LANSA®
Advanced Software Made Simple

ISSUE 45

Review

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There has to be a better tool for developing web apps than the @#*% we are using now!

APPLICATION DEVELOPMENT & MODERNIZATION | BUSINESS PROCESS INTEGRATION

CONTENTS

THE LANSA REVIEW

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EDITOR: Marjanna Frank

ARTWORK: Mercedes Rayner

PUBLISHER:
LANSA Pty Ltd
122 Arthur St, Nth Sydney
NSW 2060 Australia

LANSA®
ADVANCED SOFTWARE MADE SIMPLE

In this issue: Version 14

A WORD FROM PETE DRANEY
Founder and co-owner

We surveyed a number of organizations, mainly non-LANSA users, and asked them to tell us the number of different software development tools that they use when developing their web applications. Not surprisingly, the average number is 4.1 tools.

So we asked them this question: "Do you really want to continue using such a slew of different tools to develop your web applications and run the real risk of not having the required programming skills on hand when the applications need to be modified and extended in the future?"

Almost all answered "No, of course we don't. But what's the alternative?"

There is an alternative. It's LANSA Version 14.

The tools and frameworks that most software developers use to build web applications seem to be selected from a "flavour of the month" list that quickly becomes outdated and superseded by a newer one. Developing applications using multiple programming and scripting languages requires the mastery of these technologies – making development tasks harder, skills maintenance more costly and application maintenance more complex.

There is a better way. It's LANSA Version 14.

We believe that LANSA Version 14 provides companies with a single web development language that significantly lessens the cost of skills maintenance, provides developers with an exciting paradigm to rapidly build and deploy web applications and provides end users with the same User Interface experience in the browser as they experience with their desktop client/server applications.

LANSA Version 14 is not just a better mousetrap. We've completely redesigned the way that web application are developed, whilst freeing up developers from the drudgery of having to hand-craft the HTML5, CSS3 and JavaScript that underpins all modern web applications. With LANSA Version 14, developers never have to code any HTML5, CSS3 or JavaScript. None. Ever. LANSA Version 14 generates it all.

And the Visual LANSA Framework (VLF) has also been totally re-energized. For those who don't know it, the VLF generates screens with a modern user interface (in a choice of styles, e.g. Outlook style), with the searches, filters and tabs coming straight out-of-the-box. The learning curve is extremely short, productivity is high and the web applications are world class – it's like having an experienced mentor sitting next to your developers. The new VLF, called VLF-ONE, is completely written in Visual LANSA and is itself is an outstanding example of the power of Visual LANSA.

With LANSA Version 14, developers can now also use the Visual LANSA Integrated Development Environment (IDE) directly in the Amazon Web Services (AWS) cloud and, coming soon, in the Microsoft Azure cloud. There's no software to install and no licences required – just an hourly usage subscription.

If you'd like a test drive, it's just a click away at **http://www.lansa.com/test-drive-lansa**

Additionally, web applications that have been developed with LANSA can be deployed to and executed in the AWS and Azure cloud.

LANSA Version 14 has too many new and exciting features to list here. A full list can be viewed at **http://www.lansa.com/game-changer/#tab=#whats-included**

I will finish with one of the many great references received by LANSA:

"There is an old adage, that when building computer systems three factors are always desired: Good, Fast and Cheap. In reality, you can pick two knowing that the third is the trade-off. For instance, it may be good and fast, but it won't be cheap. Or, fast and cheap, but it won't be any good. With LANSA, we achieved all three. The deliverables are very good. They were built much faster than we could have built them in any other language. And the end result was significantly cheaper than it would have cost using other methods." Thanks to Joe Jurich, President and CEO at RORC in Texas USA.

Announcing:

Visual LANSA Version 14 – a fundamental change to the web development paradigm

For nearly three decades, LANSA has ridden at the forefront of each new wave of Information Technology, and has delivered a capability to software developers unmatched by our competitors who have come and gone over the years. Version 14 is a major milestone release to our flagship product Visual LANSA.

Visual LANSA

The new Version 14 of Visual LANSA provides such a fundamental change in the web development paradigm, that we call it a game changer.

Visual LANSA allows web developers to build Single-Page Applications (SPA), which is the equivalent to building a client/server app, but instead of the UI being a rich-client interface talking to a server, the client is a browser.

Single-page web applications run entirely inside a browser and the only time a server is accessed (asynchronously) is for reading/updating/deleting data or executing server-side logic. Users will find a noticeable performance improvement, because there is no need to refresh the entire web page with SPAs – it's a like super-fast desktop style application running in the browser.

Traditionally, web developers need to know several development languages and technologies, and they differ depending on whether developers are writing code for the browser, the server, or making the two communicate.

Visual LANSA allows developers to use the same productive high-level language across the board. Everything is now contained within the LANSA environment. There is no need to drop down into HTML, JavaScript, or CSS code.

Not only does this drastically reduce the number of skills a company needs to employ, but is also increases developer productivity – empowering them to produce more web applications than before.

VLF-ONE

VLF stands for Visual LANSA Framework which has been around for a while. VLF-ONE is the newest version and is built on top of Visual LANSA.

VLF-ONE lets developers build the infrastructure and underpinnings of an application very rapidly, so they can spend the majority of their time working on the portions of the application that are unique and matter. It allows developers to assemble commercial grade software quickly with minimal coding and generates high quality applications with a consistent appearance and behavior. It facilitates the prototyping, design, test and implementation phases and allows developers to assemble applications by snapping them into the framework.

VLF-ONE has a totally new user interface and gives users full control over where to position the panels on the screen.

Cloud Offering

In addition to being able to deploy applications to Windows, IBM i and Linux servers, Visual LANSA-based applications can also be deployed to the cloud (Amazon Web Services and soon Microsoft Azure).

Moreover, developers have the option to develop and test their applications in the cloud, meaning they no longer need to have Visual LANSA installed on their PC.

Native Mobile App.

Visual LANSA developers can now create hybrid mobile applications. A hybrid mobile app is, in a nutshell, a native app container that allows you to host web pages inside of it. It allows developers to use their current web skills to build native-style mobile applications.

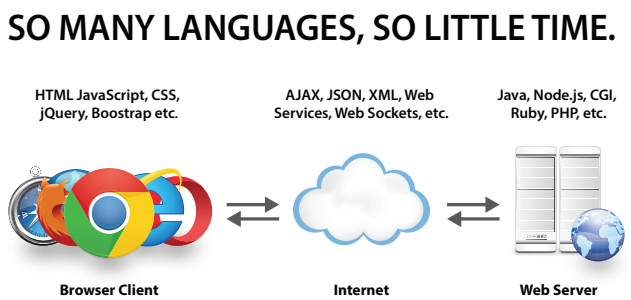
The Duro-Last case study on page 4 provides a good illustration of Visual LANSA and the LANSA Native Mobile app being used together.

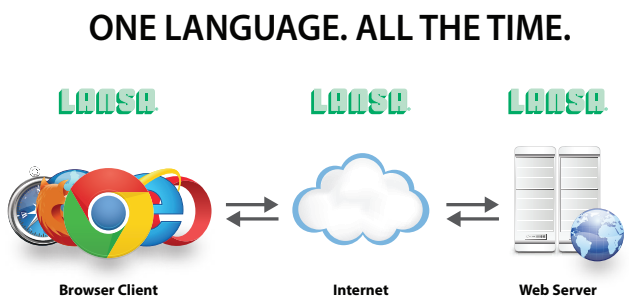
In Summary

Visual LANSA provides web developers with:

- Single Language – data access, business rules, server-side and client-side logic in one language
- Responsive design – multiple layouts for different size screens from a single code source
- Rules Engine – a single place to put rules/logic that are enforced to all your applications, whether deployed on smartphones, tablets PCs or all three.
- Browser agnostic – no coding for browsers
- Hybrid deployment without PhoneGap
- Async – all your LANSA web apps are automatically AJAX enabled.

Whether you are new to web development or are trying to stay up-to-date with continuously changing web technologies, you're going to have to learn something new. You may just as well make it LANSA, a tool that has proven to evolve for nearly thirty years.





Duro-Last delivers web solution across device types

Developing a web solution that suits customers ranging in size from one-man contracting companies reluctant to use a computer, to big construction companies with a large and demanding IT department, can be a challenge. Keeping your IT team lean and expecting your developers to handle back-end ERP systems, web applications, as well as mobile app development, sounds like an almost unrealistic challenge. Duro-Last Inc. has managed to do both with Visual LANSA.

Duro-Last is providing its 3,000 independent contractors with a web solution to manage their roofing projects, place and trace orders, view invoices, authorize payments and much more. Small contractors may use the solution from their smart phone, while the larger construction companies will have their administrative staff access the solution from their desktops. Duro-Last used Visual LANSA 14, while it was still a beta release, to provide a better customer experience across browsers and client devices of all sizes, from a single set of code.

The Challenge

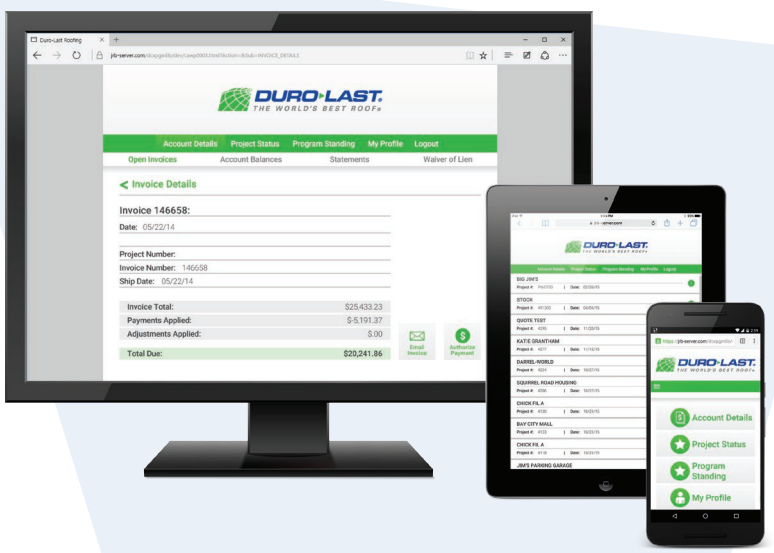
Duro-Last, incorporated in 1981 and headquartered in Saginaw, Michigan in the USA, is the world's largest manufacturer of custom prefabricated thermoplastic single ply roofing systems. Duro-Last's roofing systems are installed across the USA and Canada through 3,000 certified independent contractors. Duro-Last also has sales, engineering and technical staff, who are ready to assist the contractors.

Communication between Duro-Last and its contractors is by phone, fax and email through Duro-Last's customer services center, which is manned by 35 full time staff.

