

DHL Special Services automates warehouse management with bar coding and radio frequency technology based on Progress OpenEdge®.



CASE STUDY

CHALLENGE

Legacy applications lacked the ability to scale to support business growth, and adding new features was time-consuming and expensive.

SOLUTION

The Progress OpenEdge®-based Warehouse Management System (WMS) from Progress® partner WICS.

WHY PROGRESS® SOFTWARE

DHL selected Progress because it wanted an open systems environment that would be economical to manage while providing the ability to both easily build its own applications and select best-of-breed applications from Progress Partners.

BENEFIT

In the first few months of deployment, DHL improved its receiving operations by nearly 25%, improved stock picking accuracy, and now has an estimated accuracy of 99.7%.

Based in the Netherlands, DHL Special Services provides distribution services of pharmaceutical and veterinary goods throughout Belgium, the Netherlands, and Luxembourg. Some customers utilize the distribution division of the company, and others also outsource logistics to DHL Special Services and utilize its warehousing services. These customers outsource the logistics of their supply chain to DHL Special Services, which warehouses and stocks inventory and distributes it overnight to fulfill customer orders. This business is information intensive. Since DHL Special Services ships drugs and other regulated goods, information must be carefully tracked on each lot.

While some lots must be stored in refrigerated compartments, others must be stored in secure areas. The strategic use of information technology is essential in this market, since DHL Special Services not only has to continuously improve its own business efficiency, but it also has to provide updated information to its customers and ensure that drugs and other regulated shipments are managed in compliance with government regulations.

The company originally managed logistics using an off-the-shelf warehouse application running on a legacy minicomputer platform. By 1998, management recognized the need to develop new logistical systems to improve operations. Legacy applications lacked the ability to scale to support business growth, and adding new features was both a time-consuming and expensive process. DHL Special Services selected a packaged general ledger application and the Progress OpenEdge platform for building custom applications in-house.

Guus Knoops, Program Manager for DHL Special Services explained, "The business had gone as far as it could possibly go with our legacy applications, and we needed a scalable and reliable database platform that would allow us to track and store shipping, receiving, and customer service information. We have a small IT staff, so we needed easy-to-use development tools that would allow us to quickly build applications. We selected a solution from Progress because we wanted an open systems environment that would be economical to manage while providing us the ability to both easily build our own applications and select best-of-breed applications from Progress Partners."

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— Guus Knoops
Program Manager

By 2004, management recognized the need for a more robust warehousing application that would be able to meet the company's unique business requirements. “We wanted to improve our operational efficiency by using bar coding to mark and track all the lots of inventory throughout our warehouse and distribution operations,” said Knoops. “But in addition to the need to carefully track information for our distribution network, we also have to capture and report detailed information to the governments of the countries in which we operate, particularly for the products we distribute for the pharmaceutical industry that are opium derivatives. We concluded that we needed a new warehouse management system that would allow us to provide real-time reporting on inventory and support both bar coding of inventory and the tracking of inventory status using Radio Frequency (RF) wireless technology.”

REAL-TIME TRACKING OF LOGISTICAL INFORMATION

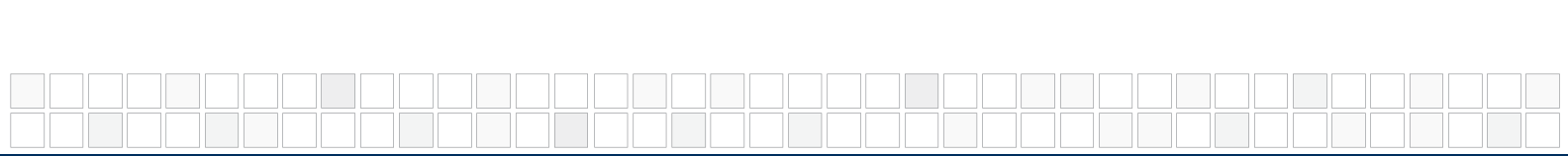
Management selected the WMS System from Progress Partner WICS, which is also based in the Netherlands. This modular warehouse management system provides tremendous flexibility and can be carefully customized for the unique needs of each customer. It offers full-featured support for both bar coding and RF technologies, and it supports the centralized tracking of inventory from receipt through distribution and delivery. WMS runs on the OpenEdge business environment, and it provides the detailed tracking and reporting capabilities necessary for ensuring compliance with government requirements for tracking drug storage and shipments.

