

## GREEN VERSUS LEAN

/// VIEWPOINT PAPER



### A Green Vision for the Modern Consumer Age

Retailers and consumer packaged goods (CPG) companies are continually bombarded with “Green” messages on operations, products and carbon footprint reduction. And “Greenwashing” - making a company or its products appear environmentally friendly, sustainable, low impact and recyclable - is another eco-buzzword that has moved to the forefront of today’s environmental dialogue.

Regardless of what they’re called, these sustainable and/or green behaviors, including recycling and lowering emissions and carbon footprints, are increasingly being contemplated - or required - by corporate boards, consumers and, in many cases, governmental entities. And leading retailers and CPG companies are seeking innovative new ways to achieve this “Green” vision while continuing to support the growth and productivity that’s so critical to their continued success.

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## Introduction

It's clear that environmental issues have now taken center stage. Daily headlines feature rising energy costs. (As of 7/13/08, oil was at \$145/barrel.) Pundits forecast this trend is not likely to improve any time soon. And the associated geopolitical risks loom - ever present.

Perhaps in a more subtle fashion, consumers are changing their behaviors. Use of mass transportation (such as bus and light rail) is up. A recent report by the American Public Transportation Association (APTA) shows trips on public transit January-March 2008 rose 3 percent over the same period last year to 2.6 billion rides. Light rails saw the biggest jump: 10 percent to 110 million trips. Early figures for April show ridership going even higher as gas hovers near \$4 a gallon, says APTA president William Millar. In 2007, he says, "We had higher numbers than we've seen in 50 years, and the trend is continuing in 2008."

There's much anecdotal evidence of family, friends and neighbors shopping together and generally going to the store less often - then really stocking up when they do go. Recent surveys indicate that 74 percent of customers buy environmentally friendly products, and 60 percent are willing to spend more on environmentally friendly products. Currently, online growth is averaging three times that of conventional retail, and there is proof that a well-executed, multichannel capability has an equally stimulating affect on in-store sales and improving customer loyalty.

The critical question today? How can retailers and CPG companies change their business model to satisfy all these mandates, behaviors and requirements while increasing growth and productivity?

## Shining New Light on Supply Chains

A powerful first step in "going green" is to look at supply chains in a new light. Currently, extended supply chains can be characterized as follows:

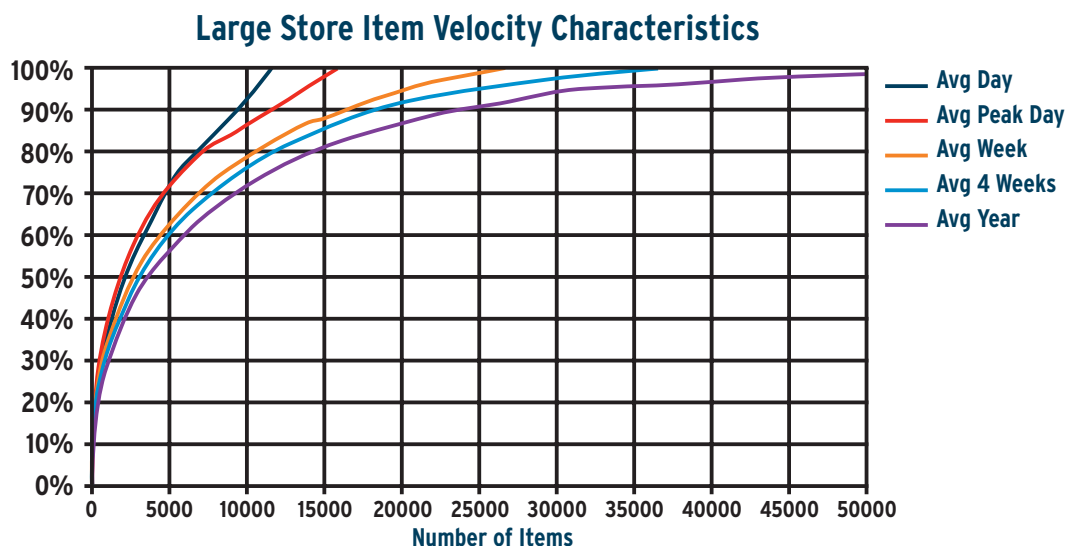
- Shelf out-of-stocks run about 8 percent and have done so for decades, despite acknowledgement that this is a critical failure - and that "winning" this battle holds great financial rewards. In fact, nearly every report continues to converge on that 8 percent number, as if there was some DNA in the industry that predisposes retailers to this level of service.
- Measurement of shelf service levels has been difficult and typically only takes place during intensive study periods.
- Because of several factors, shelves are generally set largely to reflect case pack-out - rather than strictly by velocity and holding power. Over time, SKU proliferation has exacerbated this situation. Most items on shelves do

