

technology review

VISIBILITY & CONTROL

in a (software) class by itself?

Analysts may be divided on how to classify the newest supply chain applications. But no one denies that sales of event and performance management software are about to explode.

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With a hurricane bearing down on a busy Asian port, a ship operator is forced to scuttle its regular sailing schedule, delaying the departure of a U.S.-bound vessel loaded with electronic components. But the consignee doesn't have to wait long to find out about the delay. At the first sign of trouble, its event management software application sends out an alert to the company's logistics managers. It then sends out a recommendation that they reallocate stock in the U.S. warehouse in order to meet a delivery commitment to an important customer.

Afterward, during a routine review of shipping performance, the importer's performance management application notes that the hurricane-delayed shipment was only the latest in a long series of shipping problems. In fact, it notes that the overseas factory has routinely made expedited air shipments to the United States, rather than using standard ocean service. An analysis of the factory's inventory and production schedules reveals that the root cause of the repeated use of expedited service was a shortage of a critical part. The software recommends that the factory increase its safety stocks of that key part to keep the production line running and hold down shipping costs.

That might sound like a futuristic scenario, but it's already taking place in shipping operations across the country. Just as they installed warehouse and transportation management software a few years back to streamline their order fulfillment and freight operations, companies are now installing event management and performance management software that will allow them to respond instantly when things go awry. "Companies have come to the realization that to thrive today, it's not just about having a good plan," says Randy Littleton, vice president of marketing at Kinaxis, a software maker based in Ottawa, Ontario. "It's about responding when the plan does not go as predicted."

Early detection

That's exactly what these two software applications are designed to do—detect, diagnose, and resolve performance exceptions. The first type, event management software, collects data in real time from multiple sources so that it can monitor a shipment's progress against predetermined milestones, such as the ship date, and notify supply chain managers if an event fails to take place on schedule. The more sophisticated versions of the software enable companies to respond to exceptions as well.

After a shipment has been completed, the second application, supply chain performance management software, takes over. This type of software measures events after the fact and compares them against pre-set benchmarks to assess adherence to standards. These benchmarks can cover any function or activity in the supply chain. For example, if standard performance for a warehouse is to pick and ship 1,000 items an hour, the software will notify managers if performance slips to 800.

"It's used to manage performance of both internal and external supply chains," says Dushyant Mehra, a senior analyst with the research firm Frost & Sullivan. "It helps companies detect and diagnose exceptions before they become a problem."

Taking the lead

The dominant players in this segment of the software market are SAP and Infor, according to a market research report released by Frost & Sullivan in March. SAP, one of the bestknown makers of business software, has been selling event management software as part of its solution set since 2001. Today, about 200 SAP customers around the world employ the application to keep tabs on supply chain movements. If an event—say, a shipment—does not take place as scheduled, the program will alert a manager by such means as an e-mail or a fax.

"You can track and monitor processes with the software," says Tobias Goetz, a business developer for SCM solution management who's located at SAP's headquarters in Walldorf, Germany. "We are also extracting data from event management software and doing aggregate reporting. So you can determine, for example, the average time [for a shipment] to go from A to B."

Infor Global Solutions, a major software maker based in Alpharetta, Ga., also markets an event management software application. Developed a couple of years ago, the event management system lets the user set up event triggers in a database with instructions to alert a designated person if an exception occurs, says Andrew Kinder, Infor's director of product marketing for supply chain management. The event management application is designed to work with software from a variety of vendors.

Along with its event management system, Infor also offers a performance management application that allows manufacturers, retailers, and distributors to assess execution in planning, budgeting, forecasting, and logistics. This Webbased application draws data from enterprise resource planning and other supply chain applications, whether they're Infor's own systems or those supplied by other vendors. The program compares the data against key performance indicators (KPIs) selected by the user. Christina McKeon, Infor's director of product marketing for performance management, reports that inventory turnover and warehouse labor forecast accuracy are popular KPIs.

