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ISSUE 40

Review

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Reduce the Human Effort in your Data Chains

LANSA holds the key for STRATTEC

TCM simplifies complex business processes

Piraeus MultiFin improves competitiveness with LANSA

Advance Computing goes cross platform with LANSA

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Issue 40: July 2010

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In this issue:
Integration automation and 5250 application modernization

A WORD FROM PETE DRANEY
Director and CEO

Integration Automation

Many companies have business processes that are chained together by a mishmash of computer interfaces and human effort – negatively affecting operating costs, employee productivity and business relationships.

The **Showcase** demonstrates how automating data chains with LANSA Composer lowers data processing costs and improves accuracy by reducing the amount of paper, email, fax and human effort required for repetitive tasks.

All the showcased projects have two factors in common. First is the simplicity of design and development, usually requiring no programming skills. Second is the streamlining of the business processes around these data exchanges, with the automation of the actions to take on success or failure of each step in the process.

The **Architects Corner** focuses on business process integration and provides considerations and best practice guidelines for designing and delivering integration solutions.

5250 Application Modernization

The article "**How to justify 5250 application modernization to your CFO**" provides some proven tips and techniques for success in presenting an application modernization project for budget approval. Many IBM i users are still running at least one of their core business applications in 5250 mode. Of the many reasons we hear in support of this, the two most common are a) the cost of modernisation versus ROI and b) the lack of a compelling reason to modernize.

STRATTEC Security Corporation, an automotive lock maker in the USA, provides a very good example of how to pick modernization projects for maximum ROI. They use a simple yet powerful rule: start with what gives the biggest bang for your buck. In other words, start with the most inefficient and time consuming procedure and turn it around. In their first modernization project, they made processing shipments six times faster. Just two guys did this. I bet their CFO is all ears the next time they knock on his door.

Piraeus MultiFin, a finance company in Greece, used the Visual LANSA Framework to redevelop its core line-of-business system, transforming it from a 5250 interface to a modern Web application. MultiFin improved customer service and lowered their operating cost. This was all achieved with modest resources and MultiFin's own small team of two LANSA developers, who also looked after the existing system while redeveloping.

TCM, an IT infrastructure and services provider in South Africa, used RAMP and Visual LANSA to modernize their systems, following a pragmatic low risk approach through a phased implementation. The improved efficiency of the modernized solution has contributed to allowing TCM to double in size whilst only increasing administrative support staff by twenty percent. The modernization project was carried out by two developers from TCM's own IT team, both new to visual development.

Notice a pattern here? All these companies carried out successful modernization projects with a staff of just two, who looked after the maintenance of the legacy system as well.

Advance Computing, a provider of financial software in Australia, presents a special modernization example. They gradually, but totally, replaced all RPG code with LANSA and can now offer their solution across different deployment platforms. This allowed them to expand their market share from a handful of large IBM midrange customers to also include numerous Windows implementations. All platform implementations are supported from a single set of LANSA source code.

Visual LANSA for .Net Developers

Finally, I draw your attention to the latest release of LANSA Open .NET. Version 3. It is now very easy for any .NET developer to access LANSA's business rules via the LANSA Repository and to access DB2 databases from their Visual Studio development environment. You can think of it as simplified Visual LANSA for .NET.

Announcing:

LANSA Open for .NET Version 3 brings LANSA's Repository into Visual Studio

LANSA Open for .NET gives Microsoft .NET Framework developers easy, secure access to data and information on IBM i servers via the LANSA Repository. With the announcement of LANSA Open for .NET Version 3, LANSA brings even more of the power, security and performance of its Repository into Microsoft Visual Studio.

Now .NET developers have access to DB2 databases and business rules from their Visual Studio development environment, as well as being able to access other IBM i server objects. This allows them to write code to inspect spooled files, issue operating system commands and start programs.

LANSA Open for .NET ships with an industry standard class library and includes ready-to-run samples in C#.NET and VB.NET. The product does not require additional LANSA software to be installed on the .NET client system. It is easy to use and implement, and, for .NET developers, no knowledge of the IBM i, DB2 or LANSA is required.

What Does it Include?

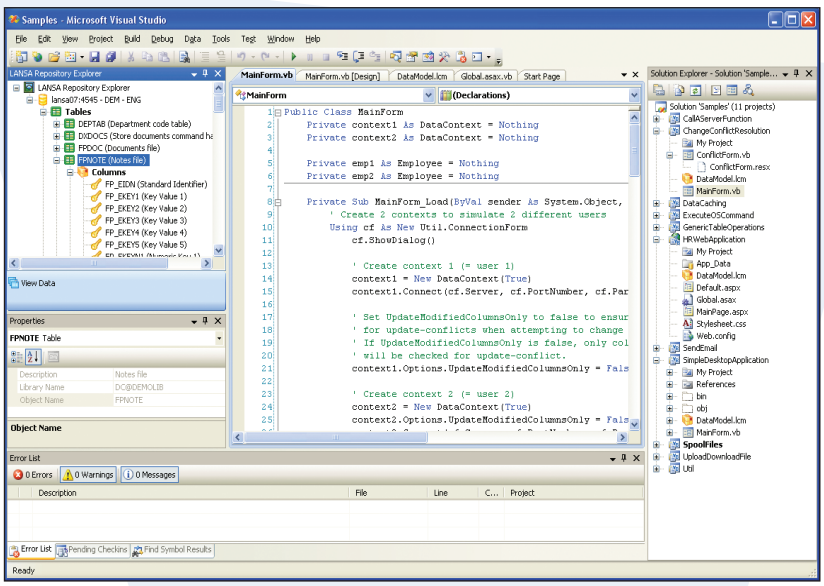
The new release includes a Repository Explorer and a Data Model Editor so .NET developers can connect to a LANSA Repository on an IBM i server and inspect the objects defined in the LANSA Repository. For example, they can view and edit the content of tables in a DB2 database.

From the Visual Studio IDE, .NET developers construct a data model for their application from DB2 tables defined in the LANSA Repository. They construct the model by dragging objects from the Repository Explorer to the Data Model Editor. Saving the data model generates the .NET classes and methods that will access the table on the IBM i server from the .NET application

The C# code to access an employee table would be as simple as creating a LANSA data context and retrieving the employee details:

```
// Create a LANSA data context
DataContext context = new
DataContext(true);
// Retrieve all fields of an
employee with key field EmpNo =
"A0070"
var employee = context.Employees.
RetrieveItem("A0070");
```

An IBM i or LANSA administrator can also create data models for use by the .NET developers. There is a standalone version of the Repository Explorer and Data Model Editor (not integrated into Visual Studio) for use by IBM i developers or administrators who do not use Visual Studio.



From the Visual Studio IDE, .NET developers can drag objects from the LANSA Repository Explorer to the Data Model Editor.

Is it for LANSA Shops Only?

Any DB2 file on the IBM i can be made known to the LANSA Repository. The process does not involve data duplication. Once files are made known to the LANSA Repository, business rules, validations, error messages and other attributes can be defined. These additional rules can then be enforced across all applications that access the DB2 files through the repository, including C#.NET programs that use LANSA Open for NET.

Of course, LANSA shops would have the benefit of already having defined their business rules in the repository, while most RPG and COBOL shops will have the rules embedded in their program code. (By the way, LANSA also has a facility to make the repository rules available to RPG and COBOL developers, so they can start to centralize the business rules, rather than duplicating them in numerous programs.)

What are the Benefits?

The .NET applications (written with C# or Visual Basic) can use the validations, calculations and other business rules defined in the LANSA Repository. No extra effort is required from the .NET developers. They do not need to duplicate any of the business rules in their .NET applications and the rules will still be applied. Multilingual text (such as field labels, headings and help text) defined in the LANSA Repository are also available for reuse by .NET applications.

Not having to duplicate the business rules in the .NET applications will increase development productivity, and drastically reduce coding errors and maintenance effort.

The .NET developers also have access to IBM i server objects. They can write code to inspect spooled files, issue operating system commands and start programs. Data queues on the IBM i provide a messaging service for program-to-program communication. With LANSA Open for .NET Version 3, .NET developers can write programs to use the same messaging services. A program running on the IBM i server and a .NET program can work collaboratively to meet a business requirement by sending messages to each other via data queues. ■

How to justify 5250 line-of-business application modernization to your CFO

Steve Collins - *Director of Professional Services, LANSA North America*

There is so much talk about application modernization that you could be forgiven for thinking that every 5250 application has already been dragged into the 21st century. But we all know that's not true. In fact, a typical IBM i user will probably be running at least one of their core business applications in 5250 mode.

So what is standing in the way of progress – apathy, fear, cost, or lack of a compelling reason?

The LANSA Services experience, from working as an advisor to many IBM shops (AS/400, iSeries, System i and IBM i) has taught us that the major impediment to starting an application modernization project is cost, or more specifically, how to justify the total investment required and thereby secure the funding.

This article shares some of the tips and techniques that have been used successfully to present an application modernization project for budget approval. As with many things in life, it is often the way that you present something that makes all the difference to how it is perceived and received.

You know that:

- Modernization has moved well beyond screen scraping your 5250 applications.
- Modernization has even moved beyond re-organizing functionality into an intuitive user framework.
- Modernization now includes workflow optimization, process automation and integration that extends beyond your four walls.

You know all that and more, but none of that matters as your CFO tuned out seconds after you started talking.