Sue Gilbert, Director of Information Services at Duro-Last, explains, "Our customer service representatives spend a lot of time on the phone, providing assistance with things that the contractor should be able to do online, such as placing of orders, tracking of shipments, managing invoices and more. Giving contractors online access to their data would save a lot of time, both for the contractor and for us."

Companies contracting for Duro-Last vary in size and computer literacy and deciding on the best format for online access was not easy. "About 20% of our contractors are small one-man shops, reluctant to have anything to do with computers. Other contractors, probably about 10%, are large construction companies with their own IT department," says Gilbert.

Duro-Last had already made a native mobile app available to its contractors, using LANSA's LongRange technology. But that app was specifically for repair & warranty work and was only meant to be used by field staff. The new application that Gilbert had in mind would need to be suitable for both admin staff from a desktop, as well as for contractors using a mobile device on site.



Contractors can use the solution from desktops or mobile devices to manage roofing projects, place and trace orders, view invoices, authorize payments and participate in incentive programs.

"Getting quick results is important. With Visual LANSA we don't have to use a whole range of tools."

The Project

Gilbert was discussing these requirements with her LANSA contact, exactly at the time a beta version of Visual LANSA 14 became available. Applications developed with Visual LANSA 14 can run on multiple device types and sizes, and the code is cross-browser compatible. Gilbert was keen to sign up for the beta program.

Gilbert says, "It's impossible to control what device types and browsers our contractors may want to use. To me Visual LANSA is the cream of the crop, because it gives us the ability to deliver a responsive website for desktop users and a mobile app for any device and any browser. It means we can now give both our small and large contractors the solution they want. We can do all that with one tool, one language and one set of code."

Equally important to Gilbert was how realistic it was that she could deliver and maintain the solution with her small team of two developers. One with .NET skills and one with RPG skills, both already busy with maintaining and enhancing Duro-Last's core ERP system. Visual LANSA met Gilbert's criteria in that area as well. "Getting quick results is important. With Visual LANSA, our developers do not have to use a whole range of tools and languages. They can use one single development language for both the server side logic and the user interface."

Gilbert and her team drafted the specifications for the solution. It includes four key components:

'Project Status' ties together all the tasks related to a roofing project, such as requesting technical assistance, placing orders, inquiry into shipping dates and booking the inspection of the finished roof. All tasks have a responsible person associated with it, providing workflow guidance to Duro-Last and the contractor.

'Program Standing' is related to Duro-Last's

incentive program. Points and awards can be earned based on the volume of sales and the quality of installation services (each commercial roof is inspected and scored). The app allows contractors to view their sales and award levels, points earned and used, plus much more.

'Account Details' lets contractors view invoices, authorize payments and submit waiver of lien forms, while the fourth component, 'My Profile', lets contractors maintain account details and setup the user-ids, passwords and access levels for staff.

The solution, named 'the Corporate app', will be launched at the annual contractor event.

The Solution

The Visual LANSA developed solution consists of a server component and a browser component. The dynamic Single-Page Application (SPA) is available to authorized users across device types and browsers. It is conceptually the equivalent of a client/server app, but instead of a rich-client talking to a server, it is all running dynamically in the browser. The Visual LANSA developer needs no understanding of the syntax or complexities of HTML, JavaScript and CSS languages. The server platform can be Windows, Cloud (AWS or Azure), Linux or IBM i. At Duro-Last, the solution runs on an IBM i server where it integrates with the Infor XA ERP system (previously MAPICS).

Technically there is no need to wrap the solution or to make it available in the App store. However, for mobile device users, Duro-Last wants the solution wrapped in the Visual LANSA container app. From a marketing perspective, offering a mobile responsive website doesn't have the same appeal as offering 'an App'. Also contractors may find it easier to have the app as an icon, rather than bookmarking the URL. As an added benefit, the container allows Duro-Last to wrap the solution with device security and to provide access to device features and local storage.

The Benefits

Dennis Schluckbier, developer at Duro-Last, has a Windows development background and is familiar with PHP, JavaScript and other web development languages. He personally enjoys the challenge of learning new programming languages, new features and 'getting into the code'. But he recognizes that not every developer shares that passion and also that it is unreasonable to expect that employers are keen to pay for developers continuously pursuing that passion during work hours.

"Developers who are savvy enough, but don't have any web development skills yet, may be able to cut down web development time to less than half with Visual LANSA, compared using the traditional mix of web development languages," estimates Schluckbier. "Plus the quality is likely to be better, because developing good web applications comes with experience and when the tool takes care of the low level coding, there is less opportunity to get it wrong, especially for novice developers."

Duro-Last's factory controlled custom prefabrication eliminates up to 85% of field seams, resulting in lower on-site labor costs and easier installation.

"We can give desktop users a responsive website and also wrap it with security into a mobile app."

"The web world changes very quickly and programming languages come out with new releases and new features all the time. Not everyone has the time or the passion to keep up with that. If Visual LANSA can keep up with those web developments, then that is going to save all its customers heaps of time. It feels a little bit like giving over control to the tool, but so far Visual LANSA has been able to handle everything I wanted it to do," says Schluckbier.

Gilbert received very positive feedback on the corporate app. "The IT Manager from one of our larger contractors commented that the solution is very user friendly and that it conforms to all the standards that you expect from a solution like this. He reckons that his mobile and desktop users will pick it up very easily and can use it without the need for training."

Conclusion

"The expectation is that the solution will reduce the number of calls to our call center significantly. However, a reduction in call center traffic was not our main driver. The most important goal is to improve the customer experience," says Gilbert.

"Timing is extremely important in this industry. We can produce almost all made-to-measure orders within a few days and our standard shipment is on the fifth day. The contractor may have hired a crane and booked hotel rooms for his staff. Online order entry and online inquiry are becoming crucial for avoiding scheduling conflicts and the expensive consequences they may have for our customers."

"This is our second project with LANSA and working with your company is awesome. From what I have seen, our guys have picked it up pretty quick, and from what I have heard it's really simple to use. And most important, we like the results," concludes Gilbert. ■

Snapshot

Customer: Duro-Last is the world's largest manufacturer of custom prefabricated thermoplastic single ply roofing systems. http://duro-last.com

Challenge: Provide a solution that independent contractors can use from desktops and mobile devices.

Solution: Use Visual LANSA to deliver a dynamic Single-Page Application (SPA) that is available to authorized users across all device types and browsers.

Key Benefits: Quick delivery with small IT team. The entire solution, server-side and client-side across many device types, was delivered with one tool, one language and one set of code.

Product Used: Visual LANSA

Mobile access to portfolio for Beacon Insurance customers

Back in 2011, the Beacon Insurance Company demonstrated how a customer focused vision, together with innovative use of technology, helped the company to rebuild its organizational structure and achieve complete visibility and control over the progress of documents and work through the organization. Improved customer service and dramatic savings were the result. More recently Beacon was the first insurance company in the Caribbean to offer its customers the facility to interact with their portfolio through a mobile app and web portal.

LANSA Professional Services and LANSA's technology products played a major role in these projects. Beacon has nearly doubled in size over the last five years with only a slight increase in employee headcount. Technological innovation and excellence are important to Beacon's operations and branding. LANSA is proud to be part of Beacon's continuing success.

Workflow and Modernization

The Beacon Insurance Company Ltd, is headquartered in Port of Spain, Trinidad, and supported by a network of branches and agencies throughout the Caribbean. Beacon underwrites all major lines of insurance including Property, Motor, Accident and Casualty, Marine Cargo and Hull, Engineering, Bond, and Group Life and Employee Benefits.

Beacon's core policy administration system is Insure/90, a software solution for the insurance industry supported by CSC (Computer Sciences Corporation).

In 2011, Beacon transitioned to a more efficient and customer centric way of doing business. Before then, the static and hierarchical organization of products and divisions meant that customers had several points of contact, often having to explain their situation multiple times.

Initially Beacon was hampered in its transition because its Insure/90 implementation didn't have the workflow features to measure timelines, nor did it have the facilities to effectively manage tasks that spanned multiple divisions.

Beacon analyzed various options, including a full Insure/90 system replacement. However "the risk was too big, the cost too high and the timelines too long", explained Christopher Woodhams, Beacon's CIO. Another consideration was to run a packaged workflow management system alongside Insure/90. But as the workflow solution was based on a different technology platform, integrating the two systems would have been difficult and expensive, with an ongoing need to manage data duplication and synchronization.

After extensive research Beacon selected LANSA Professional Services as its technology partner because of LANSA's deep understanding of the business requirements. LANSA's modernization, workflow and integration products were selected because of their native integration with Insure/90 and low risk implementation that didn't require data conversion. The resulting solution now includes:

- Support for to-do lists, latency escalation and performance metrics using LANSA's Workflow Engine.
- A Windows-based framework in which both modernized Insure/90 programs and brand new functionality are integrated, using Visual LANSA and RAMP.
- PDF document generation, web services and XML integration with LANSA Integrator.

Beacon Buddy was realized with LongRange, in combination with Google's AngularJS framework. LongRange offers native mobile app development, plus web views.

"We have a 360-degree view of our customers, their policies, claims and quotes."

"The solution helped Beacon to achieve dramatic efficiencies, such as speedier and more effective service delivery. We have streamlined multi-divisional workflows and customer representatives now have a 360-degree view of our customers, their policies, claims, quotes, and all past and current matters," says Woodhams. More details here www.lansa.com/casestudies/beacon.htm#2

Ready for 3rd Party Access

"After rolling out the LANSA workflow management and modernization platform, we were getting ready to open up our IT systems to third parties," says Woodhams.

The criteria below were key to Woodhams in determining that Beacon's IT systems were ready to be shared and exposed:

- Automated follow up for quotes in a structured process
- Improved service times through a streamlined underwriting process
- Consistency through PDF document generation and digital signatures
- Accountability and visibility through paperless operations
- Professionalism through standard documents and procedures

"We were confident that we had reached a high level of efficiency and that our IT systems were ready to be shared and made transparent to partners and customers," says Woodhams. ➔

"By 2013 most of the Caribbean territories had legislation in place to cover electronic transactions. This allowed us to fully embrace digital innovation and, with LANSA, we were now well positioned to place the technology benefits directly into the hands of our customers through web portals and mobile apps," continues Woodhams.

Web Portal and Mobile App

As a first step, Beacon wanted to give its policy holders direct access to their insurance portfolio and also provide the wider public with the facility to get quotes and coverage online.

As with Beacon's previous projects, LANSA Professional Services played a key role in the mobile app and web portal projects, working closely with Beacon's marketing and technical teams to craft the vision, establish functional and technical requirements and manage the project throughout the complete lifecycle.

