Supplying intelligence

Supply chain management software lets users take action to solve supply chain problems before they happen. *by Craig Mullins and Richard Lower*

Today's fast moving, competitive business environment requires companies to balance product supply and delivery with forecasted and varying product demand. Doing so can be surprisingly difficult, however, and companies rarely get it right. Often, when shortages or quality issues are finally discovered, it's too late; the damage to customer satisfaction, customer loyalty, profitability and revenues has been done.

Operational performance constitutes the cornerstone of a healthy supply chain. To remain competitive, companies need tools to determine whether or not their supply chain is performing efficiently. Teradata's SeeChain supply chain performance management application uniquely and effectively addresses these common business challenges.

As part of Teradata's portfolio of solutions for the demand and supply chain market, SeeChain allows business managers and executives to measure and monitor supply chain performance. The application allows them to exceed their objectives, compress decision cycle times and gain a faster return on their supply chain and marketplace investments.

The SeeChain application complements existing investments in supply chain planning and enterprise applications. It leverages their data in order to quickly diagnose problems and pinpoint improvement opportunities across the entire supply chain. In delivering continuous visibility into performance, SeeChain reveals the root causes behind both exceptional and substandard performance. Prioritizing these performance exceptions and delivering the information to users in context can reduce from weeks to hours the time required to identify, understand and resolve operational problems. Furthermore, having such data fosters a forward-looking supply chain geared toward continuous improvement.

The software takes a systematic approach to monitoring performance and tying the relevant data to specific business processes. The combination of powerful, scalable analytics technology, business-process alignment and the experienced Teradata SeeChain services team allows customers to implement solutions in 90 to 120 days and realize up to a ten-to-one return on investment (ROI)within the first year.

The ins and outs of SeeChain

SeeChain performance-management software is an integrated application based on an open and extensible underlying architecture that can be deployed throughout the enterprise and to partners and customers beyond. This is accomplished through an *n*-tier architecture in which a Web-browser client connects to a Web server and an application server which, in turn, interact with the data store and data sources. This design leverages industry standards such as Java, HTML, HTTP/HTTPS, XML, caching and SQL across the distributed architecture for fast, scalable and secure interface of real-time information exchange.

The application consists of three primary functional components:

> **Correlative Data Analytics**
SeeChain leverages the Teradata Warehouse to correlate, normalize and validate data from existing supply chain systems. With this information, it generates and manages the unique key performance indicators (KPIs) critical to improving an organization's operational performance. This highly scalable data environment is quickly deployable, highly configurable and maximizes existing database and data warehouse investments.

> **Prioritized Exception Management**
Performance management associates data analytics with business processes and problem resolution. SeeChain uses a prioritized exception-management engine to constantly monitor all planned and actual events within the supply chain for critical changes that will impact performance upstream and downstream. The application then alerts specific users to these exceptions, along with their root causes, so preventative and corrective actions can be taken quickly.

> **Intuitive User Interface**
The software incorporates an intuitive, Web-based user interface for interactive information delivery. As a result, all levels

of users—management, employees, customers and suppliers—can use standard browser technology to access, distribute and collaborate on performance exceptions within a secure environment. Upon login, the application server verifies user access against preassigned security parameters. After verifying a given user's security level, the application platform determines what information they can retrieve. Users can dynamically navigate the information in context with an easy-to-use single-screen view to quickly identify performance issues, understand root causes and drive continuous improvement—all while using their existing browsers.

These functional components of SeeChain provide the ability to turn traditional data and KPIs into actionable information. The software delivers all of this critical information using a single platform, which facilitates continuous improvement.

SeeChain in practice

Retailers jockey for position in an increasingly competitive environ-ment and operational efficiency remains the most promising area for improvement. Whether it is days of inventory maintained, forecast accuracy, supplier perfor-mance or in-stock percentage, the difference between today's retail leaders and the rest lies in the efficiency of their operations.

Although most retailers understand the costs associated with poor operations, few have complete visibility into the performance details of their supply chain from the distribution-center dock to the store shelf. Supply chain executives are restricted by the high level summary

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information they typically access, which is generally available only in a historic sense, too late to address current operations such as the ability to get product to the shelf in anticipation of demand. Without comprehensive and timely information, suppliers, store managers and planners tend to blame each other for problems throughout the supply chain.

SeeChain pulls required data from existing

applications such as point of sale (POS), enterprise resource planning (ERP), warehouse management and forecasting and from the data warehouse itself, in order to continuously monitor the drivers that lead to inventory items being out of stock. It then alerts decision makers so that problems can be addressed and avoided in the present or in the future.