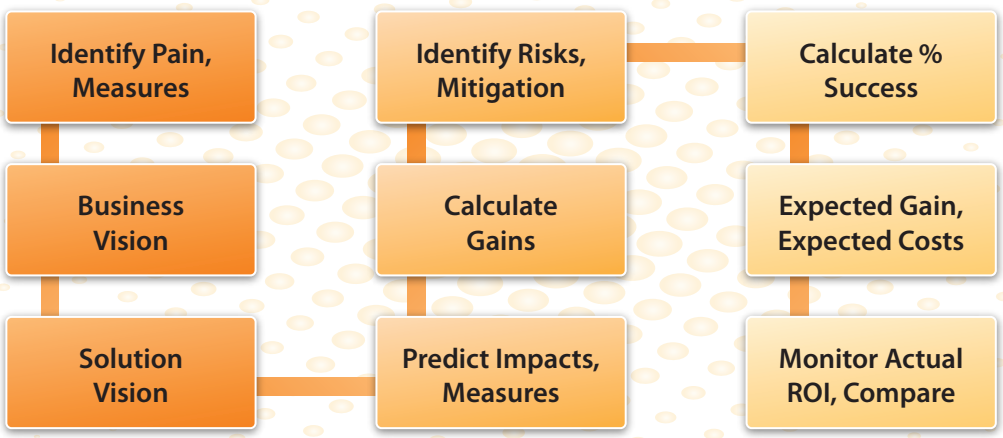
Here's the thing. Your CFO does care about application modernization. He or she just doesn't realize it yet. Your job is to position it so they can embrace it – even if it becomes 'their idea' all along!

Let's start with what you have:

- A homegrown application, semi-monolithic, originally written in the '90s, maintained ever since, running your core business transactions.
- A stable, scalable and generally misunderstood hardware platform.
- 1,000 demanding customers, many of them wanting you to open up your application for Web access and B2B integration, or move aside.
- 10 developers (well it used to be 10, now it's 5, including you) that maintain the application.

Now let's list what you want:

- An application that your users brag about to your top brass.
- An application that is more intuitive and faster to navigate – saving time and money.
- An application that lets your executive self-serve their own dashboard of reports, happily.
- The agility to respond to the needs of the business, without putting the business at risk.
- Less time on maintenance, so you can enjoy more than three rounds of golf per year and fewer than three cold dinners per week. ➔



Now how do you get your CFO to fund this journey?

- Don't talk about modernization and the merits of .NET, XML, SOA, SaaS, etc.
- Talk cost reduction.
- Talk customer satisfaction.
- Talk market share.
- Talk money!

But wait a second, don't walk into the CFO's office just yet. You need a plan. Here are 4 steps to follow:

Step 1 – Find the Right Application Modernization Initiative

Don't just listen to the business on a daily basis and be reactive. Instead co-ordinate periodic meetings to challenge current operations and policies. Become pro-active. Brainstorm from several perspectives: business objectives, market share, customer satisfaction, current operations, HR implications, financial risk, product or service innovation and so on. If you're not already doing this, schedule your first monthly/quarterly meeting now... really.

Bring process engineering and technology to each issue/opportunity. Ask "What if?" Work with the business users to focus on inputs and outputs rather than how things are done today.

Picture yourself there. How would operations look? Would you drive more revenue? Open a new market? Be more responsive? Reduce costs? Improve PR? Improve HR?

Picture it from the CFO's perspective. Be realistic, even bordering on pessimistic. How much effort would it take? How long would the benefits take to realize? What could go wrong? If it fails, can you recover? Wouldn't it be better off waiting another year to see if the market changes? CFOs don't want a naïve rose-colored sales pitch.

The right initiative is one that will help the organization further its mission and appears to be clearly justifiable – but more R&D work is needed to draw it out.

Step 2 – Start Planting Seeds Early

Very few CFOs will approve a significant project the first time they hear of it and no CFO will approve a significant project coming from only one source.

Think of the initiative from the perspective of each department head. Would the initiative be welcomed, dreaded, feared, slowed, stopped or stolen?

Very few CFOs will approve a significant project the first time they hear of it and no CFO will approve a significant project coming from only one source.

Gain preliminary support from all key areas of the organization by showing 'what's in it for us all'. Be ready to make some reasonable adjustments to garner support. It's like passing a bill through Congress!

Partner with a business sponsor who is willing to support the objective and work with you to get there.

Inform the CFO of your early initiative, what you have done so far and that it looks very promising. However, there is still lots of work to do before you are ready to gain the CFO's valuable perspective and critical assistance. Don't detail your R&D plan too much or too soon, but offer a milestone date by which you expect to be able to present it.

Step 3 – Do Homework to Justify a Project Scope

Interview business areas needed or impacted to anchor the solution vision. Meanwhile, capture support for the vision and garner willingness to assist in the sale and subsequent project stages. You want to be able to show the CFO that John in manufacturing and Jill in marketing support this vision and will assist you to achieve it. Ideally John and Jill take part in the presentation to the CFO – but don't gang up on the CFO.

Build a preliminary business case, but keep it simple and back it up with figures.

Step 4 – Gain CFO Support for a Deeper Study / Project Scope / RFP

With the sponsor, co-present the business vision, business case and potential ROI sources.

- Size and timeline the project's estimated effort/costs and benefits/ROI.
- Give an overview of the work done to date and the information that is still needed.
- List the project scope deliverables and identify the project scope team (internal and external).
- Size and timeline the project scope's estimated effort/costs and benefits (for example, decision-support information)
- End by highlighting the desirable future state and how it supports the organization's mission.
- Ask for the green light to proceed with the study and book a first executive/CFO update meeting.

These first steps will get you well on your way to securing the funding for an application modernization project.

In the next article we will cover the follow-on steps such as conducting the project scope, calculating the predicted ROI and how best to run an application modernization project. These steps are different from regular application development projects. ■

LANSA holds the key for STRATTEC

STRATTEC Security Corporation, headquartered in Milwaukee, Wisconsin in the U.S., is the world's largest producer of automotive locks, keys and related security access control products for global automotive manufacturers and the aftermarket. STRATTEC used a combination of LANSA's application development, modernization and BPI tools to dramatically improve the screen navigation of its System21 application and to replace repetitive tasks with automated EDI processes.

Nick D'Alessandro, Technical Lead at STRATTEC, says "We achieved major savings by tackling the most cumbersome procedures first. LANSA RAMP gave us the tools to truly solve the structural shortcomings of the legacy application, while LANSA Composer allowed us to set up efficient EDI and XML processes."

Improve and Streamline

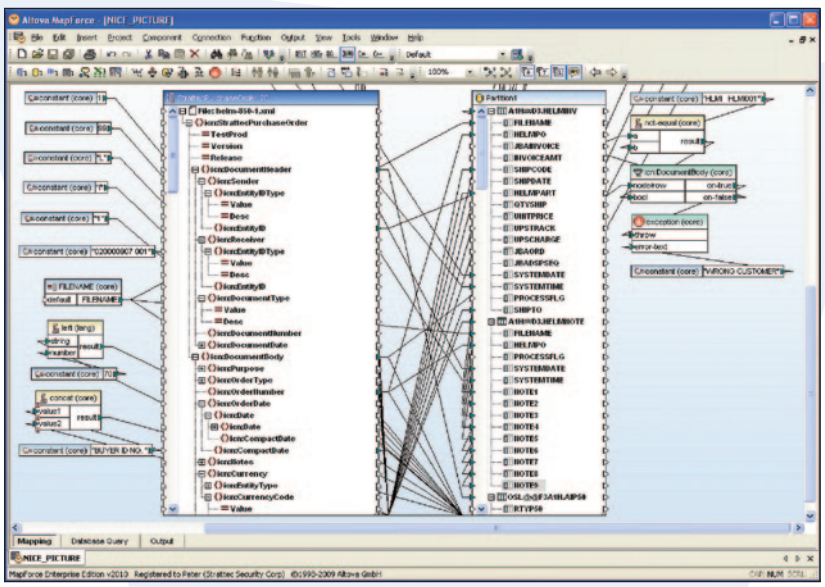
STRATTEC has plants, engineering and distribution centers in Milwaukee, Detroit, El Paso and Juarez (Mexico) and operates manufacturing and support facilities in China, Japan and Korea through a joint venture. Formerly a division of Briggs & Stratton, STRATTEC's heritage goes back over 100 years, to the early days of the automobile.

Over the years, STRATTEC has customized its System21 ERP implementation considerably, especially the DRP (Distribution Requirements Planning) and MRP (Material Requirements Planning) modules. The company uses Nutech's warehouse management system and Future3 for EDI transacting with its production customers, the car manufacturers.

The integration of these solutions into System21 had its limitations and some of the procedures within System21 itself were also inefficient. In addition, the order entry for aftermarket customers, such as car dealers and locksmiths, was still mostly manual. Even though these customers could send their orders electronically, EDI was only automated up to the point of STRATTEC's VAN (Value Added Network), from where data was retrieved manually.

STRATTEC wanted to improve and streamline its business processes, starting with the most cumbersome procedures first, without having to replace the underlying System21 application code.

After researching several products, STRATTEC selected RAMP from LANSA, a modernization product that includes LANSA's framework development tool, as well as facilities for screen consolidation and improved navigation for existing applications.



The process of mapping data items with LANSA Composer is graphical and intuitive. You don't have to care how the underlying code is created.

More recently, STRATTEC also implemented LANSA Composer for BPI (Business Process Integration) tasks, such as exchanging XML and EDI documents.

"LANSA truly deals with the structural shortcomings of our core system."

"We wanted a solution that would allow us to preserve the business logic, while improving the business processes," says D'Alessandro. "We looked at several modernization tools, but most of them were just webify tools that make your application prettier, but not better. LANSA offered a solution that allowed us to truly deal with the structural shortcomings of our core system, improve the workflow and automate repetitive manual tasks. No one else could do that, unless it involved rewriting the underlying code."

Biggest Bang for the Buck

In choosing which projects to tackle first, STRATTEC uses a simple rule: start with what gives the biggest bang for your buck. In other words, start with the most inefficient procedure and turn it around.

One particularly time consuming procedure for STRATTEC's warehouse staff was determining which items in inventory transfers from their plants needed to be allocated to fill backorders and which items could be kept in stock.

The original 5250 application required many steps, including printing the list of received items, manually checking each item on the list to see if there was a backorder and then entering the quantity to be allocated. Staff had to switch between screens and menus frequently, start and exit several applications and write down customer numbers for pick slip sorting later in the process.

The new process, modernized and extended with Visual LANSA and RAMP, automatically checks all shipments for items on backorder and displays the relevant item receipts and backorders on a single screen. The user only has to confirm the stock allocation and the pick slips are automatically generated in the desired sequence.

