain, power has shifted from retailer to shopper. Retailers are moving from digital marketing to digital business strategies. The average retailer has worked on a mobile strategy for less than two years; but today, it needs to be more than mobile for the sake of mobile. Retailers require a pervasive redesign to rethink how real-time data, coupled with cross-channel operations, can redefine the retail response. We are in a time of transition. The convergence of retail and social coupled with the eCommerce channel offers retailers a path forward to drive growth, but it also offers suppliers a new opportunity for disintermediation. Now, more than ever, retailers can self-manufacture and consumer products manufacturers can sell directly to the shopper. As a result of the changing reality of the retail industry, the definition of the banner to drive services and a unique experience are paramount.
- **Disintermediation. New Business Models. Redefinition of Retail.** The convergence of business models, the promise of technology, and the power shift to the consumer is redefining retail. For the bold, it will be a revolution: a time for new leaders, new

> business models, and redefinition of the retail value chain. Just as Amazon.com rode the eCommerce wave to power a new business model, the shift from digital marketing to digital business offers an opportunity for the extended supply chain—both suppliers and retailers—to reshape the meaning of value in the 21st century.

As retailers look to redefine their business models to power growth, supply chain matters more than ever. Leaders will embrace a broad definition, spanning from the customer's customer to the supplier's supplier, unleashing the power in new business models, while laggards will continue to use existing technologies and old thought patterns, remaining stuck with traditional supply chains serving traditional banners.

The Current State of the Retail Supply Chain

Each retail supply chain operates on its own effective frontier attempting to balance the trade-offs of growth objectives, increasing business complexity and the challenges with inherent cycles. In the last five years, growth has slowed, complexity has skyrocketed and cycle-time effectiveness has become more challenging. Effective management of any supply chain requires visibility of this data to make tradeoffs and informed management decisions in these three key areas. In this report, we share insights on how these metrics have changed for the retail supply chain, by sector, over the past decades.

Figure 1. Metrics of Analysis

Source: Supply Chain Insights LLC

For clarification, the formula for each of the metrics is displayed in equation form below.

Figure 2. Metrics Equations

$$\text{Year over Year Sales Growth} = \frac{\text{Net Sales}_{\text{Year X}} - \text{Net Sales}_{\text{Year Y}}}{\text{NetSales}_{\text{Year Y}}}$$

$$\text{Revenue per Store} = \frac{\text{Total Revenue}}{\text{Total Store Count}} \qquad \text{Revenue per Employee} = \frac{\text{Total Revenue}}{\text{Total Employee Count}}$$

$$\text{Cash} - \text{to} - \text{Cash Cycle} = \text{Days of Inventory} + \text{Days of Receivables} - \text{Days of Payables}$$

Source: Supply Chain Insights LLC

Growth Is Stalled

In retailing today, growth is a tough slog. Only eCommerce channels have bucked the trend with year-over-year double-digit growth. In 2011, eCommerce retailers posted a 25% growth rate while other channels were relegated to single-digit performance. While everyone would like to capitalize on the power of eCommerce, and companies frequently talk about the possibilities of cross-channel operations, few have successfully delivered against this promise.

In 2012, the biggest change occurring in grocery retail is the fact that Amazon is quickly gaining ground and market share in the delivery of center store items. This is creating a challenging situation for traditional retailers who must redefine the center of the store in addition to redefining the meaning of a shopping trip. Consumer products manufacturers that never saw Amazon as a major customer now have a 1-2% market share flowing through this new channel.

For most, growth will come through improvement in execution of channel strategies, not geographic expansion. Retailers, by design, are regional players. While they may operate banners in different countries, due to the diversity of local preferences and the unique challenges of regional operations, the retail supply chain is, and will remain, regional.

Table 1. Year-over-Year Retail Net Sales Growth Averages

Year-over-Year Retail Net Sales Growth Averages			
Retail Sector	**2000 - 2004**	**2005 - 2009**	**2010 - 2012**
Drugs	15%	6%	10%
eCommerce	16%	16%	27%
Grocery	10%	12%	10%
Mass	16%	10%	9%
Specialty	11%	11%	3%

Source: Supply Chain Insights LLC, Supply Chain Index Analysis
Averages calculated from Annual Reports for retail companies with net sales exceeding 5 billion USD in FY 2011.