not sell in a given week. According to a recent GMA study, new analyses of POS data provides a clearer picture of product movement across time. The conclusion: a relatively small number of items constitute the majority of the store's total sales. The analysis of product movement shows that in a typical day, large volume U.S. grocery stores carrying more than 50,000 items (SKUs) will sell approximately 12,000 different items.<sup>2</sup> (See Figure 1 on page 2.)

- Rather than occurring at the point of consumer interaction, service-level measurements are generally gathered and published at the point of some sort of business-to-business transaction. - Was my order filled to the distribution center? Did the distribution center fill my store order?

- Historically, retailers have paid very close attention to their working capital position and, in particular, to the ratio of accounts payable liabilities (trade credit balance sheet support) to inventory assets. This focus has driven a great deal of behavior - including demands by retailers to source goods from suppliers in smaller, more frequent lots - to improve both working capital performance and in-stock condition (as historically measured). Inventory in this mindset was "evil" - something to be reduced without degradation of service level (again, as historically measured).
- Delivery windows have generally been set narrowly to facilitate labor scheduling at the store, both from a warehouse and direct-to-store delivery (DSD) perspective. Almost all transportation systems share the following characteristic: the wider the delivery window (degree of freedom in the model), the better the solution - and the greater the opportunity to reduce miles and costs by more effective routes, split trucks, and so forth. And, especially for the DSD community, it's common for back-door congestion to cause multiple drivers to wait for an open door.
- Procurement systems generally share the following characteristics: As variability increases, safety stock increases. As order intervals go up, on-hand inventory increases (to hold more inventory as the period between deliveries increases) and safety stock goes up. The systems will "allow" out-of-stock events (as measured in business-to-business transactions) to happen if bracket minimums and/or cube requirements cannot be met.
- Bracket pricing minimums are generally set at 30k lbs. for best-bracket pricing.
- Distribution center locations and their relationships to their respective customers have been built during a time of relatively cheap oil and are very expensive to change - and impossible to relocate over the short term.
- Bracket pricing and the behaviors they drive have also been set during a period of relatively cheap oil and transportation costs.
- Vendor scorecards almost exclusively measure business-to-business transactional performance, so shelf measures are lacking.
- Many existing contracts - be they with third-party suppliers or through shipping agreements - have standard pass-through processes for fuel surcharges.
- Only the largest suppliers generally have mixing centers to get full truckloads multiple times per week.
- Demand-driven supply chains are all the rage.

Figure 1



Credit: Standard Analytics, 2006

## Taking in a New View

Given that today's applications, business processes and mindsets "grew up" during a period where "Green" was not as important and diesel was relatively cheap, it's wise to change the way we look at our respective businesses. All of our respective constituencies will require this of us. The real benefit to net-landed cost, and to the environment, will require us to look from end to end at extended supply chains - merely shifting the problem up or down the line will not suffice. This sort of collaboration/data transparency will be hard. Actual *increases* in inventory - particularly on fast moving items - may allow us to become greener and save money by using transportation assets more effectively.

## How - or what - can we change? And what will it take?

Many business process changes will be required - most enabled by some change in the current technology footprint or in the configuration/business rules in the existing applications used to run your business. Some short- and long-term suggestions follow.

## Short-Term Suggestions for Retailers

Take a hard look at your current cube utilization (or weight if this is your constraint) and establish a baseline. Using this data creates a target opportunity list where you can combine/reduce trips when the other enablers are in place.