"Users don't have to go through a dozen screens anymore to do their task. In the old

system a shipment took on average two and a half hours to process," says D'Alessandro. "Now a shipment takes on average 24 minutes to process. We didn't have to change the way the process works, we just streamlined it and made it six times faster."

Better Functionality plus EDI

Another very time consuming task was the entire procedure of retrieving the orders of aftermarket customers, shipping them and invoicing them.

Previously, every morning STRATTEC staff logged on to the Web site of its VAN, iConnect, to make screen prints of the orders that customers had sent by EDI. These printed orders were then manually entered into STRATTEC's System21 application for shipping and invoicing, a cumbersome process, as it required switching back and forth between multiple screens and manually entering shipping data.

At the end of the day, staff would again log on to iConnect's Web site, where the customer orders would still reside, and manually update each order with shipping information. iConnect would then send EDI ASNs (Advance Shipment Notifications) to the customers, based on these status updates.

In the new procedure, using LANSA Composer, the orders are automatically retrieved from iConnect in XML format, transformed and mapped to a System21 interface file for processing by the ERP system. Barcoded picking slips and shipping labels are produced, the goods are packed and the boxes come on line. Staff scan the order number and UPS tracking number, which results in a LANSA RAMP-based program populating a screen with shipping information. All the user has to do is confirm the information and an invoice will automatically be created in System21.

The LANSA process also sends electronic invoice information to iConnect, which iConnect converts to ANSI X12 810 invoices and transmits to the customer. LANSA Composer could do the actual end-to-end EDI transmissions, but for the time being STRATTEC prefers to continue using iConnect as its EDI VAN.

STRATTEC's first implementation of the new procedure was for HELM, a large wholesale aftermarket customer, who places between 60 to 100 orders each day for drop shipping to individual dealers and locksmiths.

STRATTEC Security Corporation is the world's largest producer of automotive locks, keys for global automotive manufacturers and the aftermarket.

"We have delivered the new and improved functionality with our own small team."

Pete Chrostowski, Senior Business Process Analyst at STRATTEC who is responsible for delivering the EDI solution, says that the benefits of streamlining order procedures will be substantial. "We have been able to save staff over 25 hours per week, with just this first customer implementation. There are many more customers to follow and at some point LANSA Composer is going to be the heart of our order entry system."

Chrostowski also sees the potential to use LANSA Composer for streamlining procedures that have nothing to do with EDI. "LANSA Composer is good at automating repetitive processes of any kind," he says.

LANSA intended its Composer BPI tool to be used by business analysts rather than developers, and Chrostowski agrees that LANSA Composer doesn't require any coding skills. "Using LANSA Composer is quite intuitive. I can graphically see what it is going to do, but I don't have to care how the underlying code is created."

Even so, there was still a learning curve, as Chrostowski was new to XML and LANSA Composer. Chrostowski feels that LANSA's Remote Mentoring facility was a big help during his first Composer project.

Prioritize Projects for ROI

Instead of setting out to modernize its entire legacy application, STRATTEC has carefully picked its projects. The company plans to modernize, or rather rationalize, key application problem areas first, by providing better functionality to business users and automating repetitive manual tasks.

"I know we can use RAMP to modernize our entire line-of-business system and at some point we will," says D'Alessandro. "But right now we have other priorities. We want to tackle our most inefficient procedures first and provide productivity gains for our users. Our primary focus is the distribution warehouse. Next we want to streamline our production customers and replace our Future3 EDI solution with LANSA Composer."

Regarding providing better productivity and modernizing STRATTEC's IT environment itself, D'Alessandro concludes, "We have delivered the new and improved functionality with our own small team, without having to hire EDI, XML or Java experts. LANSA integrates tightly with our RPG-based System21 system, while giving us the tools to do things that we could never have done with RPG." ■

Company and System Information

- STRATTEC designs, develops, manufactures and markets automotive security products, including mechanical locks and keys, electronically enhanced locks and keys, steering column and instrument panel ignition lock housings; and access control products including latches, power sliding side door systems, power lift gate systems, power deck lid systems, door handles and related products.
- STRATTEC runs its LANSA modernized and extended System21 ERP (version 3.5.2) on an IBM iSeries model 520. The LANSA Composer BPI solution runs in a Microsoft Windows 2003 Server environment. For more information, please visit: **www.strattec.com**

TCM simplifies complex business processes

TCM is an integrated infrastructure and service provider and one of the largest privately owned IT companies in South Africa. TCM has over 600 staff, offices in all major cities, plus numerous satellite branches. In order to maintain its impeccable service record, TCM used Visual LANSA and RAMP to modernize and progressively redevelop its homegrown system for sales and services, to extend the system's functionality and to deliver it inside an integrated visual framework that also includes System21 ERP and a document management solution.

Wayne Impey, Chief Financial Officer at TCM, said "Using RAMP and Visual LANSA, we have taken our legacy systems and left them running while we have systematically upgraded them and replaced components as required. We have been able to follow a pragmatic low risk approach through a phased implementation. The improved efficiency of the modernized solution has contributed to allowing us to double in size while only having to increase our administrative support staff by 20 percent."

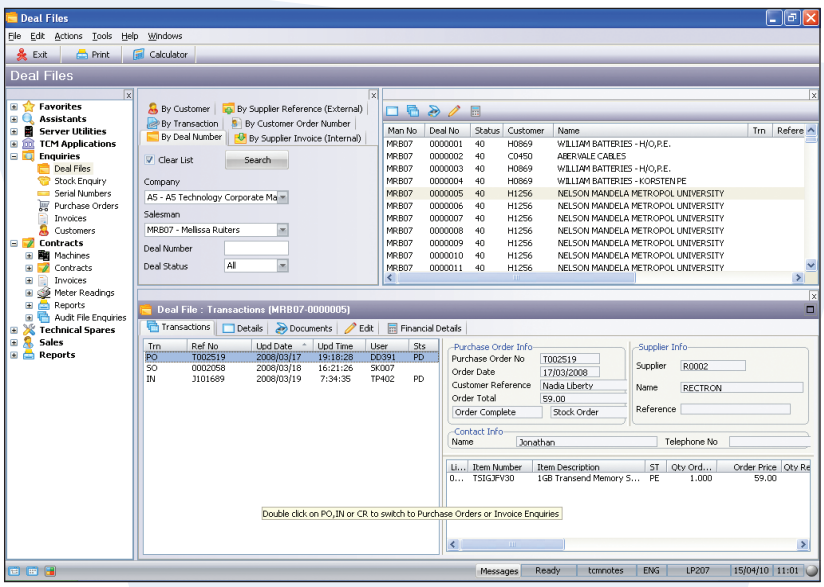
Capitalize on Lessons Learned

TCM has strong formal relationships with IBM, HP, Dell, Microsoft, Cisco, SUN, LANSA and many other software and hardware vendors. The company was founded in 1987 and has grown exponentially since.

As there were no suitable packages available for the services area, TCM developed its own, initially using traditional development methodologies based on RPG. The services system has grown with the company over 15 years and evolved to include sales, stock and warranties. The homegrown systems were supplemented with a standard implementation of System21, for which the source code was not available.

The business eventually outgrew this structure. Although most of the required functionality was covered, the system showed a number of structural shortcomings, especially in the sales and stock modules. Moreover, the system still had its original 5250 character-based user interface that required users to navigate through many screens to process a single transaction.

TCM was considering a system replacement. Any new solution had to be representative of 'best business practice' and, as a first choice, packaged solutions were examined for best fit. As TCM already had System21 Financials in place, the first thought was to implement the System21 Sales and Stock modules and integrate the homegrown system with these modules. However, that plan turned out to be problematic and was eventually dropped. The search for solutions from other vendors didn't result in any suitable outcome either.



TCM added the option of viewing transactions in System21 by 'deal reference'. This was possible even without having the source code.

"To us it was a better option to take the virtue of what we had and improve on it."

Gavin Mills, IS Manager at TCM, explains, "We found that the commercially available solutions were not only very expensive, but also needed a great deal of customization."

In addition to the IT effort and costs of replacing the existing IT systems, TCM found the associated risk to the business disproportionately large. "Migrating to another system would have created a lot of disruption to our daily activities and would have involved a significant amount of training. We looked at various products. We considered the risks and the costs and we came to the conclusion that these ERP vendors were not going to offer anything fundamentally different to what we already had," says Impey.

However, TCM did need to modernize its existing systems, not just by improving the look-and-feel, but also by reworking some of the structural shortcomings and adding new functionality. In searching for a product that could do all this, TCM chose RAMP from LANSA. "To us it was a better option to take the virtue of what we had and improve on it. LANSA allowed us to capitalize on the lessons learned and work done over the years, but without having to take the legacy code forward. RAMP also provided us with the opportunity to improve on the system's shortcomings and add new functionality," continued Impey.

A Phased Approach

TCM's first modernization project phase involved setting up the RAMP Framework for easy navigation. This was followed by the snapping in of the refaced System21 screens, with several improvements in functionality and presentation. For example, TCM added the option of viewing transactions in System21 by 'deal reference', which was implemented by

adding an extra table. These improvements were possible even though TCM didn't have the source code.

The second project phase involved improving on the sales, stock and warranty modules, plus integration with MicroFile, a document management system.

Several structural improvements were made in this phase. One example is Built Units, a process that involves assembling a unique machine from a set of parts. Previously this required a user to manually go through a number of screens for each part, by first selecting the part for the custom machine and transferring it from the warehouse to the workshop and then booking the part's transfer into System21.

