



Overview

Country or Region: Europe

Industry: Manufacturing-automotive and industrial manufacturing

Customer Profile

With headquarters in Ebbw Vale, South Wales, Yuasa Battery Europe sells and manufactures automotive and valve-regulated lead acid batteries to a network of distributors and original equipment manufacturers around Europe.

Business Situation

Yuasa has a complex, variable supply chain that involves multiple suppliers and depends on volatile resources. Its existing enterprise resource planning solution did not provide the flexibility or automation required to effectively manage this process.

Solution

To aptly support the supply chain, Yuasa teamed with Microsoft® Gold Certified Partner eBECS to implement and customize Microsoft Dynamics™ AX 4.0 business management software.

Benefits

- Provided comprehensive supply chain visibility
- Increased efficiencies
- Reduced IT burden

Battery supplier infuses supply chain with visibility and automation

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John Cook, IT Manager, Yuasa Battery Europe

Yuasa Battery Europe, a subsidiary of GS Yuasa, was formed in 2003 to bring continuity across the sales and manufacturing organizations that supply industrial and automotive batteries to a network of customers throughout Europe. The original enterprise resource planning (ERP) system at Yuasa was costly to maintain and lacked the flexibility and automation required to support the company's complex supply chain.

Yuasa teamed with Microsoft® Gold Certified Partner eBECS to implement Microsoft Dynamics™ AX 4.0 business management software. In just six months, the company rolled out a highly customized system that effectively supports the complex supply chain and helps minimize the burden on internal IT resources. Today, Yuasa Battery Europe has comprehensive visibility across the entire supply chain and has automated multiple processes to create a more efficient, streamlined business.



Situation



Established in the United Kingdom in 1980, Yuasa Battery supplies and manufactures batteries for customers that include one of the largest automotive suppliers in the United Kingdom and major industrial manufacturing firms throughout Europe. In 2003, the company established Yuasa Battery Europe as the center of business operations for the company's European subsidiaries.

This network of five sales and one manufacturing company used distinct systems to manage their businesses. To bring continuity to these operations, Yuasa Battery Europe introduced a common enterprise resource planning (ERP) system.

Soon after the original ERP implementation, Yuasa found its focus shifting away from high-volume traditional manufacturing towards an integrated sales and distribution business with a higher-value manufacturing facility. As their needs changed, it became apparent that the current system no longer met the company's collective ERP requirements.

The Yuasa supply chain is complex and dynamic, and requires sales organizations to forecast customer demand and manage orders across multiple suppliers. Effectively managing this process presented several challenges because the original ERP system solution was inflexible and used multiple interfaces, none of which provided comprehensive insight into the entire process. In addition, the system required multiple manual tasks that included purchase order entry and modifications, stock allocation, invoice generation, and more.

One of the key challenges of the Yuasa supply chain stems from the volatility of the resource markets. The price and availability of the lead used to manufacture batteries can fluctuate widely, and these variations affect the cost and quantity of batteries from suppliers. As a result, suppliers ultimately dictate when orders become available and the amount of product included in each order. This impacts both the industrial and automotive sides of the business.

While lead times on orders for industrial batteries often stretch for many weeks, suppliers may communicate changes as little as one month before a scheduled delivery. Communicating

these changes throughout the supply chain is critical to business—but under the current system, planners had to manually input changes and make modifications on several screens across the system.

At times, multiple suppliers contribute products to a single purchase order, which means that planners have to split one order among several shipping containers and track who had supplied which products. These tedious processes required large investments of time, caused data entry errors, and made it difficult to confirm changes across the entire supply chain.

Adding further complexity, the demand for batteries, particularly automotive orders, is seasonal; during a cold winter, demand may peak at more than six times what it was in the spring. However, suppliers have limited capacity and cannot change their volume in accordance with the seasons. Yuasa needed to level this demand on suppliers throughout the year, but the current ERP system did not provide an easy way to balance demand versus supply.

"Our existing ERP solution simply lacked the automation and flexibility necessary to keep pace with our business," explains John Cook, IT Manager for Yuasa Battery Europe. "We needed a solution that would support our complex, variable supply chain and automate some very manual processes."

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Solution

In late 2006, Yuasa decided to replace its existing ERP system with Microsoft Dynamics™ AX 4.0 business management software. This highly adaptable solution would deliver the automation and visibility the company required to effectively manage its supply chain, at a lower cost than the existing system.

“We chose Microsoft Dynamics AX for many reasons. It provides a low total cost of ownership, delivers an intuitive interface, and is a high-quality product with high-quality support,” explains Cook. “But most importantly, with Microsoft Dynamics AX, we can easily make modifications to support all of our complex business processes.”

