ID4D
IDENTIFICATION FOR DEVELOPMENT

Argentina

ID Case Study: The Evolution of Identification

WORLD BANK GROUP

Contents

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The World Bank Group's Identification for Development (ID4D) initiative uses global knowledge and expertise across sectors to help countries realize the transformational potential of digital identification systems to achieve the Sustainable Development Goals (SDGs). It operates across the World Bank Group with global practices and units working on digital development, social protection, health, financial inclusion, governance, gender, and legal, among others.

The mission of ID4D is to enable all people to access services and exercise their rights, by increasing the number of people who have an official form of identification. ID4D makes this happen through its three pillars of work:

- Thought leadership and analytics to generate evidence and fill knowledge gaps;
- Global platforms and convening to amplify good practices, collaborate and raise awareness; and
- Country and regional action to provide financial and technical assistance for the implementation of robust, inclusive and responsible digital identification systems that are integrated with civil registration.

The work of ID4D is made possible through support from the World Bank Group, the Bill & Melinda Gates Foundation, the UK Government, the French Government, the Australian Government and the Omidyar Network.

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Abbreviations

CR	Civil registry
DNI	Documento Nacional de Identidad
GDPR	General Data Protection Regulation
ICAO	International Civil Aviation Organization
IDB	Inter-American Development Bank
MoU	Memorandum of understanding
RENAPER	Registro Nacional de las Personas
SINTyS	Argentine Tax and Social Security Identification System

Executive Summary

As the birth place of fingerprint identification and one of the first countries in Latin America to establish a civil registry (CR), Argentina has a long history of identification. Until 2009, however, its civil registration and national ID systems suffered from a number of issues, including noninteroperable civil registries, between provinces, lack of integration between CR and ID systems, and slow and inefficient paper-based processes. Since 2009, however, Argentina has made great efforts to steadily enroll more than 45 million residents to establish a robust national digital ID system. Birth registration is now universal and 98 percent of the population is in possession of a national ID card, including more than two million migrants. The national ID agency, RENAPER (Registro Nacional de las Personas), responded to more than 230 million queries in 2018 from the public and private sector creating the foundation for a digital economy.

Since 2009, in the context of a federal country with autonomous provinces working together with the federal government, with the support of the Ministry of Modernization, have implemented a series of innovative initiatives to create a digital one - stop shop called *Mi Argentina*, such as digital birth and death registration, verifying "proof of life" of pension beneficiaries remotely, and offering verification services to public and private institutions. This was achieved through political commitment at the federal and local levels sustained over 10 years, public investment and legislative reforms on civil registration, identification, and data protection, and personal data privacy.

In addition, the key features of the reform process provide valuable lessons for other countries, including:

- Maintaining a political commitment to implement consistent policies over a period of more than nine years, throughout changes in government.
- Establishing a robust legal framework which encompasses a data protection and privacy framework to protect individuals from misuse of data. Argentina approved a civil registration law and an identification decree that served as the foundation for the subsequent institutional reforms.
- Ensuring close coordination between the federal and provincial governments that facilitated strong linkages between the CR and ID systems and, therefore, an improvement in service delivery and savings for the country. Enabling a common platform to share birth and death certificates between provincial civil registries and leveraging existing civil registry offices to issue ID cards are two effective strategies that the government accelerated during the transformation.
- Designing an enrollment process to steadily register people over more than eight years, instead of a more accelerated mass enrollment exercise over a short period of time that would be more expensive and require more intensive communication campaigns and public outreach.
- Building an interoperability platform that includes the private and public sector to verify information and authenticate identities and the creation of a one - stop shop Mi Argentina for government services as a key component in the transformation of the identity scheme. Both the digital ID project and *Mi Argentina* platform have been supported by a World Bank public modernization project.[1]

1 https://hubs.worldbank.org/docs/imagebank/Pages/docProfile.aspx?nodeid=27419670

1. The Evolution of Identification in Argentina

Country Context

Located in the southern part of South America and sharing borders with Chile, Bolivia, Paraguay, Brazil, and Uruguay, Argentina is the eighth largest country in the world and the fourth largest country in the Americas in terms of mainland area.

With a Gross Domestic Product (GDP) in 2018 of more than US$628 billion, Argentina is one of the largest economies in Latin America. Also, Argentina is one of three federal countries in South America, with 24 autonomous provinces.

Since the early 2010s Argentina has sought to develop an infrastructure for the digital economy. For instance, in 2011, Argentina had the highest population coverage for 3G in the region (Jordán, Galperin, and Peres 2013); in 2010, the government launched the program "Connect Equality" to provide digital education across schools and, in 2014, it had one of highest levels of Internet use in the region.[2]

In 2015, the newly-created Ministry of Modernization started to work together with other agencies, such RENAPER, to accelerate the implementation of infrastructure to enable the delivery of better and digital services.

Argentina has played a key role in the history of identification since the 19th century. In 1888, Juan Vusetich, a young immigrant from the Austro-Hungarian city of Lesina (now in Croatia), arrived in Argentina to work in the statistics office of the Province of Buenos Aires. As the chief of the office, Vusetich developed the first workable system of visual fingerprint identification. Vucetich worked to improve his fingerprint system, called "comparative dactyloscopy," which was adopted by the province of Buenos Aires in 1903 and spread rapidly throughout the Spanish-speaking world.[3]

Argentina was also one of the first countries in Latin America to establish civil registries for its population. The first civil registration law, enacted in 1884, transferred the management of civil records from the church to the province of Buenos Aires. Since then, other provinces have passed laws to manage their own civil registries.