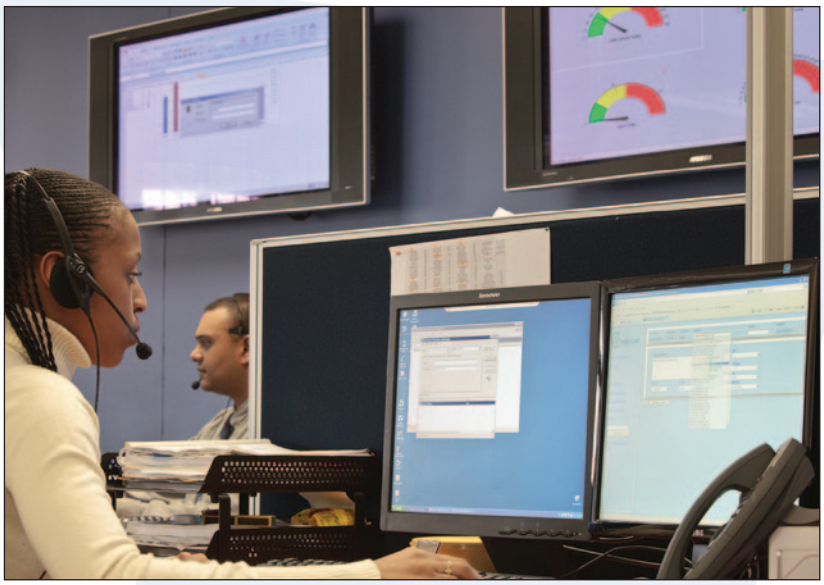
Mills explains, "It is not uncommon for a machine to be built from over 100 parts. Sometimes it took hours to process a single Built Unit, now it takes only minutes. The user can now select the parts with the point-and-click of a mouse, allowing for a far more rapid selection than what was previously possible. Next, behind the scenes, a RAMP program populates the screens that are needed to pull the parts from the warehouse and run the transactions through System21. The user seemingly takes a few simple steps, but the system generates many different transactions in the background."

The third project phase, which only recently started, is concerned with improving the services system. It includes helpdesk, contract and service level agreement management features, enabling advanced customer service management. This phase involves real-time data integration between the LANSA-based services application on the IBM i and PDAs carried by TCM's field engineers.

Improved Agility

"We have simplified complex business processes while maintaining the integrity of the underlying applications and business controls," Mills summarizes as one of the key benefits of the system overhaul. "This simplification was achieved by using LANSA to consolidate multiple screens across various homegrown and packaged systems, dramatically reducing the input of data and the number of screens to navigate."

"The new system contributes to improved agility and a better response to customer needs and market forces," according to Impey. "It has helped us to reduce the business cycle time, as measured from the initiation of a transaction to the collection of cash."



At an operational level teams are provided with easy access to live information enabling them to take timely corrective actions when needed.

"The modernized solution has contributed to allowing us to double in size."

"The improved efficiency has contributed to allowing us to double in size while only having to increase our administrative staff by 20 percent," explains Impey, citing as specific areas of improvement: a productive user interface to the call logging systems, easy allocation of costs to customer business units and improved access to performance reports.

Document handling time has been significantly reduced for both TCM and its customers. Electronic documents are automatically created, archived and distributed upon production and can be retrieved when required, all through the LANSA Framework.

"Management has been provided with faster access to information to support decision-making, while at an operational level teams are provided with easy access to live information, enabling them to take timely corrective actions when needed," says Impey.

"The modernized system allows us to draw on best business practice, past experience and lessons learned, by combining a mix of software packages and homegrown applications, all presented as one consistent and seamless view to the user through the LANSA Framework."

With Our Small IT Team

The modernization projects, including setting up the RAMP Framework, the Visual LANSA extensions, the integration with the document management system and the engineers' PDAs, were carried out by two developers from TCM's own IT team, both new to visual development.

"LANSA is productive in development, but more importantly we have found that our LANSA developed applications also require a dramatically reduced level of maintenance," concludes Mills.

Chantal Applewhite, Managing Director at TCM Software & Services, reflects on the fact that TCM, as a long time LANSA partner, has advised several of its customers to adopt LANSA. "We believe in the products we sell. Our project provides a great example for our customers of how you can modernize and extend legacy applications using your own small IT team and with minimum risk to the business."

"By putting the existing functionality in the Visual LANSA Framework, modernizing it and adding new applications, we have provided a solid foundation for further enhancing the IT systems that support our business." ■

Company and System Information

- Technology Corporate Management Pty Ltd (TCM), headquartered in Johannesburg, is one of South Africa's largest privately owned IT companies with offices in all major cities and 24 satellite branches.
- The LANSA solutions at TCM integrate with System21 and the MicroFile document management system.

For more information please visit: **www.tcm.co.za**

Piraeus MultiFin improves competitiveness with LANSA

Piraeus MultiFin SA, based in Athens, Greece, is one of the country's leading finance companies for the automotive, motorcycle and marine sectors, both in retail and stock financing. Piraeus MultiFin used Visual LANSA Framework to redevelop its core line-of-business system, transforming it from a green screen legacy interface to a modern Web application. The system provides secure Web access to over 400 car dealerships and numerous customers, collection partners and other stakeholders.

George Drakos, Managing Director at MultiFin, says, "Our customers, staff and external stakeholders all benefit from the system's productive user interface, improved functionality and easy Web access. The system has reduced the time it takes from application to approval, making us more competitive. We have improved customer service and lowered our operating cost structure and achieved all this with modest resources and our own small team of two LANSA developers."

Challenging Times

Piraeus MultiFin (MultiFin) is a member of the international Piraeus Bank Group, one of the most dynamic and active financial organizations in Greece, with over 350 branches in Greece and more than 500 branches in South Eastern Europe and Egypt.

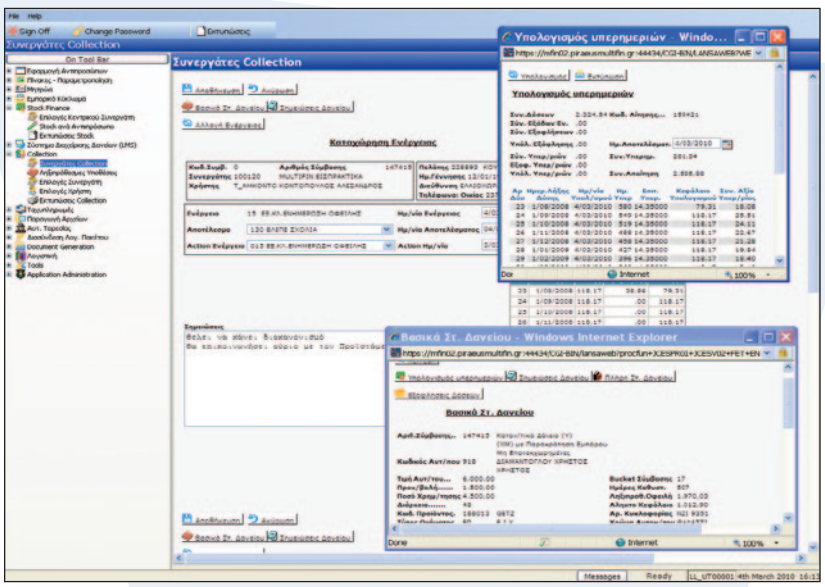
MultiFin's main business is in the automotive industry, with smaller operations in the motorcycle and small vessels industries.

Although 2009 was a very challenging year for the asset finance market, MultiFin managed to be profitable and improve its relationships with customers and other stakeholders. 2010 may prove to be even more challenging, but MultiFin feels well prepared.

Mr Drakos explains, "In a business where you cannot differentiate by price, providing good customer service and keeping your costs down become the two major driving factors for success. Our IT systems help us to continually improve in both and we view our investment in technology a key element in building a sustainable competitive advantage."

On the establishment of the company in 1998, MultiFin selected LANSA as its development tool, the main reasons being LANSA's development productivity, short learning curve, repository-based architecture and proven stability.

From 2000 onwards, dealer partners and collection partners were provided with interactive Web access, developed with LANSA for the Web. However, MultiFin's internal users were still using the traditional 5250 system, originating from the nineties.



MultiFin can assign cases for collection to the appropriate agency and monitor the progress and quality of the work they perform.

> **"We improved customer service and lowered our operating cost structure."**

The system served the company well, but as time went by, the legacy green screen user interface became unpopular. In addition to providing a more user friendly and productive user interface, MultiFin also wanted to modernize its systems with better email and Microsoft Office integration, plus real-time integration with external business partners.

When MultiFin needed to deliver major new functionality to its system, the company decided the timing was right to upgrade its development environment to Visual LANSA Framework, both for the delivery of new functionality and for the redevelopment of the existing system.

"We were used to LANSA's productivity in the traditional development environment, especially its template and repository features, and could see that Visual LANSA Framework's prototyping capabilities could take that productivity even further. We also felt that the framework development approach would result in consistent program quality and disciplined development standards," says Gakis Karageorgas, IT Manager at MultiFin.

The Modernization Project

MultiFin is well on its way to redeveloping its entire 5250 core system, roughly consisting of 1,500 programs, to modern Web applications. At the time of this case study, the Collection and Financial stock modules were already fully converted and implemented. Over 60 percent of the Loan and Commercial modules have been redeveloped, while the General Ledger module will be modernized last, possibly using LANSA's RAMP phased modernization rather than full redevelopment with Visual LANSA.

A critical issue that came up during the project was the need to deliver new functionality for the existing 5250 system, alongside development of the new graphical system. To minimize duplication of development effort, MultiFin made use of LANSA's complete segregation of the user

interface and business logic by defining the business rules in the LANSA Repository and the technique of including common code in both the old and new system.

A major difference between the old and new system is the usage pattern, according to Mr. Drakos. "In the old system, users were inclined to remain within the limited usage of their daily routine. It was not uncommon for users to request upgrades to the system that were already built in. The more welcoming nature of the Windows-based system encourages the user to explore the system's potential."

"Users are particularly happy with the easy search and multi-tasking features and tight integration with MS Office, enabling them to directly send email and work with PDF, Word and Excel files, without having to leave the core system. Integration with MS Office has never been so simple," says Mr. Karageorgas.

Improved Workflow

The new system helped to improve the workflow between MultiFin's internal departments as well as with external parties, such as dealers.

"The dealer site provides direct secure access to MultiFin's data and applications, allowing for effective communication with customers and sales points. Also, having a Web presence in the dealer's showroom makes MultiFin more approachable in the eyes of the customer," says Mr. Drakos.

"The dealers' ability to input a loan application directly into the system has reduced the time measured from application to approval, thus boosting our competitiveness. At the same time, it has reduced administrative costs, because it now takes less effort to input and process a potential retail customer."

