LANSA Case Study

Brewers Distributor achieves rapid ROI in its warehouse

Brewers Distributor Ltd. (BDL) is Western Canada's leading distribution and container return service for the brewing industry, moving nearly a billion Canadian dollars worth of beer per year. After successfully extending its JD Edwards system with LANSA-based Web self-service and M2M integration for its wholesale customers, BDL used Visual LANSA Framework and LANSA Integrator as part of a dispatch and Warehouse Automation System, saving the company nearly $500,000 per year.

Andrew Hobbs, manager of IT applications at BDL, says, "We should see payback in less than three years. The total capital required to complete this project was $1.3 million and the annual savings are projected at over $450,000. Without LANSA, we could not have achieved the look and feel necessary for this application, nor could we have implemented it in the short development window available."

Improving Packer Productivity

BDL handles warehousing and distribution for its two shareholders, the Labatt and Molson breweries, which together hold over 85 percent of the Canadian beer market. Customers create on average 28,000 orders per month, an increasing number of which are handled electronically by a LANSA-based M2M solution. The solution lets high-volume customers transmit orders directly from their POS systems or a self-service Web site used mainly by smaller customers.

Having streamlined and enhanced customer service, BDL's next focus was to improve productivity at its Vancouver distribution facility that processes over 40 percent of the beer BDL ships each year.

Picker productivity was hampered by inefficient procedures. Pickers delivered pallets to one of the six manual scales, introduced to compare the actual and calculated weight of pallets as a loss control measure.

Hobbs explains, "Pickers would lose between 5 to 15 minutes for each pallet. In our Vancouver distribution center, where we put through 1300 to 1700 pallets per day with 40 pickers, that could easily add up to over 100 lost man-hours per day."

Another area open for improvement was the way pick slips were dispatched. Pick slips were printed in advance, manually sorted by priority and placed on a table. Unfortunately some pickers would go through the stack of pick slips and take the easier looking assignments or more than one assignment at a time, disrupting the priority.

"With annual savings over $450,000, we should see payback in under 3 years."

"We wanted to put control of the workflow into the hands of the supervisors. They needed better visibility of what still needed to be picked and better tools to manage that work," continues Hobbs.

"We had already benefited from LANSA's productivity and easy integration with JD Edwards when we delivered the Web order system in 2004. Rather than introducing yet another technology that we would have to master and support, we decided to extend our investment in LANSA."

An Integrated Warehouse Solution

With the help of Samuel Strapping Systems, BDL designed and implemented an automated production line that automatically weighs, wraps and labels completed pallets, then scans pallets as they move through the production line and are loaded onto delivery trucks.

Although this removed the delay at the scales, additional functionality and tighter integration with JD Edwards was needed to provide better management of the workflow.

"We took the new process well beyond just automating production lines," says Hobbs.

"We built a Warehouse Automation System (WAS) that uses a number of LANSA components. I strongly favoured Web services for any system integration, as it fits in our plan

to gradually move to an SOA environment. We used LANSA Integrator SOAP Web service requests to have JD Edwards communicate with our line control software, labor management solution and other systems."

"We used Visual LANSA Framework to replace our green-screen JD Edwards Dispatch module with easier to navigate forms."

"Visual LANSA Framework was also used for new modules that manage the Load Plan and give the process controller a visual depiction of pallets moving through the line and lets them deal with any exceptions."

"Last but not least we re-introduced RedPrairie's labor management software and integrated this as well."

"We began development of WAS in December 2005 and started roll out less than 5 months later. The project team consisted of four business-experienced RPG developers, who were newly trained in Visual LANSA."

"The developers really enjoyed working with LANSA. They were proud of the graphical systems they produced and of how quickly they did it. Development time has been cut significantly by using LANSA versus RPG. Not only that, the screens are highly graphical and intuitive, something we could not have done in RPG," says Hobbs.

