

the 4caster

The Quarterly 4R Systems Company Update



RETAIL TRENDS:

4R Systems is a leading provider of software tools, analytical models and information services that allow retailers and manufacturers to increase the profitability of products by accurately matching supply with demand.

Key to Collaboration: Understanding the Product Lifecycle

In the last two issues of *the 4caster*, we started by examining how retailers can move beyond mark-down management to more optimally manage their business throughout the product lifecycle. Then, we explored the importance of effective end-of-life management on manufacturer profitability and the myriad of challenges a manufacturer must deal with in profitably exiting a product.

While retailers and manufacturers hold many interests in common, all too often there are circumstances where what's good for the retailer comes at the expense of the manufacturer or vice versa. And while many of these circumstances are unavoidable, a common understanding of the product lifecycle

can effectively help manufacturers and retailers reduce the occasions of misalignment.

In this issue, we'll talk about how developing and using better insights into the product lifecycle can help retailers and manufacturers develop a strong, mutually beneficial framework to align their supply chain and interests.

In today's modern supply chain, retailers have worked closely with manufacturers to create a responsive supply chain that quickly replenishes from a manufacturer within weeks if not days. As a result, retailers have reduced their non-store inventories dramatically and been able to better

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CLIENT UPDATE:

Crate and Barrel Engages 4R Systems to Help Analyze and Optimize Supply Chain Performance

Client participates in 4R inventory productivity IP^{Mark} benchmark

4R recently announced that Crate and Barrel, one of the most influential and respected housewares retailers in the United States, has engaged 4R to quantify opportunities to drive increased profits by optimizing inventory management throughout the product lifecycle.

"We attribute our success at Crate and Barrel to the vision of our people, as well as our passion for the products we sell. This approach flows into all aspects of our business, including our supply chain," said John Ling, Crate and Barrel's Vice President of Logistics. "We continue to be focused on innovative ways to improve profitability and efficiency and believe that through better analysis and use of our sales, inventory and supply chain data we will continue to improve supply chain performance, and ultimately, the customer shopping experience."

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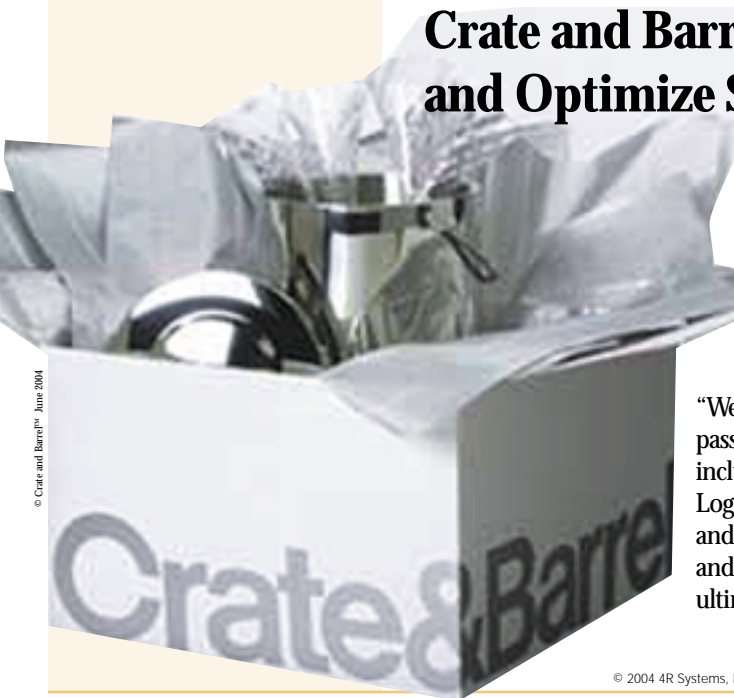
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4R IN THE NEWS

Dr. Marshall Fisher Selected as 2004 "Pro to Know"

Supply & Demand Chain Executive magazine, which provides complete knowledge and information on end-to-end supply and demand chain solutions, recently announced their third-annual listing of top supply and demand chain professionals in its February/March 2004 issue. Marshall Fisher, 4R co-founder and Wharton professor, was chosen as a "Pro to Know" in the Practitioner category.

The Practitioner "Pros to Know" is a listing of supply and demand chain management professionals that have excelled in the commitment to improving the use of supply chain technology and practices within a brick-and-mortar company. These individuals have a deep breadth of knowledge about the industry and are forward thinking in their approach to the evolving supply chain network.