The functional design for the mobile app and web portal included:

- Access and renew policies
- Get policy documents
- Submit and track claims
- Pay premiums securely
- Request quotes
- Request road side assistance
- Use Beacon Rescue (Accident checklist)

The Beacon Rescue feature is much talked about. It guides customers, who might be distressed after having an accident, through all the steps that would otherwise be easy to forget. It includes recording contact details of witnesses, uploading of pictures of the other driver's licence plate and insurance certificate, accident pictures and finally uploading a copy of the police report. And, of course, submitting the claim. Customers can start the process at the accident scene on their mobile app and, if needed, finalize the claim later on the web.

The Mobile App, called Beacon Buddy, was realized with LongRange, LANSA's mobile development tool. LongRange offers native mobile app development, but can also include hybrid/container-like web views. In Beacon Buddy, Google's AngularJS framework was used inside LongRange web views. Beacon Buddy is available from the Apple, Android and Blackberry App stores.

The web solution, called AboutYou, was developed with Visual LANSA WAMs (Web Application Modules), also in combination with the AngularJS framework.

LANSA Integrator was used to consume and publish the required web services, such as for communication with a common insurance rating engine, and for feeding submitted claims and self-serve quotes into the workflow engine.

"To be technologically advanced is part of Beacon's brand image. The mobile app and web portal compliment that branding. We wanted to be first, and we were the first insurance company in the Caribbean to offer its customers Mobile and web access to their portfolio. LANSA helped to make that happen. Being the first was important and key to a significant advertising campaign," explains Woodhams.

Renato Lezama, Beacon VP Regional Operations (2nd left) and Christopher Woodhams, Beacon CIO (2nd right), accepting the Customer of the year Award at the LANSA User Conference.

"We were the first Caribbean insurance company to offer a mobile app."

Conclusion

LANSA Professional Services conducted the business and technical consulting and the actual development work for the workflow, modernization and integration projects, and more recently also for the web portal and mobile projects.

"The LANSA team worked closely with our business users, senior management and marketing team and helped shape the vision and key portions of the functionality. LANSA had a clear understanding of our business and came with a lot of ideas of what we needed to do to achieve our objectives. The relationship we developed is very productive. We felt from the start that the LANSA team was as keen as us to make our project a success," says Woodhams.

"Innovative use of LANSA's technologies helped us to achieve dramatic efficiencies, streamline our operations and grow our business. We have nearly doubled in size since 2011 and hardly increased staff headcount. The web portal and mobile app were in the first instance important to our marketing, but these solutions have also generated a climate of trust, because we have made ourselves 100 percent accountable and transparent."

"We have created significant advantages through continuous technology improvements. These improvements are geared towards enriching the customer experience, deepening our relationships and providing many areas of value-added services that support our corporate mission. LANSA has not only made a tremendous difference to our internal operations, but to our customers as well," concludes Woodhams. ■

Snapshot

Customer: Beacon Insurance is one of the Caribbean's leading insurance companies. www.beacon.co.tt

Challenge: To become the leading insurance company in the Caribbean, based on excellence and technological innovation.

Solution: Partner with LANSA Professional Services to modernize and streamline the core line of business system and to extend it with mobile and web access for customers.

Key Benefits: Efficient operations and fast growth with only a small increase in administrative headcount. The Mobile app and web portal demonstrate that Beacon is innovative, technically advanced, accountable and transparent.

Product Used: Visual LANSA (WAMs), LongRange, LANSA Integrator

iPad solution for JCM service staff improves efficiency

(This case study is based on an article published by iMagazine Japan)

If all that IBM i users get to see are 5250 screens, it is not surprising that the platform is perceived to be legacy. The IT team at Japan Cash Machine (JCM), with the help of LANSA partner Neoaxis, took a pro-active approach to not wait for that perception to take hold. Looking at the pain-points in the company, they determined that JCM's maintenance and repair system was a prime candidate for improvement and transformation.

JCM's 150 repairmen now use iPads with integrated hand-writing, signature capture and camera features to create and submit their repair reports and to access maintenance data. Office staff have a productive rich-client interface to real-time and integrated maintenance, billing and customer information. The new solution, developed with LANSA and deployed on IBM i, has helped to improve the quality and speed of customer service and has drastically reduced the workload for JCM's staff.

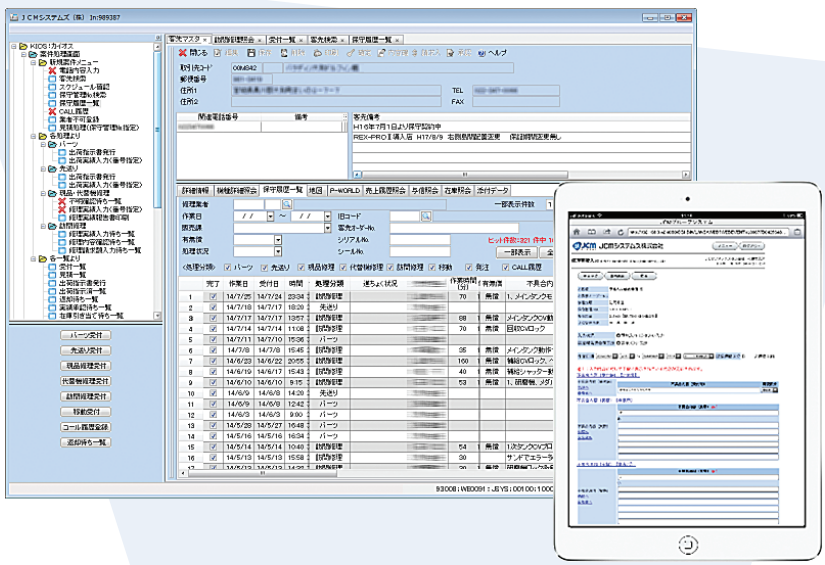
The Challenge

Japan Cash Machine, under the brand name JCM Global, is the world's leading provider of money handling machines, such as bill validators that are used in casinos, ATMs, automatic ticketing machines, fare adjustment devices, vending machines and other kiosk terminals.

In Japan, JCM has over 200 service centers. To support its operations, JCM uses in-house developed applications for Manufacturing, Sales, Distribution and Accounting, which run on the IBM i operating system. These systems are RPG-based and have evolved since 1995.

JCM's maintenance division in Japan consists of 150 staff and contractors who visit on average around 100 customer sites each day. The high volume is not surprising, considering that Japan has the world's highest number of vending machines per capita (5.8 million vending machines, one for every 23 people). In addition, Japan has a large number of pachinko/slot machines in gaming parlors.

Before the implementation of JCM's new Maintenance & Repair system, details of the customers' locations, machines and service history were kept in a Microsoft Access database. When call center staff received a service request, they would search the MS Access database to confirm the customer's location and machine details.



The new maintenance management system consist of 70 Windows rich-client screens and 20 mobile web screens. All developed with LANSA.

After the call they would create a service/repair request form and fax it to the JCM support office or agency located nearest to the customer. The serviceman in charge would then visit the customer site with the request form. When the service work was completed, a repair report was filled out and signed by the customer, which was then sent by post to JCM's head office. Upon receipt of the repair report, head office staff would enter the details into the MS Access maintenance system, as well as into an IBM i-based billing system.

"Field staff needed real-time access to maintenance history and availability of spare parts."

The old way of doing things was inefficient

- Double data entry caused inaccuracies.
- Field staff didn't have access to data, causing mistakes and delays in spare parts delivery.
- Lack of real-time information caused inaccurate responses to the customer.
- Waiting for mailed reports delayed the billing and quality control processes.
- In order to still meet its SLAs (Service Level Agreements) both field staff and office staff regularly had to work overtime.

Evaluation of Technologies

Mr. Kenta Shintani, head of JCM's Information Systems Group, explained "We needed a solution that was truly integrated with our customer, inventory, billing and product information systems. Plus we wanted the information to be available across all divisions, with a productive Windows interface for office staff and a mobile web interface for field staff and contractors."

"We have an IT team of five, of which only three have development skills. It was obvious that we could not do this project with RPG, but we had no other development skills in our team. It was hard to determine which technology we should use, because there are so many technologies out there."

"After some research we chose the Visual LANSA development tool, which our IBM partner Neoaxis had introduced to us. The 4GL syntax was easy to understand and reminded us of Visual Basic. LANSA showed a strong affinity with IBM i and it could easily integrate with our existing RPG and CL programs. ➔

Another reason to choose LANSA was that we could use the same tools and skills for mobile and web development, as well as for rich-client applications. Last, but not least, from LANSA's case study examples it was clear that many other companies had successfully used the product for similar projects."

The Project and Solution

Mr. Shintani continues, "The new maintenance management system was created by consolidating the maintenance history, sales and inventory systems into an integrated solution with a rich Windows GUI. This system is now used by call center and admin staff. Simultaneously we developed a mobile web app for iPads, for use by maintenance staff and external contractors."

JCM's own three programmers developed the client/server system, which consists of about 70 Windows rich-client screens. It offers sophisticated search facilities on customers, machines, maintenance and spare parts and allows staff to open multiple tabs simultaneously.

Neoaxis developed the mobile web app consisting of 20 screens. Field staff use it to look-up customer, machine, maintenance history and spare part details and to enter maintenance reports. The app integrates with 7notes handwriting software (from MetaMoji), allowing field staff to use a stylus pen to enter data. The customer's signature is also captured using the stylus pen and handwriting software.

Field staff can take before-and-after repair photos and attach them to their report. The photos and repair reports are stored in real-time in the IBM i database together with sales and maintenance history data.

JCM's three RPG developers received one month LANSA training and were given six months for development, testing and iPad field-trials (While also taking care of ongoing RPG maintenance work). After a three month trial period, the new maintenance application went live to call center and admin staff, plus to 150 repair and maintenance workers in the field.

The Benefits

The new system has helped to improve the quality and speed of customer service. Because field staff can check the maintenance history and availability of spare parts while on site, they can do their job better and faster. They can also respond quicker to customer enquiries.

Billing is triggered automatically upon receipt of the repair report, optimizing JCM's cash flow. Real-time availability of maintenance and billing data also allows call center staff to respond accurately to customers who ask about job progress or repair costs.

Maintenance information is now well structured and available to quality control for further analysis, assisting JCM to continuously improve its products and services.

Rekeying and filing of paper-based maintenance reports is no longer required. This has drastically reduced the workload of admin staff, reducing staff numbers from seven to four. According to JCM's impact analysis, the number of man hours related to the handling of maintenance reports is now 10% of what it used to be. Overtime has decreased by 30%.

These efficiencies allow JCM to handle more jobs with their own staff, reducing the number of contractors by three and be confident to meet their SLAs.

The new application offers sophisticated search facilities on and allows staff to open multiple tabs simultaneously.

