

# LANSA Case Study

## The Principality of Andorra lifts productivity with LANSA

The Principality of Andorra is a small landlocked country located in the eastern Pyrenees between France and Spain. Nearly all of the administrative activities of the Andorra government are supported by solutions developed with LANSA's low-code platform. The Departament de Sistemes d'Informacio (DSI) Govern d'Andorra uses LANSA to build highly graphical client/server Windows applications for internal users and Web-based applications for remote and occasional users.



**Govern d'Andorra**

**Miquel Haro**, manager IT services at DSI Govern d'Andorra, says, "LANSA makes our life much easier. Productivity has increased and the reliability of LANSA applications is never in doubt. Recently, we successfully managed the entire general election process, from voter enrollment to collecting and publishing results live on the Web and television, with a Visual LANSA solution."

### The Challenge

DSI Govern d'Andorra is responsible for all phases of all data-processing projects for all administrative activities of the Andorran government. This includes customs and immigration, driver and vehicle licensing, education, finance, health, industry regulation, personnel management, police, trade and the management of the parliament and justice departments.

Since it is responsible for requirements analysis, quality control, user sign-off and implementation, DSI Govern d'Andorra implements a standardized methodology of work practices and technical standards to ensure that all projects meet deadlines and are also documented and tested independently of the people who developed them.

One of DSI Govern d'Andorra's highest priorities is to ensure the security of data in the government's information system by applying technical standards and functional procedures safely throughout the entire administration.

"Historically development was carried out in RPG on iSeries, but we needed a development tool that supported multiple platforms, so we evaluated several tools, including Synon and Adelia," explains Haro.

"We wanted to rationalize the management of our information system by choosing a single tool set so our data processing specialists could focus on meeting the business requirements of our organization."

*"We successfully managed the last general election with a Visual LANSA application."*

"We were looking for a CASE tool to retain the stable and secure iSeries environment, but at the same time have high productivity and reduced maintenance for consistent and standardized applications. But above all was the need to deploy to multiple platforms from a single tool set."

"LANSA was chosen as the development tool and that decision has never been in doubt and often confirmed by regular evaluations of other tools on the market," says Haro.

### The Solution

Since 1992, DSI Govern d'Andorra has based its development strategy around LANSA tools, starting with LANSA for iSeries.

"This initial choice was based on both the strength of LANSA's repository-based development environment and its multiple platform deployment capabilities," explains Haro.

"In our first LANSA project, we successfully redesigned all the systems used by the ministry for finance. Then we did the same for customs and immigration, before moving on to the other government departments."

DSI Govern d'Andorra has regularly expanded its use of LANSA and equipped its teams with additional LANSA products.

In 1994, LANSA Open fast middleware was used to open the iSeries to the Windows world.

In 1998, Visual LANSA was used to support graphical Windows user interfaces through a client/server architecture using Windows Terminal Server.

Then in 2002, DSI Govern d'Andorra used LANSA for the Web to develop easy-to-deploy Intranet applications for internal staff and give Extranet access to remote users.

Haro continues, "In 1994 we needed to implement Windows systems, but Visual LANSA was not yet available, so we first developed Visual BASIC applications that used LANSA Open to access the iSeries data. One example was the TRÀMITS front desk system that interfaces with the existing back office applications for the Trade Mark Registration and other departments."



The Principality of Andorra, located in the eastern Pyrenees, between France and Spain is a popular tourist destination in summer and winter.

"However, since 1998, we have used Visual LANSA for all Windows applications, delivering a highly graphical user interface and exploiting ActiveX components to provide new capabilities, including scanning drivers licenses and managing credit card payments."

*"LANSA is a strategic choice that saves valuable time for both developers and our users."*

"And in keeping with our philosophy of rationalizing on a single skill set, we have since reengineered all our Windows applications with Visual LANSA."

"Since 2002, LANSA for the Web has been used to give browser-based access to remote users via Intranet and Extranet applications."

"Today, the majority of the strategic activities of the Andorra government ministries are supported by solutions developed with LANSA. This includes applications for the ministry of finance, customs authorities, ministry for the economy, education, industry services and others."

"Increasingly this means giving access to government services and information online via Web solutions."

"Recently we used LANSA for the Web to develop an Extranet for managing vehicle registrations and driver licenses in the principality, including issuing number plates to dealers and booking of driving examinations."

In 2006, DSI Govern d'Andorra built an Internet portal for the calculation and the declaration of the new indirect services tax (Impuesto Indirecto sobre la Prestacion de Servicios or ISI) using LANSA WAMs and AJAX Web development techniques. Introduced in LANSA V11, Web Application Modules (or WAMs) are a new way to separate business logic from the presentation layer. WAMs not only support today's Web browser and PDA user interfaces, they let DSI Govern d'Andorra take advantage of new techniques such as AJAX to create a faster, more interactive Web application and will accommodate future user interface technologies, such as XAML/Avalon in Microsoft's upcoming Vista version of Windows.

"We also successfully managed the last general election with a Visual LANSA application. This included managing the electoral

rolls, then collecting, validating and publishing the results from the polling stations in real time via Intranet, Internet and television," says Haro.

## The Benefits

"Today, the whole team at DSI Govern d'Andorra highlights the reliability and flexibility of the LANSA solutions, the single language skill set and shared repository, support for multiple platforms, increased development team productivity and constant evolution as the main qualities of LANSA," comments Haro.

"We are pleased to notice a clear increase in developer productivity through the reuse of components defined in the LANSA Repository and the applications delivered are reliable and advanced. Not only have we improved developer productivity the easy-to-use Windows and Web applications save time for the users of the applications as well."

"A good example is the renewal of driving licenses and passports. Today that can be done locally at the town hall, which is connected in real time with the central Government system. This application is appreciated by everyone, because, thanks to it, long delays and queues have been eliminated."

"In summary, one can say that the results are extremely satisfactory and that LANSA is a strategic choice which saves valuable time for both developers and users."

"We are also very satisfied with the support we receive from LANSA technical staff who respond so swiftly that we feel like we are getting local support even though we are really quite remote from the LANSA offices in France," says Haro.

## The Future

"As developers, we must admit that LANSA tools make our life much easier. Our productivity has increased considerably and the reliability in production of applications developed with LANSA for the iSeries, and now Visual LANSA, is not in any doubt. We are very happy with the results of our Web implementations," concludes Haro.

"With LANSA, our collaboration is far from being finished," concludes Gil Riba, DSI Govern d'Andorra director. "We approach the future confident we can provide the Government of Andorra with innovative solutions of the highest quality that use the latest technology."

## Company and System Information

- The Principality of Andorra, located in the eastern Pyrenees, between France and Spain is a small landlocked country in southwestern Europe with a surface area 468 square kilometers and a population of 75,000. For more information about Andorra visit: [www.andorra.ad](http://www.andorra.ad)
- The Departament de Sistemes d'Informacio (DSI) Govern d'Andorra is responsible for providing and planning the data processing projects for all government services, not only for government ministries, but also for town hall and other public organizations. DSI Govern d'Andorra manages software development, coordinates computer equipment, user training and the security of equipment and data.
- DSI Govern d'Andorra's IT team of 34 people manages 20 IBM iSeries and 50 Windows servers and supports 1,000 PC users.
- DSI Govern d'Andorra uses LANSA for all its critical applications, including finance, customs, economy, education and elections.

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