Better Workflow Management

The new Dispatch system lets dispatchers select orders for dispatch using a variety of filter options. Selected orders are passed to a pick slip management program, which breaks down the order into pallets. The Load Plan module lets supervisors sequence picking assignments at the pallet level and alter the priority to handle unforeseen events.

Pickers go to a kiosk and swipe their ID-card, which triggers printing of the next pick slip and WAS passes pick slip data to the RedPrairie CALM system, which calculates a picking goal time and displays it on the kiosk screen and on the printed pick slip.

The picker takes his loaded pallet to one of five in-feed lifts on any of the three automated lines. The pallet label and pick slip are scanned to tie the pallet ID to the pick slip order data. LANSA Integrator then processes SOAP transactions to tell WAS the picking assignment is complete and the pallet has started its journey on the production line.

"The line control software in our Vancouver distribution center interfaces with the JD Edwards and WAS systems in our Calgary Data Center via LANSA Integrator," says Hobbs.

"The automated lines have scanners at different points along the line that read pallet labels and send data via XML SOAP requests. Using LANSA Integrator, we receive and evaluate that data and send SOAP instructions back. The line control software does not move the pallet until WAS sends back a LANSA Integrator SOAP request."

"We have proven that we can rapidly develop new systems with LANSA."

Rapid Return On Investment

"The total capital required to complete this project, including the Samuel Strapping line automation, was $1.3 million and projected annual savings are $450,000," says Hobbs.

"So we should see payback in less than three years. Above that, savings from effectively measuring and managing picker performance and reducing error rates, will become more evident over time."

"We took away manual weighing, wrapping and labeling of product and replaced it with an automated line process. Now pickers drop their finished pallet onto the line and go on to the next order. We can now handle an additional 280 pallets in a 24 hour shift, a 25 percent improvement."

"In the manual system we hired up to six loss prevention officers from an external security company for each eight hour shift. These have been replaced by three automated lines and one process controller," says Hobbs.

"The new system gives us an accurate, timely overview of the daily workload and lets us release pick slip assignments in the most efficient order," adds **Peter Gill**, warehouse manager at BDL's Vancouver facility.

"We now manage the picking assignments properly, based on our daily priorities, rather than leaving decisions to the individual picker."

"Before we could not accurately measure picker productivity and didn't have any reliable statistics to set safe productivity expectations. We went from a system where we couldn't effectively control work being done to one where we have detailed and reliable statistics."

"Three months after going live, we reduced picking errors to three percent, the lowest ever at the Vancouver location. Correcting errors is expensive and impacts the performance statistics upon which our shareholders measure us," adds Hobbs.

Future Improvements

"Over time I can see our JD Edwards World system being phased out. Our version has been so highly customized that it is not really JD Edwards anymore, so upgrading would be a daunting task," concludes Hobbs.

"We may move to the LANSA ERP Framework. We have already proven we can rapidly develop new and enhanced systems with LANSA. Our in-house Web and warehouse automation extensions give us a competitive edge far and above the standard ERP logic. Using LANSA's industry standard Web services to integrate these diverse systems is also a good start on the road to SOA."

Company and System Information

- Brewers Distributor Ltd (BDL), based in Calgary, Alberta, Canada, is a joint venture owned by Labatt Breweries of Canada and Molson Breweries for the wholesale distribution of beer and the collection of returnable beer containers within Canada's Western Provinces and the Northwest Territories. BDL operates nine distribution centers and four cross-dock facilities. For more information visit: www.bdl.ca
- BDL uses a single System i model 550 with multiple locations attached via VPN connections and Citrix servers.
- BDL's LANSA systems integrate with JD Edwards World V7.3.11 ERP software from Oracle, automated production line systems from Samuel Strapping Systems and Computer Assisted Labor Management (CALM) software from RedPrairie Corporation. For more information visit: www.jdedwards.com, www.samuelstrapping.com and www.redprairie.com

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