To help with the implementation and to exploit the full potential of its investment, Yuasa teamed with eBECS, a Microsoft® Gold Certified Partner that specializes in integrating and customizing Microsoft Dynamics AX. Six months after the project began, Yuasa successfully rolled out Microsoft Dynamics AX.

Microsoft Dynamics AX enables information to cascade throughout the organization in real time, providing everyone with access to the latest order information. eBECS modified this core ERP functionality to further automate, improve, and streamline the flow according to the nuances of business processes at Yuasa. For example, if the quantity on a purchase order is split among multiple suppliers, the information is automatically transferred up the order chain. This allows the initiating sales organization to see the new order status, the quantity of products requiring delivery, the associated container numbers for each product, and any remaining balance on the order.

In addition, the system does not assign a batch ID to an order until a supplier actually confirms how much of an order they will be able to fill.

“Essentially, there is one person pushing requirement demands down the order chain and one person confirming and updating the order chain against the accurate supply,” explains Cook. “The moment information is changed, such as a delivery date, it is replicated across the supply chain—from the supplier to the sales organization.”

To manage the fluctuating demands of the automotive industry, eBECS implemented custom logic that helps automate

monthly purchasing decisions. Through this process, Yuasa effectively overbuys stock during times of low customer demand to ensure that it can accommodate high customer demand when suppliers’ stock is limited. To prevent factoring in overstock inventory when determining the number of automotive batteries to order for a given month, the system allocates stock to a virtual customer. When the demand for a specific month exceeds supply, Microsoft Dynamics AX automatically releases reserved stock that was previously allocated for the fictitious customer order.

“A simple mechanism was put into place so that the virtual customer reserves the excess stock that is purchased each month,” says Martin Robinson, Senior Consultant at eBECS.

“Microsoft Dynamics AX provides the foundation we needed to create a custom business process that enables Yuasa to level its demand on suppliers and maintain inventory at a level that can accommodate customer needs at all times.”

To further streamline and automate operations, eBECS developed an Electronic Data Interchange (EDI) interface that enables Microsoft Dynamics AX to accommodate electronic orders and invoicing. Customers use one interface to input orders

while another interface supports outbound transactions, such as electronic invoices for customer billing. Yuasa further customized the solution so that customer account administrators can automatically allocate warehouse stock from a valid warehouse location to a customer order.

Under the old system, customers typically submitted orders by fax, and customer account representatives spent two to three hours manually entering data into the system. With the new EDI interface, customers submit their orders electronically; the information automatically appears in Microsoft Dynamics AX and is immediately available throughout the organization.

Integrating Microsoft Dynamics AX with Microsoft SQL Server® 2005 Reporting Services improves data visibility for executives at the parent company, providing easy access to important financial and performance data. Microsoft Dynamics AX rolls up critical data, generates reports, and automatically sends financial reports to executives through e-mail. Sales people also use these reports to analyze sales figures. “The table structure in Microsoft Dynamics AX is quite sensible, which makes it very easy to extract the data into reports,” says Cook.



Benefits

With Microsoft Dynamics AX, Yuasa and eBECS have brought flexibility and automation to a complex supply chain, which has streamlined business processes and minimized the burden on IT.

Provided comprehensive supply chain visibility

Through Microsoft Dynamics AX, Yuasa now has complete visibility across the supply chain because data flows seamlessly through each step of the process. With easy access to information and real-time updates through Microsoft Dynamics AX, planners can forecast business demands and salespeople can provide better customer service.

"In Microsoft Dynamics AX, all of the information regarding orders is immediately available through a single, user-friendly interface. Customer service representatives can easily answer customer questions and everyone has access to the information they need to complete their jobs," says Cook.

Increased efficiencies

Microsoft Dynamics AX has helped Yuasa automate multiple processes and achieve significant time savings. Using the customized EDI interface from eBECS, customer account representatives receive orders over the Internet and electronically reserve the stock from the warehouse through Microsoft Dynamics AX—a process that once took two to three days. This automation saves customer account representatives three to four hours a day. And, by implementing an electronic invoicing system, the company can quickly generate and send out customer invoices, resulting in timely payments and better cash flow.

Reduced IT burden

Before implementing Microsoft Dynamics AX, Cook estimates that the Yuasa IT department spent 50 percent of its time supporting requests to extract data from the previous system. Today, the company uses Microsoft SQL Server 2005 Reporting Services to generate preconfigured reports.

The system runs many reports overnight and automatically publishes them to the company intranet. Executives and sales staff can also receive reports directly through e-mail, so they always have the information they need to run the business.

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eBECS is a specialist in the design and delivery of solutions for manufacturing, distribution and the extended supply chain using Microsoft Dynamics AX and CRM. For contact details please visit our website or email us.

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