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Compendium of **Good Practices** in Linking **Civil Registration and Vital Statistics (CRVS)** and **Identity Management Systems**



ECUADOR

CASE STUDY 2

Prepared by Verónica Álvarez



**Global
Partnership**
for Sustainable
Development Data

This publication is a single chapter in a larger body of work. The *Compendium of Good Practices in Linking Civil Registration and Vital Statistics (CRVS) and Identity Management Systems* was developed by the Centre of Excellence for Civil Registration and Vital Statistics Systems in collaboration with the Global Partnership for Sustainable Development Data (GPSDD). The full compendium is available starting November 2019 at crvssystems.ca/IDcompendium.

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ECUADOR

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Acronyms

DIGERCIC	Dirección General de Registro Civil, Identificación y Cedulación (National Agency for Civil Registration, Identification, and National ID Issuance)
DINARDAP	Dirección Nacional de Registro de Datos Públicos (National Agency for Public Data Registration)
ID	Identity
INEC	Instituto Nacional de Estadística y Censos (National Institute of Statistics and Census)
REVIT	Sistema de Registro de Datos Vitales (Vital Events Registration System)
UIN	Unique Identification Number

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Executive summary

In 2008, the president of Ecuador declared that the *Dirección General de Registro Civil, Identificación y Cedulación* (DIGERCIC) – the country's National Agency for Civil Registration, Identification, and National ID Issuance – was in a state of emergency. After creating an overarching reform plan, which launched in 2010, DIGERCIC transformed itself into a modern agency.

In 10 years, it has

- moved from a paper-based to an electronic registration process;
- increased birth registration from 80 percent to 90 percent;
- increased identification coverage from 78 percent to 95.4 percent;
- begun issuing a modern and more secure national ID; and
- transformed an obsolete technology infrastructure by developing its own technological solutions.

By adding digital technology and digitizing civil registration information, DIGERCIC has built three main databases:

- Live birth and death certification;
- Civil registration; and
- Identification.

Because the agency has made such great progress, the government also made it responsible for issuing passports, another part of the identification system. All these databases are linked by a unique identification number (UIN) assigned at birth, and all feed into DIGERCIC's population register.

Figure 2.1 gives an overview of how the CRVS and ID management systems interact in Ecuador.

The information that DIGERCIC generates helps institutions provide more efficient and inclusive services. It does this by making it easier to identify people who receive services and by reducing duplicate and fraudulent registrations and undue payments in social programs. In modernizing, the agency has improved the way it works with public and private organizations by exchanging data. It has become the country's main source of identity information and verification.

This has created revenue for the agency, which helps to keep its business model sustainable. Having a solid civil registration and ID system also has economic and social benefits. DIGERCIC estimates these at about US\$15 million per year (on average) in the last 10 years.

Between 2010 and 2019, the agency put in place good practices that have greatly improved the quality of services and made them available to more people.

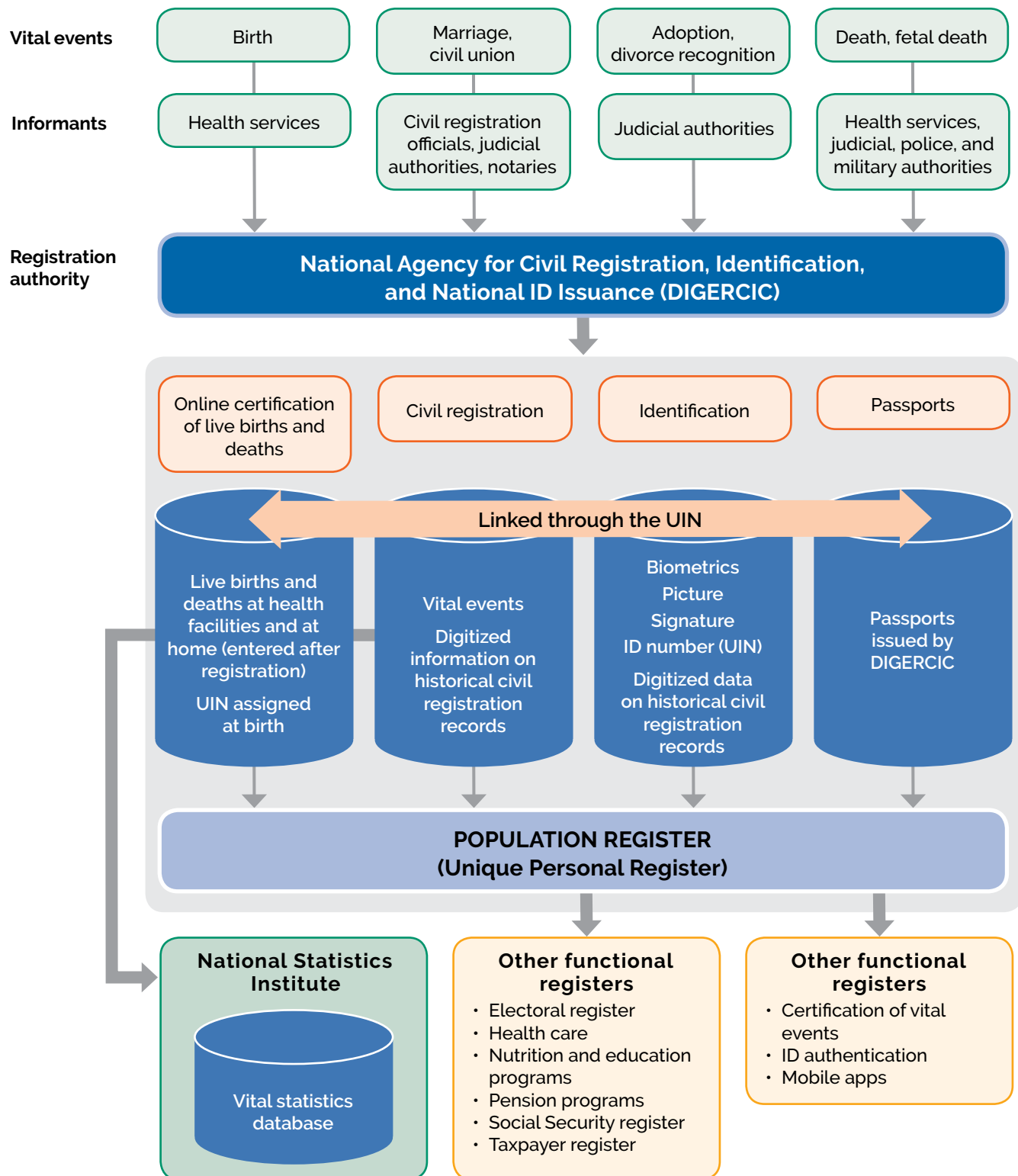


Figure 2.1: Overview of civil registration, vital statistics, and ID management.