Perform the same sort of analytics on the size of your delivery windows. If you have an up-to-date routing system, expansion of this window will likely lead you to a solution with lower miles and higher utilization.

Look closely at your shelf management process and begin a two-pronged attack. First, with the big win in mind (that is, 8 percent out-of-stocks), make the difficult choices. Get rid of items that do not sell - either out of select stores or, better yet, out of distribution completely. This will make room for increased shelf capacity for the higher velocity items that do sell and offer holding power for a revised delivery schedule. This gives space to the items that do sell.

If you have computer-assisted ordering, look at "peak shaving" functionality. Move some of the cube on heavy days to light days, accomplishing the two-pronged goal of going to the store less often and going full when you do go.

## Long-Term Suggestions for Retailers

While measurement of business-to-business transactions is - and will remain - important, retailers need to improve their ability to measure and deal with out-of-stocks at the shelf. Customers don't care about warehouse fill rates. All that matters is having the item on the shelf when they want to buy it.

With examination of your practices, be willing to expand your view from end to end - and involve your partners. Working together, can you use slower, more fuel-efficient transportation mechanisms - and, perhaps, those that have *more* variability - to lower environmental impact by investing in more inventory. Historically, with the intent of lowering working capital, some retailers' incentives in the past have encouraged procurement to order half pallets, yet the actual working capital impact was only a fifth of the financial impact on labor (that is, after twice the number of pallets had to be received, put away and taken down). Carefully review your scorecards from end to end to make sure they reward the right behaviors.

If you do not have the analytical support tools to enable the move to green, get them - or update them if your tools are not adequate. This would include a review of anything that affects forecasting, cube utilization and delivery schedules, including:

- Warehouse Management Systems
- Routing and scheduling systems
- Point-of-service/computer-assisted ordering tools
- Data warehouse and associated tools
- Planogram/space management, category management, and store execution tools
- Virtual reality (VR) applications

Inventory is not necessarily a bad thing. It can enable you to transport goods less often or to use more environmentally friendly delivery transportation. It will save money and environmental impact and, given the right execution, may also positively impact out-of-stocks.

## Short-Term Suggestions for Manufacturers

Discuss the "Green" topic with your trading partners. These mindset changes will take time and dialog, backed up by solid analytics. Real progress will involve tradeoffs on both sides. Collaboration, while difficult, will be key, especially when deciding to measure based on green implications (as

opposed to the traditional measurement of only business-to-business transactions). New green measurements would include in-stock conditions at the shelf and shelf-holding power.

Take a hard look at your assortments and at case pack-out, particularly for slower moving items. If you have items at a store that sell one - or none - per week, why are they there at all? If you have items where the typical sales pattern related to case size shows months of inventory on the shelf, is this case size correct? Is now the right time to look at changing these parameters to allow better shelf in-stock holding power for fast moving items?

Look at cube utilization and incentives that include bracket pricing. Do these cause suboptimal utilization? Construct the baseline.

Again, smaller CPG companies have a more difficult time working with their respective retail partners and putting an effective truckload together multiple times per week. This really affects performance in a number of areas, including the ability to generate full truckloads (not partials).

### Long-Term Suggestions for Manufacturers

Collaborate with your retail trading partners to enhance the extended supply chain behavior to support your Green vision - with investments in inventory as one of the enablers.

