

LANSA Case Study

Green's winds back ERP modifications with LANSA

In order to make a packaged ERP solution suitable to a company's way of doing business and to interface it with other systems, it is usually unavoidable to make modifications. Moreover, it is often in the gaps created by these generic ERP systems where the real opportunities to innovate and gain competitive advantage exist. But over time, these modifications can also be a burden, especially when they are developed in hard-to-maintain or error-prone code. Many IT departments find that they are spending most of their time maintaining these modifications and interfaces.

Green's General Foods (Green's) found a way to wind back their RPG-developed ERP modifications without losing any custom functionality. Over 150 RPG programs have been replaced with LANSA's Business Process Integration solution and custom processing is now managed by a business analyst, rather than a developer.

More than Just Middleware

Green's General Foods, based in Australia, produces and distributes food products, such as baking and pancake mixes, crackers, muesli, oats, popcorn, maple syrup, toppings and gravy. Brand names include Green's, Lowan, Poppin, Waterthins and the gluten free range Basco.

Green's main ERP is BPCS 8.0 (called Infor- LX since version 8.3) supplemented by over 30 other systems that include a WMS (Warehouse Management System) from the Paperless Warehousing Group and EDI Server from GXS/Inovis. Both the WMS and EDI solution are Windows-based. The ERP is IBM i-based.

Anish Mathur, Senior Business Analyst, explains "Until recently all the interfaces between BPCS and the other systems were custom developed RPG programs that had many business rules embedded. We wanted to move away from that way of doing things, as we had a lot of issues supporting the various interfaces."

"We needed more than just middleware and were looking for a BPM (Business Process Management) solution. Something that would allow a business analyst to configure our business processes, rather than having to write programs to do that. We wanted to make better use of our ERP by moving the modifications outside the ERP and come back to a near standard implementation.

The Evaluation Process

Green's looked at several middleware and BPM solutions. Anish was initially keen on TIBCO and MS BizTalk, because



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he already had experience with those products "But the bigger, and more complex, BPM tools weren't really suitable because of the high investment in licencing cost, as well as the huge effort involved in learning, implementing and supporting the tools. We only have a team of four, including help desk support. We want to keep our team small and were looking for a practical tool, something that could be managed by a small team, or even by a single business analyst," says Anish.

LANSA Composer was one of the evaluated tools that was shortlisted to complete a Proof of Concept (POC). Simplified for this case study, the POC consisted of:

- Pulling picking confirmations into BPCS from the WMS.
- Applying validation rules on order-quantity and available inventory. Trigger an alert on fail.
- Triggering billing in BPCS and send the generated Invoice to the EDI server.

Even though BPCS has an ECM (Electronic Commerce Management) module to automate the import of transactions, it doesn't offer a way to automatically launch

Snapshot

Customer: Green's General Foods is a leading Australian producer and distributor of food products. www.greens.com.au

Challenge: The many customizations in Green's ERP system required a lot of maintenance effort, were error-prone, and made ERP upgrades difficult and expensive.

Solution: Move the modifications out of hard to maintain ERP programs into a BPI solution where business rules can be managed by a business analyst.

Key Benefits: Quick ROI at what is estimated to be half the cost of more complex tools. The ERP implementation is now easy to upgrade, as it has only minimal customizations.

Product Used: LANSA Composer, aXes-Robot

the billing process. The only way to initiate billing is to type the order number into a BPCS screen.

This is where aXes, another LANSA product, could fill the gap. aXes-Robot is an API (application programming interface) that basically simulates the actions of a data entry person, making it possible to integrate 5250 programs with .NET, Java and other applications.

In Green's POC, after LANSA Composer has pulled the picking confirmations from the WMS, it extracts the order number from the confirmation, calls aXes-Robot and instructs it to navigate to a particular BPCS screen, type the provided order number and submit the screen to initiate the standard BPCS billing process.

"The LANSA Composer and aXes combination turned out to be a very good solution for us. Composer does the orchestration and contains the business rules and smartness, while aXes-Robot helped us with 'the last mile' of integration that would otherwise have meant that we needed to continue develop custom programs," explains Anish.

The Project

Green's went ahead with the LANSA Composer and aXes-Robot combination. The six interfaces that were causing the most grief, as they included over 150 RPG programs, were tackled first:

1. Pull orders from the Windows EDI server and transform them to a BPCS format.
2. Trigger order acknowledgements in BPCS and send them to the EDI server.
3. Trigger pickslips in BPCS and send them to the Windows WMS.
4. Pull picking confirmations from the WMS to trigger inventory adjustments in BPCS.
5. Initiate BPCS's billing process to generate invoices, then send them to the EDI server.
6. Pull ASNs (Advanced Shipping Notifications) from the WMS. For each ASN find and update the matching order in BPCS, check that billing has completed, then conditionally update the ASN with BPCS billing info and send the ASN to the EDI server.

aXes-Robot is used to cater for conditional order adjustments (step 4). If there isn't enough stock to fulfil an order, either the quantity of the order line needs to be reduced or the order line needs to be cancelled. And if the cancelled line is the only line in the order, the whole order needs to be cancelled.



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These validations are now done in Composer, which then calls aXes-Robot to navigate to a standard BPCS screen to make the appropriate order adjustments.

aXes-Robot was also used to trigger the billing process (step 5) and to execute 'batch allocations', mimicking what a data entry person would do to allocate inventory to an order.

"By putting the rules and validations in Composer and filling the data entry gaps with aXes-Robot, we were able to remove the need for many custom programs," says Anish.

The Benefits

"Our ERP system is quite robust, if you use it in the standard way. The problems start when you make too many modifications, because you end up having complex business rules duplicated and embedded in hard to maintain programs. We replaced over 150 custom RPG programs by putting the smartness in LANSA Composer and having it trigger the standard ERP processes, with the help of aXes-Robot where needed," says Anish.

Anish found both products easy to use and the learning curve short. "We had given ourselves six months for this project, but after I spent two days together with a LANSA consultant on automating the first few processes, I was able to rather quickly design and create the rest of the processes. Most of the work was done in just over two months. We then had the luxury to deploy parallel testing for the remaining four months."

"Some of the old custom programs were of poor quality, resulting in all kinds of issues and time-consuming fixes. Records would get locked, inventory updates would go wrong, trucks would queue up in the morning, because we were having delays getting the invoices and ASNs out. We would sometimes spend hours fixing things. These programs needed a lot of maintenance and corrective action," continues Anish.

"By running in parallel for several months we were able to test the system in scenarios that we otherwise would never have anticipated. We established beyond any doubt that those problems and issues had disappeared in the new environment. So we were extremely confident going live with the new solution. We knew the project was a success."

Conclusion

It's not always easy to calculate the ROI on a software investment, but in this case the benefits are very clear. "If we had to rewrite the RPG interfaces from scratch, I estimate we would be looking at something like \$60,000 to \$100,000 and at least seven man-months. And although the new programs would be of better quality than the old RPG programs, fundamentally we would end up in a similarly heavily customized and difficult to upgrade ERP environment," explains Anish.

"We evaluated other more complex BPM products and the cost of implementation would have been at least double as compared to the solution we implemented with LANSA Composer," says Anish.

"To us LANSA Composer is far more than just middleware that transports files from A to B. We can actually build rules into it. It's a true BPM solution. With Composer, the business rules are more visible and if the business changes, I can very quickly change the rules. There is no programming or compiling involved. And aXes-Robot fills the last-mile data-entry gaps between the various tools and solutions," concludes Anish.

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