The first ID issued in the country, called *Libreta de enrolamiento* (see Figure 1), was established in 1911 through law 8.129. The *libreta* was designed to serve as a proof of identification to cast a ballot during elections, and as a proof of military service, and was therefore only issued to men. Women had to wait 36 more years to have access to an ID, when law 13.010 was passed in 1947 guaranteeing women the right to vote. One year later, law 13.482 mandated the creation of the National Registry of Persons (RENAPER), and the issuing of ID for women, called *libreta civica* (see Figure 2) which enabled them to vote.[4] In 1968, Argentina passed the "Identification, Registration and Classification of the Human Potential" law (law

2 Freedom on the Net 2017: Argentina Country Profile. Freedom House. https://freedomhouse.org/report/freedom-net/2017/argentina.
3 https://www.nlm.nih.gov/visibleproofs/galleries/cases/vucetich.html.
4 https://www.clarin.com/sociedad/historia-documentos-argentinos_0_B1jg3ft5Pme.html.

Figure 1. Libreta civica

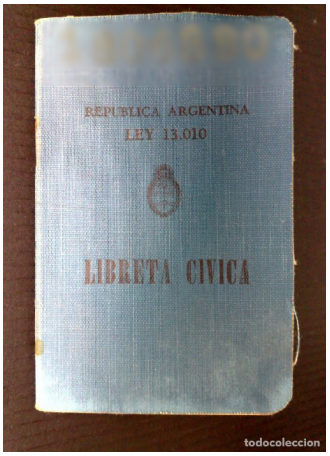


Figure 2. Libreta de enrolamiento

17.671), by which unique national ID cards were established, replacing the *libreta de enrolamiento* and the *libreta civica*.

In the Argentine ecosystem, 23 provinces and one autonomous city maintain their own civil registries while the identification system is at the federal level. Table 1 summarizes the main changes in CR and ID systems pre- and post-2009 reforms.

Table 1. Summary of Changes to Civil Registry and ID Pre- and Post-2009 Reforms

	CR	ID
Provincial level: Civil registrars (appointed by autonomous provincial governments)	Conduct civil registration, issue certificates, and control and maintain CR data	**Pre-2009:** processed paper-based applications for the DNI received from federal government (i.e., with fingerprints)
	Pre-2009: records were paper-based	Issued their own ID cards
	Post -2009: records are digitized locally and added to the RENAPER platform	**Post-2009:** processes digital application for DNI and passports collecting data electronically
Federal level: RENAPER (under Ministry of Interior, Public works and housing)	**Pre-2009:** had no relationship with CR at local level	**Pre-2009**: issued paper-based DNI based on applications made at the provincial level
	Post-2009: developed and runs interoperability framework and platform for CR digitization and data exchange	**Post-2009:** issues electronic DNIs and provides authentication and verification services to the public and private sector

Following the creation of RENAPER, provincial civil registries captured personal data and processed applications for the *Documento Nacional de Identidad* (DNI) while RENAPER issued paper-based ID cards. Processing was manual and without digital connection with and between provincial civil registries. The green ID, as it is known (see Figure 3), included a picture and a fingerprint stamped with ink. It was used for all purposes included voting and access to health, education, and social services.

Although the DNI was a paper-based document, at that time, it offered the innovative feature of establishing a unique identifying number for all individuals. This form of the ID lasted for more than 40 years. In 2009, the government stopped issuing the paper-based ID document but it was recognized as a valid document until 2017.

Figure 3. Documento Nacional de Identidad or "green ID".

Before 2009, the lack of linkages between CR and ID, and manual procedures were administratively inefficient, leading to extended processing times to issue DNIs. For example, a citizen applying for DNI had to go the provincial civil registry, submit a paper-based application that was then sent to RENAPER's central offices in Buenos Aires. After several months, the DNI would be sent back to the provincial civil registries where civil servants added a personal photo and a fingerprint using ink. The process could take up to two years to complete, generating high costs for government and citizens who had to travel to the capital if they needed to expedite the procedure.

At the end of 2005, it was estimated that RENAPER failed to deliver more than 800,000 copies of the DNI. Unofficially, other sources maintain that in 2007, about one million DNIs had not been collected. In addition, the old DNI did not have security measures to prevent identity fraud and/or impersonation. For instance, the personal photo glued in the DNI could be easily removed facilitating identity fraud. According to RENAPER, 1,596 cases of identity fraud were identified in 2005, before the implementation of the new DNI (Inter-American Development Bank 2007).

A paper from the IDB published in 2007 stated that "the main identification problem of the Argentine population, in terms of the number of people affected, is the institutional and technical difficulty of RENAPER to issue and deliver in an efficient, fast and timely manner, in original or duplicate, the DNI, derived in part from its archaic features (booklet and paper notebook, typed)." (Inter-American Development Bank 2007, 17. ID4D translation).