The retail supply chain is serviced by multinational suppliers who are supplied by global chemical operating companies. Progressively, as one moves backwards or upstream in the retail supply chain, the global capabilities and understanding of global operations increases.

Table 2. Average Retail Growth in Comparison to Other Industries

Average Retail Growth in Comparison to Other Industries			
Industry Sector	2000 - 2004	2005 - 2009	2010 - 2012
Chemical	14%	5%	14%
Consumer Products	4%	7%	2%
Food & Beverage	7%	6%	14%
High-Tech & Electronics	11%	11%	24%
Retail	13%	11%	12%
Pharmaceutical	6%	5%	16%

Source: Supply Chain Insights LLC, Supply Chain Index Analysis
Chemical: Dow, DuPont, PPG, Monsanto, Huntsman
Consumer Products: Colgate, P & G, Unilever
Food & Beverage: Kellogg, Kraft, General Mills, Pepsi, Coca Cola
High-Tech & Electronics: Apple, Samsung, Microsoft, Intel, Motorola
Retail: compiled from Table 1
Pharmaceutical: Merck, Eli Lilly, Pfizer, Abbott, Bristol Myers

Revenue per Store

Surprisingly, despite the encroachment by Amazon on the grocery channel and the overall decline of sales by store, the median size of the United States grocery store is increasing. In the period of 2002 to 2010, the median grocery store footprint in the United States increased by 2,000 square feet. In figure 3, we share data from the Food Marketing Institute on median supermarket square footage over the past decade.

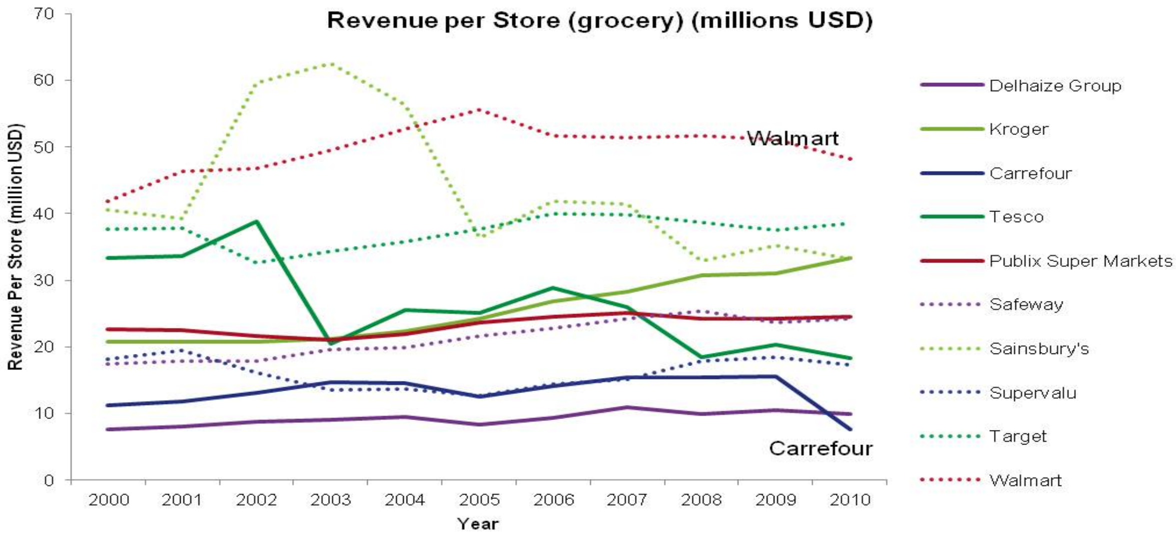
Figure 3. Trend in Median Supermarket (grocery) Total Store Square Footage

Trend in Median Supermarket (grocery) Total Store Square Footage									
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Square Footage	44,000	44,000	45,561	48,058	48,750	47,500	46,755	46,235	46,000

Source: Median Total Store Size – Square Feet, Food Marketing Institute
http://www.fmi.org/research-resources/supermarket-facts/median-total-store-size-square-feet

However, these larger store footprints have not driven increased sales volume. In grocery retailing, with the exception of **Kroger**, the trend of revenue per store over the past ten years has been static, or worse, declining. Even with larger footprints, store sales are not increasing.

