CASE STUDY – TMEIC

Industrial Electric & Controls System Manufacturer Automates Warehouse by Mobilizing Oracle E-Business Suite Data

Capacity increase drives need to replace manual operations with integrated WMS

Toshiba Mitsubishi-Electric Industrial Systems Corporation (TMEIC) was formed in 2003 from the merger of the industrial systems departments of Toshiba Corporation and Mitsubishi Electric Corporation. Headquartered in Roanoke, VA, TMEIC Corporation's North American operation designs, develops and engineers advanced automation, large AC machines and variable frequency drive systems for a range of industrial applications.

The Business Challenge:

TMEIC's small, 12,000-square-foot offsite warehouse housed over $2 million in inventory, shipping approximately 10-12 industrial equipment kits per week. The warehouse was not automated, and was staffed by two full-time warehouse workers, with plans to add another. Due to operational changes, TMEIC expected to double inventory and expand shipping/receiving operations three- to four-fold within the next few weeks. They wanted to automate several of their transaction pieces to increase efficiency and reduce the need for additional staffing.

TMEIC ran Oracle E-Business Suite (EBS) v.11i for its ERP application, primarily using the inventory, purchasing and order management functions. Warehouse workers had to key all data into the Oracle EBS system manually, resulting in errors, inefficiency and the pending need for additional staff. They needed to barcode and label their warehouse inventory and use mobile devices to interface with Oracle EBS directly, thereby eliminating manual data entry completely. Additionally, warehouse workers were faced with Oracle EBS downtime each month, when the finance department blocked access to Oracle while they closed the books. Although the warehouse team continued to work, they were unable to process transactions in Oracle for a day or two.

With a sizeable but busy internal IT department, TMEIC decided to outsource its mobile warehouse automation project. They initially looked at Oracle's native Warehouse Management System (WMS) and Mobile Supply Chain Application (MSCA), but quickly realized that neither had the functionality they needed for mobile connectivity without extensive modifications, long installation times and high costs. MSCA in particular, would not allow any custom work for mobile transactions. Anything to do with tailoring, modifying, building new transactions or batch applications was either impossible or prohibitively expensive using MSCA. Additionally, while TMEIC knew that many third-party Oracle integration vendors existed, they did not want to branch too far outside of the traditional Oracle EBS application for their solution.

The Solution:

TMEIC discovered Inovity, formerly BarCode ID Systems, through an Internet search for mobile integration to Oracle E-Business Suite. They initially requested three EBS transaction sets—Inventory, Purchasing and Order Management—to be used by mobile warehouse workers, but after extensive discussion and guidance from Inovity, they realized that eight mobile transaction sets would be more beneficial:

- Miscellaneous transactions
- PO Receiving
- PO Shipping
- Create Shipment
- Ship Confirm
- Sub-Inventory Transfer
- Item Inquiry
- Accounting Close

Inovity conducted a live web session with TMEIC to demonstrate a flexible software solution with business partner RFgen that integrates the desired Oracle EBS transaction data with mobile devices. Impressed by what they saw, TMEIC invited Inovity in for an onsite demo of the software solution.

RFgen Software is a highly-flexible solution for mobile ERP integration that can be expanded to include over 21 pre-built Oracle EBS transaction sets. With development tools for mobile, wireless and voice environments, and open standards-based connectivity to a multitude of systems, RFgen provides certified, open-source transactions and integration to Oracle EBS (as well as Oracle JD Edwards, SAP, Microsoft Dynamics and more). The solution includes standard, out-of-the-box transactions that can run in batch or high-availability mode if Oracle is offline, which was appealing to TMEIC due to its monthly offline status while finance closed the books.

During the onsite demo, Inovity and RFgen were able to connect into TMEIC's Oracle EBS—a highly complex and unique feat for an initial product demonstration. To overcome some onsite challenges, Inovity and RFgen developers also made on-the-fly coding adjustments during the demo to further show the solution's functionality, impressive flexibility and configurability, along with the aptitude and skills of its integrators.

The Results:

Because Inovity developed a trusted business partner/advisory role with TMEIC, they were able to guide the IT team toward the best solution for their needs. In fact, the RFgen Oracle EBS mobile solution was the only offering without a challenging caveat, according to key IT contacts at TMEIC. All other competing solutions under consideration could not provide 100% of TMEIC's required needs and most had to be modified on a custom basis, the results of which were neither tested nor guaranteed to work without extensive additional development time. The RFgen solution required no additional development due to its pre-developed, tested and Oracle-certified transaction sets. Additionally, the Inovity/RFgen solution cost was fully one-half less than the cost of competing, third-party Oracle mobile offerings, with a total cost of ownership estimated at approximately $100,000 less than competing solutions.

Inovity stayed onsite at TMEIC for a week to conduct a Business Analysis Workshop (BAW) to observe company procedures and workflow in order to determine

©Inovity. All rights reserved.

what manual processes needed to be automated. During the BAW period, Inovity and TMEIC uncovered the need for additional transactions not in the original scope of work. Yet, despite the additional requirements, the installation came in ahead of schedule and under budget, fully meeting—and even exceeding—TMEIC's expectations.

For TMEIC's relatively small warehouse, Inovity provided two Zebra Technologies (formerly Motorola Solutions) mobile computers for Oracle data transactions, along with a light industrial Zebra barcode printer, media, and NiceLabel enterprise label printing software, which integrated seamlessly with Oracle EBS and RFgen. Due to the offsite location of the warehouse, Inovity also recommended a Mobile Device Management (MDM) solution to control, troubleshoot and monitor remote devices from TMEIC's corporate IT location.

While mobile integration to Oracle can be a time-consuming and expensive undertaking, the RFgen solution from Inovity gave TMEIC the functionality they originally sought and extended even more Oracle EBS data to its mobile workers with additional transaction sets. The project was completed ahead of schedule and under budget and resulted in significant improvements in warehouse worker accuracy and efficiency:

- 75% reduction in receiving and put-away times
- 83% faster sub-inventory transfers
- 95% faster PO receipts
- 96% faster miscellaneous transactions
- 67% faster sales order management

With mobile Oracle EBS transactions, the increases in inventory and shipping/receiving operations were handled smoothly by existing warehouse staff and the solution was easily adopted. According to Chris Eakin, Inventory/Warehouse Supervisor at TMEIC, "The RFgen solution from Inovity was the easiest to implement and saved us many hours of development and implementation time." Eakin continued, "Multiple groups within TMEIC use the solution easily. We have improved accuracy and increased volume while minimizing the need to hire additional employees."

Formerly BarCode ID Systems, Inovity is a business process improvement company that transforms technology into powerful, integrated solutions that drive efficiency and reduce costs. As a specialty IT systems integrator, Inovity designs and delivers innovative solutions that connect and relay crucial business information between all points of operational activity, in real time. By emphasizing workforce mobility, ERP data mobilization and business process intelligence, Inovity provides automated technology solutions for numerous industries encompassing manufacturing, distribution, healthcare, field service and more.

BarCode ID Systems was established in 1993 and formally changed its name and branding to Inovity on April 4, 2016. Inovity is privately owned and headquartered in Atlanta, and maintains sales and engineering offices in Atlanta, Chicago, Boston, Greenville, SC, Greensboro, NC, Columbus, OH, Huntsville, AL, Ft. Lauderdale and Charlotte. With innovation at its core, Inovity improves client productivity, efficiency, agility, connectivity, mobility and visibility. Contact Julie A. Leonard, Marketing Director, 800-452-7418, ext. 9045, jleonard@inovity.com, www.inovity.com.

©Inovity. All rights reserved.