techlogix

Harmonizing People | Process | Technology

Establishing Supply Chain Visibility at a hi-tech Manufacturer

Our client, a Fortune 500 enterprise, is a data communications and telecommunications equipment provider. The company is headquartered in North America and provides products and services around the globe. It is a global leader in providing public safety equipment - from infrastructure to applications and devices such as radios and task-specific mobile computing devices.

Our client employs numerous supply chain partners and runs multiple enterprise resource planning systems to support its core business. These systems are deployed at distributed manufacturing and distribution locations in several countries. The company receives a huge number of customer orders every day and, in the absence of any order visibility solution, was struggling to track orders in real-time to identify any issues or delays and to provide timely information back to the customers.

Techlogix implemented a state-of-the-art Business Activity Monitoring solution to provide near real-time order tracking and visibility into the fulfillment process through all stages including planning, manufacturing, pick-pack-ship and delivery by interfacing with more than a dozen ERP and custom built applications.

Customer
Fortune 500 Manufacturer

Industry
Communication Products / Services

Offering
Business Activity Monitoring (BAM) Application Development

About the Client
Our client is a global hi-tech manufacturing leader and provides business-and mission-critical communication products and services to enterprises and governments across the globe. Its products include cellular phones, wireless network infrastructure equipment, and cable television set top boxes.

The Challenge

For this high-volume manufacturer, most customer orders are very complex with typically dozens of line items. Each line item may follow a different fulfillment path - determined by the capacity and manufacturing planning for each type of product. During a single day, there may be as many as 40,000 active order lines whose fulfillment is underway. For the most complicated of orders, the fulfillment cycle can take more than a year to complete.

Once a customer order is booked, it runs through a complex application landscape and disparate enterprise resource planning and factory management systems for its fulfillment needs. A given order, based on its shipment path, may be processed across as many as a dozen different systems. Extensive manual effort was required to check order status in multiple systems to compile and provide information back to business and customer service representatives.

Since the information was available in bits and pieces in multiple systems, the challenge was to create a single end-to-end view of the order fulfillment cycle for different business and IT groups to provide near real-time visibility into critical business activities, and to monitor and provide alerts for potential risks and failures.

Key issues faced by the end users were:

- No real-time order tracking or fulfillment monitoring.
- No single source to view high-level end-to-end order fulfillment status and associated details.
- Reports available in individual systems provided partial tracking information with reactive information only.
- No active monitoring to highlight potential delays in customer shipments.
- No escalation mechanism to resolve delays in different stages of the fulfillment process.

The Solution

Techlogix worked with the customer's Subject Matter Experts and IT groups to craft a business activity monitoring (BAM) solution by analyzing hundreds of supply-chain steps and selecting the ones that provided visibility into the performance of the order fulfillment process. Our consultants also identified potential issues and bottlenecks. This unique logical process has been designed to ensure that our solution provides a single vantage point into the fulfillment process for both functional and technical visibility and analysis.

The order visibility solution monitors the stages followed by an order during the fulfillment and provides lifecycle visibility into the planning, manufacturing, pick-pack-ship and delivery processes.

The solution utilizes the following components:

