“TIBCO’s architecture was a very close match to our existing architecture. Within two weeks, we were able to unplug our messaging infrastructure and plug in TIBCO. We also liked the fact that TIBCO was more than a messaging company, and they had a vision for EAI, process automation, B2B technologies, and a portal solution.”

Terry Tutt, senior manager and enterprise architect, TNT Logistics, North America

TNT Logistics Streamlines Supply Chain with Real-Time Integration

TNT Logistics, North America Inc., provides logistics support for some of the most demanding manufacturers in the Fortune 500. From its operations center in Jacksonville, Florida, TNT Logistics provides both real-time inbound supply-chain support and outbound distribution support for a wide range of companies, including DaimlerChrysler, Ford, General Motors, Goodyear, Hewlett-Packard, Home Depot, John Deere & Company, and Union Pacific. TNT Logistics’ range of services includes transportation, warehousing, subassembly, and inventory control – virtually all aspects of supply-chain management.

Thanks to its expertise in supply-chain management, TNT Logistics was able to construct its own supply-chain management system more than seven years ago. Vector 21, a real-time transportation and warehouse management system, was written in C++. Its real-time supply-chain architecture uses the Microsoft Windows NT operating system to interconnect a Microsoft SQL Server 2000 database; a proprietary event engine and tracking application; and IBM eServer iSeries – based enterprise resource planning (ERP) suite to handle warehouse management, financials, and accounting; and a transportation manager/transportation optimizer to manage dynamic shipments and other carriers.

System architects at TNT Logistics designed the system using a hub-and-spoke model: a distributed client base running applications from a central server. A proprietary messaging system was responsible for exchanging real-time transaction information between the server and the clients, so users had up-to-the-second information about the status of deliveries, shipments, inventory, and related supply-chain activities.

The Vector 21 system tracks execution at all stages of the supply chain, using real-time messaging to reconcile events and milestones received from a variety of sources such as electronic data interchange (EDI), interactive voice response, and wireless devices. These messages can also trigger events such as “proof of delivery” for the transportation system or invoices in the ERP systems.
The challenges facing the Vector 21 architects were scalability and portability. As the company added more systems to its infrastructure, the server became a bottleneck – the existing messaging system simply could not scale to handle the increase in traffic. In addition, the entire messaging infrastructure was written in C++, which made it difficult to develop interfaces for other platforms.

“Our system was in danger of becoming overextended,” says Terry Tutt, senior manager and enterprise architect at TNT Logistics, North America. “We had reached the limits of the architecture and our proprietary infrastructure, so we were at a decision point.”

Supply-chain Experts Turn to an Integration Originator
Because developing real-time messaging was not part of the TNT Logistics core competency, the system architects elected to abandon their proprietary messaging software and seek a third-party solution to power the Vector 21 supply-chain management system. TNT Logistics needed a new, standards-based solution that was scalable, extensible, and sufficiently open to integrate with a multi-platform global supply-chain infrastructure.

First, TNT Logistics evaluated real-time messaging solutions from various vendors. System designers realized they needed a solution that could go beyond Java Message Service and support legacy C++ applications, as well as the IBM OS/400 operating system, and the Microsoft Windows NT operating system. TNT Logistics turned to TIBCO Software Inc., a leading enabler of real-time business.

“TIBCO’s architecture was a very close match to our existing architecture. Within two weeks, we were able to unplug our messaging infrastructure and plug in TIBCO,” Tutt says. “We also liked the fact that TIBCO was more than a messaging company. TIBCO had a vision for EAI, process automation, business-to-business (B2B) technologies, and a portal solution.”

Integration Sets Stage for Expansion
By integrating its supply-chain infrastructure using an open, real-time messaging platform, TNT Logistics was able to preserve investments in its legacy systems – including those proprietary applications written in C++ – and establish a foundation for future expansion.

By clearing the real-time messaging logjam, TNT Logistics increased system capacity to handle more customers. And by adding a secure web portal, partners, customers, and other business units can access TNT Logistics’ supply-chain systems anytime, from anywhere. Now that TNT Logistics has a real-time infrastructure in place, the company stands head and shoulders above the competition in terms of its supply-chain support capability, and its ability to support vertical and horizontal supply-chain networks.

Secure Portal Links Customers, Employees, and Partners
TNT Logistics’ next step was to extend the integrated system worldwide through a web-based portal. Using TIBCO’s enterprise portal solution to power MyVector.TNT Logistics.com, TNT Logistics can deliver a personalized, secure supply-chain database to customers, employees, and partners anytime, from anywhere.

“We looked at other solutions, but were heavily weighted toward TIBCO because of our favorable experience with TIBCO’s business integration solution and because we wanted to limit the number of vendors we had to deal with,” Tutt says. “TIBCO gave us the solutions we needed.”

TNT Logistics North America is now working with other TNT Logistics global divisions throughout Asia and Europe to train them to use Matrix TNT Supply Chain Technologies. The company continues to grow its logistics support infrastructure and creates B2B interfaces with new TNT Logistics customers to provide better support as it grows.

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TIBCO Software Inc. (NASDAQ: TIBX) is a provider of infrastructure software for companies to use on-premise or as part of cloud computing environments. Whether it’s optimizing claims, processing trades, cross-selling products based on real-time customer behavior, or averting a crisis before it happens, TIBCO provides companies the second advantage – the ability to capture the right information at the right time and act on it preemptively for a competitive advantage. More than 4,000 customers worldwide rely on TIBCO to manage information, decisions, processes and applications in real time. Learn more at www.tibco.com.