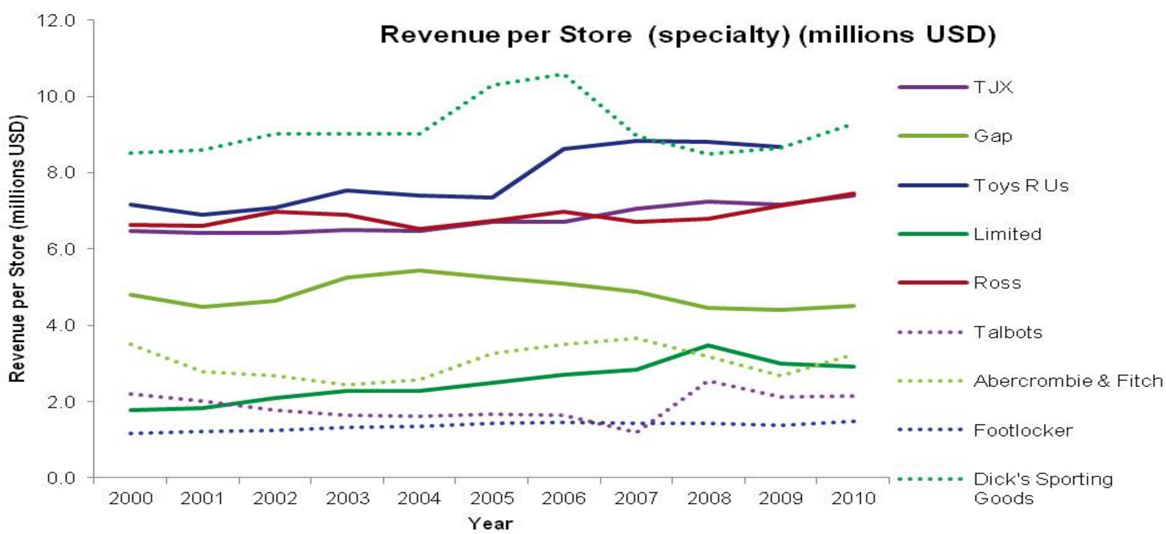
Figure 4. Revenue per Store (grocery)



Source: Supply Chain Insights LLC, Supply Chain Index Analysis

The revenue per store story is the same for specialty retailers who are struggling to redefine the role of the store and compete with their own set of burgeoning eCommerce retailers.

Figure 5. Revenue per Store (specialty)



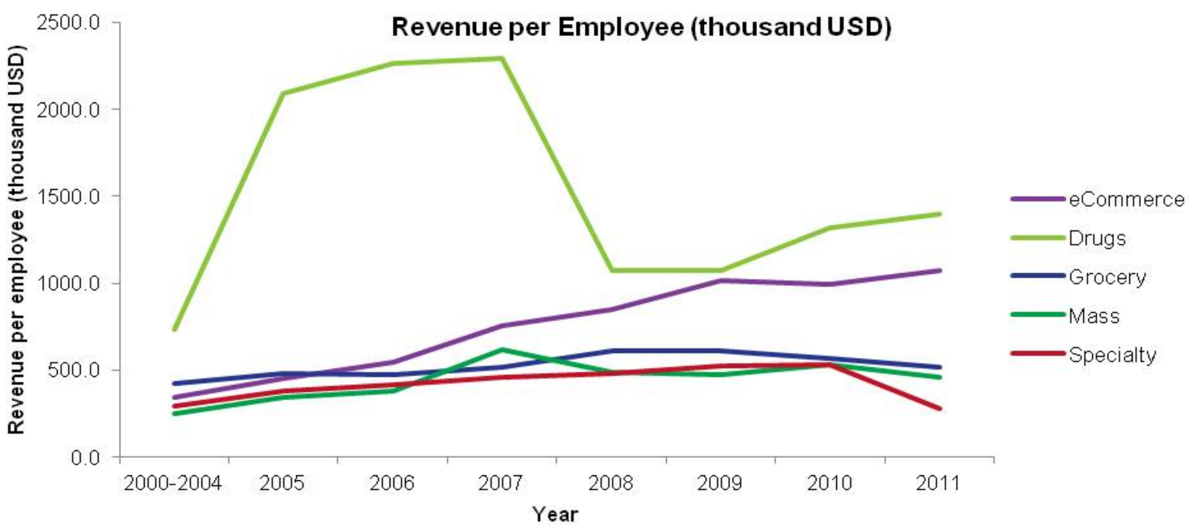
Source: Supply Chain Insights LLC, Supply Chain Index Analysis

