

Drivers Licenses province of San Luis, Argentina

Abstract

San Luis Province, Argentina, home to over 400,000 people, saw the opportunity to standardize identification methods and public-agency processes which would create efficiencies within the province's governmental infrastructure. This standardization would enable many government programs, from issuing driver's licenses to public agency services, to ensure identity and streamline operations.

The Situation

San Luis Province, a centrally-located province in the heart of Argentina with over 400,000 citizens, has a well-established public agency system. Much like other city and provincial governments, a growing population coupled with advancements in electronic systems highlighted an opportunity to not only create efficiencies within governmental processes (by replacing paper-based systems with electronic systems that supported biometric identify verification) but also ensure identification of its citizens using those programs. From driver's licenses to the use of government agencies, a secure electronic identification system reduces fraud (by verifying the identity of the citizen) as well as increases overall efficiency of operations.

Specifically, San Luis Province identified two applications for a secured identity-card system:

- CIPE—a general identification system to ensure identity of citizens using governmental programs; and
- CIPE-LC—a secured identification system specifically for driver's licenses.

The Critical Issues

In order to implement a secure technological identification system that supported the two identified needs—driver's licenses and governmental programs—San Luis Province needed the computer systems, the software, and training. In doing so, San Luis Province identified four key objectives for the system:

- Efficiently deliver the CIPE / CIPE-LC systems utilizing the most advanced technologies while employing minimal operating costs but ensuring easy maintenance and updates;
- Provide security levels appropriate to the type of document including cryptographic and biometric;
- Incorporate fingerprints on the card (via a chip) to perform the validation of the card holder using biometric readers; and
- Incorporate a digital signature of the card holder on the card (via a chip) enabling card holders to carry out authentication via signature at appropriate terminals in a cryptographic method.

The Solution

San Luis Province selected Unitech's solution together with Innovatrics' ExpressID AFIS Government edition as the foundation for the CIPE and CIPE-LC systems. This system provided a number of benefits including:

- End-to-end solution—The ExpressID AFIS solution includes all of the technologies needed to implement the type of secure identification system that the San Luis Province needed;
- Fraud prevention—ExpressID AFIS can ensure that citizens who are registering for biometric identification are not already registered;
- System efficiency—the Innovatrics' technologies boast the fastest biometric algorithms in the industry ensuring that users are not kept waiting at identification terminals;
- Flexibility and scalability—ExpressID AFIS works seamlessly with other Innovatrics' products including the IDKit PRO SDK enabling for the development of additional modules, such as client applications.

Implementing the Solution

The implementation of ExpressID AFIS as the solution for San Luis Province's CIPE and CIPE-LC systems required Innovatrics to assist Unitech and the province's IT resources in building-out core components, enabling system elements, and developing additional modules.

The Components

- Software—the CIPE and CIPE-LC system solutions employed Innovatrics ExpressID AFIS Government and IDKit PC SDK for the registration/authentication functionality;
- Biometric Hardware—Crossmatch Verifier 320LC;
- Computer Hardware—in a virtual machine running Windows 2008, a high-speed biometric verification engine that can compare a biometric fingerprint image with up to 20 million records and check for duplication within six seconds; the database repository was implemented in an Oracle 11g database.

Design

Innovatrics worked with Unitech and San Luis Province to design a system that could grow with their population. Based on their expressed needs and requirements, Unitech and Innovatrics suggested the following:

- Centralization—the installation of the core software components and database in a single location to maximize system efficiency and performance;
 - Actual—San Luis Province elected to install the ExpressID AFIS Government (Dispatcher and Node Service) and Biometric Data Repository (Oracle 11g) inside a highly-available datacenter;
- Enrollment—geographically-distributed enrollment stations as well as one or more mobile enrollment/verification stations.
 - Actual—three enrollment stations (spread throughout the province) and two mobile enrollment/verification stations utilizing a CrossMatch Verifier 320LC;



- System security—employment of multiple intra-system security methods to ensure proper authentication of components and users;
 - Actual—utilization of HTTPs between Dispatcher and Node Service and client applications to require valid credentials; deployment of Oracle 11g Biometric Data Repository on Unbreakable Linux;
- Verification—a client application for verification and enrollment stations that handles duplication prevention and authentication;
 - Actual—.NET application built utilizing the IDKit PRO SDK that handles duplication checking prior to enrollment.

The Results

Innovatrics’ assistance and products ensured a robust, scalable, and secure system that the San Luis Province could deploy to handle the enrollment and identification of citizens for governmental program usage as well as driver’s licenses. This system will provide long-term efficiencies for citizens interacting with governmental programs and agencies as well as ensuring the true identity of those receiving government assistance and aid (through programs) as well as every driver.



Testimonial

“Innovatrics provided exceptional service, complying with all of our agreed upon deadlines and providing very fast response times when working with our team. Additionally, Innovatrics showed a willingness to work with and meet our needs, providing not only the most competitive pricing but also a trial version prior to purchase. It goes without saying that we were already convinced by the industry-leading speed and reliability of the Innovatrics’ biometric verification algorithms. We are very excited by this system.

Mr. Anibal H. Carmona, President of Unitech’

About Unitech

Unitech is the leader in development of systems, integration of solutions and IT premium services for the government and justice sectors in Argentina. Planning to be global leader in the computerizing of the public sector through research, development and production of our systems, which are known as the vanguard of technological innovation that fit to our customers’ needs, always creating value. More information can be found at www.unitech.com.ar.

About Innovatrics

Innovatrics is focused on providing fast, accurate, interoperable and sensor independent fingerprint recognition software for incorporation into final biometric applications. Innovatrics components offer exceptional performance perfectly suitable for both, high-end and low-cost biometric applications. More information about Innovatrics product suite and technologies can be found at www.innovatrics.com.