In 2009, Argentina began to transform RENAPER with the goal of providing a secure, reliable, and unique identity as one cornerstone of a national strategy to deliver more effective services to citizens. This strategy focused on **key elements for building a trusted national digital ID system** with high coverage, including:

- A **robust legal framework** that introduced a new civil registration law, and a decree on identification standards together with a law on privacy and data protection strengthened by legal reforms.
- A new **digital DNI** linked to biometrics (fingerprints, face, and digital signature) based on digital data stored on a central database (see Figure 4)
- Public investment to conduct **registration campaigns**, including the installation of more than 2,200 points to capture biographic and biometric information throughout the country

Figure 4. New DNI

- **Integration between CR and the ID systems**, including administrative linkages, the creation of a digital DNI and the assignment of a unique number for newborns following birth registration and the creation of an interoperability platform to exchange civil registry records between provincial civil registries.
- The implementation of **verification and authentication services** that allows people to authenticate themselves remotely and verify proof of life (for example, for pension beneficiaries).
- Launching a **digital one-stop-shop** app called *Mi Argentina* that allows individuals to store digital mobile ID, disability certificates, vaccination certificates, and vehicle insurance documents.
- **Piloting digitalized birth and death registration**, allowing people to complete registration using their mobile phone instead of visiting a physical office.

Together, these reforms enabled Argentina to transform its foundational national ID system into inclusive resources that provide authoritative sources of identity information for a wide variety of uses. The country has now achieved a universal birth registration rate, and more than 45 million residents (98 percent of the population) are in possession of a DNI (RENAPER 2018). Furthermore, digitization, improvements in the accuracy and reliability of identity data, and interoperability and integration with the CR has increased the efficiency of the ID system—today, it is possible to obtain a DNI in two hours—and helped build the foundation of a digital economy. With the national digital ID system, RENAPER performed over 230 million remote authentications in 2018, just for public institutions. According to the Inter-American Development Bank (IDB), assuming a high level of digital ID adoption, Argentina could unlock about one percent of its GDP in the next three years (Inter-American Development Bank forthcoming). This case study discusses the primary building blocks that Argentina implemented to transform its CR and ID systems.

2. Legal, Regulatory, and Policy Framework

Argentina has worked to build a comprehensive legal and regulatory framework to enable its CR and ID system. This includes a set of policies specifically designed to increase the inclusion of the system and ensure coverage from birth to death, and to protect people's data and privacy.

Enabling Legislation

In 2009, Argentina passed the "Registration of Civil Status and Capacity of Persons" law number 26.413 which updated the civil registry law from 1963. The law's goal was to modernize the provincial civil registries and set the parameters for integrating them with RENAPER. The law kept the structure where births, deaths, adoptions, and marriages were registered by provinces and set new requirements for a timely birth registration of 40 days after the birth (Article. 27 and art 28). In addition, the law created the Argentine Federal Council for Civil Registries "to harmonize the legislation, to promote the exchanges of experiences and information among provinces" (Article 93).

Along with Law 26.413, a 2009 decree number 1501 authorized "RENAPER to use digital technologies in the identification of national and foreign citizens, as well as in the issuing of the National Identity Document." This decree also specified that "it is considered pertinent to insert in the card of the digitalized National Identity Document one bar code of two dimensions which contains biographical and biometric data which reading allows to certify its authenticity…." (ID4D translation)

Building on the 1968 law, the 2009 civil registry law and decree provided an essential framework for the implementation of the foundational national digital ID system and its integration with the civil registration system.

Policies to Promote Coverage

Argentina has implemented a number of legal reforms intended to improve the coverage of the ID system. A first wave of laws in 2003, 2005, and 2006 (laws 25819, 26034, and 26061 respectively) had the goal of eliminating barriers for birth registration and the DNI by granting amnesty for the late registration of children until the age of 10 years old and mandating that RENAPER should issue the first DNI free of charge. For "my first DNI" RENAPER does not charge fees regardless of the age of citizens while individuals renewing their DNI and migrants are charged a fee of Arg$300 (about US$ 5).

RENAPER has also established some policies to waive fees for people living in poverty, vulnerable people, or those living in remote areas. For example, RENAPER does not charge fees for IDs issued during mobile campaigns in rural or remote areas; nor to individuals seeking to change their sex on their DNI in order to reflect an individual's self-perceived gender identity, in accordance with law number 26.743 on Gender Identity.

Likewise, individuals not able to afford a DNI can apply for a "certificate of poverty" issued by the minister of social development or by the provinces to waive fees. Requirements to issue the certificate varies according to each province but usually includes a proof of residence (for example, electricity or telephone bill) and the presence of a witness.

Having laws and policies in place that promote inclusion and accessibility has been particularly important as the DNI is mandatory for all citizens from birth or upon entry to the country (as per decree 1501), as well as for non-nationals, including refugees, when residency is granted by the National Directorate of Migration (law 25.871 and article 51 of law 17.671). Both nationals and non-nationals obtain the same type of DNI.

Data Protection and Privacy

In addition to laws enabling the ID and CR systems, Argentina has developed a legal framework to regulate personal data usage and processing by public and private institutions.

In 2000, the Argentine Congress approved the Data Protection Act number 25.326 with the purpose of guaranteeing "full protection of personal information recorded in data files, registries, banks or other technical means of data-treatment, either public or private for purposes of providing reports, in order to guarantee the honor and intimacy of persons, as well as the access to information that may be recorded about such persons." Moreover, as it is mandated, Argentina created a Data Protection Office under the Ministry of Justice in charge of overseeing the compliance with the law and reporting possible violations. The law specified principles and regulations for data protection and processing, including:

- **Personal data:** Defined as information of any kind referred to certain or ascertainable physical persons or legal entities.
- **Consent:** The processing of personal data may only be carried out the consent of the data owner, which must be given in writing, or through any other similar means, depending on the circumstances.
- **Sensitive data:** Personal data revealing racial and ethnic origin, political opinions, religious, philosophical or moral beliefs, labor union membership, and information concerning health conditions or sexual habits or behavior. Personal photo is also considered a sensitive data.

