

Bemis' agile IT team scores one success after another



Some IBM i shops seem to get caught in a self-fulfilling downwards spiral. It may start with a few RPG developers who don't want to learn anything new, or who are not given a realistic opportunity to do so. User requests for modernization and innovation are not met and eventually this results in the platform itself getting a negative image. The system goes officially into 'maintenance mode' and efforts are being focused on getting off the platform, starting from scratch with something new.

Bemis Manufacturing decided on an upwards spiral capitalizing on its existing infrastructure, but redeveloping where needed. Its agile RPG team trained in LANSA and has delivered one successful project after another. Four IT college graduates joined the team, becoming familiar with LANSA and IBM i in a few weeks. Bemis business users are now experiencing productivity gains of over 20%, as well as improved effectiveness of decision making.

RPG & Standalone PC applications

Bemis Manufacturing Company, with its headquarters in Sheboygan Falls, Wisconsin, USA, is a family-owned business that traces its roots back to 1901. Bemis produces and markets bathroom products, custom plastics, healthcare products and precision parts, serving markets worldwide. At the core of its business are bathroom products and Bemis is the largest toilet seat manufacturer in the world.

In the early eighties, Bemis started out with the PRMS ERP package on an IBM S/38, but the solution has been so heavily customized over the years that it can hardly be called PRMS anymore. The ERP system, now running on IBM i, was developed over a well-designed database, but the RPG programs had limitations, especially the user-facing programs.

Susan Leonard, Director Systems Programming & Operations, says "Users often had to open multiple programs to collect the data they needed, or step through consecutive screens. RPG also didn't allow users to hyperlink documents or images to the ERP information."

In addition to the RPG code, there were a few thousand MS Access, MS Excel and other PC applications that were never supported by IT. These standalone applications, mostly in the manufacturing area, were the result of users resorting to all kinds of tools as a way to get a solution without having to wait for IT resources.

A few years ago a new initiative started to 'Simplify Our Systems' (SOS). A cross-functional team came up with a list of 150 improvements that they would like the IT department to do to make the systems easier to use.

Bruce Hagen, VP of IS, explains "The improvements ranged from very simple to very complex. It was clear that most of them could not be delivered with RPG. Coincidentally we were receiving LANSA's email invitations for Webinars and whitepapers and we decided to have a closer look at it. We saw an opportunity to use the LANSA products to address the system simplification project, which today we describe as system modernization."

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Agile and Scrum

Bemis' eight RPG developers were then trained in LANSA. Most of them were new to event driven programming and learning curves differed for each individual. Overall they became familiar with LANSA fairly quickly.

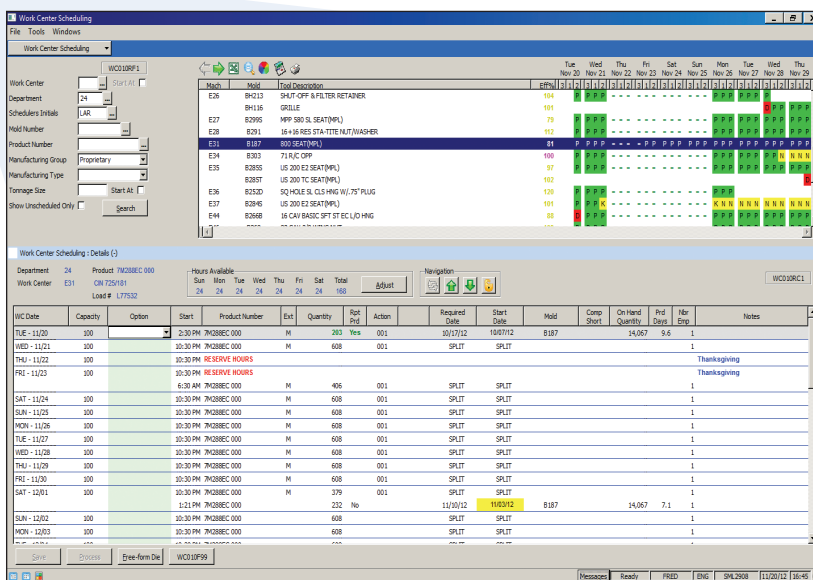
The last four developers that joined the modernization team were college graduates, who didn't attend any formal LANSA classroom training. "Learning from the tutorials, they were able to build production ready programs by the second week of employment" says Leonard. "LANSA is straightforward and quite similar to what they had been taught in college."

Developers are split into three natural teams of four, each team working on its own project. The team members themselves ensure there is a balanced mix of experience in each team. Once a team has been told what their next project is, they do all the planning themselves.

Bemis has been using agile development for seven years and it is working extremely well for them. Very early on in a project the IT teams start to schedule weekly face-to-face meetings with their business users to show them the project's progress. Stephanie Held, one of the developers, explains, "Users not only get to see the programs, they actually get to interact with them. They can conceptualize the solution, discuss it in a group and provide really good feedback. Development is now a joint effort."

Where to start?