"With LANSA we can use the same tools and skills for Mobile and web development."

Conclusion

Mr. Koji Imanishi, manager of JCM's Information System Group, who led this project, commented, "Key to the project's success was the active involvement of the end users. We showed them how the design of the system evolved and they provided us with their feedback and additional suggestions. This helped us to better understand the business flow and visualize areas of improvement. Thanks to their feedback, we could offer a better solution. I was impressed that the graphical user interface made it so much easier to work closely with the end user."

"Another success factor was the versatility of LANSA. We made maximum use of its reusable component architecture with business rules and triggers and easy integration with third party technologies such as Microsoft Excel, PDF, email and workflow."

"Previously users had a poor perception of the IBM i, because all that our users got to see were its 5250 screens. Now they can see the platform supports web, mobile and rich-client applications. It can do anything if you use the right tools."

Following the success of the maintenance system project, JCM now plans to modernize and mobilize its sales system by adding workflow management and automated email functionality, replacing the 5250 screens with Windows clients and by providing sales representatives with mobile access. ■

Snapshot

Customer: Japan Cash Machine (JCM) is the world's leading validating technologies supplier for the banking, retail, kiosk and gaming industries. www.jcm-hq.co.jp/english

Challenge: Transforming an inefficient system that included paper-based reports, character-based screens and double data entry, into an integrated modern solution with access for office and field staff.

Solution: Redevelop the system, using a single development tool for desktop and mobile access.

Key Benefits: The quality and speed of customer service has improved and staff workload has been drastically reduced.

Product Used: Visual LANSA

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 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.

"By putting the rules in LANSA Composer we were able to remove many custom programs."

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:

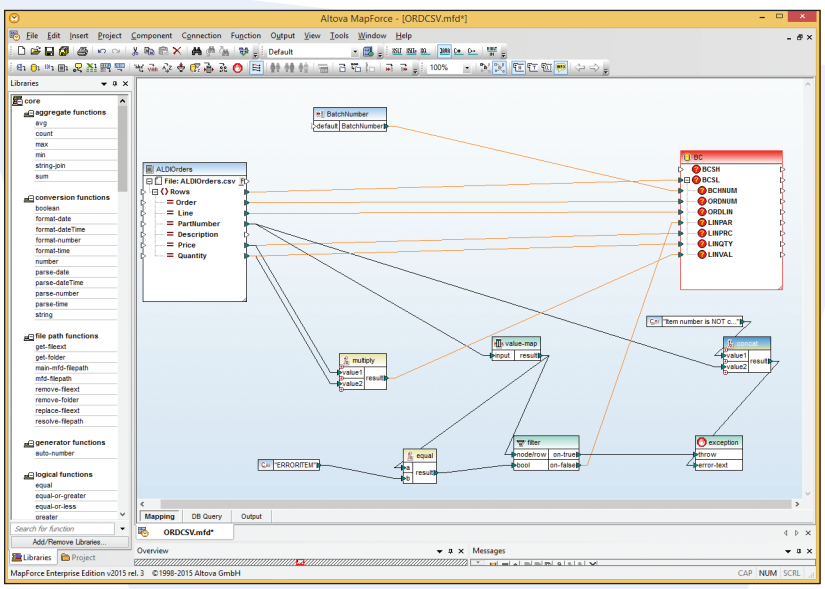
- Pulling picking confirmations into BPCS from the WMS.
- Applying validation rules on order-quantity and available inventory. Trigger an alert on fail.
- Triggering billing in BPCS and send the generated Invoice to the EDI server.

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 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. ➔



Data transformations are not restricted to mapping from one file format to another. It may include functions and lookup tables to change or add data.

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. 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."

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.

"With Composer, the business rules are more visible and I can very quickly change them."

"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. ■

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

Excellence with AHC, in the office and at point-of-care

Most of us know someone who lives in a retirement community, nursing home or other long-term care facility and eventually we may end up in one ourselves. Senior Care Communities, as these facilities are collectively called, take up a special place in the healthcare sector as they have to meet specific clinical, administrative and regulatory requirements. The Harmony Health Care Management System, a solution from American Health Care Software, helps to meet these requirements. Harmony, originally developed in Synon and RPG, has been redeveloped with Visual LANSA and uses LANSA Composer for integration.

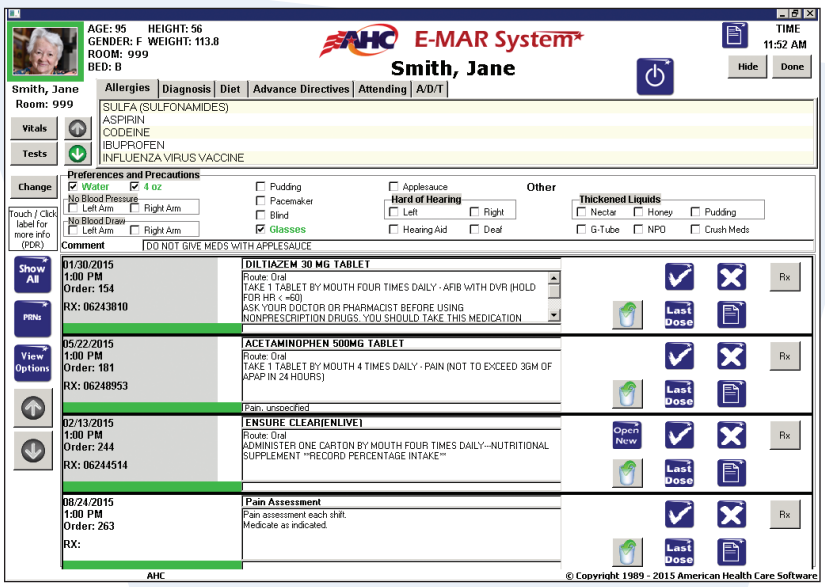
River Garden Senior Services, in Jacksonville, Florida, USA, is a long-time user of Harmony and has more recently implemented the clinical modules. River Garden's clinical staff, including doctors, nurses, social workers, dieticians and therapists, now have access to vital information at the point-of-care through touchscreen tablets and laptops. Nursing supervisors can monitor in real-time whether residents get their medication on time. Integration with third parties, such as pharmacies, laboratories and specialist web services, is completely automated.

The Challenge

When Marcia DeRosia, President of American Health Care Software (AHC), purchased the company and its Harmony solution in 1990, she recognized the potential but also knew she took on a huge challenge. Having been a user of Harmony herself as the CEO of a nursing home chain, she realized the importance of having to meet the looming deadline of the MDS (Minimum Data Set, a clinical assessment process of nursing home residents, federally mandated for Medicare and Medicaid certification and funding).

Within three months after purchase, AHC's technical team developed the MDS module and rolled it out to all Harmony customers. Ever since AHC has been quick to update its Synon and RPG developed Harmony solution with new functionality and to comply with constantly changing regulations.

By 2005 Harmony had become a leader in its field. Although it was functionally rich and its database well designed, its character-based screens became too restrictive, especially for use by clinical staff. Another concern was that Harmony wouldn't be able to meet the growing demands for integration with third parties, such as pharmacies and laboratories.



The eMAR and Point-of-Care modules have a touchscreen interface so they can be used on tablets by nursing and medical staff.

"Harmony consists of millions of lines of code and is used by hundreds of facilities. Redeveloping from scratch would be a massive effort and result in a risky and disruptive migration path for our customers," explains DeRosia. "We simply could not afford to put innovation on hold for our existing customers, while working on a brand new solution. We were therefore looking for a development environment that would allow us to gradually modernize and redevelop Harmony."

"We can progressively redevelop and add Windows functionality and touchscreen tablets."

After researching available options, AHC opted for LANSA. "Visual LANSA gave us the capability to modernize, extend and progressively redevelop our IBM i-based application, and also allowed us to add Windows-based functionality and touchscreen tablets," says DeRosia. "In addition, although we love the IBM i operating system, it's good to know that LANSA doesn't lock us in."

The Project

The decision to use Visual LANSA was made several years ago. AHC decided to use the Framework development approach, which is available as an option within Visual LANSA.

"It allowed us to continue to utilize parts of our legacy application, for as long as we still needed to, in combination with new functionality. It also saved us a massive amount of development time, as it comes with standard navigation and MS office integration functionality," says Warren Rice, senior developer at AHC.

Melissa Carter, Technical Manager at AHC, explains, "Redevelopment is now almost finished. Besides redeveloping existing functionality in LANSA and moving to MDS 3.0, we have spent the bulk of our effort on building a new clinical package. We now have a comprehensive E.H.R. (Electronic Health Record) solution with eMAR (Electronic Medication Administration Record) and Point-of-Care modules."

The clinical modules have a touchscreen interface for use on tablets by nursing and medical staff.

All Harmony modules – clinical, waiting list management, admission, census tracking, billing, financial and others – are integrated with MS

Office. "Whenever users have a grid on their screen, they can push a button to export to MS Excel," explains Rice. "Free format text fields, extensively used by doctors and nurses, are based on LANSA memo fields and utilize MS Word's spell checking."

Integration with third parties is done with LANSA Composer, for example, to exchange physician orders with pharmacies, receive and process test results from laboratories, check interactions of medicines against TruvenHealth, and much more.

River Garden Senior Services

One of the Harmony customers who has made the modernization journey with AHC, is River Garden Senior Services (River Garden,) a not-for-profit, mission-driven organization established in 1946 and sponsored by the Jewish community in Jacksonville, Florida. Located on a 40-acre campus, River Garden offers a variety of services including, a 180-bed skilled nursing and rehabilitation facility, 80 apartment homes for independent living, home health care and adult day care.

Martin Goetz, CEO at River Garden, explains "We have been using Harmony since 1988. Initially we used it mostly for administrative purposes, but when the government started mandating electronic records, we decided it was time to put technology in the hands of clinical staff. Having seen Harmony's existing modules move from green screens to graphical with LANSA, we were enthused and keen to get involved in the design of the clinical modules."

Over a period of three years with weekly phone calls, River Garden's clinical staff was extensively consulted for their feedback as a beta customer.

Harmony on the Floor

Implementation of the clinical modules was unit by unit and is now available throughout the River Garden facility. On each of the 20 nursing wings, staff have access to kiosks through rich-client Windows PCs with touchscreens. eMAR is accessible through touchscreen thin terminal services tablets mounted on medication carts.

Nursing staff add their comments to the system, for example relating to food and fluid intake. Doctors, dieticians, and therapists also add their comments, as well as medicine orders and treatment plans, making it immediately available to others.

Carol Thomas, RN Chief Nursing Officer at River Garden, explains, "All data entered in Harmony is automatically time stamped. It allows us to monitor risk factors in real-time and take preventative steps before they result in actual problems. For example, we can see how nurses are progressing with administering medicine and treatment to residents."