By moving the responsibility for data quality directly to the source, there has been a sharp decrease in errors and misunderstandings. Previously MultiFin staff had to enter the loan application, with all the delays and inaccuracies associated with paper forms and rekeying of data. Now staff are automatically alerted regarding new applications and the next step that needs to be taken.

The Web interface allows dealers to monitor the loan's completion process until disbursement, thus reassuring them that all is done in a timely fashion. The process cuts costs for both MultiFin and its dealers, as it reduces the number of enquiry phone calls.

IT team, left to right: Gakis Karageorgas, Dimitris Karanikolas, George Gerakis, Panagiotis Zaxariadis. Seated: Costas Kelaidis, Zana Tzia.

"We have reduced the time from application to approval, thus boosting our competitiveness."

Once the loan is complete, the system's integrated document management facility ensures fast paperless exchange of legal documents.

Other external stakeholders benefit from direct Web access as well. These include the bank's risk and Basel II teams, both of which are in constant need of information. "The system helps to reduce the amount of time our staff need to spend communicating this information," says Mr. Drakos.

MultiFin's collection agencies also have Web access to the system. MultiFin can assign cases for collection to the appropriate agency and monitor the progress and quality of the work they perform.

Last but not least, MultiFin's sales and audit team members on the road also have Web access, making their customer visits more effective.

Everyone Benefits

Mr. Karageorgas feels that it has been very important to the success of the project that the application transformation was achieved by MultiFin's own small IT team. LanSoft, a LANSA partner in Greece, provided training and technical assistance, but the actual redevelopment was done by just two of MultiFin's developers.

"LANSA provided the tools and training to make this project a success using very few resources. With Visual LANSA Framework, a small team of just two developers managed to deliver roughly 1,000 programs, while also being responsible for the continuous maintenance and improvement of the existing system. The framework's standard MS Outlook-style user interface, easy prototyping and evolutionary development and deployment cycle made this possible," concludes Mr. Karageorgas.

"Our customers, staff and external stakeholders all benefit from the system's productive user interface, improved functionality and easy Web access. Our IT team is excited about using LANSA's modern technology and feel more job satisfaction being able to support a sophisticated Web application that is used by both internal and external parties. Management is pleased because all of the above has been achieved with modest resources and has resulted in a lower operating cost structure," concludes Mr. Drakos. ■

Company and System Information

- Piraeus MultiFin operates in the area of financing the purchase of both new and used vehicles, as well as motorcycles and small vessels. The company works with more than 400 car dealerships, including several of the country's major dealers. For more information visit: **www.piraeusmultifin.gr**
- LanSoft is a LANSA business partner in Greece, specializing in application development for the IBM i platform, including systems for warehouse and inventory management, car leasing and supermarket retailers. For more information visit: **www.lansoft.com.gr**

Advance Computing goes cross platform with LANSA

Advance Computing Pty Ltd, based in Kyabram north of Melbourne in Australia, has been a leading provider of specialist financial software and consultancy services for over 25 years. Advance Computing has expanded its market for its financial solutions from a handful of large IBM midrange customers to also include numerous Windows implementations. All platform implementations are supported from a single set of LANSA source code and include features such as XML data exchange, Web access and integrated email and document management.

John Martin, Senior Consultant at Advance Computing says, "Being able to offer a scalable solution that can be deployed on multiple platforms has allowed us to expand our market share dramatically. LANSA lets you start from where you are and build on what you have. Accuracy and reliability are of the utmost importance in the finance industry. LANSA helps us to manage the complexity and risk of implementing new technologies and getting it right the first time, every time."

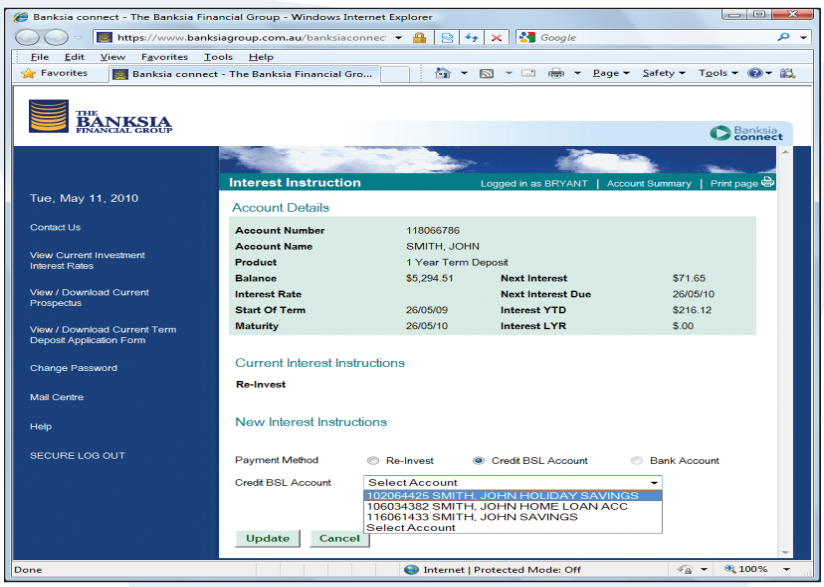
Moving Away from RPG

Back in the early eighties, Advance Computing, then known as M&S Computer Services, developed the first versions of its legal and financial software solutions that are today known as MISSION (Mortgage Investment Software System) and CMS (Contributory Mortgage Scheme).

The software was written in conjunction with the company's first AS/400 customer, The Banksia Financial Group, a large non-bank financial institution, that is still a happy customer today. All applications were written in RPG2 and had been migrated from the IBM System 34/36 to run on the IBM AS/400.

Although very complete in functionality, the application didn't have the right architecture to take forward. The database was internally described, many of the files had multiple record formats and the RPG language lacked productivity. The applications would only run on the IBM AS/400, but that was not a concern at the time. In 1989, cross platform deployment wasn't yet on anyone's radar.

Martin explains, "The challenge then was to reuse existing business logic – initially most of the RPG2 programs – while at the same time updating our software to native AS/400 and taking advantage of the DB2/400 relational database. We selected LANSA because of its central data repository and productive 4GL."



The online banking system allows clients to securely transfer money, view their investments and download statements in PDF format.

The Migration Project

Using the LANSA Repository, Advance Computing first reworked the database to a proper relational design and externalized the business rules and validations. The RPG programs were initially left as they were, except that they were re-engineered to work with the modernized database. "We decided for the incremental modernization approach, as we could not afford to break with what we had. We wanted to avoid a disruptive and risky big bang approach," explains Martin.

> **"We decided for an incremental modernization approach."**

After back-engineering the modern database design into the RPG programs, Advance Computing embarked on the next step, the gradual replacement of RPG programs with LANSA programs. This included a lot of consolidation where multiple RPG programs were replaced by a single LANSA program.

When in 1992, LANSA announced the first version of its Windows development and deployment tool, at that time called LANSA PCX, Advance Computing was one of the first customers to make the switch from AS/400 to Windows development. The Windows tool allowed Advance Computing to use the same high-level LANSA source code to generate either Windows-based C code or AS/400 based RPG code.

By then, Windows deployment had become a priority for Advance Computing, as several smaller AS/400 customers indicated they wanted to move to the Windows platform. Initially the MISSION and CMS solutions were still partly relying on RPG and therefore could not be deployed in their entirety in a Windows environment. The moment all RPG programs were redeveloped with LANSA, around 1993, Advance Computing offered its solutions in the Windows environment, which the vast majority of customers use today.

Continuously Evolving

The MISSION and CMS solutions have been continuously evolving. MISSION was extended with a Web-based online banking system that allows customers to offer their

clients electronic access to their accounts to securely transfer money, view their investments and download statements in PDF format.

Both solutions have been extended with LANSA Integrator for XML data exchange with third parties. For example, with the Australian Taxation Office for instant verification of a client's tax file number and for periodic reporting of investment returns.

Other integration points include near real-time two-way synchronization with MYOB, Australia's most popular Windows-based accounting system, and on-demand integration with Microsoft Outlook, Excel and Word with Adobe for PDF creation.

A Web-based branch and agent system, currently being implemented by Banksia, allows Banksia's 20+ branches and 300+ agents to have a sub-group of clients in the Banksia system, so they can do business on behalf of Banksia. Banksia can define different levels of authority and individual access to loan/investment products and view reports that show the overall performance of products. In addition, Banksia's branches have Windows client/server access to the core functionality on the IBM i, using LANSA on the client and server, plus Citrix and LANSA middleware.

Advance Computing is often the first to adopt new technologies internally. Martin gives an example of how LANSA Integrator was recently used to extend a Web-based support system with a facility to automatically redirect support requests to the iPhones of technical staff. Martin feels his staff is well prepared as some MISSION customers are now looking at offering their clients the option of receiving alerts by SMS.

What the Customers Say

HD & C Securities Limited is one of MISSION's Windows-based customers. HD & C recently moved from a less scalable solution that required deployment in an emulated UNIX environment under Windows. David Joyce, General Manager at HD & C Securities expects that the move to MISSION will provide for a very quick return on investment. "MISSION is a perfect fit for our company and I am very impressed with the XML integration, paperless office and document management features," he says.

John Martin, standing on the right, with the MISSION and CMS development team.

"We already implemented iPhone integration for our own technical staff."

Joyce is also pleased with the way Advance Computing has built a framework around the application for managing security, printers, Windows integration, backups and other housekeeping tasks. "It's all very streamlined," he concludes.

Trevor Goode, General Manager at The Banksia Financial Group, one of the IBM i customers, regards reliability as one of the biggest attractions of the combined IBM i, MISSION and LANSA technology. "We prefer the stability of the IBM i environment," he explains. "The hardware is reliable and the software is reliable as well. We just don't have any downtime." Having said that, Goode is also pleased with the multi-platform capabilities of the LANSA-based solution, as it allows Banksia to offer its 20+ branches and 300+ agents a mixture of Windows client/server and Web access.

Goode notes that the online banking module benefits Banksia and its customers. "It is very seamless and hands free. Online access enables our clients to view and manage their investment accounts from anywhere and is an additional selling point for our products. Plus the site provides us with a platform to publish information for our customers. The online investment facility also drastically reduces the need to send out paper statements."