"The editorial and advisory board staff at *Supply & Demand Chain Executive* is impressed every year by the thought leadership and innovation displayed by the nominees that are finally accepted as the Pros to Know, and this year is no exception," said Sarah Murray, Managing Editor of *Supply & Demand Chain Executive*. "With people like these leading the charge at corporations all across the world, supply and demand chains are being transformed into lean, competitive tools that challenge traditional business rules and point to the future of supply chain management."



Linens 'n Things CIO Selected as 2004 Executive Technology CIO/IT Leadership and Innovation Award Recipient

We were very pleased to recently learn that 4R client Jeff Steinhorn, Sr. VP and CIO at Linens 'n Things, was chosen as one of *Executive Technology's* 2004 CIO/IT Leadership & Innovation Award recipients. These awards shine a spotlight on the foremost CIO's and senior technology executives in the retail industry today.

The editors of *Executive Technology* presented the awards to the winners at a gala reception and dinner held during the Retail Systems conference and expo in May. As the nominating company, 4R was also in attendance. The magazine will publish a special section profiling the award winners and their accomplishments in an upcoming issue.



Key to Collaboration: Understanding the Product Lifecycle

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shape store inventory to meet consumer demand. But, manufacturers increasingly need to tap distant manufacturing capacity to deliver low costs and they've had to grow inventories in order to provide responsive service.

As long as the product keeps selling, the cost of the large inventory buffer is minimal. However, a sudden end-of-life comes at large cost. What once was a valuable asset becomes a costly liability that needs to be liquidated—and both retailers and manufacturers are left coping with the excess inventory. And similarly to how misreads of demand can cause over ordering and a "bull whip" effect, sudden end-of-life causes a reverse "compression" not unlike braking by hitting a wall at 60 mph.

Clearly, if manufacturers and retailers can collaborate on understanding the product lifecycle and more systematically

close out a product, significant costs can be eliminated and the supply chain can be more effective.



So why doesn't it happen? First, a lot of the focus in the supply chain is tactical. Literally getting the right (amount of) product to the right place at the right time. Day after day and week after week, we're feeding the chain with product and we strive to make things repetitive, as repetition is reliable. So we build the system to repeat, and repeat it does. But ending a product's life means breaking that pattern and that requires a lot of thought and, more over, that thinking to be shared throughout the supply chain. If we do that, we can slow the chain down logically and reduce cost. Otherwise, we have an accident and that comes at great cost.

But this problem isn't just confined to end-of-life. It's not unusual to have a promotion-planning horizon that is

THOUGHT LEADERSHIP:

4R CEO ASCET White Paper Contributor



ASCET
Achieving Supply Chain Excellence through Technology

Montgomery Research, Inc. in association with Accenture, is preparing to release

The ASCET Project: Achieving Supply Chain Excellence through Technology, Volume 6. Available late Spring, the sixth annual edition of ASCET will contain insights, guidance, technical instruction and case studies from nearly 100 of the world's leading companies and thought leaders.

4R CEO Jiri Nechleba, among other supply chain luminaries, was approached to participate in this project. His white paper, entitled, "*Retail Optimization—Profiting in an Uncertain World*," will be published in the upcoming edition.

Montgomery Research will be distributing 30,000 books to a list of subscribers, key clients and prospects of Accenture, vendor selected decision makers and C-level executives in the Global 2000.

Fisher Academic Paper Makes List of 10 Most Influential Papers Published in the Last 50 Years

The year 2004 marks the 50th year of publication for *Management Science*, a monthly scholarly journal published to scientifically address the problems, interests and concerns of managers (a publication of the Institute for Operations Research and the Management Sciences (INFORMS)). To commemorate the significant occasion, they took a look back in the journal's prestigious past to celebrate some of its most influential papers.

Management Science recently announced their list of "The 10 Most Influential Papers of the Last 50 Years." Marshall Fisher's paper entitled "*The LaGrangian-Relaxation Method for Solving Integer Programming-Problems*," made this prestigious list.

This paper describes a general concept, LaGrangian Relaxation, which is a technique that has proven useful in solving a number of problems, including a clustering problem called the K-median problem. This clustering model is the backbone of 4R Systems Right Test product.

4R Sponsors Upcoming Merchandise Optimization Summit in Las Vegas



In the current climate of diminishing profit margins, discount hungry consumers, and the impact of multi-channel retailers, the need for the competitive edge is greater than ever.