Staff literally have the resident's information at their fingertips with easy to interpret charts and with alerts and warnings when appropriate.

"We can monitor in real-time how nurses are progressing with administering medicine."

"The biggest impact of capturing and displaying information at the point-of-care, is that it is now actually being consistently used," continues Thomas. "Previously information was spread over numerous pages of paper sitting in a folder that was updated on a weekly basis by a charge nurse, but otherwise it was hardly used. Now staff literally have the resident's information at their fingertips with easy to interpret charts and with alerts and warnings when appropriate."

Jeremy Green, Director of IT at River Garden, manages the computing environment with just two staff. It consists of an IBM i server, over 150 PCs for office staff, 20 touchscreen rich-client PCs at nursing kiosks and 10 terminal services laptops mounted on medicine carts.

Conclusion

River Garden is a multi-time recipient of the prestigious Florida Governor's Gold Seal Award for Excellence in Long-Term Care, along with 5-Star ratings by regulatory authorities. It hasn't been cited for deficiencies in clinical care for years in a row, and not for deficiencies in MDS preparation ever. "That's a huge accomplishment which would not have been possible without our excellent nursing and clinical staff and the robust Harmony solution," says Goetz.

Thomas and Goetz say,"LANSA has made it possible for AHC to bring exceptional software into the 21st century. We now have well over 150 staff using the AHC software. Our staff love it and it's made a huge difference in our ability to document and manage care. AHC is an excellent partner with a passionate commitment to their clients and the residents we serve. Colleagues of their caliber simply do not come along all that often."

Carter concludes, "When we moved forward with LANSA, we employed four developers, who we hired right out of technical college. They have all been outstanding and learned how to use LANSA very quickly. Now they are all experienced and even our newest employee has been with us for over five years."

"Currently all our customers run Harmony on IBM i. There are still some programs and routines that are RPG-based, but once we have everything converted to LANSA we can be platform independent and offer Harmony on Windows, Linux and IBM i, from a single set of source code." ■

Snapshot

Partner: American Health Care Software is a national software solution provider to the healthcare industry, based in Vermont, USA www.ahconline.com

Customer: www.rivergarden.org

Challenge: To modernize and redevelop its IBM i solution, without putting innovation on hold for existing customers.

Solution: To extend and gradually redevelop.

Key Benefits: Happy customers. Expansion to Windows, Linux platforms in addition to IBM i

Product Used: Visual LANSA, LANSA Composer

NSPCC revamps its supporter care system

NSPCC

The IBM i and LANSA-based supporter system of the NSPCC charity was developed in the late eighties. Being nearly three decades old, it still reliably holds several million supporter records and processes hundreds of thousands regular donations, mostly in modest amounts, amounting to a whopping £114 million last year.

But the 5250-user interface that the Supporter Care team used to access the data was way past its useful life. Initially the most obvious solution seemed to be to replace it with an off-the-shelf CRM system. However, such a solution would need to integrate with the existing supporter transaction processing system, greatly increasing complexity, risk and cost. The NSPCC decided instead to let LANSA develop a productive Windows user interface replacement with better functionality, but keeping the existing database structure intact. The new solution, implemented at a fraction of what a CRM integration would have cost, is greatly benefitting the NSPCC and its supporters and has kicked off a number of similar modernization projects.

The Role of the NSPCC

The NSPCC (National Society for the Prevention of Cruelty to Children) is the UK's leading children's charity fighting to end child abuse. The NSPCC works directly with children and families from its 40 service centers and is the UK's only children's charity with statutory powers, meaning it can take action to safeguard children at risk of abuse.

The services and resources that the NSPCC offers are too wide ranging to do justice in this short case study. To mention just a few: Counselors at the NSPCC's HelpLine and ChildLine provide help and support to those who need it. Its School Service workers visit 9-11 year olds in schools to help them understand what abuse is and to give them the confidence to speak out and seek help if they ever need it. The NSPCC collaborates with frontline professionals to evaluate what works and provides best practice policies.

The overwhelming majority of NSPCC's funding – more than 90 per cent – comes from public donations and other fundraising.

The Challenge

People who donate or fundraise, collectively called supporters, are looked after by the Supporter Care team. The NSPCC has 6.2 million supporter records in its database, of which 1 million are active supporters and 700,000 are regular donators. NSPCC's marketing department keeps supporters informed with newsletters and campaign updates, but supporters also have a need for individual attention and their queries come in by phone, email, mail and social media.

Alan Carter, Senior Manager Fund Raising, explains, "Whether they contact us to change their address, or to discuss leaving money in their will, we aim to give the supporter an excellent experience at all times. The Supporter Care system, in-house developed and IBM i-based, was functioning well in the sense that it was reliably holding large volumes of data and accurately processed hundreds of transactions each month. But the user interface for the Supporter Care team was inefficient."

"The system slowed us down and hampered the quality of our phone conversations."

The system's character-based user interface could show only limited information on a screen. You had to navigate through several screens to see, for example, a supporter's donation or mailing history. Also, recording notes was clunky, allowing for only one line at a time without any text wrapping. Moreover, documents, such as email attachments, could not be linked.

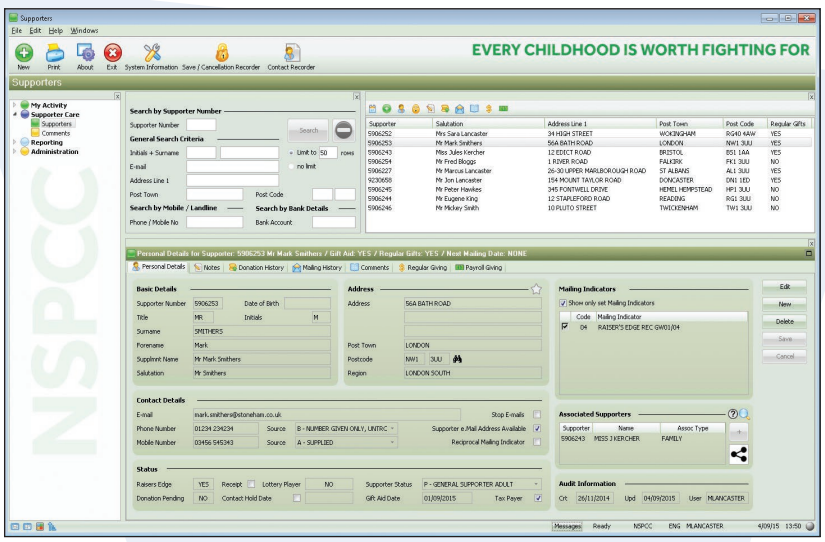
Procedures require that staff make a note about their interactions with the supporter, but they didn't get any help in doing so from the system. This lead to duplication of effort. For example, staff would change an address in the database and separately make a note to log the fact that they had made such a change.

"The system slowed us down and hampered the quality of our conversations with the supporters," says Carter.

The Solution

Several response handling and hybrid phone/CRM systems were considered, which were discounted for various reasons. An important factor was that the new solution would require real-time integration with existing downstream supporter data and transaction processing systems, introducing a layer of complexity and greatly increasing risk and cost. Also, due to an impending office move, it was the wrong time for a new phone system. Last but not least, like other charities, NSPCC is under continuous scrutiny to be as lean and effective as it can be. Therefore high cost solutions were undesirable.

"After discussing the situation with a LANSA consultant, we decided to provide the



The 'work with' supporter screens contain a floating 'Contact Recorder' form, ensuring that all communication with a supporter is recorded.

Supporter Care team with better functionality and a productive Windows style user interface, but keep the existing database structure intact," explains Carter.

Together with in-house business analysts, the Supporter Care team held several flip-board sessions, brainstorming what their ideal solution would look like. The main objectives were to improve operational efficiency and the supporter experience. A detailed specification document was created, which the LANSA consultant developed into a working prototype, using Visual LANSA. The team trialled the prototype and provided feedback and further refinements. Two months after the start of the project, the prototype went live into production.

The Benefits

"All important information is immediately right in front of us on the first screen, such as contact details, contact preferences and the donor's gift aid/tax status. We can switch easily between tabs to see the donation history, mailing history, notes and more," say Hugh Havard, Supporter Care team member. "This means we can focus on the conversation, rather than on getting the data on our screen."

"Notes are automatically created for 90% of the work we do. For example, when we change an address, a note is generated with the correct code, the old address, the operator's initials and a date/time stamp," continues Havard.

Staff now also have a proper free-format note section, with text wrapping and spell checking. Plus documents can be linked into the notes. "Having the relevant documents and untruncated notes is of enormous value for future conversations that we may have with the donor," says Havard.

Reporting, statistics and analysis are now directly driven from captured data. Previously each staff member maintained a spreadsheet, recording the nature of each phone call, such as tax inquiry, change of bank details, legacy conversation, and so on. "Not having to maintain these spreadsheets and not having to collate them at the end of each month saves a lot of time and has significantly reduced reporting inaccuracies," says Carter.

Donors can be fuzzy-searched by name, email, postal code and other criteria. Pressing the button kicks off an asynchronous search, leaving the window unlocked and available for other work. This may seem a small feature, but when you have 6.2 million supporters in your database it comes in very handy.

Havard points out that the new system saves time and also allows for more meaningful conversations with supporters. "We can now action the supporter's query immediately, but also have time to engage with them. Do they know how their donation is helping? Have they thought about leaving money to the NSPCC in their will? If we just said 'Yes, we have changed your details' and nothing else, we may lose them. It's all about keeping supporters engaged, and together with LANSA we have developed a solution that really helps us to do that."

From Left to Right: Dawn Shortall, Business Support Officer, Hugh Havard, Supporter Care team member, and Alan Carter, Senior Manager Fund Raising.

"We can focus on the conversation, rather than on getting the data on our screen."

Carter agrees, "What the new system does is not only provide more time, but provide more quality time. That results in a better experience for the supporters and therefore they are more likely to stay engaged with us."

Conclusion

Leigh Day, a senior business analyst, concludes, "Using Visual LANSA to essentially rework the tasks of the Supporter Care team has led to that rare thing: IS customer satisfaction. It has generated all sorts of efficiencies within the team and improvements to supporter interaction. The impact on the existing IS infrastructure and dependent systems was minimal, keeping the costs in check. It has been a real pleasure to be involved in such a warmly received and smoothly implemented project."

Dawn Shortall, a member of the Supporter Services team, explains "Now that it has been established that the our IBM i system is essentially sound and that with LANSA it can easily and affordably be extended with new Windows functionality, many more ideas for other improvements are starting to pop up."