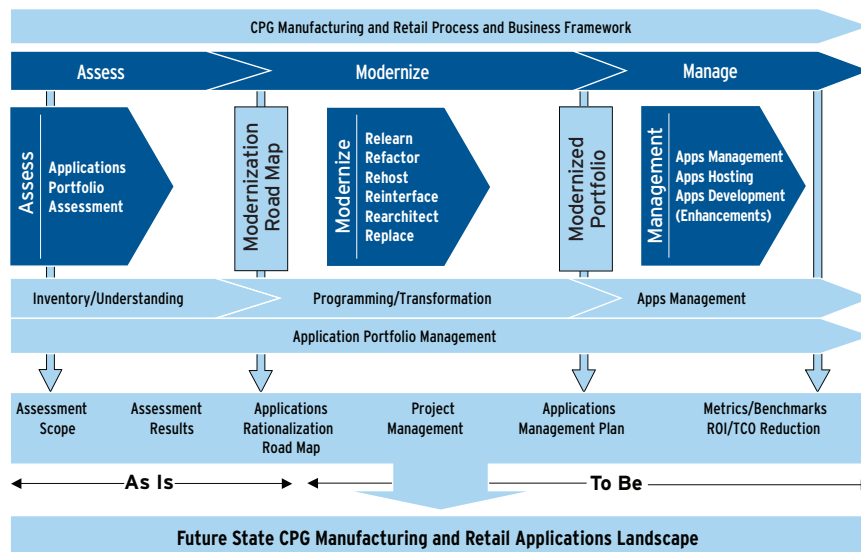
Work together with retail shelf management on measurement and effectiveness. While measurement of business-to-business transactions will always remain important, look to partner on-shelf measurement.

### Technology as a Critical Enabler

To change behaviors in a sustainable way (no recidivism allowed), system changes must enable new business processes - and cut off the old. Without system changes, improvements in business processes - from conference room pilots to field trials - will be lost as companies and people revert to the old way of doing things.

Many issues will require much larger, more elaborate data warehouse applications and forecasting abilities (such as those provided through EDS Data Warehouse On Demand Services). For example, assortment localization requires movement data not "on average" but specific to store. These changes and others will drive complexity, which requires IT to manage effectively. This allows customers to buy these services "by the drink" rather than having to set up their own costly infrastructure and services. And retailers can achieve speed-to-market at a lower cost. (For example, EDS' relationship with Netezza enables data warehouse execution at lower cost with better execution than many would think possible. EDS, an HP company, has helped several customers in this process.)

Figure 2



VR applications (such as those supported by EDS Virtual Reality Solutions) are another critical component of this strategy, enabling retailers and CPG clients to visualize new shelf sets without the need to build them out physically.

To improve in-store management, EDS works in conjunction with O4 Corporation to enable far more specific measurement and task assignments, improving in-stock conditions and facilitating the assignment of replenishment tasks and other execution tasks.

Clean data is a major issue for any chain involved in an acquisition. EDS has proven methodologies to help clean up the data from an acquired company or brand, ensuring all the analytics that follow give the right answers. If the “tie high” on your records is transposed, or the cube on an item is wrong, it will be impossible to execute this sort of initiative successfully.

Successful implementations of this sort of shift in strategy require applications assessment, modernization and rationalization expertise. Even with applications that can support this proposed “new thinking,” hard-coded business rules - some of which still work and reflect years of business knowledge - may still be necessary to running an enterprise. While the choice here was once stark - live with it, work around it, or rip it out and replace it - EDS can now supply another answer: modernize it so that your hard-fought gains are not lost.

Applications modernization provides a way to maximize the value contained within legacy applications while moving them quickly and efficiently to modern platforms. Applications modernization implementations typically include applications rationalization, hosting, development and outsourcing and enterprise integration, as well as midrange hosting and enterprise server consolidation elements. (See Figure 2 on page 4.)

With the right architectural approach, you can gain the flexibility you want, within the time frames you need. However, if your application portfolio is such that you really do need to replace major components, EDS can provide the expertise to assist you in this journey as well - with time-tested migration mechanisms and hosting capabilities.

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Tom Schaumburg is a senior industry consultant for EDS' Business Transformation Outsourcing, Consumer Industries & Retail industry, where he provides advice about supply chain strategy, helping companies strengthen their competitive position, increase market share, improve customer satisfaction and streamline expenses. He also advises retailers on transformational outsourcing.

Schaumburg has 20 years of operational experience in supply chain management, including procurement, logistics, vendor management, and compliance and distribution.

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### Notes

- 1 American Public Transportation Association, 2008.
- 2 GMA Study: A Comprehensive Guide to Retail Out-of-Stock Reduction in the Fast-Moving Consumer Goods Industry, 2007.

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