Jumping in the game

SAP and Infor may be the dominant players in this market, but they've got plenty of competition. For example, Dallas-based newcomer Blue Sky Logistics Inc. also offers event and performance management applications. Those applications sit on top of other software, such as enterprise resource planning (ERP) systems, warehouse management systems (WMS), and transportation management systems (TMS). Along with sending out alerts when an exception occurs, the software can analyze the reasons for recurring problems. "Not only does it tell me that the order was only 97.6 percent perfect, it tells me why," says Steve Hensley, president of Blue Sky Logistics. "The cause could be the labor force is not effective in getting picks done. Or you don't have enough equipment. It gives the root cause as to why you're falling short."

Other vendors have included event and performance management features in existing software. For example, global trade management software vendor QuestaWeb of Westfield, N.J., offers both event monitoring and a diagnostic capability to suggest a corrective action, such as contacting customs or a customs broker, when an event does not happen as planned.

A few companies have even begun to close the loop between these types of systems. For example, the Canadian software supplier Kinaxis has developed an application, RapidResponse, that connects the event management system to a performance management engine. The application sends out an alert and then diagnoses the problem, generally offering a number of possible fixes. "It sees the problem, then tries to solve it," says Dwight Klappich, an analyst in the Atlanta office of Gartner Research. "It has taken event management from just identifying problems to solving them."

The RapidResponse application uses "live" scorecards set up by the user to measure activities in real time, says Littleton. For example, the application might send out an alert that a scheduled order drop for a part can't be met. The program would then suggest alternatives. The company could expedite shipping of the same part from another warehouse or could locate the part being built by a contract manufacturer to have it fill the current order with product originally intended for another customer.

A number of contract manufacturers have already deployed the Kinaxis application to help control their worldwide supply chains, says Littleton. The application can be accessed through the Web on a software-as-a-service basis or installed on a company's own server.

Class differences

Analysts say the future looks bright for event and performance management software. Mehra, for example, projects that sales will swell from \$600 million at the end of 2006 to \$1.8 billion by 2013. "Overall, [this] segment is expected to grow at a faster rate than the supply chain planning (SCP) and supply chain execution (SCE) segments," he says.

In fact, Mehra believes these applications have reached the point where they should no longer be considered a subset of other supply chain applications. In the March Frost & Sullivan market report, *World Supply Chain Management Software and Services Markets*, he argued that, based on their rate of growth, event management and performance management supply chain applications deserve their own class—a category he calls "Supply Chain Coordination."

Not everyone agrees. Analyst John Fontanella of Boston-based AMR Research, for example, doesn't see a big future for these "coordination" programs as stand-alone applications. He says it's far more likely that both event and performance management will be absorbed into other supply chain applications as features. The market is already moving in that direction, he says. "A lot of supply chain applications have some level of analytics built in that can be used to determine the performance of the function that application is involved in."

Klappich of Gartner Research also thinks event management capabilities will likely be incorporated into other supply chain applications, like transportation management systems. "Companies today expect visibility to be part of any transportation solution," he says. "We'll see less event management as a stand-alone category because it will just become a software function."

But it could be a different story with performance management software, he says. Although Klappich expects to see performance management features incorporated into more warehouse management systems, he also sees a future for stand-alone performance management software packages if they focus on cross-functional performance across the supply chain. In fact, he predicts that major vendors outside the supply chain space—companies like Cognos, which makes financial performance software—will enter the supply chain market with performance applications.

Mehra concedes that performance and event management applications may someday be absorbed into other supply chain solutions, but he says that it won't happen right away. "It will take some time for this trend to develop," he contends.

But no matter how they're sold—as stand-alone applications or as features in other business software solutions—it seems clear that event and performance management will continue to gain traction. When used in conjunction with planning and execution software, these "coordination" applications hold great promise for helping optimize the supply chain.

"There is an increasing preference for supply chain solutions that integrate collaboration between planning, execution, and coordination of the entire supply chain network," Mehra wrote in the Frost & Sullivan report. "By using technology to decide on the appropriate courses of action and then acting rapidly on these decisions, businesses can satisfy their customers' requirements better and deliver the product at the appropriate place and time."