Since biometric information (personal photo and fingerprints) is consider sensitive data, RENAPER approved an additional regulation (number 4133) that aimed to create a memorandum of understanding (MoU) between RENAPER and the individual (or a legal guardian, in case of minors) in order to provide consent on the use of biometric data for verification purposes. This MoU is signed when a person initiates a procedure to obtain the DNI.

In 2018, a group of law makers proposed a bill to replace the 2000 Law number 25.326 in order to align Argentina with the General Data Protection Regulation (GDPR) approved by the European Union. It included (i) concepts such as genetic data, biometric data and cloud computing (ii) the obligation on government agencies to appoint a data protection officer if sensitive and big data are being processed; and (iii) incorporation of standards for the lawfulness of data processing (Bojalil, 2019). Currently, the bill is under consideration by Congress.

3. Linkages Between ID and Civil Registration

Motivated by potential savings, better coordination, and better service delivery, RENAPER's goal was to create stronger linkages between civil registries in provinces and the national ID system at the federal level.

Considering the federated governance structure, RENAPER reached agreements with provinces to foster integration in two ways. The first was by registering vital events and issuing ID cards at the same venue, that is, linking the administration of the two processes. The second was creating a network that allowed provinces to share certificates with each other, and with RENAPER fostering the linkages between databases and improving the quality of the data.

Administrative Linkages

RENAPER installed its own enrollment centers in provincial offices called Quick Documentation Centers. These centers aim to facilitate the procedure for enrollment and issuing DNIs or passports, collecting biometric information at the time that birth certificates are issued.[5] For example, when a baby is born, parents go to the provincial civil registry office to register the birth and obtain the birth certificate. Now, at the same venue, the baby's biographical and biometric information is captured and sent to RENAPER's central system, where a DNI will be issued and sent by mail.

Administrative integration required new agreements between the provincial and federal level. These established that civil provinces would oversee biographical and biometric data collection while RENAPER would provide hardware, software, networks, technical assistance, and support during the enrollment process. In addition, a monetary incentive was arranged between RENAPER and civil registries: for each DNI issued, RENAPER receives 70 percent of the amount charged to citizens, while provincial civil registries receive 30 percent. As mentioned earlier, since the first DNI is free for citizens, it is the federal government that assumes the cost of production.

RENAPER has leveraged these administrative linkages to save costs on offices and staff who perform dual tasks, capturing data for CR and ID procedures.

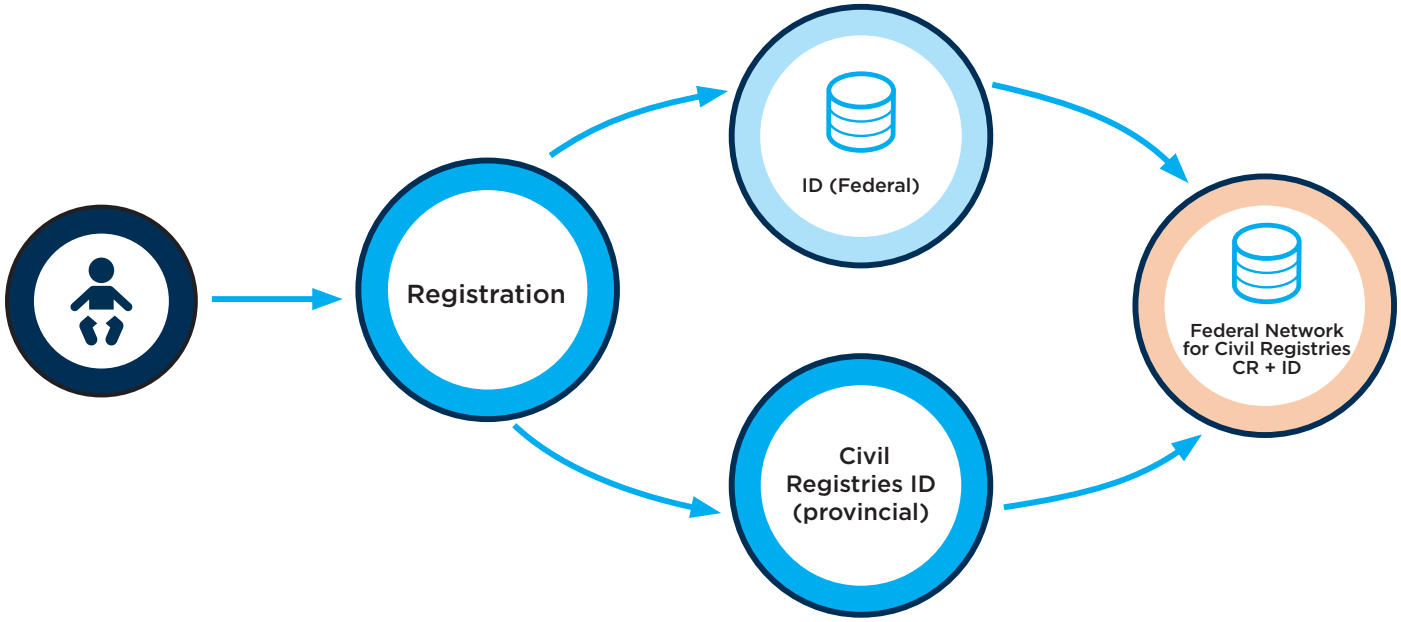
Federal Network for Civil Registries

RENAPER also facilitates linkages between civil registers with the DNI databases. Although each provincial civil registry retains control of its own database, RENAPER maintains a unique database to facilitate data verification and authentication between civil registries and with the national digital ID system.