- **Process Dashboard:** Provides a macro level process view of order fulfillment; shows the activities that have been completed, those that are still pending for a particular order, and those that are adhering to or in violation of an internally agreed service level, etc.
- **Order Tracking:** An interactive tool that provides a single view to track a customer order - its manufacturing progress, and associated delivery and shipment processes
- **Monitors:** Reports that provide detailed information about each fulfillment stage (cycle times, SLAs, etc.) and issues related to each stage (order holds, blocks, delays)
- **Alerts:** Notifications to users about the delays or unwanted situations that may occur during the fulfillment process. The alerts empower users by providing them with the right information at the right time to take appropriate actions in a timely manner. Also, they help business to respond in real-time to mitigate the risk of delaying a customer order
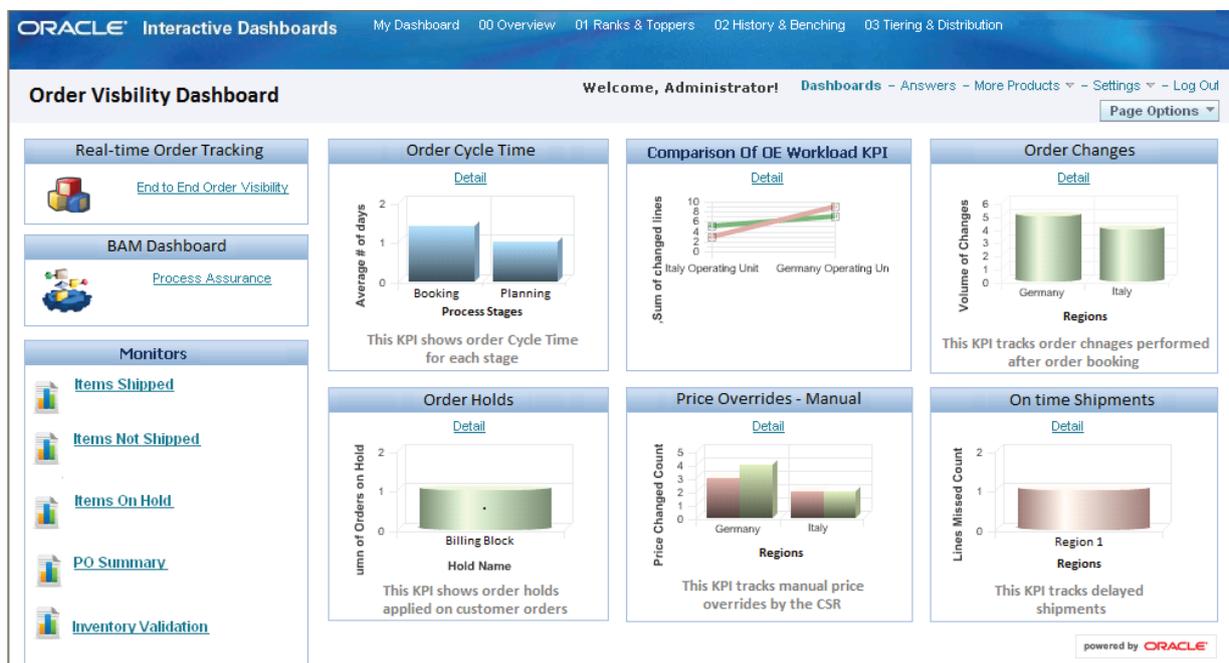
- **Key Performance Indicators:** KPIs measure the actual executed performance metrics against organizational goals. The dashboard enables managers and executives to view performance in real-time, through metrics such as:
  - Number of orders shipped on time
  - Number of orders exceeding the threshold limits
  - Frequency of order holds and/or blocks
  - Fulfillment performance by order, customer, product, region etc.

- Users do not have to log in to different systems for order details and status. The dashboard provides a single point of access and helps them respond to customer queries in a more timely and reliable way
- Reduction in order fulfillment delays with BAM alerts (early detection of issues)
- Enables Executive Management to take strategic decisions based on Key Performance Indicators

Major Issues Faced

The project faced significant challenges:

- Due to functional silos and lack of communication between several geographically distributed teams, project requirements contained conflicting needs, goals and priorities
- Many teams were working on different aspects of Order Management life cycle without a comprehensive view of inter-dependencies
- Several of the 15 systems that our solution needed to interact with, were being revamped independently and simultaneously without a clear picture of their to-be state
- An inadequate level of functional or technical support was available to analyze some of the legacy applications/systems

Technology

The solution was developed using Software AG Business Process Management Suite, Oracle Business Intelligence Enterprise Edition, J2EE and Oracle database 10g.

The interface, business logic and persistence layers reside in Software AG's Integration Server; alerts, KPIs and process visibility were developed using Software AG's Optimize while the dashboard was created using OBIEE.

Benefits

The solution provided significant customer value by reducing the effort to track an order and provided the following benefits:

- The visibility into order progression against customer requested shipment and promise dates resulted in reduction of "late orders" which:
  - Increased customer satisfaction
  - Increased profitability by avoiding late order penalties and lost revenue from cancelled sales
- Business users now have a macro view of order fulfillment status that allows them to collaborate and organize their activities better.

"The business users are very happy with the new capabilities provided to them by this ground-breaking solution. Already, this application has added significant value to the Order Management process and is well on the way to becoming the de facto tool for monitoring orders.

We very much appreciate the partnership we have developed with Techlogix to execute this project in a timely fashion and with such great teamwork with all the other teams involved.

This solution is full of creativity and innovation and represents an exceptional effort at putting the BAM tool in the hands of business users."

Head,
Business Process Optimization Center of Excellence

Contact

For more information, contact info@techlogix.com

About Techlogix

Techlogix is an IT Services, Consulting and Business Solutions company that helps its global clientele achieve enterprise transformation by harmonizing people, process, and technology. Techlogix builds high performance solutions using practice-specific delivery methodologies that utilize its globally distributed development teams. Our people combine the spirit of engineering excellence with a strong commitment to end-to-end customer experience. Techlogix employs approximately 300 people in 5 delivery centers worldwide.

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