Source: Author

Summary of good practices

- Offering political leadership and an updated legal framework;
- Coordinating and standardizing processes within the agency;
- Introducing online certification of vital events and civil registration services in health facilities;
- Digitizing and checking the validity of digital certificates;
- Measuring users' satisfaction rates; and
- Using strategies to reach remote areas and vulnerable populations.

After almost 10 years of modernization, DIGERCIC has a user satisfaction rate of 91.9 percent. The agency is now able to provide reliable data, help make services more efficient, and reach more people. This inclusive provision of services shows how the integration of CRVS and ID management systems is fundamental to guarantee citizens' access to rights and to put better policies in place.

2.1 Introduction

General information

Country name	Ecuador
Surface	283,560 km ²
Geographic location	Andean region of South America; it borders Colombia to the north, Peru to the south and east, and the Pacific Ocean to the west.
Total population	17,273,615 (2019 projection by the <i>Instituto Nacional de Estadística y Censos</i> [INEC], the National Institute of Statistics and Census)
Share of urban population	64%
Official language	Spanish. Kichwa and Shuar are official languages in intercultural relations. Fourteen indigenous languages are spoken.
Civil registration and identification agency	<i>Dirección General de Registro Civil, Identificación y Cedulación</i> (DIGERCIC)
Birth registration rate	90% (DIGERCIC 2018, based on total estimated births by INEC)
Death registration rate	68% (DIGERCIC 2014, based on total estimated deaths by INEC)
Identification coverage	95.4% (DIGERCIC 2017, based on total population estimated by INEC)

Table 2.1: Ecuador country information.



Figure 2.2: Geographical map of Ecuador.

Historical context

The government has taken care of civil registration and civil identification in Ecuador since the start of the 20th century. For most of that time, this work has been combined by law in one national agency.

The first civil registration law was enacted in 1900. Congress approved the first civil identification legislation in 1924; this included different formats of ID cards for tax purposes.

In 1966, the government enacted the *Ley de Registro Civil, Identificación y Cedulación* (Civil Registration, Identification, and National ID Issuance Law). This law combined civil registration and identification. The new law made the system simpler and created the National Registration Office in Quito, the capital. The office started issuing a single ID card (*cédula única*) for all adults: this was the only legally valid ID. Since 1966, people are not able to change their ID card number. In 1975, to produce the register for elections, the

agency began to digitize identification information, recording it on magnetic tapes and storing it in a central archive.

But not everything ran smoothly. During more than a century, the civil registration and identification agency fell under different ministries and was gradually charged with increasing responsibilities. Technical capacity was low, there were not enough resources, and corruption was widespread. The result was poor service, and the public was more and more dissatisfied.

In response to a request from DIGERCIC's general director at the time, in 2008 the government declared a state of emergency for the agency and in 2010 came up with a plan to modernize it. This plan, which has been in place for almost a decade, received a clear political and financial commitment from the government. It has three main pillars:

- Training for human resources;
- Modernizing infrastructure and technology; and
- Signing cooperation agreements with other institutions.

The plan also included more specific goals, such as:

- Modernizing the legal framework;
- Reducing under-registrations and late registrations;
- Reorganizing the number and location of DIGERCIC's offices; and
- Increasing safeguards for information and documents.

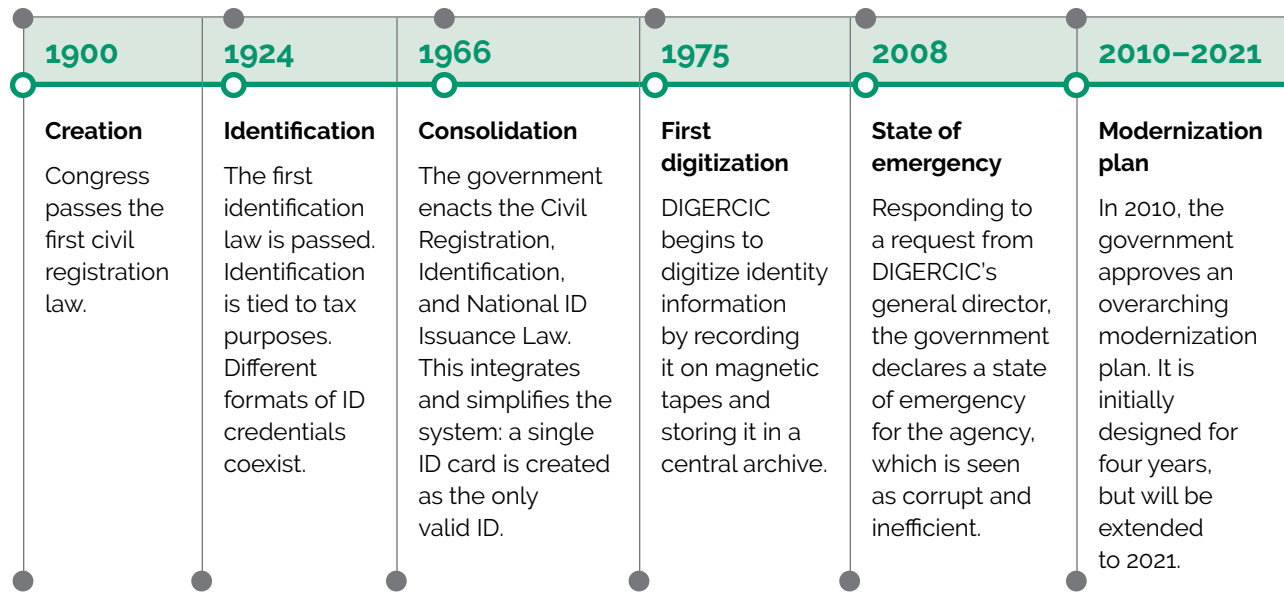


Figure 2.3: Timeline of civil registration and identification leading up to Ecuador's modernization plan.

2.2 Legal and institutional arrangements

Ecuador approved a new Constitution in 2008. It sets out

- the right of every child and adolescent to an identity, a name, and a nationality (Article 45); and
- the right to both personal and collective identity, including a name freely chosen and duly registered (Article 66).

