It is now 15 years, and more than 6,500 customers, since LANSA began empowering organizations with leading-edge technologies to automate their business processes. LANSA has consistently delivered a short learning curve, high productivity, easy maintainability and solid protection of customer investment in existing applications. In this Architects Corner, we celebrate LANSA’s first 15 years with a technical review of LANSA milestones.

**Technology Waves**

The IT industry regularly re-invents itself with wave after wave of new technology. Each wave risks disrupting your existing application investment. In its 15-year history, LANSA has consistently risen to new technology challenges. The evolution of our core Repository has protected your investment in existing skills and applications while speeding the introduction of new technology.

**In the Beginning ...**

LANSA was originally named LAMDA when it began in 1986. Originally designed for the System/38 in close consultation with Colgate Palmolive, the LAMDA team had just five R&D staff. LAMDA was an acronym for Language to Automate the Maintenance and Development of Applications. LAMDA already included a Repository for centralizing Business Rules and some 50 4GL commands.

**AS/400 and LANSA Conquer All**

In 1988, IBM launched the AS/400 to outstanding worldwide success. LAMDA was launched internationally with the new name of LANSA. Existing registration of the name LAMDA outside Australia meant it could not be used. Strong sales followed in Europe and USA. In early 1990, LANSA introduced double byte character set (DBCS) and multilingual support and quickly gained a dominant market share in Japan, the second largest IT market in the world. This success was largely due to LANSA’s Japanese Business partners, especially SEL and IBM Japan, combined with LANSA’s willingness and ability to adapt to the unique challenges of the Japanese market. Marketed as Simply More Productive and The Practical CASE Tool, LANSA introduced many technical firsts to the AS/400 including pop-up windows, Object-Oriented Design, and database event triggers. The Repository centralized field descriptions, data validation rules, help text, error messages, and multilingual text.

**Data Warehousing**

In 1994, LANSA Client provided ad hoc user reports from an easy-to-use graphical reporting environment. LANSA’s native data access was much faster than ODBC-based query tools and many companies used LANSA to make their BPCS, JD Edwards and other ERP databases look easy with friendly field names, calculated fields and pre-defined joins defined in the LANSA Repository. Many existing and new LANSA Solution Partners built comprehensive Data Marts for their packaged solutions without having to change or duplicate data, whether the application was written in LANSA or another language.

**Windows Dominates Client/Server**

With the rise of Microsoft Windows in the early 90’s, both LANSA and the AS/400 faced a new challenge, the dawn of client/server computing. Initially, ODBC drivers were notoriously slow and LANSA thrived with its very fast and intelligent middleware. LANSA’s middleware allowed customers to develop Visual Basic client applications and to access AS/400 data with 4GL commands. LANSA’s performance was super fast because it used native I/O and not ODBC. The LANSA Repository continued as the central store of Business Rules, re-used across both 5250 and client/server applications. When IBM acquired Lotus, Notes was ported to the AS/400. Notes (which evolved into Domino) was best at collaboration and complemented LANSA’s strength in transaction processing. Customers could use Notes/Domino to create portable graphical clients while LANSA’s intelligent middleware gave rapid access to AS/400 transactions and data.

At this time, the LANSA Repository was only hosted on an AS/400, but the LANSA Repository ensured business rules were consistent across Notes/Domino, 5250, batch and client/server applications.

**UNIX**

In 1993, LANSA introduced IBM AIX deployment. This was the first of several commercially popular UNIX platforms to be supported by LANSA as AS/400 customers sought a portable insurance policy should their favorite hardware platform wane. From the beginning, the LANSA Repository was active. LANSA Repository definitions were compiled into the executable code and re-used across applications. This feature became more important as LANSA supported crossplatform deployment. LANSA Repository business rules were now consistently enforced whether an application was executing on an AS/400 or was ported to AIX.

**Web Rules OK**

In late 1996, Shell Canada helped prototype what was to become LANSA for the Web. Shortly afterwards, IBM contracted LANSA to rebuild the IBM AS/400 Web Site, using
LANSA for the Web. LANSA continued to power the IBM Web Site for some 18 months. Other LANSA for the Web technical advances included LANSA Commerce Edition’s rapid extension of ERPs to Web-based ordering and later, automated ordering with LANSA Integrator. LANSA developers could now rapidly build applications for 5250, Windows, UNIX, Web and Wireless platforms with reusable Web components and HTML pages stored in the LANSA Repository.

Java and WebSphere
IBM re-christened the AS/400 as iSeries to better promote the lower cost of ownership of an integrated system. The iSeries emerged as an industry leading Java Server to host IBM WebSphere applications and LANSA introduced WebSphere integration for LANSA for the Web. Java is increasingly used to implement new technologies on the Server. LANSA Integrator allowed iSeries (and now Windows) developers to easily integrate Java Services with their applications and the LANSA Repository. LANSA Integrator’s Remote Function Invocation (RFI) service provided seamless integration from remote Java applications.

Wireless
Moving beyond the Browser on PCs, many mobile staff communicated with head office LANSA applications using Wireless devices such as Palm and the new PocketPC 2002. For example, LANSA powered the American COMMON User Group registration with Palms and Corochan, a leader in the Japanese fast food industry, implemented a Wireless data capture solution that used i-Mode mobile phones.

Web Services
With the dawning of a new century, LANSA Integrator introduced a new way of connecting businesses. LANSA Integrator leverages low-cost Internet connections to automate the exchange of data between applications on different platforms (or on the same platform if preferred). For example, using LANSA Integrator, a distributor’s procurement application can automatically place orders directly with a supplier, without manual intervention. Existing applications can be rapidly extended with LANSA Commerce Edition to automate cross-business processes. The LANSA Repository definitions protect your data across platforms.

Visual LANSA Components
When LANSA introduced Visual LANSA, it was as a next-generation highly productive object-oriented application development toolset, upwardly compatible with LANSA for the AS/400. Using a single skill set, LANSA developers created both server and Windows code without leaving LANSA’s highly productive 4GL environment.

Next, LANSA introduced Visual LANSA Components that allowed highly graphical Windows forms and encapsulated code to be reused across applications. Components extended the information held in the active LANSA Repository, adding properties, events and object-oriented methods. Currently these components can only run on Windows, but they are designed to be platform and architecture neutral. This means you will be able to deploy non-visual components to all the places you can deploy your Repository definitions today. Visual LANSA will support deployment as industry standard J2EE and .NET components. Your LANSA developers use their business domain knowledge to define components in architecture-neutral LANSA and your Java or C# developers can easily integrate these components with existing applications or new technologies, broadening the skills base that can use LANSA.

Linux
The remarkable popularity of open source software produced yet another UNIX-like operating system in Linux. With IBM’s strong support, Linux rapidly expanded beyond Web Servers to gain a foothold for application serving, too. The iSeries is at the forefront, as server consolidation leverages the high availability of iSeries to host Web and new workload applications on Linux alongside traditional iSeries line-of-business applications on OS/400. In 2002, LANSA added Sun Solaris and Red Hat Linux as both Web and Application Servers to a UNIX stable that already included support for AIX and HP-UX.

Future Challenges More LANSA Solutions
There will always be yet another new technology. New technologies challenge LANSA to reach new heights. LANSA is always evolving, adapting to new technologies that assist business. For example, the Visual LANSA Framework will design for both Web and Windows applications and the LANSA WYSIWYG Web editor will shield you from editing XML/XSL for Web applications deployed on iSeries, Windows and UNIX. Whatever new standards and technologies emerge, LANSA will extend the LANSA Repository and the highly productive LANSA development environment to enhance your application creation.