RENAPER created a Federal Network for Civil Registries with the objective of connecting provincial civil registries on a secure platform to share certificates between each other using digital signatures to ensure the security and authenticity of documents (see Figure 5). The Federal Network for Civil Registries allows users to request copies of vital event certificates (for example, birth certificates) from offices other than

5 For a newborn, fingerprints and a photo are captured to issue a DNI. Also, biographic data from a newborn and his or her parents are collected to create a family tree on RENAPER's systems.

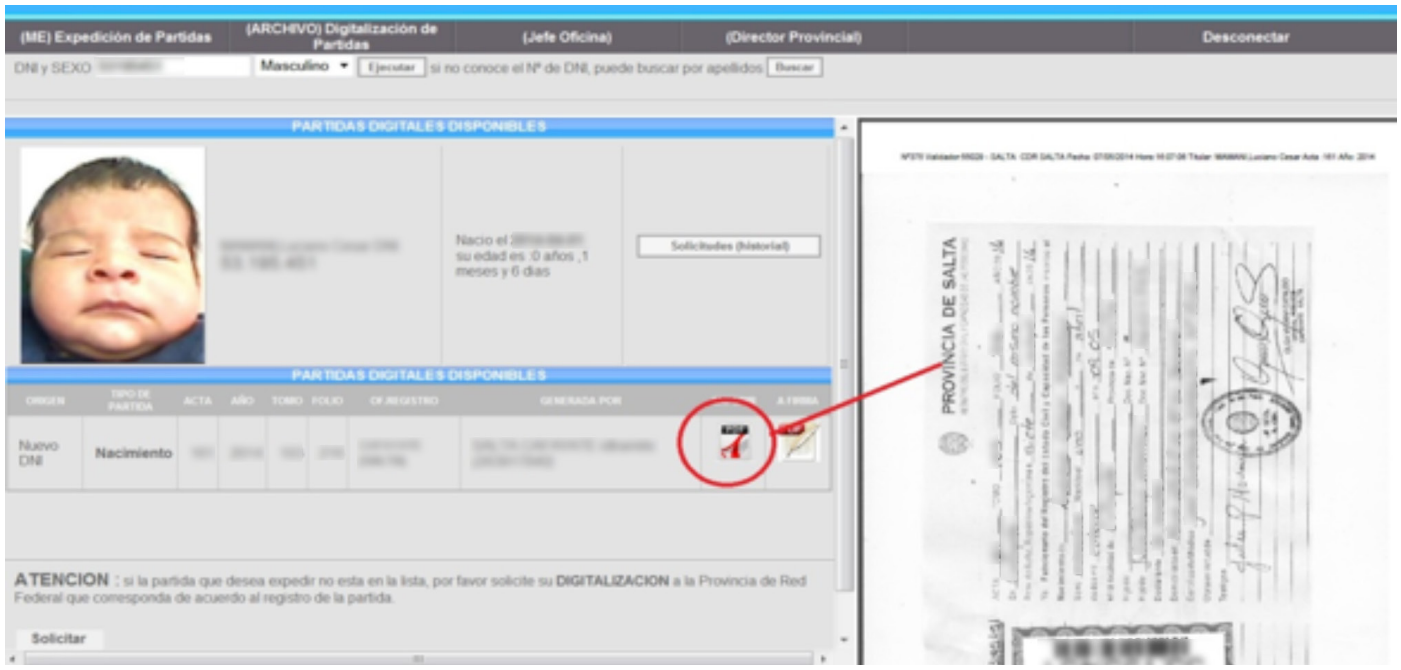
Figure 5. Links Between ID and Civil Registries



where these events were registered. This includes the ability to access digitally signed certificates from offices both within and across provinces.

For example, Figure 6 shows a record from the Federal Network. On the left, a baby's personal information, including place and date of birth, a photo, and the unique identification number is available for consultation. Clicking on the PDF icon, the public servant is able to issue a copy of the birth certificate which appears on the right side of the screen. This PDF is not necessarily always available as each province still has the authority to decide if the original document will be uploaded to the system.

Figure 6. Birth Certificate Exchanged Between Two Civil Registry Offices in the Province of Salta



Source: RENAPER 2018.

4. Proactive Enrollment for New DNI

Before 2009, the DNI was paper-based, and the issuing process was slow, labor-intensive, and highly vulnerable. For example, the procedure to capture fingerprints used paper and ink, and there was no standardized form of taking personal photos.

Enabled by the 2009 legal reform, RENAPER therefore embarked on a process of issuing a new DNI[6] linked to biometrics (fingerprints, facial image and digital signature) and storing digital data in a central database. However, given the limitations of the existing data described above, it elected to reenroll the entire population in order to capture more accurate biographical data as well as digital fingerprints, a facial images, and a signature.