The Constitution also states that the central government has sole authority for registration, nationalization, and control of migration.

Good practice: Offering political leadership and an updated legal framework

DIGERCIC's modernization plan was launched thanks to the government's sustained political leadership and clear financial commitments. The plan was part of the National Development Plan, which made it a policy priority. National and international funding supported the plan.

In modernizing the civil registration and identification legal framework, Congress passed the new Organic Law for Civil Identity and Civil Data Management in 2016. (The 1976 law was now out of date.) This was followed by the regulation of the law in 2018. By using an organic law, which has more authority than ordinary laws, legislators gave the agency more stability. DIGERCIC's organic law gives it administrative, operational, and financial independence, plus sole authority over services related to identity, registration, and certification of vital events.

The organic law also defines the *Registro Personal Único*, or Unique Personal Register (Article 73). This register contains information on vital events and unique identity features, including address and cultural identification of citizens, if they offer this information. This is DIGERCIC's main database: it combines information from civil registration and identification.

A 2010 law also created the National Public Data Registration System. The *Dirección Nacional de Registro de Datos Públicos* (DINARDAP), the National Agency for Public Data Registration, oversees this system. DINARDAP is in charge of organizing, regulating, and interconnecting with government-operated information and communications technology systems that process public data. At the same time, it guarantees that the system is managed efficiently, data is safeguarded, publicity is done, transparency is maintained, and new technology is put in place. The system includes data from various sources, such as:

- Civil register;
- Property register;

- Commercial register;
- Vehicle, ship, and aircraft registers; and
- Patents and intellectual property registers.

Both DIGERCIC and DINARDAP fall under the *Ministerio de Telecomunicaciones y Sociedad de la Información* (Ministry of Telecommunications and Information Society). The Ministry has overseen the reform and modernizing of the civil registration and identity agency. The general director of DIGERCIC, the agency's highest position, is appointed by, reports to, and can be removed from office by the Minister.

As part of the National Public Data Registration System, DINARDAP oversees DIGERCIC's technical management. DINARDAP also standardizes and manages the public registers database.

By law, members of this system must provide continuous digitized and updated information from their government-operated databases. Although Ecuador does not yet have a data protection law, in January 2019 Congress started discussing a bill that DINARDAP proposed.

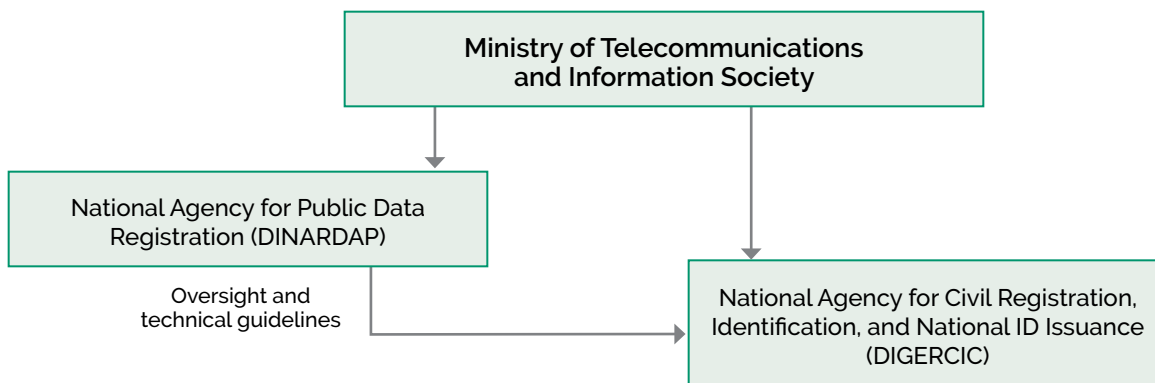


Figure 2.4: Registration agencies under the Ministry of Telecommunications and Information Society.

2.3 Civil registration and vital statistics

As mentioned above, Ecuador's Constitution clearly states that an identity and a name, which must be duly registered, are fundamental rights. This makes civil registration a key part of guaranteeing fundamental rights. Since birth registration and a legal identity are essential for individuals to be seen as full members of a political community, civil registration is crucial in enabling citizens to access their social, political, cultural, and economic rights.

Registration of vital events

By law, DIGERCIC is responsible for registering

- births;
- deaths;
- marriages;
- divorces;
- adoptions;
- changes in name and surname;
- changes in gender;
- civil unions (and their termination);
- recognitions;
- degrees of disability;

- decisions to donate organs;
- naturalization;
- legal residences of foreign migrants; and
- other life events.¹

As the agency in charge of registration and identification, DIGERCIC is part of citizens' lives from beginning to end (see Figure 2.5).

In Ecuador, people must register all vital events. The civil registration law (Article 19) also states that officials who by law must notify DIGERCIC of vital events must do so within 30 days of the event, or they could lose their job. For births and deaths, the responsible health professional must notify DIGERCIC within 3 days (but declarants have up to 90 days to request registration at a DIGERCIC office).

All registration of vital events is done electronically. Registrars use an online platform to enter information, and they sign records using an electronic signature. The information entered is automatically added to the civil registration digital database.

Table 2.2 shows the legal period for registration, requirements, and observations for some of the main vital events that DIGERCIC registers:

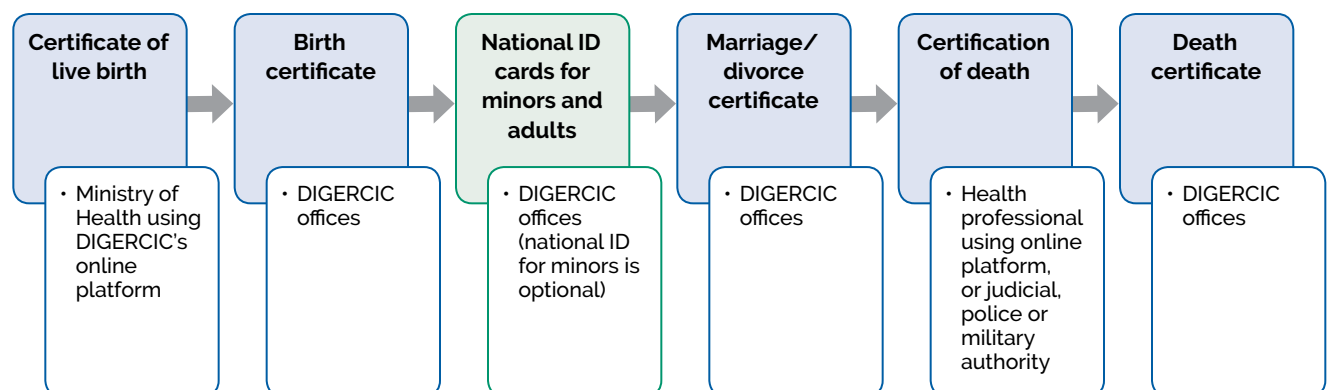


Figure 2.5: Registration cycle in Ecuador.