The IT team arranged the modernization projects on the watermark of a tree, with essential manufacturing applications at the bottom of the trunk and less essential applications spreading to the branches. →



Work Center Scheduling is used by the production schedulers to plan the manufacturing floor by day, shift, work center, mold and product.

"A lot of the general modernization requirements were not specifically scheduled for, as you get them automatically when you develop in Visual LANSAs, such as being able to sort on columns, export to Excel and hyperlink to documents or Web sites," explains Leonard.

Starting at the trunk of the tree with the manufacturing applications, the teams found that numerous procedures were duplicated and that multiple versions existed. "Redeveloping those standalone mission critical PC programs, received priority over modernizing 5250 screens. There were many more benefits to be gained by consolidating them into one way of doing things and by integrating them with our IBM i system," says Leonard.

One of the larger MS Access to LANSAs consolidation projects was for **Quality Specifications**. This system provides operators with instructions how to produce a high-quality product. It may contain machine settings, pictures of good products versus bad products, packing instructions, and so on.

"Previously there were six different ways of doing the same thing, today there is just one way. The system has been setup very flexibly, allowing for consistency across divisions, but also for nuances. Using LANSAs it was also very easy to attach documents and images to our IBM i systems," says Leonard.

Another project involves **Capacity Planning**. Users select the product, time period, machine size, tools and other criteria and press a button to let the LANSAs application do the calculations and produce the graph. "Previously users would have to export data to a CSV file, reformat data in Excel, put in their calculations and create a graph. They had to do that every time they wanted to graph," says Leonard. "Now it is amazingly easy and far more accurate."

A **Forecasting System** lets users import data from Excel into the LANSAs application, simulate what-if scenarios and re-graph the data. Users can save different scenarios centrally on the IBM i server.

"We also redeveloped several legacy RPG applications in LANSAs," says Leonard. "The new applications are far easier to use and drastically reduce the need for training. For example, a quite complex **Work Center Scheduling** application was recently implemented at our Lenoir plant, without IT staff having to travel to provide training."

Other applications are totally new. For example **Requesting Time-off** was previously a manual process. Now workers can view relevant rosters and apply for time-off at a kiosk in their lunchroom.

Bemis is also working on a **B2C eCommerce project**, called 'Classic Colors'. It allows customers to select a toilet seat matching the colors of the bowl from a large range of colors.



The development team. Back Row: Brian Mauk, Bill Justman, Dean Reinemann, Garrett Eaton, Scott Eickert, Brian Rettmann. Middle Row: Calvin Steward, Kevin Welsh, Andrew Zastrow, Cindy Schuler, Stephanie Held, Dave Harms. Front Row: Michael Gallipeau, Gail Schroer, Troy Loberger

"Over 100 business users now spend less time learning and navigating the system."

They can pick a few colors and have them mailed as paint chips in the actual material of their chosen toilet seat. They can match the paint chips with their bathroom, pick the color they like best, go back online and finalize their order. The solution is expected to decrease the number of returns because of color mismatches. This project was done with LANSAs Commerce Edition, a product that provides all the code for a standard eCommerce site, which can then be customized.

High Visibility of IT Team

"The LANSAs applications have a consistent and intuitive look and feel. Moving between tabs, sorting on columns and Excel export buttons are now standard features. This results in over 100 business users spending less time learning and navigating the system. And with features like dynamic graphics, it has not only improved overall productivity, but also the effectiveness of users and decision making," says Hagen.

Bemis' users agree. Wayne Pilz, who uses a modernized **Engineering Database** application, says his team can implement new product setup at a much faster rate than previously. Scott Willadsen, who uses **Work Center Scheduling**, estimates the new system saves him 20% of his time. He especially likes the way charts are redrawn when the data changes, giving an instant insight into capacity and trends.

"The word of mouth from our users in terms of how the LANSAs applications have

really simplified their work and how they look forward to developing new applications, has resulted in a lot of visibility. Our CEO has become a major sponsor and supporter of IT and LANSAs," says Hagen

Likewise the developers are also happy with the quality and productivity of their work with LANSAs. "No one wants to go back to RPG, although at this stage RPG maintenance cannot be totally avoided," says Leonard.

Leonard summarizes the overall experience of application modernization as very positive, but also warns that it is an evolution that takes time. "Initially there was resistance, especially from die-hard 5250 users. But once users started to realize what kind of applications we could give them with LANSAs, they became very involved and started asking for more." ■

Snapshot

Customer: Bemis Manufacturing Company, with 1,600 employees, is an international manufacturer serving markets worldwide. www.bemismfg.com

Challenge: Modernizing a legacy IBM i-based ERP system and redeveloping a few thousand PC applications to become an integrated part of that ERP system.

Solution: RPG team and college graduates use LANSAs to gradually redevelop its legacy RPG system and standalone PC applications.

Key Benefits: Improved productivity and effectiveness of decision making for users. Happy and very visible IT team, sponsored by CEO.

Products Used: Visual LANSAs, LANSAs Commerce Edition.