Managing the breadth and depth of

Web-based user interface with a hierarchical view
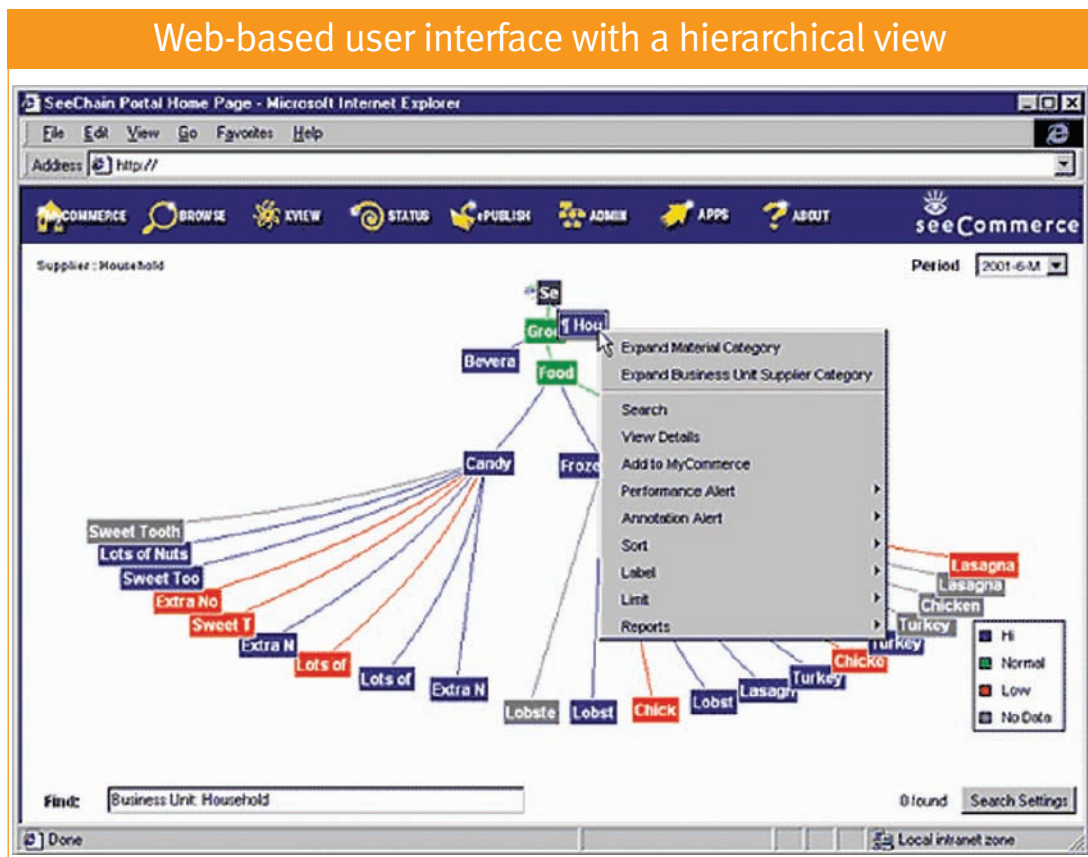
Leveraging standard browser technology, SeeChain provides a dynamic, Web-based user interface that allows users to see their entire supply chain with hyperbolic navigation and traffic light indicators in a single-screen view.

inventory involved in a typical retail supply chain is a complex task, particularly with all of the disparate legacy systems currently in place. SeeChain collects that information to provide a single enterprise view of the supply network. This allows users to significantly reduce average inventories while maintaining high levels of service all the way to the customer.

Jim Presley of the Teradata Demand and Supply Chain Center of Expertise works with SeeChain customers on a daily basis. As a former vice president of professional services at SeeCommerce, the developer of SeeChain, Presley was responsible for professional services, implementation services, training and education. "One of today's biggest challenges is working to enable customers to connect into multiple, disparate data sources in an intelligent manner," says Presley. "Visibility to the data infrastructure so that customers have that single view of the business is important."

SeeChain enables leading retailers to continuously improve business processes, reduce supply chain costs and increase corporate revenue. Shoppers today have dozens of purchasing options; the retailers who provide the best experience will develop the brand loyalty required to survive, and that means keeping shelves stocked while controlling costs.

Living in the real world

Consider a large retailer experiencing significant out-of-stock situations, especially with promotions. By the time they could identify a problem, it was too late to do anything about it. Their manual, six-week analytical cycle hid many performance problems. With promotional analysis not available until after multiple promotional periods had passed, they could not make meaningful adjustments.

To address the issue, the retailer implemented SeeChain. They now receive granular, weekly analysis enabling delivery of detailed and actionable improvement plans to suppliers. Such frequent analysis allows adjustments to be made in the middle of a promotional event.

Out-of-stock situations improved 2% and promotional service levels reached 99%, with promotional sell-through rising 80%. The SeeChain solution paid for itself within the first six months of the project.

The retailer chose to use a Teradata Warehouse as the data store for SeeChain. This platform shift enhanced data loading performance by 450%. Promotion reporting accelerated from four hours to 40 minutes and system-access time greatly improved.

In a second example, an automotive parts dealer improved operations using SeeChain. The complex operations of this business require keeping track of millions of parts from more than 3,500 suppliers. Prior to implementing SeeChain, the company had problems forecasting their inventory. Out of the roughly 220,000 orders taken daily, as many as 10% went unfilled.

Using SeeChain, the company can now resolve fulfillment issues before they impact dealer deliveries. In the first year alone, they realized $7.5 million in inventory reduction; in the second and third years, the company achieved 15% to 18% inventory reduction resulting in an aggregate savings of $400 million. The bottom line is that SeeChain enabled millions in inventory reductions and a revenue increase of more than $10 million in fill-rate improvements.

Teradata SeeChain is a component of Teradata's comprehensive demand and supply chain solution portfolio, which also includes the Teradata Demand Chain Management and Teradata Supply Chain Intelligence applications. These applications all work at the detail items/location level. They all leverage the performance and scalability of the Teradata Warehouse to make information on demand and supply chain performance available in the most timely and effective manner.

SeeChain allows business managers and executives to see and collaborate across the total supply chain. As a result, they can proactively measure and monitor supply chain performance and exceed objectives.

With the Teradata SeeChain supply chain performance management application, you can optimize your sourcing operations. You'll

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be assured of ideal inventory levels, reduced inventory holding costs and compressed decision cycle times, even as you provide an improved experience for your customers. T

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