	Legal period	Requirements	Observations
Births that occur in health facilities	Up to 90 days after birth (timely registration)	<ol style="list-style-type: none"> 1. Certificate of live birth issued by health facility (no fee). 2. National ID card/passport/refugee card of declarant(s). 3. If parents are married or in a civil union, one of them must be present. Otherwise, both must be present to recognize paternity. 	<p>Health professionals must notify DIGERCIC within 3 days. If no declarant requests registration, health personnel must notify DIGERCIC and request registration. This is done using information on the certificate of life birth.</p> <p>The certificate must include the intended name for the newborn. (DIGERCIC gives parents up to 90 days to change the child's name.)</p> <p>Timely and late registration of minors is free of charge. Birth registration of adults must follow a judicial process. The fee is US\$5.</p> <p>If a health professional fails to certify a live birth and this causes late registration, the professional must pay a fee equal to 1% of an average minimum wage for each day of delay.</p>
Births that occur outside of health facilities	Up to 90 days after birth (timely registration)	<ol style="list-style-type: none"> 1. Sworn statement by declarant and two witnesses. 2. National ID card/passport/refugee card of declarant(s) and witnesses. 3. If parents are married or in a civil union, one of them must be present. Otherwise, both must be present to recognize paternity. 4. Minor must be present at registration. 	<p>A medical certificate of prenatal care can be presented as another document.</p> <p>If a health professional fails to certify a live birth and this causes late registration, the professional must pay a fee equal to 1% of an average minimum wage for each day of delay.</p>
Marriages	No period is legally established (see requirements)	Marriages must be celebrated at DIGERCIC offices to be legally recognized. They are automatically registered after the ceremony.	Registration fee: US\$50
Civil unions	Authorities that certified the civil union or its termination must notify DIGERCIC within 30 days	<p>Judicial ruling or certified notary declaration of civil union.</p> <p>National ID card of declarant(s).</p> <p>Receipt of fee.</p>	Registration fee: US\$50
Divorces	Judicial authority that certified the divorce must notify DIGERCIC within 30 days	<p>Judicial resolution of divorce.</p> <p>National ID card/passport of declarant.</p> <p>Receipt of fee.</p>	<p>Registration fee: US\$12</p> <p>Individuals can get a certificate 8 days after the divorce is registered.</p>
Deaths	Up to 48 hours after death or after knowledge of death	<ol style="list-style-type: none"> 1. Certificate of death signed by health professional or, if health professional is not available, death certificate will be completed with sworn declaration by two witnesses. 3. Judicial resolution (for specific cases). 4. National ID card of declarant. 	<p>Health professionals must notify DIGERCIC within 3 days of death.</p> <p>For burial permit (issued by the Ministry of Health), the certificate of death issued by health authorities (not the death registration record) is required.</p> <p>Late registration fee: US\$5</p>

Table 2.2: Registration of main vital events in Ecuador.

Source: Organic Law for Civil Identity and Civil Data Management (2016) and DIGERCIC website (registrocivil.gob.ec)

Use of a unique identification number assigned at birth

A unique identification number (UIN) is assigned at birth to all newborns. It is linked to a biometric feature to individualize them. This UIN becomes the national ID number. All public and private services that citizens access will be linked to that UIN, even if the person does not have a physical national ID card. This UIN must appear in all public documents and credentials, such as passports, tax register, and property register. This helps public institutions exchange information.

The UIN has 10 digits:

- The first two digits are the code of the province where the person's birth was registered or where they obtained their first ID card;
- The next seven digits are a serial number; and
- The last digit is a verification digit.

The UIN is one of the person's key identity features. It enables a connection between the civil registration and identification databases and makes it easier to retrieve information between registers.

According to the Constitution (Article 7), all individuals born in Ecuadorian territory (*ius soli*) and those born abroad to an Ecuadorian mother or father (*ius sanguinis*) have the right to nationality. *Ius soli* is applied no matter what the parents' migratory situation is. If a birth took place in Ecuador and declarants bring proof of birth, the newborn will be registered as Ecuadorian. To register the child's birth, a foreign declarant can present their passport or refugee card.

The civil registration and identification law also states that if physical or electronic records are deteriorated, destroyed, illegible, or lost, DIGERCIC can order them to be reconstructed upon request or by its own request (*ex officio*).

DIGERCIC designed an online platform, REVIT-Births, to certify live births in health facilities. (Note: 96 percent of births in Ecuador happen at health facilities.) Since 2015, an agreement between the agency, the Ministry of Health, and the *Instituto Nacional de Estadística y Censos* (INEC – the National Institute of Statistics and Census) allows health personnel to access an online tool to certify live births as they occur (see Figure 2.6).