It took a "stock-and-flow" approach to registration in order to cover both the people already living in the country ("stock")—including immigrants that did not have a DNI —as well as the "flow" of newborns and new immigrants. RENAPER implemented a number of policies and measures to achieve this goal, including:

- **Investments to digitize the system and avoid the use of paper:** RENAPER acquired new equipment to capture fingerprints in digital format, and photographs using International Civil Aviation Organization (ICAO) standards and security measures.
- **The creation of a secure and private digital network to share information:** RENAPER created a unique database to store data from fingerprints, signatures, and facial images, establishing application programming interfaces (APIs) to connect with public and private institutions.
- **Harmonizing information management policies throughout the offices:** RENAPER provided guides to standardize internal procedures between civil registries and Quick Documentation Centers. Also, RENAPER provided training in information management to ensure traceability in the issuing of DNIs.
- **Multiple enrollment strategies to ensure full coverage:** The increased number of mobile campaigns has helped Argentina reached nearly universal coverage of the DNI (98 percent). Multiple points of contact included civil registry local offices, mobile campaign and pop-up office in malls and stadiums. As of December 2018, RENAPER had issued DNIs to 44,441,815 citizens and 2,563,750 residents since 2009. Table 2 shows the total number of procedures undertaken by RENAPER per year since 2009, including issuing new and replacement DNIs and passports.

Table 2. Number of enrollments by year

Year	New and replacement IDs and passports
2009	332,676
2010	4,172,102
2011	7,603,573
2012	9,618,621
2013	10,835,473
2014	13,189,456
2015	11,097,922

6 According to the IDB, in 2005, approximately 700,000 immigrants living in Argentina (mostly from Bolivia, Paraguay and Peru) did not have a DNI.

Year	New and replacement IDs and passports
2016	7,962,017
2017	7,804,130
2018	5,903,532
Total	**78,519,502**

Source: RENAPER 2018.

Mobile Campaigns

A key success factor in RENAPER's coverage has been the use of mobile campaigns to reach the population in vulnerable situations and/or in remote areas (as shown in Figures 7, 8, and 9). Some mobile units are equipped with technology and connectivity that allows DNIs to be issued within two hours. RENAPER has also opened pop-up offices located in shopping centers, bus terminals, and airports in order to make IDs more accessible.

Figure 7. RENAPER Truck

Figure 8. RENAPER Mobile Unit

Figure 9. RENAPER Truck Issuing DNIs and Passports

As it shown in Table 3, RENAPER conducted more than 3,000 mobile campaigns between 2016 and 2018, issuing more than 1.2 million ID cards through these units.

Table 3. DNIs Issued Through Mobile Campaigns

Year	Number of Mobile campaigns	DNIs issued
2016	490	390,000
2017	1,494	524,057
2018	1,210	339,831
TOTAL	**3,194**	**1,253,888**

Source: RENAPER 2018.

5. Identity Authentication Services

Now that the national database has become a robust source of reliable information, RENAPER provides authentication services to provincial civil registry authorities, the private sector, and federal government entities as described in the following sections.

Public Institutions

RENAPER provides authentication services free of charge for public institutions, enabling more secure and trustworthy delivery of social services. In 2018, RENAPER verified more than 230 million queries from a wide spectrum of public institutions. For example, RENAPER verifies data with the social protection agency (to authenticate identity before issuing a social credit card called *Ahora* 12, transfer cash to beneficiaries, or update information about death registration); the tax agency (to authenticate identity and to send alerts on deactivations in the database); and provides data to the electoral commission (to prepare the electoral roll and update information about death registration).

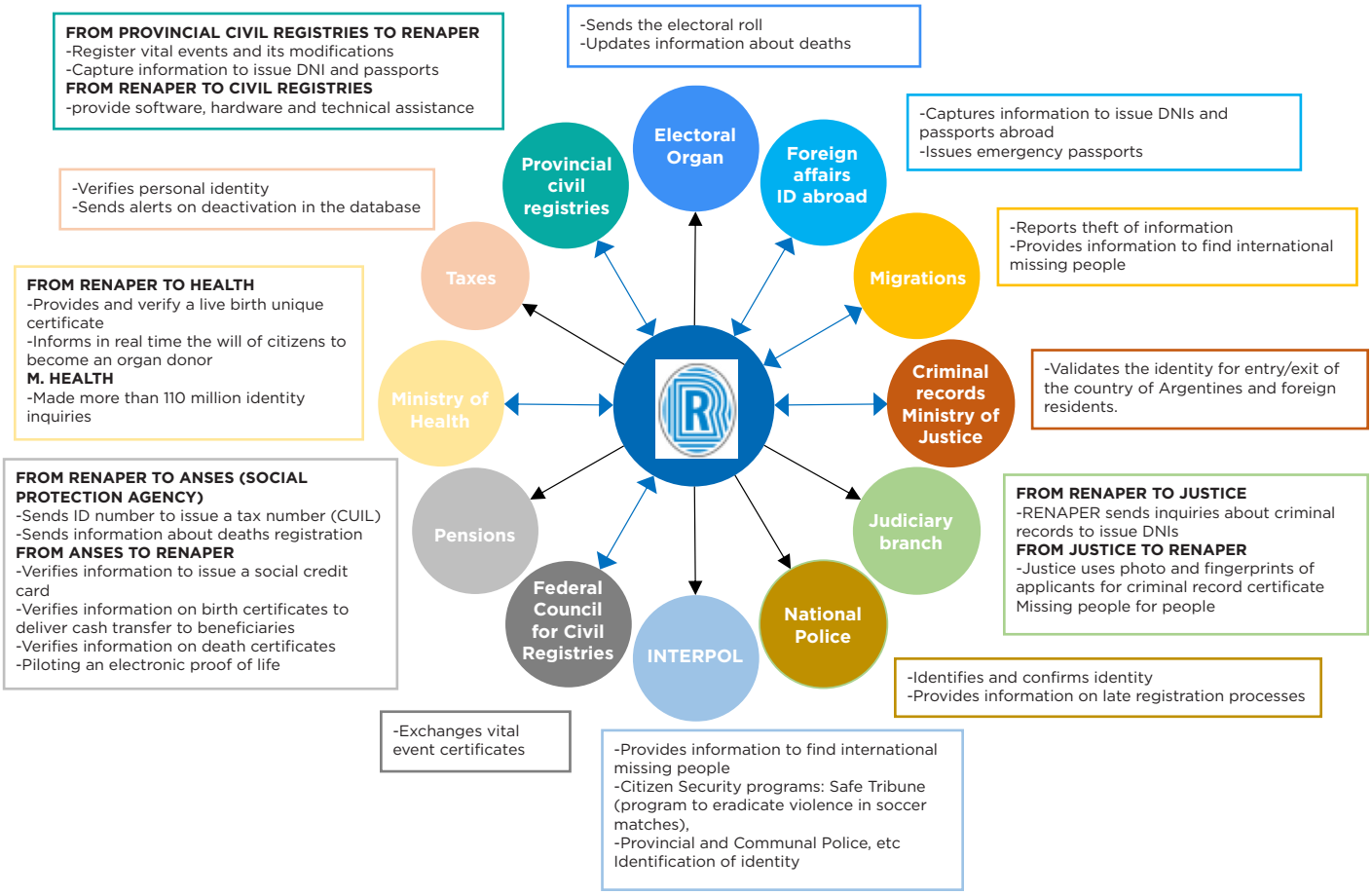
RENAPER also responds to queries from the Ministry of Foreign Affairs (to issue DNIs and passports abroad); the Migration Agency (to report theft of information and provide information about missing people); the judicial branch (to issue a criminal records certificate and provide information on late registration); the National Police (to confirm identity, and implement the Safe Tribune program[7]); and the International Criminal Police Organization, INTERPOL (to find missing people and wanted criminals). Figure 10 shows the flow of queries between public institutions and RENAPER.