Windows and IBM Customers

"Being able to offer a scalable solution that can be deployed on multiple platforms has allowed us to expand our market share dramatically," says Martin. "Our customers range in size from new startups that are managing several million dollars with a couple of staff to firms managing in excess of a billion dollars with over 100 staff."

"Most customers run Windows implementations of our software, while some larger finance companies are ideally suited to the IBM i server. LANSA allows us to deliver a scalable low-cost solution on a variety of Windows and IBM i operating system versions that we can support with a single set of LANSA source code."

Martin feels that LANSA has been a major contributor to the fact that his team has always been able to rapidly incorporate ideas and requests that have come directly from customers. "Having set up a good architecture and having a productive tool has made it easy to deliver just about any enhancement our customers have asked for," he concludes. ■

Company and System Information

- Advance Computing has been a leader in its field for over 25 years. The company's MISSION and CMS solutions are used by finance companies and legal mortgage practices throughout Australia. Advance Computing's professional team also provides network management and support, Web and application development, project management and specialized training courses. The company's retail outlet offers sales and services.
- Advance Computing has formal/certified partnerships with LANSA, Microsoft, Cisco, Apple and HP.
  For more information visit: **www.advancec.com.au**

Reduce the human effort in your data chains

Marjanna Frank
LANSA Review Editor

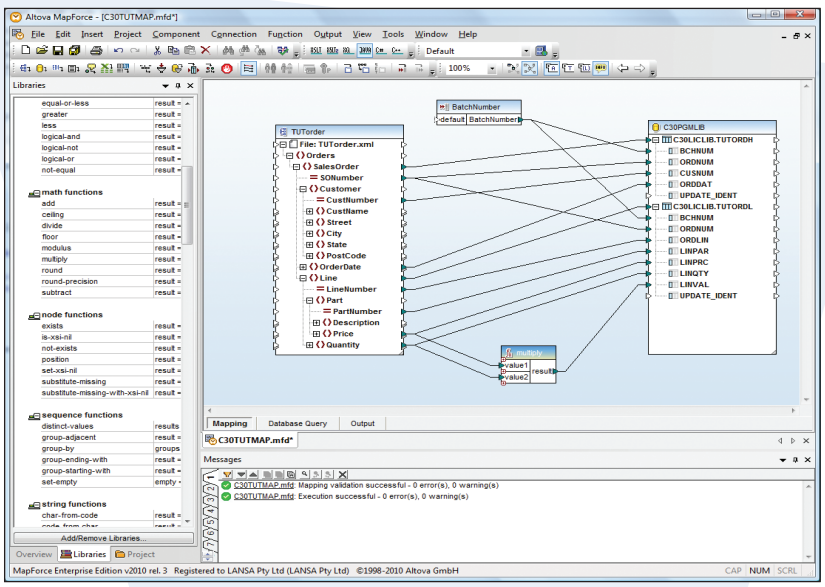
Every business is under pressure to automate its manual processes, to better integrate its internal systems and to share data with external parties. Many companies have business processes that are chained together by a mishmash of computer interfaces and human effort – negatively affecting operating costs, employee productivity and business relationships. It's not uncommon that the chains that connect trading partners increase in length with each new connection and every extension can introduce additional manual steps that compromise the process flow.

Automating these data chains with LANSA Composer lowers data processing costs and improves data accuracy by reducing the amount of paper, email, fax and human effort required for everyday repetitive tasks.

LANSA Composer is an application integration solution for automating the exchange of data and documents between systems and trading partners. It is compatible with ERP systems and common interfaces, such as EDI, FTP, Web services and email. New smart processes will handle unexpected events and restart interrupted sequences from the point of failure, which then run to completion without loss of data or transaction integrity. LANSA Composer's robot-like automation can execute a multi-step process with a single instruction and will run natively on IBM i or Microsoft Windows servers.

The newly released Version 3 of LANSA Composer adds support for robust transaction workflows that streamline the electronic interactions between internal departments and organizations, saving time, reducing costs and improving customer service. Highlights of LANSA Composer Version 3 include:

- Improved visibility and tracking of files and business documents, via an extensible dashboard equipped with drill-down charts and statistics depicting cost of doing business, ROI and KPIs.
- Standard and sample business process orchestration templates that are modular, customizable and provide out-of-the-box compatibility with common EDI transactions.
- Visual data mapper support for XBRL, HL7, EDI X12 and EDIFACT standards, with data transformations all designed and executed using drag-and-drop techniques.
- Substantial increase in the out-of-the-box process orchestration functionality and supported activities, including seamless integration with Java applications and foreign LANSA systems.



Visually map data transformations using a drag-and-drop interface to transform data between different formats.

LANSA Composer Usage Examples

LANSA Composer is ideal for automating repetitive processes of any kind, as it supports multiple interfaces, document formats, transport protocols and data transformations. Below is an overview of the wide range of real-life integration projects for which LANSA Composer is being used.

American Health Care Software Enterprises Inc. (AHC), an IBM business partner located in South Burlington, Vermont, USA, is a solution provider to the American healthcare industry. Customers include nursing facilities, assisted living and retirement homes, outpatient clinics and other healthcare providers. AHC's Harmony Health Care Management System offers fully integrated software suites that can be used standalone or with other solutions.

Harmony, originally consisting of 20 million lines of Synon Cool/2E and RPG code, is in the process of being redeveloped and extended with Visual LANSA. Several of these extensions are portable point-of-care touch screen applications running on tablet PCs with data access to IBM i and Windows servers, helping nursing staff to provide timely, accurate quality patient care.

AHC uses LANSA Composer for the exchange of Health Level Seven (HL7) secure medical information documents between their nursing home users and pharmacies, supporting the newly released XML-based HL7 standard, as well as the HL7 legacy EDI format. HL7 is also used between local hospitals and labs for the transfer of medical information, orders and test results.

In addition, LANSA Composer plays a role in the constant exchange of information with medical trading partners, such as pharmacies, laboratories, referring institutions and the American EHR (Electronic Health Records) applications. ➔

Balitrand SA, based in Cannes, is one of France's leading hardline retailers, with over 20 stores spread over the south of France. The information for Balitrand's product catalogue comes from many suppliers, who send their files in various formats, such as CSV, XLS and XML, by email or FTP.

Until recently, supplier product and pricing updates were applied manually to the catalogue. This was a time consuming task occupying a full time resource from Balitrand's sales team. Balitrand has started a project using LANSA Composer, to fully integrate and automate the process. Steps include:

- Extracting the updates from the FTP server or SMTP email messages
- Converting the files to DB2/400 format
- Running a 3GL program to parse the updates into Balitrand's catalogue
- Sending a confirmation message with status update to the supplier
- Sending a confirmation to the catalogue manager about pricing and product updates

Casa International NV, headquartered in Belgium, is a specialist retailer of interior decorations, gifts, tableware, garden furniture and small furniture. With over 500 Casa shops across Belgium, Luxemburg, France, Spain, Portugal, Switzerland and Italy, Casa is Europe's largest retailer in cozy living items. Casa carries about 6,000 items in its catalogue, a large part of which is also presented online at www.casashops.com, a site maintained and hosted by an external marketing company. Casa's core ERP system is IBM i-based and consists of a mixture of RPG and LANSA programs.

Casa and its marketing partner are implementing a new digital assets management system with product information management, using the FLO-suite in an Adobe InDesign environment. Generated content includes artwork for published leaflets, PDF files for in-store communication material, dynamically generated online content and more.

The solution uses LANSA Composer to automate the process of transmitting real-time updated item information to the digital asset management database. The information is exchanged in XML format and includes item specifications, special promotions and so on.

Leo de Ridder, ICT Manager at CASA, explains, "The solution was selected to improve the uniformity of our corporate communications, reduce administrative preparation and allow for a database driven layout. Key factors were reducing costs, improving time-to-market and optimizing resources. We already used LANSA Integrator for other projects, but the benefit of using LANSA Composer is that business analysts can develop the mappings and transport processes. Complexity is reduced. The audit trail of the transmissions provides total end-to-end visibility to ensure close integration with the back-end ERP system."

Many companies have business processes that are chained together by a mishmash of computer interfaces and human effort.

Eagle Systems, Inc. (ESI) is part of the Eagle Group based in Wenatchee, Washington, USA, a leader in intermodal transportation and container repair with locations throughout the USA and Canada. Eagle Systems' core logistics system is Synon2E-based, while most recent development is with Visual LANSA Framework.

LANSA Composer projects that are currently being implemented at Eagle involve partner communications. These include outbound communication of invoices in CSV format over secure FTP with a van leasing partner. For another partner, Eagle is using LANSA Composer to replace Gentran EDI for mappings and transmission of various transactions.

An upcoming project involves the streamlining of transacting with container maintenance customers. While the trucking business uses mostly standard EDI format, the container business has fewer standards and consequently every new container customer is unique and may involve a lot of IT effort in setting up individual file layouts, FTP processing and programming. In a successful pilot test, Eagle has managed to considerably decrease the set up time for new container customers. Moreover, Eagle now has a clear audit trail of its transmissions. The immediate confirmation on the success or failure of transmissions is expected to significantly decrease late fees and lost revenue.

Other planned projects that involve LANSA Composer include a system to manage billing disputes, where LANSA Composer will receive email messages related to billing disputes, unpack the information and feed the information into the billing disputes system. There is a narrow timeframe to handle disputes and LANSA Composer is expected to significantly reduce the handling time.

Groupama AC is a subsidiary of Groupama Assurance, the 5th largest insurance company in France. As the second biggest multi-line insurer and the leading mutual insurer in France, Groupama has a broad spectrum of business lines – life and non-life insurance, savings, and now also a range of banking services.

In the process of rating their potential future clients, Groupama AC uses several risk assessment criteria. Agents, responsible for customer management, are using the services of specialized companies to collect the required information. Access is through Web portals, by manually querying a database, or by using third party software to the back-end systems of the service provider.