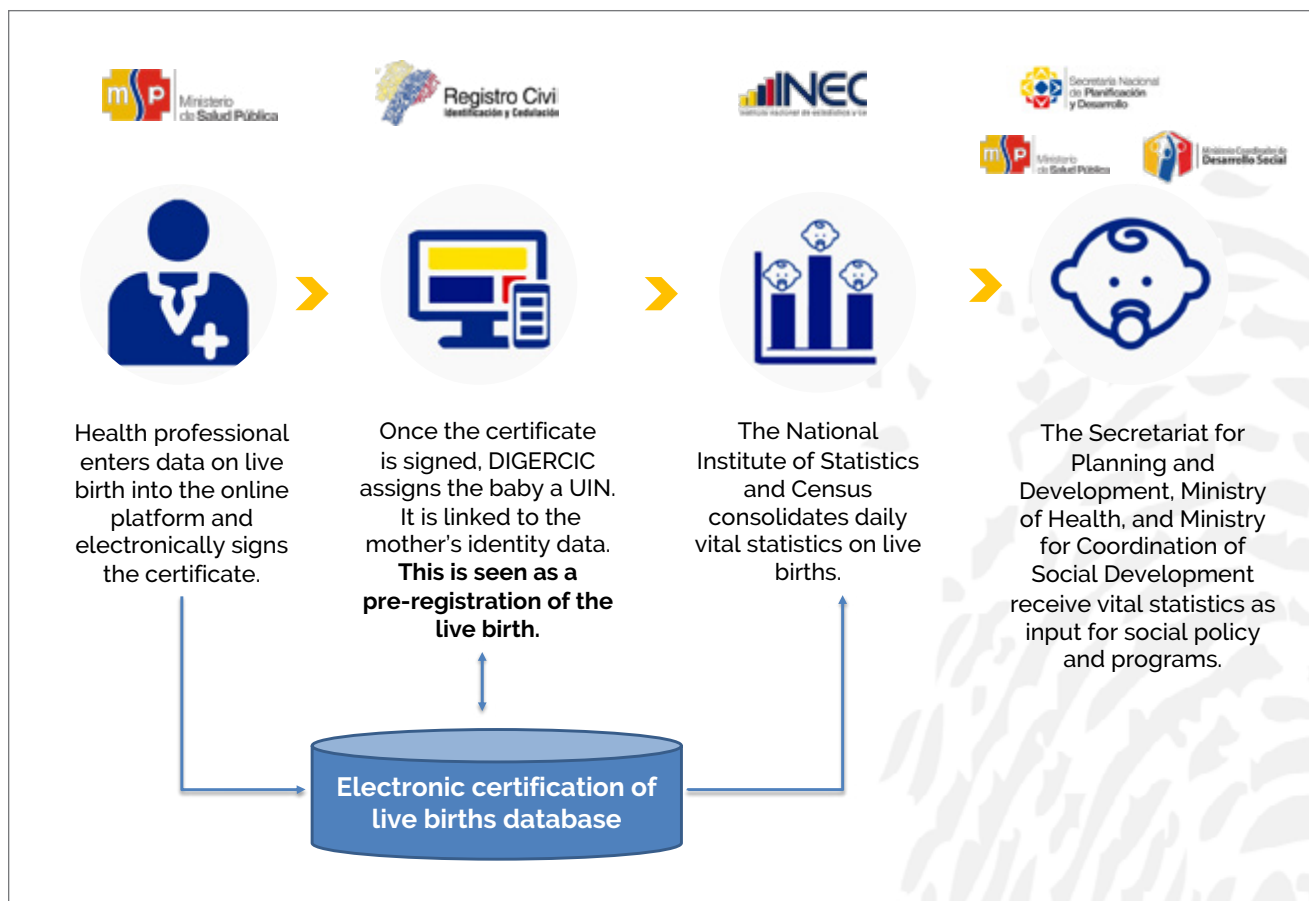


Figure 2.6: Certification of live birth, pre-registration, and generation of vital statistics.

Source: DIGERCIC 2017 (author's translation)

Good practice: Introducing online certification of vital events and civil registration services in health facilities

Health personnel can access REVIT-Births to certify live births as they occur. Since the platform is connected to DIGERCIC's database, the health professional and the mother are identified through their UIN. The mother's and the newborn's information are also linked in the database. The health professional signs the certificate of live birth using an electronic signature and immediately issues a copy for the mother.

Parents can also finalize the birth registration process in DIGERCIC's 31 civil registration offices, found in public health facilities in Ecuador. If the birth is recorded in the platform, mothers can register their children without having to show a certificate of live birth, since DIGERCIC can retrieve the information using her UIN. Because the platform was created with the Ministry of Health and INEC, the certificate contains all the information needed to generate vital statistics.

By April 2019, the platform was available in 95 percent of the country's health facilities. In the remaining 5 percent, physical infrastructure does not allow for this tool to be set up. The system allows DIGERCIC to monitor cases of newborns whose births are not registered. Mothers can voluntarily provide contact information, with the incentive of accessing social programs and subsidies. DIGERCIC uses this information to send a text message reminding them to register their baby's birth. Based on data for 2015–2019, 95 percent of births in REVIT have a birth certificate. For births that happen outside a health facility, registration requires two witnesses. Once the birth is registered, it is added to the REVIT database.

A similar platform, REVIT-Deaths, was set up in July 2017. Health professionals can electronically enter information of deaths at health facilities, get technical support for death classification using the ICD-10 code, and electronically sign the death certificate. This tool, developed by INEC, is now part of DIGERCIC's platforms and is connected to the population register. In April 2019, REVIT-Deaths was available in 25 percent of the country's health facilities. Authorities are working to increase this coverage.

Today, DIGERCIC offers civil registration services in 221 offices in Ecuador, covering all provinces. In 174 of those offices, identification services are provided as well. The agency also has 15 mobile units, which are set up in one location temporarily to give services twice a week.

Good practice: Using strategies to reach remote areas and vulnerable populations

The vast majority of the hard-to-reach population, including Indigenous communities and African-Ecuadorians, lives in rural areas without internet access, with low population density, and in dispersed settlements.² DIGERCIC has special brigades that bring civil registration and identification services to remote areas and vulnerable populations. In 2018, the agency sent out more than 15,000 brigades. These services are targeted to certain groups.

- **Out-of-coverage Brigades:** for areas located more than a 90-minute drive from the closest DIGERCIC office.
- **Solidarity Brigades:** for hospitalized citizens, citizens with severely reduced mobility, seriously ill senior citizens, and cases of emergency.
- **Organizational Brigades:** upon request by legal representatives of organizations, such as local governments asking for services that their residents can access, or private companies asking for services for their employees.

Brigades that are deployed in areas without internet access (offline brigades) collect information through electronic devices. They then go to the closest DIGERCIC office to connect online and send in the information.

As part of the modernization process, DIGERCIC digitized its civil registration records. All information has now been entered into the agency's digital database and can be accessed at any DIGERCIC office. However, this digitization process does not include the full scanning of these records into digital images. DIGERCIC started this work in 2010 and has invested almost US\$7 million in the digitization of documents.³ By 2019, more than 74 million civil registration records (57 percent)⁴ had been added to the agency's electronic database. Physical copies of the records are kept in a central archive.

DIGERCIC recently digitized 2.7 million death registration records from 1966 to 2013 to help update the electoral register. The agency is doing something similar with marriage records, and expects to reach a similar figure. It also digitizes documents every day for citizens who need certified copies of original paper records.

