



NATIONAL RETAIL
FEDERATION

STORES

NOVEMBER 2002

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IT SOFTWARE

Linens 'n Things projects an overall annual ROI in the millions of dollars from 4R Systems' Supply Planning software.



Linens 'n Things Protects Inventory Investment with Supply Planning Suite

Application helps retailer manage and replenish store-level stock to meet customer demand and eliminate out-of-stocks

Like most retailers with several hundred stores, Linens 'n Things has a large investment in inventory. To help protect that investment, the Clifton, N.J.-based specialty retailer has turned to a supply chain management tool

from Wayne, Pa.-based 4R Systems, a provider of analytical software that uses algorithms to match supply and demand.

The 4R Supply Planning Product suite helps Linens 'n Things better manage and replenish store-level stock to meet customer

demand and eliminate lost sales due to out-of-stock merchandise. 4R Systems' retail clients include Ahold, Best Buy, Trans World Entertainment, Stride Rite and Kenneth Cole.

"We offer our guests a deep selection of quality merchandise at exceptional value, while ensuring they can find what they want, when they want it," says Jeff Steinhorn, senior vice president and chief

information officer at Linens 'n Things. "This challenges us to maintain the right stock levels within our stores and ensure customer satisfaction, which translates to sales," he continues. "That means we cannot be under- or over-stocked."

Linens 'n Things logs \$1.8 billion in annual net sales from more than 360 stores across 43 states and Canada selling home textiles, housewares and decorative products. As the company continues to grow, however, it's become increasingly taxing to rely solely on the company's core merchandising system to manage stock levels chainwide.

REDUCING LOST SALES 4R Systems' software is the brainchild of two professors, Marshall Fisher of The Wharton School and Ananth Raman of Harvard Business School. Fisher and Raman partnered with 30 retailers to study short lifecycle products and the challenges posed by matching supply with consumer demand.

By combining their findings with sophisticated analytical tools, the first version of the Supply Planning Product suite was created and launched in late 2001. At press time, 4R Systems was in the final stages of completing version 2.0 and preparing for its release at the end of 2002.

"The software analyzes the full lifecycle of a product," explains Jeff Singer, chief executive officer at 4R Systems. "Its mission is to help retailers reduce lost sales, while maintaining or reducing inventory levels."

The suite, with its multi-tier architecture supported by an SQL server and centralized database, includes the Right Test module which allows retailers to do merchandise testing and store clusters, the Right Buy module to aid in initial product buys and product rollouts, and the Right Plan mod-

ule which forecasts inventory levels based on product movement and impacting variables, including seasonality, promotions and markdowns.

The application leverages transaction and POS data and uses algorithms to translate results into decision-making information for forecasting and supply planning. "By feeding our POS data into 4R Systems' metrics, we will be able to forecast, plan and replenish more accurately at each store," Steinhorn says.

In March, Linens 'n Things launched a five-month test of the application by implementing the Right Plan module to forecast demand and inventory levels for 78 sku's within the chain's bedding products category.

"We started our limited sku test to see if we could do a better job of optimizing these inventory levels and more effectively replenishing these products at store level based on sales data," explains Steinhorn.

Linens 'n Things' core retail merchandising system, supplied by Scottsdale, Ariz.-based JDA Software Group, manages inventory and merchandising processes and provides a master file of inventory levels at the warehouse and each store. By adding 4R Systems' Right Plan module, the retailer has enhanced the merchandising system's results.

Weekly sales and inventory data from the core merchandising system are downloaded into the Right Plan module and, on a weekly basis, the system creates order recommendations and uploads them to the merchandising system. "The system's scientific analysis provides recommended order quantities that we did not have access to before. We feel this is helping us improve on our stock levels," says Steinhorn. "By

improving inventory levels and reducing out-of-stocks, we increased sales. In the past, out-of-stock items would have been lost sales."

EARLY RESULTS With improved inventory levels, Linens 'n Things was able, in some cases, to reduce its required inventory investment for slower moving items. "Findings also might require us to increase investments in faster moving items which translates to more sales," Steinhorn notes. "Looking at these early results, we project that the overall annual chainwide return on investment will be millions of dollars."

Linens 'n Things currently uses Right Plan to manage the bedding department's entire 150 sku's chainwide. Positive results pushed the retailer to embark on the next phase of the implementation which includes using the suite's Right Plan and Right Buy modules to manage 12,000 sku's, including new product introductions.

"The module will help Linens 'n Things analyze which new products should be sampled in specific stores and rolled out to other locations," 4R Systems' Singer explains. "This will replace a manual process the retailer typically used to make these critical decisions."

In the near term, Linens 'n Things plans to spend the last months of 2002 adding the remaining modules. By summer 2003, Steinhorn hopes to roll out the entire suite to all stores in the chain. The application will be launched next in the area rug category, and all 35 store categories will be added on a department-by-department basis.

"We plan to have the company rolled out within nine months," says Steinhorn, "and hope to ramp up approximately four departments per month." — *Deena M. Amato-McCoy*



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