There is a struggle for survival. Defining the role of the store is paramount to the discussion. While Amazon attacks center store merchandise, brick and mortar retailers must improve the excitement of their banner and turn their physical store into a destination. It can no longer be thought of as a place reserved for monetary transactions because those can be conducted faster and easier online. To be successful, retailers must offer differentiated services for customers that cannot be obtained online. Examples where this is happening in specialty retailing is **REI's** monthly bike clinics at the local store, **Petco's** grooming services, and cake decorating classes at **Williams-Sonoma.**

Revenue per Employee

As we view the revenue per employee metric, the impact of eCommerce and the expansion of the drug channel can be clearly seen. While grocery, mass and specialty stores have struggled for channel share, these new forms have outpaced the more conventional and traditional stores in both growth and profitability. We find that revenue per employee has been one of the most consistently insightful comparisons across the industries profiled by **Supply Chain Insight's** corporate annual reports analysis.

Figure 6. Revenue per Employee



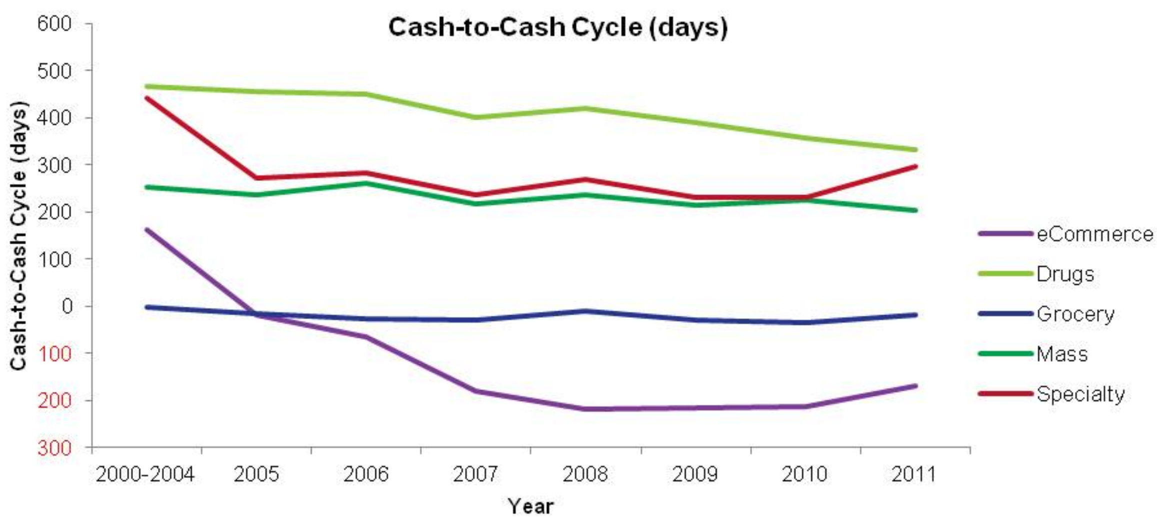
Source: Supply Chain Insights LLC, Supply Chain Index Analysis

While eCommerce has continued its steady upward trajectory, other segments have struggled. Drug retailers demonstrate a resilient growth pattern compared to the other traditional categories. So what are they doing right? The difference is redefining the store format to match the shopping mission. Drug retailers have already made the switch in understanding the difference for a customer between filling a prescription online and filling a prescription at a store counter. The ability to interact with a pharmacist, obtain a blood pressure or cholesterol level reading, as well as receive other value adding services separate the brick and mortar drug stores from an online experience. There is still more work to be done in this realm, for drug retailers as well as other traditional retail channels.

Cash-to-Cash Cycle

First, the bad news: Regardless of the millions of dollars poured into technological investments, business reengineering initiatives, and highly touted software packages in the past decade, the C2C cycle has been flat across the traditional retailers. The exception is eCommerce with a declining C2C ratio indicating improving cash flow management, and a negative number indicating collection of accounts receivable prior to submitting payment to suppliers.

Figure 7. Cash-to-Cash Cycle



Source: Supply Chain Insights LLC, Supply Chain Index Analysis

Increasingly, retailers have pushed working capital back in the supply chain to suppliers and suppliers have done the same, pushing working capital to their suppliers, increasing the total cost of the supply chain. Retailers lag other industries in their understanding of supply chain execution and inventory optimization technologies. Many retailers still lack perpetual inventory capabilities.