Good practice: Digitizing and checking the validity of digital certificates

Since civil registration information is available in electronic format, DIGERCIC can issue digital certificates of vital events. These certificates have a bar code that any institution can use to check them against DIGERCIC's database. The civil registration and identification law explicitly says that electronic documents have the same legal validity as original paper ones. That means they are valid at public and private institutions. In 2014, the agency started issuing digital identity certificates, which are often used as proof of identity when people have documents notarized. Digital certificates of birth, marriage, civil union, and death became available in 2017. This reduces the need for paper documents and makes it faster for people to get certificates.

Vital statistics

Because DIGERCIC, the National Institute of Statistics and Census (INEC), and the Ministry of Health have worked together to build modern electronic platforms to register vital events in health facilities, the three entities can generate more timely and updated data. This information is a key resource. The Secretariat for Planning and Development, Ministry of Health, Ministry of Coordination of Social Development, and others use it to design and provide social policy and programs.

Information on births comes almost solely from health facilities (Ministry of Health) through the online certification of live births. Information on deaths is complemented by other sources, such as:

- Attorney General's Office;
- DIGERCIC (more so than with births);
- Legal medicine and forensic services; and
- National Transit Authority.

Good practice: Coordinating and standardizing processes within the agency

DIGERCIC is part of the Inter-Institutional Committee for Health Statistics. The other members are the Secretariat for Planning and Development, Ministry of Health, Ministry for Coordination of Social Development, and INEC. The Committee coordinates and standardizes concepts and methodology for producing information. As part of its work, in 2016 the Committee issued two resolutions to standardize estimates of under-registration of births and deaths.⁵ To do this, it used information from DIGERCIC and from INEC's population projections.

These institutions are also part of the National Statistics Plan 2017–2021. This key tool of the National Development Plan seeks to guarantee statistical data that makes it easier to

- create national indicators;
- design public policy;
- continuously monitor and evaluate policies; and
- do national development planning.

One of the National Development Plan's goals is to modernize the National Statistics System by identifying administrative records and using them intensively. This allows statistics to be produced based on timely and low-cost data. Also, Ecuador expects that the 2020 census will be the last one done using traditional methods. INEC is working with several agencies, including DIGERCIC, to ensure high-quality data so the country can start doing its census based on administrative records. This is possible only when a country has a solid civil registration and identification system that can provide universal, timely, complete, continuous, and reliable information.

DIGERCIC is one of the institutions providing official information for the National Statistics Plan. The agency's data helps to design, carry out, monitor, and evaluate the goals of the National Development Plan and similar instruments.

- DIGERCIC provides information on births, deaths, and marriages, and on people who have a national ID card and a passport.
- INEC produces annual reports of births, deaths, and fetal deaths.

The National Statistics Plan lists the United Nations Sustainable Development Goals as one of the main demand components for official statistics. INEC checks all statistical operations and administrative records used in each category of information (social and demographic, economic, environmental) to see how they align with the 2030 Agenda for Sustainable Development.⁶

2.4 ID management system and interoperability

In Ecuador, all adults must have a national ID card. ID cards can also be issued for minors, but this is optional. It is the only valid ID card they can use to interact with public and private institutions. DIGERCIC issues ID cards for both Ecuadorian nationals and foreign legal residents. The cards include:

- ID number;
- Name and surname;
- Place and date of birth;
- Nationality;
- Sex;
- Marital status;
- Name and surname of spouse or partner (for civil unions);
- Place and date of issuance;
- Expiration date;
- Fingerprint;
- Signature of the holder;
- Signature of DIGERCIC authority;
- Blood type;
- Decision to donate organs; and
- Disability condition.

If changes in the population register affect any data on the ID card, the cardholder must request a new one with updated information. Anyone who does not do this must pay a fee equal to 1 per-mille of the national average minimum wage for each day of delay.

Before the reform and modernization of DIGERCIC's process, the ID card was printed on special paper and laminated. It was easily forged, and identity fraud was common. This made it hard for public institutions to have reliable and updated information. Since 2009, DIGERCIC has issued an electronic ID with 16 security measures. It has simplified the process and reduced wait times to get a national ID card from an average of 6 to 8 hours to an average of less than 60 minutes. Biometrics (10 fingerprints), signature, and photo are collected through electronic devices at all DIGERCIC offices and in the special brigades.

Once a person has an ID card, by law public and private institutions that require a birth certificate must accept the ID card as an equally valid proof of identity. The only exception is judicial or other processes that require a certified copy of the birth certificate.

Because of DIGERCIC's progress after the modernization plan, in 2016 the government added another part of ID management to the agency: issuing passports.

Integration of databases

As we saw above, DIGERCIC maintains the population register. This register links information on vital events from the civil registration database and the identification database. The agency also manages the platforms used to certify live births and deaths. These are connected to the population register, so the health professional's and the mother's identity are available in the live birth and death certificates.