Unlike the National Tax and Social Security Identification system (SINTyS), created in 1998 to increase tax revenue by linking federal, provincial and municipal databases together (including property and vehicles)[8] (World Bank, 2018), the RENAPER platform focuses on improving service delivering by providing and verifying data for a wide range of public and private entities.

7 This program identifies people, through DNI and facial recognition, at the entrance of sports stadiums https://losandes.com.ar/article/view?slug=como-funciona-tribuna-segura-20.

8 See, World Bank 2018 for a discussion of the Argentine Tax and Social Security Identification system (SINTyS) as a channel to increase savings in the public sector.

Figure 10. RENAPER Verification and Data Exchange Services



Private Sector

For the private sector, since the end of 2018, RENAPER has provided authentication services to 93 companies, including banks, financial companies, private security companies, private hospitals, travel agencies, and data brokers through an API.

RENAPER charges fees depending on the type of service provided (see Table 4). For example, for authentication using names, RENAPER charges Arg$5 (about US$0.083) for each verification, authentication using fingerprints Arg$15 (about US$0.20) each, authentication using a personal photo Arg$5 (about US$0.083) each, and authentication using a combination of photo and the bar codes on the front and the back of the ID card Arg$100 (US$1.6) each (World Bank, 2019).

Table 4. Verification Service Fees for the Private Sector

Type of verification	Price for each verification	
	US$	Arg$
ID verification using names	0.083	5
ID verification using fingerprints	0.20	15
ID verification using personal photograph	0.083	5
ID verification using photograph, and the front and the back of the DNI (using the Digital Identity System)	1.6	100

Source: World Bank 2019

In all cases, the interface requires service providers to submit information depending on the type of inquiry. For example, for photographic authentication, a digital photo (ICAO standard) is required, and for fingerprint verification, third parties need to send an image in Wavelet Scalar Quantization (WSQ) format. Multifactor authentication requires: i) a self-portrait digital photograph taken with the person's smartphone, tablet, or personal computer, making small movements (for example, blinking an eye or moving the head) as proof of life; and ii) a picture of both sides of the DNI that capture the barcode and the biographic data on it. Once both elements are captured and submitted via an app developed by a third party (that is, a company requesting authentication), RENAPER's databases respond to the relaying party. In all cases, RENAPER will return a HIT or NO-HIT answer depending on the accuracy of the match as shown in Figure 11 (RENAPER 2018).

In order to be able to use identity verification services, private companies must sign a Memorandum of Understanding (MoU) with RENAPER requesting a specific type of service and committing to comply with the Data Protection Law (RENAPER 2018).

Figure 11. Examples of Hit or No Hit on Verification Services

Digital One-Stop Shop – *Mi Argentina*

In 2018, RENAPER, together with the Ministry of Modernization and supported by a World Bank public modernization project, launched the application *Mi Argentina,* a digital one-stop shop where citizens can access public services (for example, to make appointments in public health facilities, generate tax certificates, or sign up for public virtual courses) and receive notifications (for example, DNI and/or driver's license expiration, vaccination schedule, or upcoming national holidays). *Mi Argentina* is also a digital document repository where people can store digital versions of their disability certificate, vaccination certificate, and vehicle insurance documents.

Mi Argentina is accessible through a website or an app and provides two types of services depending on whether the individual is able to validate their identity during the onboarding process. For a nonvalidated user (which represents the lower level of assurance), an account with a user-created password is sufficient to perform basic transactions such as making an appointment in health facilities, checking the expiration of the DNI, or upcoming national holidays. Validated users, that is, those who authenticate their identity to a higher level, are be able to access more complex transactions, such as using the app to carry their driver license or organ donor credential on a mobile phone.