Groupama AC uses LANSA Composer to help increase agents' productivity in collecting the information by providing a fully automated data collection process using the Web services request/response capability of the underlying LANSA Integrator technology, eliminating the need for manual query and navigation to a Web portal. The application triggers a LANSA Composer process which sends the data to the rating server, for direct integration into the back-end system. ➔

Response time has improved through the ability to post rating requests before the evening and having an answer the next morning. This integration project is part of a larger modernization plan that also includes using LANSA RAMP.

Port Autonome of Dunkerque, is the leading French maritime port of the North Sea, the third most important port in France, and the seventh largest port in Northern Europe. Situated at the very north of France and at the centre of the Brussels/London/Paris triangle, Dunkerque holds a key position as an international hub for bulking freight and shipping it all over Europe.

The port's IT infrastructure, managed by GIE GECOM, is IBM i-centric with a core bespoke ERP system developed in RPG. LANSA Composer is used for a solution that serves as a hub to collect tax related data from the shipping companies that make use of the port's facilities.

The data is converted to XML format and sent to the French customs authorities in a secure Simple Mail Transfer Protocol (SMTP) protocol. Customs sends back the statements of the taxes these shipping companies have to pay and the taxes are collected by the port authorities. LANSA Composer's auditing facilities log the email transmission and receipt acknowledgements of every email message, ensuring that all the checkpoints are met.

Promese, short for Professionals in Media Services, delivers a variety of services, based on a one-stop strategy. With a daily capacity of 400,000 optical discs, Promese is the largest manufacturer of CDs and DVDs in the Benelux region. From its modern distribution center in Breda in the Netherlands, Promese serves 3,500 retailers, and their consumer customers, for the delivery of games, game accessories, DVDs, CDs and books. Promese's tailor-made LISA system handles the order intake, credit control and invoicing.

Promese offers each of its customers their own individual Web site, built with Magento open source and hosted on a Windows server, where consumers can order products. Promese takes care of the administrative and logistic fulfillment of the consumer orders. Retailers can view their shop's sales results, orders and invoices through Promese's LANSA WAM-based Web portal.

The integration between the Magento Web shop application and Promese's back office IBM i-based core distribution system is handled with LANSA Composer using XML transactions, both for the outbound updates to the Web shop and the inbound orders. LANSA Composer also integrates the LISA and SAP systems using CSV transactions. Integration with the fulfillment and logistic area is based on the Web services of LANSA Composer.

Jac Meeren, IT Manager, explains, "LANSA Composer has become our integration tool of choice in a very short period of time. The graphical mapping facility offers our developers a modern way of working. The use of variables in a processing sequence allows an integration process to be defined once and then used for a variety of cases, such as different trading partners. Good training and support are essential for a quality implementation."

Robinson Manufacturing Company, based in Dayton, Tennessee in the USA, is a supplier of basic and fashion boxer underwear, loungewear and activewear to both the retail and wholesale markets. Robinson is using Visual LANSA to redevelop its core applications (from a UNIX Filepro system) and also to offer a Web portal to its vendors.

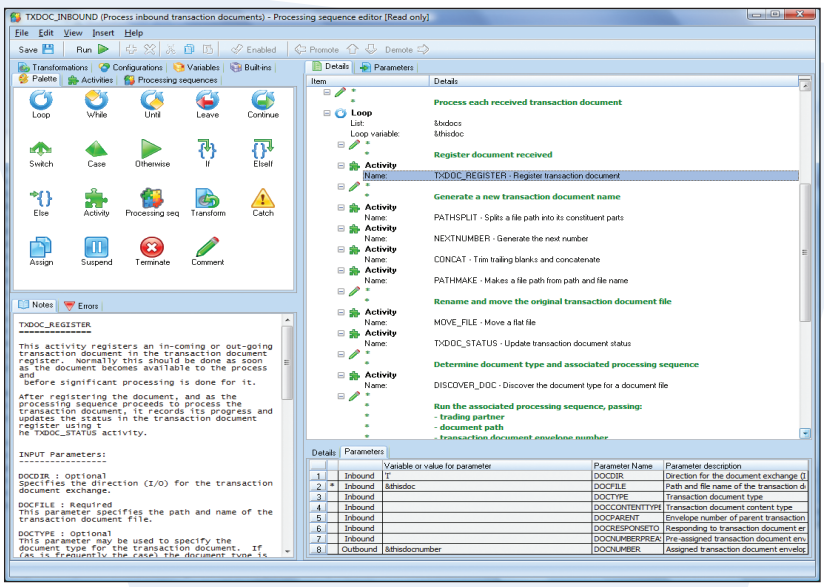
Robinson uses LANSA Composer for a wide variety of integration projects, several of them are listed below:

- UPS address validation, where LANSA Composer validates the address and classification with UPS via a SOAP HTTP/XML Request and Response. Robinson distributes items manufactured at its premises on behalf of a big-name sportswear brand. As a result of LANSA Composer validating the addresses, additional UPS charges are now less than 20% of what they were previously, saving over US$6,000 per month. Robinson also uses LANSA Composer to communicate inventory levels with the same big-name customer using FTP and flat files.
- Inbound EDI transactions. This is an ongoing project and will eventually include all inbound and outbound EDI transactions between Gentran and the ERP system.
- For the processing of PC backup logs, where LANSA Composer processes the results of PC backups by Veritas Exec and sends users an email notification in the case of a missed or failed backup.
- Report distribution, including scheduling, creating, printing and emailing of reports. This also involves converting spool files to CSV and PDF formats and converting SQL files to CSV for one-time report requests by Excel users.
- Processing Web visit logs into a database for reporting.

Fred Coulter, Director of IT at Robinson, summarizes the benefits, "Using Composer, our EDI co-ordinator was able to create and manipulate Processing Sequences with minimal training and without the need for programming skills. The visibility of background business processes has greatly improved with LANSA Composer's logging, reporting and error notification. Plus our developers can make use of these built-in logging and event notification features with custom activities."

R&R Marketing LLC is one of New Jersey's largest distributors of wines and spirits. R&R Marketing is a part of the Charmer Sunbelt Group, one of America's leading distributors of fine wines and spirits, operating in 17 states.

R&R Marketing's core system is RPG-based, extended using LANSA, for Windows functionality to internal users and Web access



Using the Processing Sequence Editor you can easily define business activities without coding.

to customers and sales staff.

R&R Marketing uses LANSA Composer for several integration solutions. One of these is the routing of R&R's fleet of 50 trucks. Using Web services, LANSA Composer exchanges information with a third party solution from UPS Logistics Technologies, refreshing the information about the location and status of truck deliveries every 15 minutes to R&R's DB2/400 database. The solution, in its final stage of beta-testing, will allow customers to get a near real-time update on the status of their deliveries via R&R's new Microsoft Silverlight customer Web portal, connecting to the DB2/400 database via LANSA.

LANSA Composer is also used to transmit daily sales and inventory information to suppliers, by building an SQL view over the DB2/400 data and have LANSA Composer create a CSV file to transmit to a vendor who needs a daily update.

"LANSA Composer has been a big help in those areas where we need a quick process to transmit data," said Matthew Portsmore, IT/Project Manager at R&R Marketing. "It's very detailed logging of the transmission process is impressive and helps IT be proactive about failures."

STRATTEC Security Corporation, headquartered in Milwaukee, Wisconsin, USA is the world's largest producer of automotive locks, keys and related security access control products for global automotive manufacturers. STRATTEC wanted to streamline parts of its System21 ERP to improve productivity and provide better customer service.

STRATTEC uses LANSA Composer, running on a Windows server, to automatically retrieve aftermarket customer orders from iConnect (its EDI VAN) in XML format, transform them and map them to a System21 interface file for processing. The first implementation of the new procedure was for HELM, a large wholesale aftermarket customer, who places between 60 to 100 orders each day for drop shipping to individual dealers and locksmiths. Pete Chrostowski, Senior Business Process Analyst at STRATTEC, responsible for delivering the EDI solution, notes that the benefits of streamlining order procedures are substantial. "We have been able to save staff over 25 hours per week, with just this first customer implementation. There are many more customers to follow and at some point LANSA Composer is going to be the heart of our order entry system."

Chrostowski also sees the potential to use LANSA Composer for streamlining procedures that have nothing to do with EDI. "LANSA Composer is good at automating repetitive processes of any kind," he said.

LANSA Composer streamlines the electronic interactions between internal departments and organizations, saving time, reducing costs and improving customer service.

The Terminix International Company, headquartered in Memphis, Tennessee, USA, is the largest termite and pest control company in the world, safeguarding over three million homes and businesses in the U.S. and 14 other countries. Terminix's LANSA-based core system is used by 12,000 employees at over 400 locations and by 5,500 service specialists with wireless hand-held devices. The system also interacts with an increasing number of third-party systems using LANSA Integrator and Web services.

Terminix used LANSA Composer to automate the remittance processing with third parties, such as mortgage providers, who include with their monthly statements an insert advertising Terminix services. Homeowners who take up the advertised offer will see the fee for Terminix services added to their next monthly statement. The process of accepting the customer's order, invoicing and processing of the payment is completely automated between Terminix and its partners, with LANSA Composer processing multiple EDI transmissions for each customer.

Wells and Young's Brewing Company is the UK's largest privately owned brewery and a leader in cask beer and premium lager. The company's portfolio includes some of the UK's best loved beers and premium lagers, including Wells Bombardier, Young's and Courage, Red Stripe and Corona Extra.

Wells and Young's first LANSA Composer project involved an AS2 solution for exchanging EDI transactions in TRADACOMS format with its main distributor.

Phil Bly, Head of IT at Wells and Young's Brewing Company, said "With LANSA Composer we now have a toolset that enables us to do native EDI AS2 transmissions directly to our distributor. From an IT point of view, that gives us total end-to-end visibility. We know the exact status of each transmission and where our orders are at."

"We didn't have to hire an EDI specialist and we managed to deliver the solution in just over eight weeks. The process is now far more efficient and we enjoy significant savings. Those 'end of the day' pressure situations where we cannot get our orders through before 6:00 pm have disappeared, together with the penalties that apply in those situations. We have good control over what we are sending and get a quick turnaround."

