NIKON – CUSTOM RF TRANSACTIONS HELP SHIP PRODUCT EFFICIENTLY

CASE STUDY

ABOUT THE COMPANY

Nikon, incorporating Nikon Inc. and Nikon Instruments Inc., is a world leader in precision optics, 35 mm and digital imaging technology, microscopes, precision measuring instruments and semiconductor wafer-handling equipment, among its other products. Nikon is recognized worldwide for setting new standards in product design and performance for its award-winning consumer and professional photographic equipment.

BUSINESS CHALLENGE

Nikon had been using an enterprise resource planning (ERP) system based on the AS/400 platform. At each stage of the process, workers had to fill out paper forms that were later delivered to clerks and manually entered into the ERP system. This approach required a high proportion of staff time for data entry and handling of the paper documents. Errors were inevitably made in filling out the forms and entering the information into the system. Therefore, to ensure high levels of accuracy, the company had to maintain an extensive auditing process that double-checked nearly every document and data entry process.

Nikon's first move to improve these processes targeted its repair facilities. The company worked with Peak Technologies to develop RF transactions that worked with its AS400 system. The system was modified to print a barcode on each repair-sales order. Once a repair was approved by the customer, the unit was scanned at every stage of the repair process so that management and the customer could follow the progress of the repair through a web interface.

INDUSTRY:
Manufacturing/Consumer Goods

BUSINESS CHALLENGE:
- Operate in a paper-free environment
- Bring warehouse operational accuracy and efficiency up to world-class

SOLUTION:
- Custom RF transactions

KEY BENEFITS:
- Increased productivity
- Customer service

ADDITIONAL KEY BENEFITS:
- Glitch-free product shipment
- Eliminated all manual data entry
- Automatically updated databases

This was a relatively small-scale project, but it raised productivity by eliminating paperwork, and improved customer service by helping us keep better track of repair items," Kamen said. "More importantly, it gave us a feel for what could be accomplished with RF technology and gave us confidence in Peak's ability to stage a successful RF implementation."

THE SOLUTION

The larger-scale RF implementation in the company's warehouses was driven by Nikon's decision to adopt SAP on a company wide basis. "When we looked at the standard SAP transactions, we felt that the amount of paperwork involved was even greater than what we had been accustomed to with our legacy system," Kamen said. "It would have been intolerable to spend the money to implement a new technology and end up with more paperwork.

Peak helped us to formulate and implement an RF strategy that was instrumental in our successful SAP implementation. They developed 12 custom transactions that handled all of the everyday tasks in the distribution centers without any paperwork. They also helped to design and install the RF infrastructure and provided training and support for the entire project. Finally, they developed a new interface for our existing RF system in the repair centers to enable it to coexist with SAP." The Peak team faced the challenge of delivering 12 custom transactions and the RF infrastructure in a six-month time period while Nikon was still trying to determine what functionality they were going to use within SAP. To meet this challenge, they developed a three phase project plan that allowed the Nikon users to test transactions as soon as they were completed, while development continued on the others. Peak was able to successfully manage this complicated schedule to prevent delays and deliver the solution on time.

The RF infrastructure included Zebra's access points and ruggedized hand held terminals. Peak developed the transactions based on an RF blueprint they put together in conjunction with Nikon managers and users that were identified for each transaction. Peak developed the transactions based on user prompts, what information needed to be provided to the user, what data needed to be captured from the user and what information needed to be sent back to SAP.

To simplify the project, Peak engineers took advantage of the builtin functionality within SAP Console whenever possible. Some of the SAP transactions, such as putaway and picking, simply needed to be modified to increase their efficiency. Other transactions, such as receiving, did not exist within SAP and had to be created from scratch. The receiving transaction, for example, makes it possible for operators, when they receive product, to stand at the door and log it in real time, rather than recording the data on paper for keyboarding later.

> *"The RF system has increased the efficiency of the entire distribution process by making it easy for people to find products, and eliminating the need to fill out forms as product is being picked or put away. As a result, we have experienced substantial improvements in productivity and customer service. We selected Peak based on their experience in implementing RF systems in all sizes of distribution centers and manufacturing plants, as well as their expertise in interfacing with SAP."*
>
> *– Arnold Kamen,*
> *Vice President of Operations and Customer Services*

BENEFITS AND RESULTS

"The new transactions substantially improved our warehouse productivity," Kamen said. When a shipment arrives at the door, the operators can scan the carton and immediately call up a list of the contents as stored on an advanced shipping notice (ASN) that has been sent to the SAP database. They can query the contents at any time simply by entering the carton number, eliminating the need to break open a carton to see what's inside. The putaway transaction suggests a location for the carton but allows the operator to override the choice.

The operator putting away the carton simply scans the carton and scans the new location to complete the putaway transaction. When the labels are scanned, the system checks to be sure that the merchandise is being put into the right spot, and if not, prompts the operator to be sure that they want to put it in a different location. When the merchandise is put away, the product immediately appears as being available for sale in the ERP system. To move a carton, the forklift opera- tor simply scans the carton, scans the old location, moves the product to a new location and scans the new location.

"The software helps improve accuracy," Kamen added. "For example, if it presents the operator with a pick list consisting of 10 items and the operator indicates the operation is completed after only picking nine, the software will prompt the operator to ask if they are really finished.

"The first day that SAP came on-line, we were able to efficiently receive and ship products," Kamen said. "Our Peak consultants were instrumental in the success of the project by developing transactions that are very user friendly. Nearly everything that happens in the warehouse now is recorded by an operator with an RF terminal. We are devoting substantially fewer hours to labor and data entry than were required in the past. The productivity of these operations is improved by the elimination of the need to fill out paper forms and data entry errors. With the RF system, inventory entries are made on a near real-time basis so that counting operations can be performed during less-busy hours. We were very impressed with the performance of the consultants from Peak who delivered better than-expected results. We consider them strategically integral to our business, and we are planning to work with them on our RFID implementation project two years from now," Kamen concluded.