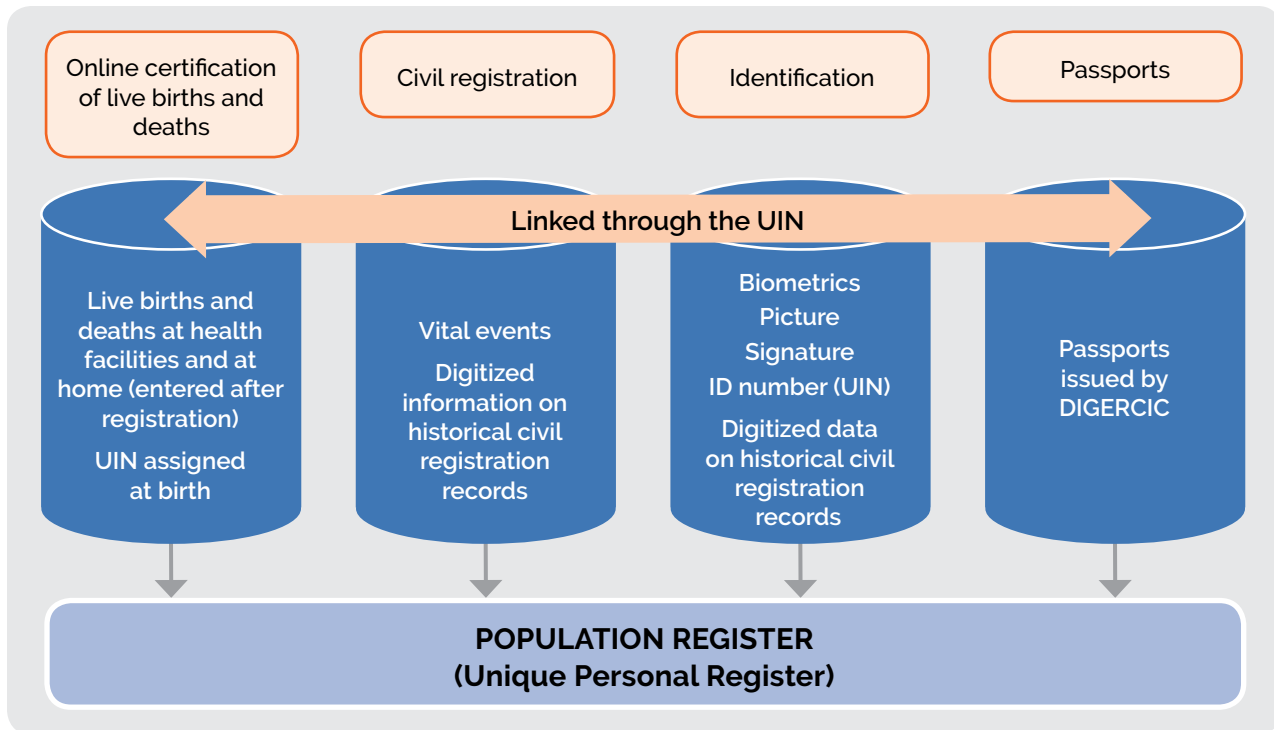


Figure 2.7: DIGERCIC's databases are linked through the unique identification number.

These databases are connected through the unique identification number (UIN) assigned at birth. This basic feature links information among databases and a person's information in the population register. The civil registration and identification law states that unless there is a purpose defined by law that requires access to personal data that DIGERCIC holds, the information will be released only if the affected person authorizes it or by judicial order (Article 75).

Changes in civil registration information are automatically sent to the population register so identity information is always being updated.

Before digital technology was in place, changes in civil registration information were often not shared, so identification data was not up to date. This

caused many problems in updating the electoral register and the social security and social programs registers. People who had died were still listed, or potential recipients could not be identified in time. The result was ineffective and inefficient service. When it digitized civil registration information, DIGERCIC began cleaning up files. One step was to digitize death certificates to help update the electoral register.

Having DIGERCIC's own team develop technological tools supported modernization. This meant big improvements over the old infrastructure. It was also better than using difficult-to-adapt platforms and software from international providers.

Good practice: Measuring users' satisfaction rates

DIGERCIC's progress is reflected in users' satisfaction with the agency. In 2008, it was widely seen as inefficient and corrupt, with a 55 percent satisfaction rate.⁷ In 2017, DIGERCIC reached a 91.9 percent satisfaction rate, based on more than 70,000 national surveys done that year.⁸

DIGERCIC collects users' feedback through these surveys and uses it to improve services.

Sharing information with other registers

DIGERCIC is part of the National Public Data Registration System. This system combines information from many registers and makes it available to public and private institutions through interoperable platforms. Civil registration and identification data is included in this system. The data can be consulted through the services that DINARDAP provides.

DIGERCIC still signs agreements with public and private institutions to grant access to identity information. Each agreement contains the terms and conditions for institutions to access data. They must provide justification for each field of information to which they request access.

DIGERCIC provides four main services related to civil registration and ID information:

- **Data web service** – Gives access to DIGERCIC information on its website using an internet connection or through a dedicated line.
- **Materialized views** (a more restricted service) – Copies of DIGERCIC's database, or subsets of it, are shared with institutions, such as the Tax Agency, Ministry of Labour, *Instituto Ecuatoriano de Seguridad Social* (Social Security Institute), and the *Consejo Nacional Electoral* (National Electoral Council).
- **Massive validation of data** – Institutions send a database of their register; DIGERCIC validates the information and sends back an updated register.
- **National system of citizen identification** – Allows public and private institutions to submit queries for identity information. In response, they get a PDF document with identification information from the citizen's ID card. This replaces the requirement for a person to present a certified copy of their ID card. This service is used by notary offices, retail stores (such as for financing big purchases), and others.

In 2018, DIGERCIC signed agreements with 115 public and private institutions. The agency responded to:

- 6,490,681 paid queries through the National System of Citizen Identification;
- 21,074,983 paid queries via data web service; and
- 196,305 queries through massive validations.⁹

By 2019, the agency estimated that it received about 80 million queries each year from the public sector and 20 million from private organizations. These do not include queries managed through the National Public Data Registration System, where DIGERCIC's information is also available.

Heading into 2020, DIGERCIC expects to be able to offer online services for verifying identity using biometrics.

DIGERCIC works closely with public institutions and agencies to improve service by sharing reliable and updated identity information. These include the *Ministerio de Inclusión Económica y Social* (Ministry of Economic and Social Inclusion) and the National Electoral Council.

Improving the impact of child development policies

The National Development Plan includes a nutrition indicator for children aged 0 to 3. The Ministry of Economic and Social Inclusion does vulnerability assessments of children and their households, and identifies potential beneficiaries for social programs and benefits. The goal is to identify children within the first month after birth, monitor their progress through their UIN, and share this information with the Ministry of Education once children are in school. Before DIGERCIC was modernized, this was very difficult.

“Children used to fall through the cracks of the system, and massive identification of beneficiaries was only possible after they were enrolled in the education system.”

(Tatiana León, Deputy Secretary for Integral Childhood Development)

This meant intervention to improve nutrition was less effective. To enroll, citizens had to present certified physical copies of documents, which was a long and costly process. The Ministry had to deal with forged documents and identity fraud.

To change this system, the Ministry worked with DIGERCIC. Now the agency sends the Ministry weekly updates on live births. But both institutions wanted to go a step further. They recently signed an agreement so the Ministry can have real-time access to information from DIGERCIC's online platform where live births are certified. This will allow the Ministry to do a quick vulnerability assessment and automatically enroll beneficiaries in nutrition programs. By doing this, their intervention is more efficient and has greater impact.

As Ms León says, ***“If we didn't have the information provided by DIGERCIC, monitoring indicators would be impossible.”***

With this cooperation, the Ministry expects to increase coverage of early childhood benefits from 40 percent to 60 percent by 2021.

Enrollment in social security benefits¹⁰

DIGERCIC shares information with the Social Security Institute in two ways:

- The Department for Enrollment and Coverage consults DIGERCIC's information from time to time using the web service (online) and materialized views that the agency provides.
- Every three months, DIGERCIC performs a massive validation of the Institute's register; it identifies errors and inconsistencies, including deceased beneficiaries who are still enrolled.

