LANSA Case Study

Mincron's modernized ERP system generates new sales

The decision as to what application modernization technique to choose can be complex for any company, but the choice is even harder for software vendors. Their future depends on attracting new customers for their solution, but they also have to consider the upgrade path and associated risks/benefits for their existing customers.

Mincron Software Systems had to make a decision about its modernization strategy for its RPG-based ERP system. Nearly three decades of industry knowledge and three million lines of code underpin Mincron's time-tested solution and form the foundation for its success. With so much at stake, Mincron thoroughly researched all modernization options and decided for a staged modernization plan with RAMP from LANSA. After delivering its RPG-based system in a Windows framework and adding new functionality on top, all came to fruition with new sales. Using LongRange from LANSA, Mincron then went a few steps further and was one of the first ERP vendors to deliver an integrated native mobile application for its customers on the road.

Three million lines of code

Mincron Software Systems (MSS) is a leading provider of software and business service solutions for wholesale distributors, logistics companies and other businesses requiring integrated enterprise software solutions.

Most of Mincron's customers are wholesale distributors of hard-goods, such as HVAC (heating, ventilation, and air conditioning), plumbing, electrical and industrial products. Greg Neal, Mincron's director of product development, explains "Our customers range from small businesses to large Fortune 500 companies. Our customers' customers are typically contractors, whose jobs may range from small residential repairs to large commercial projects. Needless to say, our solution needs to be flexible and scalable."

Over the last 30 years Mincron has grown tremendously the functionality of its flagship MSS/HD (Hard-Goods Distribution) solution to include industry-specific functionality. In addition, Mincron has developed integrated applications for warehouse management (MSS/WM) and light manufacturing (MSS/LM) for workshops. Mincron's customers all have the source code and many of their customizations have been fed back to Mincron to be incorporated professionally into the master version. Today MSS/HD consists of over 3 million lines of RPG code and 2,500 screens.

While Mincron extended its solution with Web commerce, EDI and RFID to keep up with business demand, the user

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interface had not been updated and was still 5250 style green-screen. The legacy interface was hindering new sales.

Neal explains, "You cannot go into an opportunity, demo a green-screen solution and expect to make a sale. New prospects don't want anything to do with it and existing customers are getting worried about hiring and training new staff. So essentially a few years ago our very survival relied on us modernizing our application."

"We did not have the time or the resources to sit down and start from scratch and just rewrite 3 million lines of code," continues Neal. "We didn't want to do something as drastic as that either and throw away decades of work and a time-tested solution. A drastic move like that would also mean a risky upgrade path for our existing customers. So we had to figure out a more evolutionary way to get our solution to where we wanted it to be. And since new sales is the lifeblood of any company, we had to do it quickly."

Which Modernization Strategy?

Greg Johnson, team leader for new technology at Mincron, was put in charge of evaluating modernization techniques. He explains "Early on in our research we looked at a tool that promised to translate RPG code to Java, but we didn't get the

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results we hoped for. A second evaluation was based on Web refacing technology. It made the individual screens look better, but the overall navigation and functionality had not improved."

"We were looking for a technology that would allow us to deliver our solution as a true Windows style of application. Something that would allow us to take advantage of the desktop environment, integrate with Outlook and Excel and build new gadgets into our product."

Then LANSA's modernization tool RAMP came on the radar. "The concept of the RAMP Framework was just perfect for our situation. It allowed us to totally restructure the complex application navigation of over 750 menu options with a far more intuitive tree structure, tabs and search filters in a native Windows framework. RAMP's embedded refacing component would allow us in a very short time to modernize our 2,500 screens and snap them into the framework. In a second phase we could revisit those screens and enhance them further, or we could replace them gradually and piece-by-piece with true native Windows applications and snap them into the same framework," says Johnson.

As to whether RAMP falls into the refacing or development category, Johnson feels RAMP's framework approach gives the best of both worlds. "Through the framework you're not just improving individual screens, but the overall navigation of the entire application. Another big plus is that RAMP allows you to add new functionality. Some of the tabs contain old functionality and some new, but the navigation, look and feel is consistent."

The Modernization Project

Within 3 months after attending a RAMP training course, a small team (Neal, Johnson and 3 developers) delivered stage one of the modernization project to the sales team: A fully functional Windows version of MSS/HD, now called MyHD, containing all menu options in RAMP's navigation tree structure, but still with the aXes default GUI layout for the ERP's 2,500 RPG-based screens.

The team then turned its attention to the first beta customer site and spent 7 weeks preparing, installing, training and assisting the customer to go live. Meanwhile Mincron started working on stage two, enhancing the screens to make them not only look like Windows screens, but also behave like true Windows screens. Plus Mincron was adding new functionality. The project of enhancing 2,200 screens (300 were left in their default GUI layout) took 10 months, with a core team of 5 full time developers, assisted by 4 to 5 other staff during peak times.

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New Sales and Existing Customers

MyHD stage two was released to the sales team and two months later Mincron signed up its first MyHD customer. "It ended up being a fantastic product and we continue to make it better. Our sales guys are very happy. Everything came to fruition when we started to get brand new sales." says Neal.

Mincron's existing customers are getting excited as well. According to Neal, existing MSS/HD customers, who are lightning fast when using green screens, are harder to please than new customers. "You really have to add value and provide new functionality before existing customers are willing to give up their green screens," he says.

Going Mobile

During the screen enhancement stage, one of the team members investigated the use of aXes Mobile and created a simple mobile Web app over Mincron's ERP solution. It included a customer search, product search, order inquiry and order entry. It was fully functional, but just meant as a prototype.

It did lead to some interesting discussions internally and with customers, debating whether mobile apps should be Web, native or hybrid. Based on research and customer requirements, Mincron formed the opinion that mobile Web apps are fine for basic inquiry and update access to its ERP system, but for performance, reliability and integration with device hardware functions, Mincron decided to go on the path of native mobile apps. using LANSA's LongRange. (This is a separate success story.)

All Boxes Ticked

"For the sake of our business, we had to do more than make things look pretty," says Johnson, During their elaborate search for a modernization strategy, Neal and Johnson came up with a list of criteria they were trying to achieve and feel confident the criteria were met with RAMP from LANSA:

- Marketability: Proven actual new sales.
- Integration with MS Office / Windows: Out-of-the box with Visual LANSA.
- Performance: So fast that even seasoned green-screen users are impressed.
- Incremental development & delivery: Change was by evolution rather than revolution. "We did not have to put innovation on hold for a few years while working on a 'big bang' release," says Neal.
- Timely delivery: With a first modernization stage released in 3 months and a second stage in 10 months, the answer is clear.
- ROI: After what was a reasonable investment in dollars and time and with new and existing customers lining up for MyHD, Mincron's President, Wendy Berger, is happy as well.

"RAMP almost sounds as too good to be true," concludes Johnson. "It allowed us to execute our existing RPG system in a Windows environment and immediately start building native Windows components on top and plug them in as we go. LANSA gave us the development path that we want to go forward with."