Just as eCommerce has eroded margins and changed the nature of retail, retailers have also increased business-to-business capabilities that could have a similar impact. However, they have been excruciatingly slow to mobilize. Overall, retailers still understand suppliers as a place from which to “squeeze cost,” “pocket promotional monies” and drive specialized programs. They have been too slow to build capabilities to model and optimize the entire value chain.

There is a parallel opportunity present to seize power in the store and redefine the role of the brick and mortar retailer. The techniques and lessons of eCommerce retailers can be adapted and tweaked for application to traditional channels. This includes insights from mobility and social commerce, the coming revolution of demand driven supply chains, and the power of Big Data.

Changing Cycles

Retail is moving from analog to digital. The stability of the weekly circular is now changing to be anytime and anywhere. In short, the future of the retail supply chain will operate under a different set of rules. The past model was based upon the traditional structure of physical stores, coupons in newspapers, and stocking the shelves with items off the truck. The future model will be based upon a transition from inside-out to outside-in demand sensing and a move to real-time data based on the digital path to purchase. This convergence of social/mobile and eCommerce will require a redesign of the physical supply chain and will greatly impact the inherent cycles.

The power has shifted. Instead of inventory being dictated by the availability of items from suppliers, it will be dictated by final-end customers and their demand signals. Shoppers will develop digital lists and cross-shop and compare prices and availability across store formats and channels. The purchase decisions will be based on both availability and price. The inherent supply chain cycles will shorten. The need for granular demand insights will increase. It will also be based upon a greater appreciation of the customer’s demands for both online and physical stores and a redefinition of the physical retail space.

The metrics and graphs in this report provide a backdrop for insights regarding four key changes and trends taking place within the retail marketplace. These are:

- **Moving from Supply Chains to Value Networks.** There is an increased opportunity and necessity for increased horizontal collaboration both inter- and intra-company. The channels and roles will continue to blur together. It will increasingly be about the delivery of unique value which will be the unbeatable combination of in-demand goods and services.

- **Transitioning from Analog to Digital.** The pace and cycle of the retail supply chain is changing as we transition from analog to digital and from the weekly store circular to automating the digital path to purchase. This will place increased pressure on the current work in digital marketing to be more pervasive and will include the redesign of supply chain capabilities based on the new definition of the physical store.
- **Knowing and Understanding the Shopper.** The availability and onslaught of consumer data gives companies unique capabilities to know the shopper and provide unique value. This will be confined to companies which develop, understand, and mine data insights. For retailers, the curtain is rising. The stage is set. It is the age of a new era in which all will learn the increasing importance of Big Data. For more specific Big Data insights, check out SCI's recent Big Data report.
- **Redefining the Store.** The need for retail differentiation and a redefinition of the store will increase with a focus on providing a physical experience that exceeds customer expectations for a transaction based relationship.

The potential for horizontal collaboration is an exciting prospect to tear down the vertical silos that have been created within and between companies and to engender open communication. C2C is one example of a metric that, in part, depends upon cooperative efforts with partners in the value chain. Improving the C2C cycle by enacting punishing payments terms is not encouraged, but rather working together to establish supportive practices in regards to payment and inventory transfer to idealize the entire chain's financial performance is an underdeveloped strategy for supply chain improvement.

Furthermore, horizontal cooperation within the firm allows for silo deconstruction and members of different departments (finance, sales, supply chain) to come together to optimize the total corporate entity. Easier said than done, but ultimately, it is becoming a necessity for success in today's hypercompetitive business environment.

The drive towards mobility and social commerce is exciting and new terrain for seasoned supply chain veterans. Many of the metrics indicate the supremacy of the eCommerce retailers against peers, but the techniques utilized by eCommerce retailers can be tweaked to serve all retailers. This includes the strong push to differentiate from competitors as well as the utilization of new technologies.

People have been anxious to join the movement towards uniting mobility and social commerce, but slapping up a Facebook page and giving a Twitter account to the new intern is not an adequate approach.

The mobile initiatives in the industry are overwhelmingly slanted towards digital marketing. The opportunities are abounding and pervasive through the extended supply chain. Leaders will develop “listening” capabilities and will connect them to Big Data initiatives.