For example, locating and merging duplicate contacts in the database is high on the wish list. Another improvement on the list is to be able to associate supporters. For example where multiple people from a company, or a group of friends run a marathon together, the system will be able to indicate such a relationship.

Other teams are coming with requirements as well. The donations processing team handles all gifts and sends the supporter a thank you letter. Currently they are using a laborious way to create those letters, which involves multiple exports and mail-merges. With LANSA we will create a solution to completely automate the generation of these personalized thank you letters, directly based on the data already available in the supporter system. ■

Snapshot

Customer: The NSPCC is the UK's leading children's charity fighting to end child abuse. www.nspcc.org.uk

Challenge: The user interface used by the Supporter Care team to handle incoming queries was unproductive. A rip-and-replace approach would affect integration with the existing downstream transaction processing system.

Solution: Use Visual LANSA to develop a new solution for the Supporter Care team with a productive Windows interface and better functionality, but keeping the existing database structure intact.

Key Benefits: Time savings for the Supporter Care team, leaving more time for a quality conversation with the supporter.

Product Used: Visual LANSA

Seneca ICT students in tune with the real world

Seneca

Seneca College, located in Toronto, Canada, is one of the largest colleges in Canada, offering nearly 300 programs at baccalaureate, diploma, certificate and graduate levels. Seneca provides education to over 70,000 part-time and 27,000 full-time students from its 10 campuses in the greater Toronto area.

Seneca's School of ICT (Information and Communication Technology) has built up a reputation of graduating a high caliber of students that are career ready. One of the School's major differentiators is its strong curriculum with a choice of labs for practical hands-on experience. Professional options (electives) include application development using a variety of tools on various platforms. A recent popular addition to the electives is Mobile App Development for IBM i.

Being in Tune with the Real World

Teaching staff at Seneca's School of ICT continuously seek to improve the work readiness of their students. To do so they are in regular dialog with potential employers and actively seek feedback from current and graduated students.

Russell Pangborn is a Professor at Seneca's School of ICT and also a board member of the Toronto Users Group for IBM Power Systems (TUG), a professional forum for the presentation and exchange of ideas that pertain to IBM i users. Russ was instrumental in adding Mobile App Development for IBM i as a professional option to Seneca's Computer Programming & Analysis major.

Russ explains, "We have a faculty that is passionate about technology and we occasionally have epic battles in our departmental meetings over what we can squeeze into a limited size curriculum. Seeing the huge impact that AS/400 technology (now called IBM i) was having in the industry, in the 1990's I took up the cause of getting it into our curriculum. Over the last 25 years IBM i related core subjects and electives have included RPG, C++ and Java programming, CLLE, advanced DB2 and Lotus Domino."

"Having an understanding of mature development languages as well as of new technologies, makes my students well prepared for the real world."

"We were an early adopter of RDi (Rational Developer for IBM i) and our graduates often used to tell me that they were the first ones at their company who were familiar with it and that they had to teach their colleagues about it."

"Obviously the excitement about the RPG development language has long gone. But that should not result in the view that there is no business value in existing RPG applications. Neither should it result in the perception that the platform on which those applications run is old tech." ➔

Mobile App accessing an IBM i based HR system. Created by Seneca students with LongRange.

"I aim to teach my students that they should analyze a company's existing application portfolio before making any judgements. They need to learn how to assess which applications are 'okay-as-is', which ones are candidates for modernization and extension, and which ones are beyond salvage and need to be rebuilt or bought."

Needless to say that Russ always keeps an eye out for tools that can be used to extend or modernize existing IBM i applications, such as for mobile access, web enablement or web service integration. In that context, Russ immediately recognized the potential of LANSA's LongRange, a mobile app development tool, when he heard about it a TUG meeting.

Russell Pangborn (middle), with two of his top students Artem Luzyanin (left) and Mario Rivero (right).

Mobile for IBM i in School

Using the LongRange online tutorials and a free trial license, Russ and one of his RPG students evaluated the product. They concluded it would be a very suitable subject for an elective and together they convinced the department to put it up as a professional option for the upcoming semester. It was named MAP525 (Mobile App Development for IBM i).

Russ continues, "LongRange perfectly demonstrates to students how they can combine the soundness of a widely used and mature system with the new and exciting possibilities provided by mobile technology."

Students can choose to get a brief introduction to RPGLE application development in the second semester and then use that as a vehicle to develop sophisticated mobile apps with LongRange and RPG, without having to dive into Objective-C or Java. Forty percent of a students' grade is based on a final project, rather than a final exam.

Several of Russ' students were able to produce impressive mobile apps using LongRange. For example, one of his students created an app as an extension to a payroll system. The app allows users to add and change contact details, location/address maps and employee photos, and integrates with the email and phone facilities on the mobile device.

"LongRange perfectly demonstrates how to combine a sound and mature system with new mobile technology."

Presenting at User Group Meetings

Each semester a student who demonstrates exceptional performance in the classroom and understanding of the IBM i platform is selected for the TUG award. Russ writes an article about each of those students. The award is presented at the TUG Conference and this year one of the recipients received a job interview on the spot.

Russ also provides his students with opportunities to present their mobile projects at TUG meetings and at the annual TEC conference. Students gain from the experience of speaking in public and communicating with seasoned IT professionals. The TEC2015 sessions about Mobile apps for IBM i, presented by Seneca students, were well attended and received positive feedback from industry people.

"Using LongRange mobile app development provides a perfect example to my students of how they can capitalize on existing business functionality by extending existing code with new technology. Having an understanding of mature development languages like RPG, as well as having an understanding of new development and integration technologies, makes my students well prepared for the real world and popular with potential employers," concludes Russ. ■

Snapshot

Customer: Seneca College is Canada's leader in post-secondary education.
www.senecacollege.ca

Challenge: Prepare student for the real world, where they may encounter a mixture modern, mature and legacy systems.

Solution: Teach students how they can capitalize on existing business functionality by extending existing code with new technology.

Key Benefits: Seneca's students are well prepared for the real world and popular with potential employers.

Product Used: LongRange

More than just middleware

Marjanna Frank
LANSA Review Editor

Whether working with purchased or custom applications, on premise or in the cloud, every organization has a need to automate its manual processes, integrate its various internal applications and share data with external parties.

Business Process Integration (BPI) software integrates and automates business activities within an organization and between organizations. It makes independently designed applications work together.

The core line-of-business applications that organizations have in place often encapsulate many years of experience and knowledge and represent millions of dollars of investment. Typically the most frequent and demanding changes to the business do not directly affect the core functions of those applications. Rather, they have to do with the ways in which those applications need to interact with each other and with the outside world.

The challenge of Business Process Integration is to open up those applications so that the enormous value contained in them can remain relevant and effective in a connected world.

LANSA Composer is a BPI tool that automates:

- **Transportation** — Moving data between source and target
- **Transformation** — Mapping the data at each integration point to the expected format. In many cases, that is not just the data format, but it may also involve different data content, e.g. using rules, formulas and transformation tables to change units of measure, item codes, and so on.
- **Process Orchestration** — Sequential and conditional execution of tasks (the process flow).
- **Administration** — Auditing, error-handling/recovery, security and system operations.

BPI can substantially lower processing costs and improve the reliability and accuracy of data by reducing the amount of human effort required to complete repetitive tasks at the various integration points.

Below are just a few examples of how companies are using LANSA Composer. More case studies at **www.lansa.com/builtwithlansa/process-integration.htm**

Integration in a Hybrid Cloud Environment

Eagle Systems, Inc., part of the Eagle Group based in Wenatchee, Washington, USA, is a leader in intermodal transportation and container repair with locations throughout the USA and Canada.

Eagle has recently implemented NetSuite Financials, a cloud-based solution, but will keep using its custom developed IBM i-based ERP system to run its core business. To synchronize and integrate the two systems in this hybrid cloud environment, Eagle uses LANSA Composer and web services. The solution:

- Keeps the customer master and other key files in synch.
- Posts tens of thousands of ERP invoices and credit notes to NetSuite.
- Lets Eagle's ERP system interrogate NetSuite in real time to check customer account balances.

Eagle is also using LANSA Composer to automate EDI transactions with its partners and to streamline FTP transmissions with its container maintenance customers.

Integration between Heterogeneous Internal Solutions

Green's General Foods, based in Australia, produces and distributes food products, such as baking and pancake mixes, crackers, cereals and popcorn.

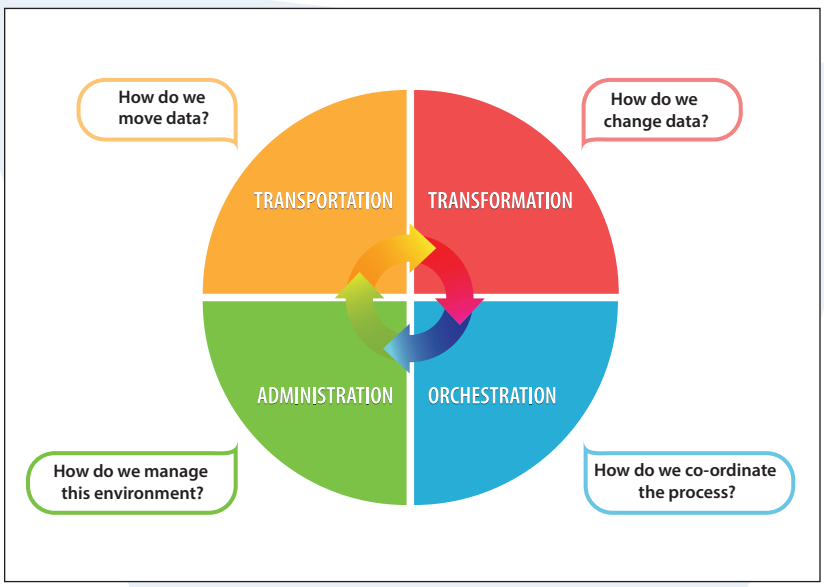
Green's uses LANSA Composer to automate the integration between its packaged IBM i-based ERP system, its Windows-based Warehouse Management System and its Windows-based EDI Server.

Previously these integrations were hard-coded in custom-developed programs that were hard to maintain and often contained error-prone code. The custom programs also made it expensive for Green's to upgrade its ERP environment

It took one business analyst less than three months to replace over 150 custom developed programs with LANSA Composer.

Green's evaluated several more complex BPM products and estimates that the cost of implementation would have been at least double compared to the solution implemented with LANSA Composer.

Robinson Manufacturing Company, based in Dayton, Tennessee, USA, is a supplier of basic and fashion boxer underwear, loungewear and activewear to both the retail and wholesale markets. ➔



A proper Business Process Integration tool addresses functional and operational control requirements. Download the BPI Buyer's guide at http://bit.ly/BPIWPLR45

Robinson was one of the first LANSA Composer customers and is using it for a growing number of tasks, including:

- Moving inbound EDI Purchase Orders from its EDI solution (Gentran) to its ERP system
- Processing web visit logs into a database for reporting.
- Processing logs regarding PC backups and emailing users about missed/failed backups
- Report Distribution that includes scheduling, converting spool files to CSV and PDF format, and emailing reports to users.