The Institute's enrollment platform includes a section where potential beneficiaries must enter their ID number and date of birth. An agreement between the Institute and DIGERCIC allows the agency to verify and confirm identity and give the green light for enrollment. Coverage can be given to a spouse or partner and children: these options are automatically displayed thanks to the link between the platform and DIGERCIC's population register. This allows beneficiaries to be identified securely and helps to reduce double or false registrations.

Electoral register

DIGERCIC coordinates with the National Electoral Council to continuously update the electoral register. To do this, DIGERCIC periodically sends all information in the identification register. The Council cross-checks it with data from migration authorities and judicial institutions (some judicial processes might result in suspension or loss of political rights) to finalize the electoral register.

2.5 Financial investment and socioeconomic benefits

DIGERCIC's modernization plan began in 2010 with an initial budget of US\$229.5 million. The plan was to be put in place within 4 years. The deadline was extended twice and is now set for 2021. By 2019, the total budget had reached US\$267.1 million. By the end of the process, the total investment is expected to be US\$277.6 million:

- US\$203.8 million (73.4 percent) will be financed through Ecuador's own resources (General Budget)
- US\$73.8 million (26.6 percent) will be financed through a loan from the Inter-American Development Bank.¹¹

Expenses include:

- Administrative costs;
- Human resources;
- ID credential materials;
- Infrastructure and equipment;
- Monitoring; and
- Purchase of land to build facilities.

DIGERCIC is financially sustainable: its revenues have been higher than its expenses since 2015, halfway through the modernization plan. For services to citizens, four procedures account for almost 85 percent of revenues:

- Renewal or duplicate of ID card: 41 percent;
- Passports: 31 percent;
- E-certificates of vital events: 6 percent; and
- Copies of original paper records: 6 percent.¹²



Estimating the socioeconomic benefits of solid CRVS and ID systems

The agency estimates that since 2011, by simplifying processes and making them more efficient, it has saved citizens US\$5 million every year. Also, to assess how efficient and sustainable the investment is, DIGERCIC measured three more cost savings of the modernization process. These underline the socioeconomic benefits of having a solid civil registration and identification system. The costs saved are due to:

- A more efficient process for issuing ID cards;
- Fewer crimes related to forged documents and identity fraud; and
- Less data correction needed.

Estimates included projections for 2019–2021 (Table 2.3).

Year	Expenses	Revenues	Total socioeconomic benefits	Total revenues + benefits
2010	26,498,824.84	18,042,857.26	N/A	18,042,857.26
2011	70,027,225.59	23,806,673.41	30,031,243.37	53,837,916.78
2012	79,529,437.41	48,123,992.74	26,885,335.96	75,009,328.70
2013	94,481,743.94	58,145,771.71	23,597,063.28	81,742,834.99
2014	85,717,904.36	55,380,137.87	20,163,093.13	75,543,231.00
2015	53,589,325.22	57,525,097.78	16,580,764.50	74,105,862.28
2016	50,758,960.22	57,090,759.55	12,847,945.29	69,938,704.84
2017	51,316,743.91	74,240,774.67	8,963,123.62	83,203,898.29
2018	47,555,160.46	81,758,907.22	8,954,925.94	90,713,833.16
2019	60,843,884.76	82,039,393.83	7,582,956.36	89,622,350.19
2020	69,935,970.48	82,782,407.50	7,559,627.69	90,342,035.19
2021	50,265,732.54	83,782,336.65	7,701,917.32	91,484,253.97
	740,520,913.73	722,719,110.19	170,867,996.46	893,587,106.65

Table 2.3: Revenues and socioeconomic benefits (2010–2021).

Source: DIGERCIC 2019. All figures are in U.S. dollars.

When these variables were included in the cost-benefit analysis, DIGERCIC found that the investment has been profitable (revenues and benefits are higher than expected costs). Projected to 2021, the investment is sustainable.

Conclusion

A decade of modernization and good practices

From being in a state of emergency in 2008, DIGERCIC has transformed itself into a modern civil registration and identification agency. In 10 years, DIGERCIC

- went from a paper-based to an electronic registration process;
- increased birth registration and reduced the high rates of late registrations through online certification of live births;
- increased identification coverage;
- began issuing a modern and more secure national ID;
- reduced the requirements and time needed to get an ID card; and
- transformed obsolete technology infrastructure by bringing together internal teams that can develop technological solutions.

Modernizing, automating processes, and digitizing records have led to concrete advantages for citizens and for the public administration: these include saving money and time. DIGERCIC now provides reliable information on residents' identity and has helped to provide better services. Challenges remain, since some segments of the population are still systematically excluded. But the agency has put in place good practices that have greatly improved the quality and inclusiveness of services, earning DIGERCIC a 91.9 percent user satisfaction rate.

Some of those good practices are listed in this report.

- The modernization process was supported by strong political leadership and financial commitment.
- This was followed by a clear and updated legal framework, one of the goals of the modernization plan.
- In consolidating improvements and strengthening the CRVS and ID management systems, DIGERCIC engaged in institutional coordination with key counterparts, such as the Ministry of Health and the National Institute of Statistics and Census.
- This coordination allowed the agency to standardize concepts and methodologies to ensure comparable data and solid vital statistics.
- Using digital technology greatly improved the quality of services the agency provides. Designing and putting in place an online certification of live births and deaths helped reduce under-registrations and late registrations. It is also beginning to improve death registration coverage.
- Birth registration has also improved now that civil registration services are provided in health facilities. The fact that 100 percent of registration is done electronically, a UIN is assigned at birth, and efforts have been made to digitize civil registration information and paper-based records has resulted in a more complete civil registration database. It also means a better integration of civil registration and identification information. This allows DIGERCIC to provide digital certificates of vital events with full legal validity, reducing the need for paper and the time needed to get certificates.

- To close the last gaps and reach populations that are historically excluded, DIGERCIC uses strategies like mobile units and special brigades to reach remote areas and vulnerable citizens. These benefit rural populations, Indigenous communities, African Ecuadorians, and others.
- Finally, to measure users' satisfaction and use feedback to improve service, DIGERCIC conducts a monthly average of 3,000 surveys nationwide. To assess how sustainable its business model is, the agency looks at direct financial revenues and estimated social benefits of the modernization process. These highlight the advantages of having a solid civil registration and identification system. ●



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