Wells and Young's is standardizing on using LANSA Composer for all its EDI communication with external parties, as well as for establishing a formal process for exchanging customer product information between its System21 ERP and various other internal systems, such as Kelros CRM and Lotus Notes.

Conclusion

LANSA Composer satisfies the four key requirements of a business process integration solution: Transport, Transformation, Process Orchestration and Administration. It provides a simple and cost-effective way to get business transactions in and out of your core line-of-business systems with less human effort. ■

Why worry about integration?

Richard Lancaster
LANSA Product Center

Integration is a complex task spanning networks, hardware platforms, operating systems, programming languages, databases, applications and business entities. Integration is not a plug-and-play device. It involves multiple business processes and integration points, collaboration across functional boundaries and numerous technologies.

Integration is a necessary component for managing information when you operate more than one application. However, integration will become just another large and complex application, unless implemented as a component in an overall information management solution.

The essential ingredients of efficient and effective integration are:

- **Flexibility** – loose coupling for the components to facilitate change and maintenance.
- **Simplicity** – an integration bus to reduce the number of point-to-point integration occasions.
- **Appropriate fit** – the right integration technology and tools for the job.
- **Part of the family** – integration solutions do not operate alone; they are part of the solution.

LANSA products play a role in integration projects by managing the integration, or by collaborating with specialist integration tools such as an Enterprise Service Bus (ESB).

What Type of Integration do I need?

The characteristics of an integration solution depend on the nature of the business requirements. What are we integrating – information and/or processes? Why do we need the integration? Answering these questions requires analysis, evaluation and decisions. Below are some issues and questions to consider when faced with an integration challenge.

Business drivers – Such as company initiatives, regulatory responsibilities and compliance obligations.

Requirements – Will highlight the project scope and the likely effort to build and implement. Consider the requirements from the perspective of a company wide integration strategy.

Scope of the integration – Is the integration part of a corporate strategic initiative, or is it tactical? This decision may influence the nature of the solution and its budget.

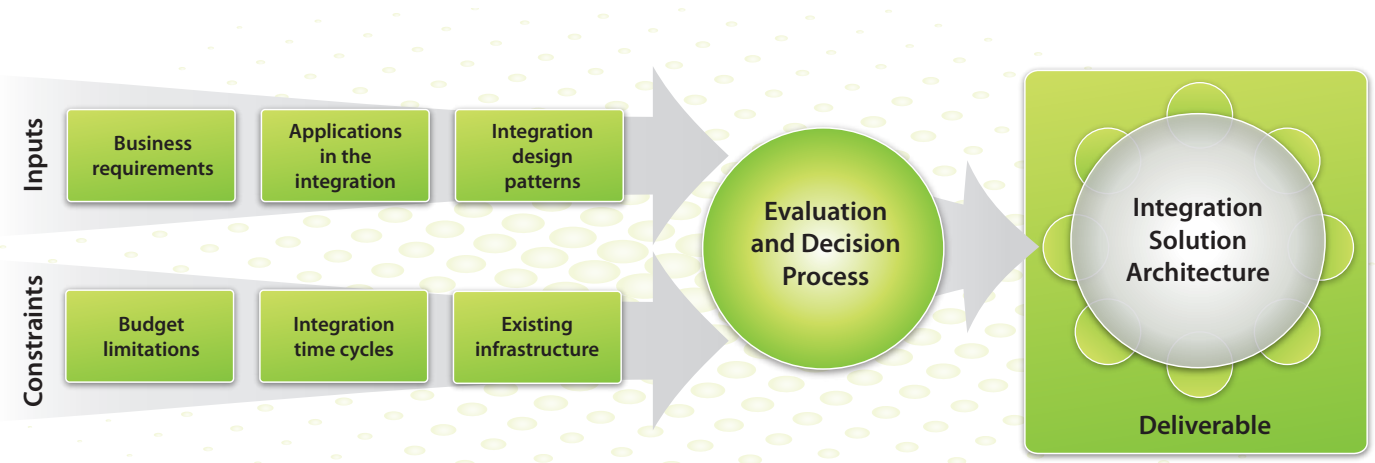
Cost benefit and return on investment – When calculating the costs and benefits for an integration project ask these questions: What are the measurements for determining success? How to collect the measurement data? How to determine the success or otherwise for the project?

Automated integration – Can you describe the business rules to the integration tools? Is it practical to delegate all decision making to automated processes? If the process requires any human intervention, a fully automated integration is impractical. Analyze the integration process and determine the parts suitable for automation.

Semi-automated integration – Semi-automated integration solutions have some parts of the integration solution managed manually and other parts automated. This type of solution is usually a compromise constrained by cost or the need for human intervention in the process. If it is possible to eliminate the human intervention, determine the implications of a fully automated solution.

Integration techniques – Identify the integration techniques needed for the solution – messaging, data mapping, data transformation, business process management, Web services and portals.

What applications are involved – The nature of the applications will influence the architecture for the integration solution and influence the level of automation. ➔



What Factors Influence the Design?

Having examined the factors that influence the integration project, the next step is to design the integration solution. Choosing the appropriate solution is the objective. Building a loosely coupled, message-based integration solution might represent best practice for a flexible, extensible and scalable integration solution, but it will be overkill when a file transfer is all that is needed.

The following list presents topics to consider when designing integration solutions.

Application coupling – Minimise dependencies between applications to allow each application to evolve without constraint. Loosely coupled integration solutions will be more flexible, but may require replacing applications that exhibit a high dependency on each other.

Data formats and transformations – Applications use data in different formats. Determine the rules for reformatting and transforming data between applications.

Design integration solutions for business processes – At the technical level, integration deals with interfaces between applications and databases. However, the reason for integration is to streamline business processes. The focus should be on the business outcomes. This will help you to see the wider perspective and not just an interface between two applications.

Discourage hardcoded integration – Hard-coded integration will prove less flexible and cost more to maintain than integration built with integration tools (for example an ESB).

Intrusiveness – Minimise the changes to individual applications and the code needed to manage the interfaces. This may involve compromising the optimum integration methodology. Above all other factors, you need the flexibility to replace an application in an integration solution with a minimum of effort and disruption. Changes to application code reduce flexibility and increase the cost of building and maintaining the integration solution.

Plan for incremental deployment – Large deployments exhibit greater potential for something to go wrong.

Reliability – Monitoring and notification are key ingredients in a reliable integration solution – knowing what is going on will help avoid problems and speed up their resolution. Reliability in this context refers to the whole integration solution and assumes reliability in the underlying infrastructure (networks, hardware and operating system software).

Share data, share functions or share both – Data sharing is appropriate when you need to be certain of the data integrity. With one source for the data, you know how and where data is maintained. Data sharing may be the only viable option when an application cannot share its functions. Function sharing enables reuse for code. A working function with a history of correct results requires less maintenance than writing code from scratch.

Synchronous or asynchronous – For synchronous calls, the calling application will wait and do no work until the called application responds. Synchronous calls will experience longer response times when distance or network reliability extends the loop delay. Asynchronous calls are more efficient but these solutions are more complex to design, build, debug; and managing exceptions can be problematic. Use asynchronous calls when the integration will tolerate latency.

Timeliness – Timeliness means determining the appropriate timing cycle for transmission. Information integration may tolerate latency but synchronous function integration must occur in real-time. Timeliness for one application may be inconvenient for another application. This becomes even worse in the case of an integration solution built on a publish-subscribe model. For example, one application may publish data to several applications, all of which apply different rules for the timeliness of the data.

Build the integration solution as a set of services – This will provide granularity for the scope of an integration function and promote reuse. Discrete services are easier to replace and maintain.

Selecting integration tools – Buying integration tools will produce a faster implementation than doing it all from scratch. However, developers may need specialised training and you may suffer vendor lock-in. Building the integration from scratch will involve a longer leadtime and, unless you get the architecture right, may require more maintenance.

How Does LANSA Help Me with Integration?

Most LANSA products will help integration projects, by themselves or in collaboration with specialist integration software. The following examples suggest the LANSA products to use for different types of integration projects. ■

LANSA Products	Integration using Shared Databases
LANSA Integrator	RPG/COBOL and C#.NET programs updating a shared database.
LANSA Open for .NET	RPG/COBOL and C#.NET programs updating a shared database residing on an IBM i server.
Visual LANSA Framework	Visual LANSA and C#.NET programs updating a shared database.
LANSA Products	**Integration using Composite Applications**
LANSA Open for .NET	Build applications in MS Office SharePoint Server with components built using C#.NET and programs running on an IBM i server.
Visual LANSA Framework	Assemble composite applications from components built with Visual LANSA and C#.NET.
LANSA Products	**Integration using Portals**
LANSA Integrator	Display customer order status in MS Office SharePoint Server using C#.NET and use LANSA Integrator to marshal the Web services needed to extract the order details from an IBM i server.
LANSA Open for .NET	Build a customer maintenance form in MS Office SharePoint Server using C#.NET and use LANSA Open for .NET to interact with the DB2 database and applications on an IBM i server.
LANSA Products	**Integrating Applications**
LANSA Integrator	Provide a set of services to support integration from an application to an ESB, or point-to-point application integration.
LANSA Open for .NET	C#.NET applications integrated with databases and operating system services running on an IBM i server.
RAMP or Visual LANSA Framework	Include components built with LANSA, C#.NET, RPG and COBOL.
LANSA Products	**Process Integration**
LANSA Composer	Business process orchestration and end-to-end management, calling applications to action the steps in the process.
LANSA Integrator	Participates with the steps in the business process. For example, call a Web service to collect data for a step in the process.
Visual LANSA Framework	Visual LANSA Framework built applications include process integration when calling other components.

Still too much human effort to exchange data and documents with trading partners?

Automating and integrating your data chains will lower processing costs and improve accuracy by reducing the amount of paper, email, fax and human effort required for repetitive tasks. LANSA Composer's robot-like automation can execute a multi-step process with a single instruction.

LANSA Composer is a simple and cost-effective way to get business transactions in and out of your ERP system with less human effort. It is ideal for automating repetitive processes of any kind, as it supports multiple interfaces, document formats, transport protocols and data transformations.

LANSA Composer

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