Big Data is also new and undefined territory for supply chain professionals. These new data sets are too large for traditional analysis and methods, making them a challenge, but they present opportunities for companies to gain levels of granularity and insights never before available. By now most have likely heard the story of the teen girl whose purchases at Target identified her as pregnant, and thus, specifically targeted advertisements and coupons were sent to her house. Not unexpectedly, her father was appalled by the materials and assertion of pregnancy, until the girl was forced to come clean. So Target knew before the grandfather knew, thanks to the power of Big Data.

Big Data provides possibilities for companies to adapt to change, anticipate through advanced analytic powers, and move from a near real-time status to a truly real-time operating structure. According to SCI’s 2012 study **Big Data: Go Big or Go Home,** only 1/3 of companies is currently evaluating the manners in which Big Data can improve supply chain performance. This is an opportunity to tear down the disconnect between the IT department and the supply chain department to define the newest technologies that can be harnessed to make real-time outside-in supply chains a reality in your organization.

Finally, the redefinition of the store is a cumulative effort that depends on all of the previous insights. Using the information available through horizontal collaboration, mobile and social commerce platforms, and Big Data, brick and mortar stores must begin the redefinition process. In order for traditional retail channels to prosper, there must be recognition of the new role of the store. Furthermore, in order to serve the customer, a physical location can no longer be based on an arm’s length transaction. Instead, traditional channels must redefine stores to be service centers incorporating experiences and value-adding services not available with the click of a mouse.

In the end it all comes down to understanding experiences that aren’t easily translated to a web presence. The opportunities for physical retailers are endless, but also intimidating. The list includes cooking classes at the local grocery store, health screenings at the pharmacy, and game testing nights at the local toy store. The list goes on, but the message remains the same. In order to stay relevant and competitive with increased pressure from eCommerce retailers, traditional channels must work to differentiate and redefine the role of the store for the future.

Looking to the Future

- **Design the Supply Chain to Serve the Shopper.** The challenging and antagonistic upstream and downstream relationships need to be a thing of the past. Align with the extended supply chain to drive value for the shopper at the shelf. The opportunity is for leaders that can work collaboratively with upstream and downstream partners.
- **Move from Digital Marketing to Digital Business.** Start the move to mobile with a plan and a dedicated team. Prioritize doing it “right” over doing it “fast.” Start testing new initiatives *now.*
- **Know the Shopper.** Design the supply chain from the shelf back while embracing the possibilities of Big Data. Establish a working group to understand the application of Big Data to your specific supply chain. Encourage collaboration with upstream and downstream partners to share data in an effort to aid in decision making.
- **Redefine the Role of Bricks and Mortar.** Our world is no longer just defined narrowly by bricks and clicks. Instead, it needs to be redefined from the shopper back holistically to drive value.

For retailers, as growth stalls and costs rise, they need to develop and personalize banners to drive value. The role of the supply chain is changing. The opportunities to better use technologies to understand the customer are increasing. Supply chain matters more now than ever.

About Supply Chain Insights LLC

Supply Chain Insights LLC (SCI) is a research and advisory firm focused on reinventing the analyst model. The services of the company are designed to help supply chain teams improve value-based outcomes through research-based Advisory Services, a dedicated Supply Chain Community and Web-based Training. Formed in February 2012, the company is focused on helping technology providers and users of technologies improve value in their supply chain practices.

About Abby Mayer

Abby Mayer (twitter ID @indexgirl) is one of the original members of the Supply Chain Insights LLC team. She is a research associate at Supply Chain Insights LLC and the author of the newly-founded blog, Supply Chain Index.

Abby brings a diverse list of experiences, both academic and professional to the team. She has a B.A. in International Policitics and Economics from Middlebury College and is completing her master's thesis, focused upon the utility of the C2C cycle in shipping & transport companies to complete the requirements for a M.S. in International Supply Chain Management from Plymouth University, located in the U.K. She has worked as an operations associate at Peabody Energy in the Powder River Basin, restaurant manager in Montana, and a stone staircase builder along Maine's portion of the Appalachian Trail. She has also completed a thru-hike of Vermont's 280 mile Long Trail, the oldest long distance hiking trail in the United States. As part of the planning and food prep process, she was forced to predict her hunger pangs for the entire three-week trip before departure. If that isn't advanced demand planning, what is?!?!