According to Knoops, “We wanted a warehouse management system that would easily integrate with our existing internally developed applications. The objective of our WMS deployment was to achieve a much higher level of automation in the warehouse, and we realized that we could not only improve logistics, but we could also better serve our customers by automating warehouse operations and moving from a paper-based system to a modern, automated infrastructure.”

DHL Special Services stockpiles inventory which it then distributes to its customers. Previously, each delivery was tracked using forms. When a customer placed an order, a stock picker was handed a form and manually went through the warehouse to gather the items for shipment. This required a highly skilled workforce, because the stock pickers needed to have a good understanding of the customers as well as an awareness of both the current inventory levels and the warehouse layout.

However, this manual process provided little insight into the current status of orders. At the end of the day, information was manually correlated to summarize the status of inventory and orders. DHL Special Services deployed the WICS WMS application to centrally track the status of logistical operations. This allowed the company to automate the tracking of inventory throughout the logistical process.

Now, when goods are received for storage WMS generates labels that are used to uniquely identify the pallets, and the system allocates storage. Put-away assignments are received through RF terminals on reach trucks. A warehouse receiver scans the bar code into an RF wireless device and then instantly receives automated instructions on where the shipment should be stored. Pick orders that are received are checked and then cleared for picking.



A picker receives the order on a handheld RF terminal and bar codes are scanned to make sure the picker selects the correct goods. Detailed information about each shipment is carefully tracked, including the size, weight, and dimensions of each lot. All the information is captured in real time, eliminating the previous manual, paper-intensive process.

DHL Special Services receives orders throughout the day, primarily through Electronic Document Interchange (EDI). In fact, many customers place multiple orders each day. Automation now allows the company to immediately identify the status of inventory and more efficiently fill each order. Warehouse staff members no longer need to walk the aisles looking for items, since up-to-date inventory status is readily available in each portable RF terminal.

BENEFITING FROM MEASURABLE RESULTS

Within only a few months of deployment, DHL Special Services had already migrated over half of its customer base onto the new systems. The company is already reaping major rewards for its technology investments.

While DHL Special Services has always had a high level of accuracy, the company has improved to over 99.7% accuracy in picking inventory and shipping orders. The company has also been able to achieve these impressive results while using less skilled workers. Training time is greatly diminished, and warehouse employees no longer have to be very familiar with customers and products. “We can now hire workers and they can become productive within an hour,” said Knoops. “We can just provide a warehouse employee with minimal training and an RF terminal that delivers the information needed on how to efficiently perform the job.”

The most dramatic results have been in receiving, where DHL Special Services has been able to increase efficiency by over 25%. Knoops explained, “The combination of a powerful database, flexible applications, bar coding, and wireless communications has allowed us to streamline our process for receiving and stocking inventory.”

Reporting to regulators is now automated, thus minimizing the demands on back office personnel. The company is able to more accurately project the available capacity in its warehouse, which is particularly critical because of the need for specialized refrigerated and/or secure storage. Despite the technology initiatives, the IT department has been able to deliver the applications with fewer staff members than the department had only a few years ago.

“We continue to build applications using Progress tools and we maintain our existing systems with a smaller IT staff,” said Knoops. “We do not have the need for a dedicated database administrator and the Progress development tools allow our software developers to quickly and efficiently add new features and capabilities to help us continuously improve our internally developed business applications.”

DHL Special Services continues to work closely with WICS to ensure that the company is making maximum use of the WMS application modules. “The WICS WMS application is extremely robust and it provides tremendous options for customization,” stated Knoops.

“We continue to work closely with WICS personnel to tune the WMS application modules for maximum productivity. Deploying a warehouse management application is every bit as complex as implementing an enterprise resource planning (ERP) system, so the ability to understand and continuously tweak the modules allows us to constantly improve operations.”

DHL Special Services provides feedback to WICS on evolving application requirements, and the company is confident of the ability of the applications, development tools, and database to scale to support new business requirements and an ever-increasing number of transactions. “The OpenEdge RDBMS provides a secure and scalable repository of information that allows us not only to carefully track real-time logistical information, but also to analyze historical data to improve operations,” said Knoops. “The Progress development tools give us maximum flexibility for creating the reports we need to analyze our performance on an ongoing basis so we can continue to improve productivity and better serve our customers throughout the Benelux region.”

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Progress Software Corporation (Nasdaq: PRGS) provides application infrastructure software for the development, deployment, integration and management of business applications. Our goal is to maximize the benefits of information technology while minimizing its complexity and total cost of ownership.

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