Robinson also uses LANSA Composer for integration with 3rd parties, such as with UPS for address validation using web services.

Integration with 3rd Parties

The Pantry, headquartered in North Carolina, USA, is a leading convenience store chain with over 1500 stores in the south eastern states, operating under select banners, including Kangaroo Express®. Its stores offer a broad selection of merchandise, as well as fuel and ancillary services.

The Pantry has to report monthly on fuel sales and tax in the 13 states in which it operates. The reporting standard is EDI ANSI X12 813, but each state requires a different version and one state has moved to web services. Monthly processing involves preparation of the tax data in Excel spreadsheets. LANSA Composer automates the transformation of the spreadsheets to the required format for each state, by working out which map to use and which fields to map. It has allowed The Pantry to standardize its reporting, improve accuracy and reduce the number of retransmissions due to errors.

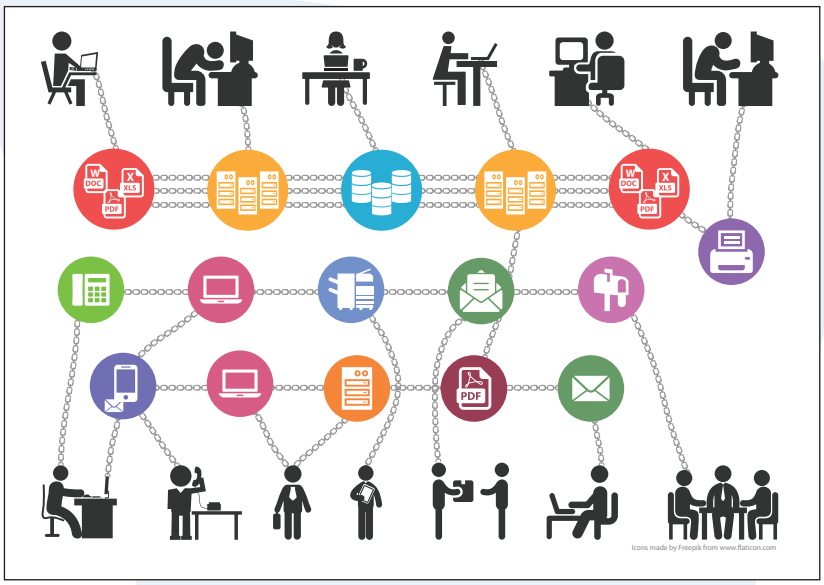
The Pantry doesn't have developers on staff and the company's Tax Analyst for Motor Fuels/Sales is self-sufficient in using LANSA Composer.

Frederic Printing, an RR Donnelley Company located in Aurora, Colorado, USA, offers an extensive range of printing services and the latest in print technology platforms.

Frederic Printing uses LANSA Composer to automate the workflow of order processing, allowing its customers the flexibility to use a variety of data formats and delivery methods.

Frederic Printing's LANSA Composer solution is implemented in a Windows and MS SQL environment and manages the receiving of orders, order acknowledgement, shipping notifications, invoicing, file management and archiving.

The solution has significantly reduced the amount of manual labor (both for Frederic and its customers), hugely increased Frederic's print-on-demand capabilities, and facilitated better responsiveness and quality of service for customers.



Business processes are often chained together by a mixture of computer interfaces and human effort.

Body Corporate Services (BCS), based in Australia and owned by PICA (Prudential Investment Company of Australia), is the national market leader in the provision of professional strata and community title management. BCS delivers guidance and support to a portfolio of approximately 175,000 clients across 10,700 schemes.

BCS has successfully trialled and is about to implement a solution where LANSA Composer automatically handles email attachments. Banks send reconciliation reports by email addressed to a specific BCS email address. LANSA Composer opens the email messages, detaches the reconciliation report from the email, and stores the reconciliation report in the appropriate directory for further processing.

BCS also uses LANSA Composer and LANSA Integrator for many other tasks, such as for automating the daily bank feed (collecting the files from an SFTP site, updating scheme bank balances and marking matching invoices as paid) and for the preparation and filing of thousands of electronic tax statements with the Australian Tax Office every quarter.

Almost Automated

Many organizations have their structured integration needs covered (albeit with a patchwork of solutions), but are still struggling with their unstructured integration.

For example, they may allow business partners to send orders by spreadsheet, but it still requires manual effort to detach those spreadsheets from the email and manipulate them to a certain format, before they can be processed.

They may have a facility to receive files via FTP, but someone is still manually moving and renaming files before they can be processed.

They may have EDI or other data exchange systems in place, but the process of responding to failures might be manual and adding new partners might require programming effort.

If you have any of these half-automated integration solutions, give LANSA a call.

Conclusion

Business Process Integration typically operates at the fringes or boundaries of existing applications and fills-in the gaps between them and the outside world. It provides the means for those applications to interact and exchange data, by providing ready-made implementations of the relevant protocols and standards.

LANSA Composer is a design and execution platform for integrating business activities involving data transport, transformation, custom processing and administration. It offers a practical and affordable BPI solution to help organizations streamline procedures, reduce human effort and minimize errors.

LANSA Composer's visual environment allows business analysts, rather than developers, to rapidly automate and integrate business processes. It offers a simple and cost-effective way to get a wide variety of business transactions in and out of your ERP/line-of-business system with less human effort.

LANSA Composer Product information: **www.lansa.com/products/application-integration.htm**

To download the BPI Buyers Guide visit **http://bit.ly/BPIWPLR45** ■

Visual LANSA version 14 is a game changer for web application development

Richard Lancaster
LANSA Product Center

Developing web applications can be a challenge because of a number of factors. Developers can select from a long list of development tools, programming languages and JavaScript frameworks. How do they choose the most appropriate combination? Will the application have to run in multiple browsers? Will the user interface provide a user experience that engages customers and staff? Where will the business logic run – in the browser, on the server or distributed across both? Then there is integration with line-of-business systems to consider.

What if you could remove or reduce the complexity and frustration by using a single development tool that addresses the problems and changes the nature of the web development game? Visual LANSA version 14 is the all-encompassing development tool that meets these challenges. You can use it for developing and maintaining applications that support multiple client device types, across multiple browsers, while the server platform can be Windows, Cloud (AWS or Azure), Linux or IBM i.

Why do you need a Game Changer?

Application development is more complex today than in the past, and compared to legacy applications, today's modern applications are expected to deliver so much more. The skills required to maintain legacy applications are not the same skills required to develop modern web applications. Many developers struggle with multiple programming languages and complicated development tools.

The tools and frameworks that developers use to build web applications seem to be selected from a "flavour of the month" list that quickly becomes superseded by newer ones. Developing applications using multiple programming and scripting languages requires mastering these tools and languages – making the development task harder and more complex.

There has to be a better tool for developing web apps than the @#% we are using now!*

When applications, built using many different tools and languages, need to be changed and modernized in the future, the risk of not having the required developer skills on hand is increased.

You need tools that can simplify the development task, reduce effort and preserve skills.

Why is Visual LANSA Version 14 a Game Changer?

Visual LANSA simplifies application development, automates much of the development effort, and produces web applications that look and behave like desktop applications.

You use one programming language for the whole application, including the server and client components. No HTML, CSS, JavaScript, C#, COBOL or RPG code required. Optionally, you can augment the code with your choice of JavaScript frameworks and libraries.

With only one language to learn (RDML, Visual LANSA's Rapid Development and Maintenance Language, a high level language that has evolved over nearly 30 years), as opposed to alternative web development methods that require multiple tools and languages, using Visual LANSA you can build web applications faster and deploy them in less time.

Visual LANSA web applications have a desktop quality look-and-feel and run in any browser. There is no need to test the applications in multiple browsers as the code generated by Visual LANSA is cross-browser compatible. You can build applications that support multiple device types and sizes, including smartphones, tablets, desktops and laptops from the same code.

Visual LANSA allows you to distribute the business logic between servers and browsers to serve the requirements of the user interface and integration with line-of-business systems.

Visual LANSA generates much of the application code for you, allowing you to build

web applications in a fraction of the time taken using other tools.

When building desktop or server applications, Visual LANSA developers write the RDML code. The "Create LANSA Application" process then builds the application, combining it with the LANSA runtime (Figure 1).

Using Visual LANSA version 14, the process for building web applications is the same as that for desktop and server applications. Developers write the RDML code for a web application. The "Create LANSA Application" process then builds the dynamic HTML, CSS and JavaScript for the application and combines it with the JavaScript version of the LANSA runtime (Figure 2).

Version 14 of Visual LANSA allows web developers to build Single Page Applications (SPA), which is the equivalent to building a client/server app, but instead of the UI being a rich-client interface talking to a server, the client is the browser. SPAs run entirely inside the browser and the only time the server is accessed is for reading, inserting, updating and deleting data or executing server-side logic. Since all of the server calls are done asynchronously, the network traffic between the client and server is greatly reduced. Users will find a noticeable performance improvement with the new LANSA web applications, because there is no need to refresh the entire web page with SPAs – it's a like super-fast desktop style application running in the browser.

Visual LANSA Framework

The Visual LANSA Framework (VLF) is an operational web and Windows application that allows developers to assemble business software rapidly with minimal coding. Developers can assemble prototype applications and use the same design for both desktop and web applications. It is appropriate to use when these requirements apply:

- Deliver an application quickly
- Develop medium to large business applications for transactional and back-office contexts
- Maximize design productivity and include significant user involvement in the project
- Use a single application design for both Windows and web

The VLF minimizes the amount of coding required and includes a program coding assistant that can automatically generate most of the code. As each component of the application is built and approved, it snaps into the VLF. The VLF uses an XML-based design schema and its modular design supports many developers working on different parts of the application at the same time. The VLF's component structure means enhancing and maintaining applications is efficient and manageable. Developers can snap in new and maintained components without disturbing the whole application.

Web Applications for Mobile Devices

Using Visual LANSA, developers can build mobile web applications or hybrid mobile applications by including Visual LANSA's native mobile app, available for iOS, Android, Windows 10/8.1 tablets and PCs.

Visual LANSA provides tools for the user interface design, business logic and database access. In the case of mobile web applications, the browser manages the user interface and for hybrid applications, the app can also access mobile device features including the camera, location services, and offline storage.

The mobile web and hybrid applications can run on smartphone, tablet, laptop and desktop devices from the same application code.