The Revenue, Price and Merchandise Optimization for Retailers Summit to be held at **The Rio in Las Vegas, June 28-30, 2004** will provide answers to the most important optimization issues in the retail industry today, through best practice in-depth retail case studies, retail world leaders, expert retail analysts and optimization professionals' insight. For more information about the event see <http://www.firstconf.com/retail/>.

Philadelphia Retailers Learn, Share and Talk Optimization

Over 40 top retailers were in attendance for the most recent installment of the successful KSA/4R event series, "Putting 'The Paper' Into Practice."

KSA's Bryan Eshelman joined Dr. Marshall Fisher, The Wharton School and Dr. Ananth Raman, Harvard Business School, supply chain experts and authors of the highly acclaimed *Harvard Business Review* article, "*Rocket Science Retailing: Are you Ready?*" as they discussed real-world examples and presented findings of pioneer companies that have "put the paper into practice."

The morning event took place at The Union League in Philadelphia in March.

The *Harvard Business Review* article highlights how sophisticated algorithms are being applied to solve complex retail supply chain issues such as replenishment and inventory reduction. The event examined how retailers are successfully applying analytics to their retail supply chains therefore profit optimizing their inventory investment. The speakers discussed real-world examples of forward-thinking companies that have achieved measurable results using analytics.



NRF 2004 Recap

This year's National Retail Federation convention and expo was better than ever as leaders in retail learned about the latest trends and sought out the latest and greatest technologies and solutions to grow their businesses!

Thanks to all of you who visited our booth. Look for us in New York in 2005...

EMPLOYEE SPOTLIGHT

Behind the scenes at 4R...

If you happen to be walking the halls of 4R and hear the strains of banjo strums, do not adjust your hearing aids. Nestled among laptops, switches, keyboards and running programs you may find Steve Crowers, Senior Software Engineer, strumming a banjo.



Steve's new found recreational pastime is banjo playing. Steve took up banjo within this past year, after attending several folk festivals with his wife Virginia. Virginia's fiddle playing since she was 9 years old had a motivating and inspiring effect on Steve.

The style Steve enjoys is old-time Claw hammer which is very rhythmic in form and composition. Steve enjoys Pete Seeger, a familiar voice within the Folk music circle. He also suggests listening to Jay Ungar, who provided the score for the PBS documentary *Civil War*.

Understanding the Product Lifecycle

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months less than the speed at which product can be sourced. So, if a promotion is programmed in for a particular product, unless the manufacturer is holding enough inventories to feed the promotion, the promotion will be under supplied or may be shifted to another product. In either case, both the retailer and manufacturer stand to lose a lot.

So how can manufacturers and retailers better collaborate?

First, it means putting more effort into understanding the product lifecycle. Whether it's when a product is promoted, a competitive launch occurs or a product's life is ended, both the manufacturer and the retailer can benefit by extending their awareness of that event to match the procurement horizon. It's best if these events can be anticipated and planned at the procurement horizon. If that's not possible, then forecasting those events and planning around those forecasts is key to driving better profitability.

Second, it means understanding how activities that impact demand ripple through the supply chain. If promotions impact demand and promotion planning occurs two months prior to the event—and the lead time to source is four months—unless your supplier is carrying excess stock, supplying that promotion with the right amount of product will be next to impossible.

Most of all, it depends on developing a strong supply chain partnership between a retailer and a manufacturer that encompasses effective operational support, identifying structural misalignment of activities and strong forward looking planning. While much of this has been talked about for quite a while, an understanding of a product's lifecycle is the key ingredient in helping retailers and manufacturers develop and share a vision for a more efficient future.

Crate and Barrel Engages 4R Systems

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4R will work with Crate and Barrel to quantify the profit improvement opportunity available through optimizing inventories to increase sales while managing inventory costs throughout the supply chain, in addition to optimizing product exit for markdown merchandise. 4R will compare and contrast Crate and Barrel's current supply chain practices to alternatives, and identify a benefit/difficulty roadmap for various future supply chain initiatives.

"We are excited to embark on this project with Crate and Barrel and believe IP^{Mark} is an excellent way for retailers to develop fact based and analytically rigorous supply chain insight that can strategically enhance procurement, allocation and disposition of their inventory," said Jiri Nechleba, 4R Systems President and CEO.



Crate&Barrel