RENAPER and the Ministry of Modernization have established two methods to validate users' identity. The first is during DNI renewal in any Quick Documentation Center, and the second is to use a digital authentication platform remotely, which requires taking a self-portrait digital photograph and making small movements (blinking an eye or moving the head) as "proof of life" as shown in Figure 12.

Since 2018, 2.4 million people have registered for *Mi Argentina* and 45 services are accessible online. Since the service is still under development, public servants from RENAPER and the Ministry of Modernization plan to add more services during 2019, such as the integration with the social protection agency and the creation of a mobile ID.

Figure 12. Method to Authenticate Identity Remotely

Source: RENAPER 2018.

Mobile ID

In October 2019, Argentina launched a new feature on the Mi Argentina app that allows individuals to carry a copy of their DNI on their smartphones. The new mobile ID seeks to facilitate online and offline authentication using Bluetooth technology. Although RENAPER is not planning to eliminate the DNI, this feature is intended to reduce the costs related to issuing DNIs by allowing individuals to opt for the mobile ID instead. In cases where a smartphone is lost or replaced, the credentials will be modified or deleted.

Digital Live Birth and Death Notification

As Argentina reinforces the mutual relationship between CRs at the provincial level and RENAPER at the federal level, more initiatives are being launched to facilitate the registration process and the issuing of DNIs. Digital certificates for notification of live births and deaths is an initiative that the Province of Neuquén (located in the southwest of the country) is piloting together with RENAPER.

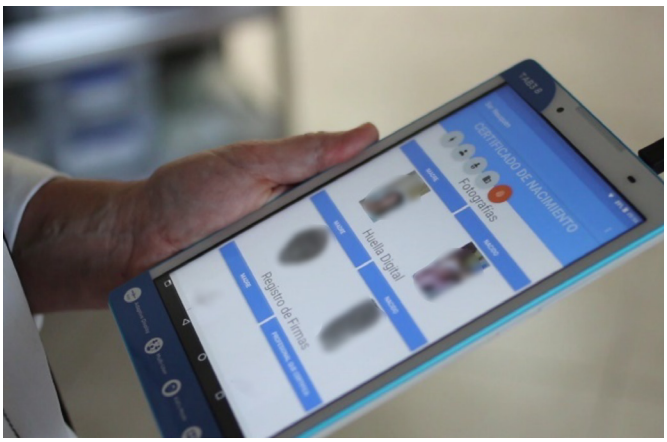
The initiative seeks to digitize live birth and death notifications issued by doctors so that they may be sent directly to civil registries' databases. Typically, the doctor that assists the birth or completes the death notification fills out a paper form and sends a physical copy to the nearest civil registry office, while giving a copy to the parents or relative. Afterwards, the parents or the relative must go to the civil registry with a copy of the live birth or death notification; if both notifications match, the birth or the death can be registered, and the birth or death certificate will be generated. Usually, the process by which hospitals deliver paper notifications to civil registries takes several weeks, which creates a delay for parents or relatives to register these vital events.

Under the model being piloted since 2018 in Neuquén, medical personnel register deaths and births in the hospital on a tablet provided by the civil registry. For births, this includes attaching relatives' or parents' information, a photograph, and fingerprints from the baby in order to create a family tree. Subsequently, an electronic copy is sent to the civil registry and an email is sent to the parents or relative indicating that they must go to the civil registry, who will issue the birth or death certificate. Figures 13 and 14 show part of the process.

The solution was developed by the province of Neuquén IT Department using Android. Currently, RENAPER and Neuquén are seeking to implement the application in the rest of the provinces.

Figure 13. Health Worker Capturing Data from the Mother and the Newborn

Figure 14. Tablet for Capturing and Transferring Data



6. Lessons Learned

Over a period of less than a decade, Argentina transformed its ID process from a paper-based scheme without connectivity between local civil registries with gaps in its coverage to a modern, digital system.

The implementation of a new system, including issuing of a new digital DNI linked to biometrics, the creation of an interoperability platform to connect civil registries and the provision of verification and authentication services, has enabled Argentina to establish the foundation for a thriving digital economy.

There are valuable lessons to be learned from the Argentine case throughout the reform process that could be applied in other countries, the key features of which are:

- The political commitment to implement consistent policies over a period of more than nine years, regardless of changes in the government.
- A robust legal framework which encompasses a data protection and privacy framework to protect individuals from misuse of data. Argentina approved a civil registration law and an identification decree that served as the foundation for the subsequent institutional reforms.
- Close coordination between the federal and provincial governments that facilitated strong linkages between the CR and ID systems and, therefore, an improvement in service delivery and savings for the country. Enabling a common platform to share birth and death certificates between provincial civil registries and leveraging existing civil registry offices to issue DNIs are two effective strategies that the government accelerated during the transformation.
- An enrollment process designed to steadily register people over more than eight years, instead of a more accelerated massive enrollment exercise over a short period of time that would be more expensive and require more intensive communication campaigns and public outreach.
- A platform that includes the private and public sector to verify information and authenticate identities was a key component in the transformation of the identity scheme. By offering authentication and verification services, RENAPER is helping enable private and public sector entities to provide better services and creating a stronger digital ecosystem. A sustained implementation of new initiatives that create frictionless services in public and private services is a pillar of the digital transformation.

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