Develop and Deploy in the Cloud

You can develop applications in the cloud and/or deploy applications in the cloud using Version 14 and LANSA's Amazon Web Services (AWS) and Azure offerings.

Using your cloud account, you can create your own instance of the Visual LANSA development environment and build applications. LANSA

Figure 1: Packaging Desktop and Server Applications

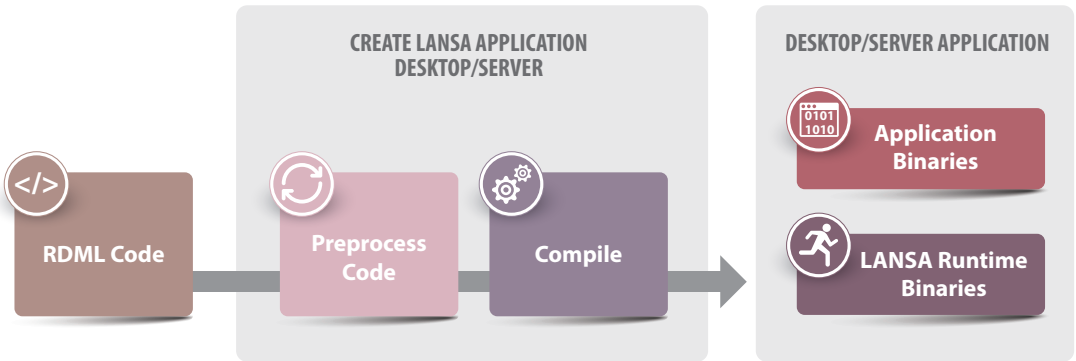
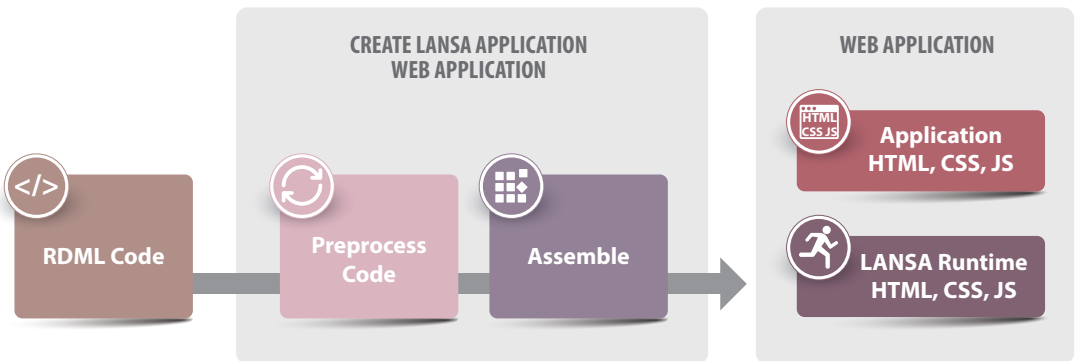


Figure 2: Packaging Web Applications



provides a ready to go virtual machine image for you to deploy applications in the cloud. You run a script with a simple user interface to instantiate a working virtual machine. After creating your instance of the virtual machine, you provide your LANSA application MSI (Microsoft/Windows Installer), which is automatically installed for you and your application is ready to go.

You can develop and deploy in the cloud, or develop on-premise and deploy in the cloud.

Business Rules Repository

LANSA's unique business rule and data definition repository makes future maintenance and enhancement easier, faster, and less risky. You are more productive because you don't have to code business rules and data definitions (including type, size, presentation and validation). The repository centralizes data definitions so that all applications use the same definitions. When a data element attribute changes, you only have to change the definition once, and don't have to examine every application that uses that data element and make the same change. This reduces the cost of application maintenance significantly. For example, 5 lines of RDML code can create a typical, working, multi-column, multilingual list bound to its data source.

Getting Web Development Right is Essential

Businesses are in two industries. One industry is the domain of their products and services and the other is information technology. Making wrong choices or failing to deliver products and services can put you out of business. The Internet is a dominant and influencing factor driving the success of any business and that is why getting web development right is essential.

Four Types of Web Applications

We at the LANSA Product Center think that there are four types of websites.

1. Information

Information websites include publishing and encyclopaedia style websites (think "brochure-ware"). Content is static and edited by the owner of the website or registered editors. Typically, these websites provide search and a table of contents, and users retrieve information by searching and following links.

2. Social and community

Social and community websites include WordPress, Facebook, Twitter, Instagram, blogs, and bulletin boards. They have more business logic than information websites. The content is dynamic and edited by all participants, including the website owners and users.

3. Transactional

Transactional websites support business-to-consumer (B2C) and business-to-business (B2B) commercial transactions between customers, suppliers and business partners. Examples are shopping, banking, shipment tracking, travel booking, procurement, and many other business related activities. Transactional websites require integration with back-office systems and content is dynamic. Users of transactional websites operate desktop and tablet computers to interact with the site. The architecture of these applications varies, examples are bespoke, on-premises packages and software-as-a-service.

4. Back office

Back office websites are corporate applications, including ERP and other core line-of-business systems, finance and accounting, customer relationship management, business document exchange and employee self-service portals. Content is dynamically served from relational and document databases. Typically, users are employees operating large tablet or desktop computers with one or more screens. Back office systems integrate with transactional systems and provide data, business logic and workflow services.

How Visual LANSA Helps you get Web Development Right

Recognizing the characteristics of website types helps architects and developers decide how to design applications and identify tools best suited to building them. Developers can use Visual LANSA to build any of the website types but where is it the most suitable tool?

1. Information

Information websites can be built with Visual LANSA, but it may not be economically viable. The competitive space is full of great tools that specialize in these type of websites, including templates and non-programming tools.

2. Social and community

Developers can build social and community websites using Visual LANSA. However, many open source frameworks are available on which to assemble social and community websites.

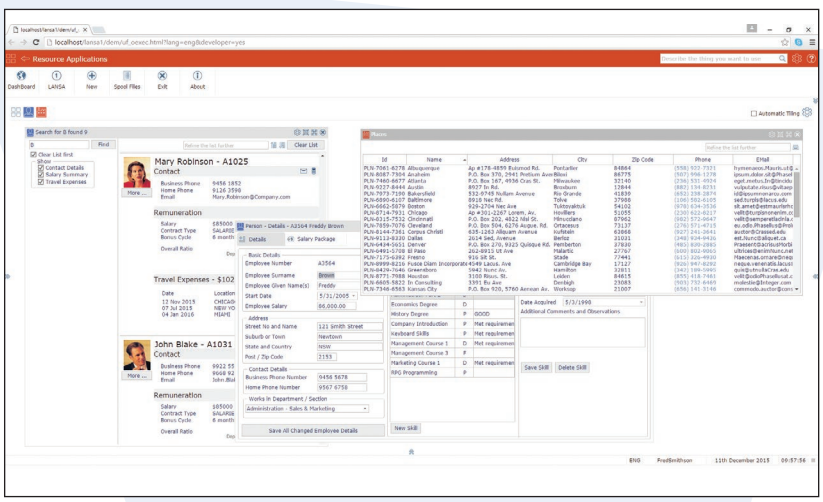
3. Transactional

Visual LANSA is very well suited to build the business logic and application functionality of a transactional website, as well as to create a sophisticated web user interface, and to integrate the website with back office systems.

4. Back-office

Visual LANSA is very well suited to build applications to manage back office activities. The Visual LANSA Framework also fits perfectly into this type of web application. Enhancements and new applications plug into the framework without disruption to existing framework applications.

Visual LANSA is best suited to building transactional and back office web applications. Developers use one language to build business logic, validation and user interface and can use LANSA Integrator to support integration interfaces with other systems. It's all right up LANSA's alley. ■



Visual LANSA is very well suited for developing transactional websites, back office applications and self-service portals.

A tour of Visual LANSA Version 14 features

Development features	
Develop web applications without coding HTML, CSS or JavaScript	Build web applications for smartphone, tablet, laptop and desktop devices without coding HTML, CSS, JavaScript, PHP, or RPG.
A single high-level language for all development	Use one programming language to build client-side (browser) and server-side components of web applications.
Web applications that look like desktop applications	The user interface is generated in the same way as it is for desktop applications. Visual LANSA manages screen rendering and updates only those areas of the screen that change. The whole page is never reloaded.
Powerful client-side processing	The Visual LANSA runtime engine runs in the browser which simplifies client-side development allowing developers to build stateful, desktop style web applications.
Browser agnostic	Applications work with all browsers and no browser specific program code is required.
Out-of-the-box application templates	Application templates are provided for developers to use as the basis for generating their web applications.
Write once reuse many times	Build web applications and user interfaces with components that can be used over and over to ensure consistency across applications.
Third party JavaScript libraries and frameworks	Developers can also use popular JavaScript frameworks and libraries and add their own JavaScript to applications.
Mobile and offline features	
Applications can use mobile device features	Integrate with mobile device features such as the camera and geolocation.
Applications can operate offline	Build web applications that can operate with or without a connection and then synchronize data when a connection is available.
Design features	
Easy responsive design	The Layout Manager includes features to make responsive interface design easier; e.g. use drag-and-drop to design multiple user interface formats.
Business rules repository	All business rules reside in a single repository so that data validation, event triggers and other rules can be isolated from the web applications that use them.
Data element definitions repository	Data element definitions include type, size, presentation and validation, e.g. the way that a telephone number is displayed and validated is defined in one place and used across all applications.
Cloud features	
Cloud based development option	The Visual LANSA Integrated Development Environment is available to code and test applications using AWS or Azure.
Completed web applications can be deployed in the cloud	Version 14 includes a deployment tool to upload and configure web applications to AWS and Azure.

TEST DRIVE VISUAL LANSA VERSION 14

You can Test Drive Version 14 in the cloud. Existing Visual LANSA customers also have the option to download and install Version 14 on their workstation.

Here's the deal

- 21-day trial period.
- Choice of cloud platform Amazon Web Services and (soon) Microsoft Azure.
- Nothing to install on your workstation.
- No cost to use LANSA (AWS or Azure charges may apply).
- Your own Visual LANSA development and test environment in the Cloud.

What you can do

- Step-by-step tutorials, demo applications and code-start samples are included.
- Develop and test responsive web apps for any device (phone, tablet, desktop).
- On completion of the Test Drive, download your "masterpiece" to your own Visual LANSA workstation or you can continue with a paid cloud subscription.

Start your Test Drive today www.lansa.com/test-drive-lansa

ASIA PACIFIC:
Sydney Australia
Tel: +61 2 8907 0200
Email: info@lansa.com.au

EUROPE:
London England
Tel: +44 1727 790300
Email: info@lansa-europe.com

THE AMERICAS:
Chicago USA
Tel: +1 630 874 7000
Email: info@lansa.com

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