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



THE NETHERLANDS

CASE STUDY **5**

Prepared by Zoran Đoković



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.

Published by the Centre of Excellence for Civil Registration and Vital Statistics Systems.

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The research presented in this publication was carried out with financial and technical assistance from the Centre of Excellence for CRVS Systems. Housed at the International Development Research Centre (IDRC), it is jointly funded by Global Affairs Canada and IDRC. The views expressed herein do not necessarily represent those of Global Affairs Canada, IDRC, or its Board of Governors.



THE NETHERLANDS

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Acronyms

API	Application Programming Interface
BRP	Personal Records Database (Basisregistratie Personen)
CRVS	Civil Registration and Vital Statistics
GSM	Global System for Mobile Communications
ID	Identity
ICT	Information and Communications Technology
IT	Information Technology
SMS	Short Message Service
UIN	Unique Identification Number

Acknowledgements

This case study serves as a single chapter in a larger *Compendium of Good Practices in Linking Civil Registration and Vital Statistics and Identity Management Systems*. This work was developed by the team at the Centre of Excellence for Civil Registration and Vital Statistics (CRVS) Systems – Anette Bayer Forsingdal, Irina Dincu, Kristin Farr, Montasser Kamal, and Nomthandazo Malambo – in close collaboration with our partners at the Global Partnership for Sustainable Development Data (GPSDD) who managed the production of the compendium – Karen Bett, Jenna Slotin, and Colleen Wile.

We would like to thank Zoran Đoković for his research, country visits, data collection, and initial write-up of this study, as well as Sanjay Dharwadker, Vyjayanti Desai, Raj Gautam Mitra, and Mia Harbitz from the technical advisory committee for their peer review.

Finally, we are indebted to the Government of the Netherlands who shared their stories and successes with our researchers. Special thanks to Rhodia Maas, Frans Rijkers, and Michel Savelkoul.

Executive summary

The Netherlands' current identity system is based on sound registration processes used by municipal authorities to register vital events, address of residence of the population in their territory, and other personal information that facilitates communication between citizens and public authorities. The records in municipal population registers are synchronized daily with the central population register. The central population register provides up-to-date personal information to other public administrative authorities and service providers that connect to the register through dedicated application programming interfaces (APIs).

Appointed municipal authorities are responsible for the civil registration of vital events, which include births, deaths, marriages, civil partnerships, and paternity recognition. Vital events are registered and recorded in registration books in the municipality in which they occur.

Civil registration records are one of the fundamental building blocks of municipal population registers. Completing a birth registration provides legal cause to create a new record in the population register. This record is added to the population register of the municipality in which the person maintains permanent residence. All subsequent vital events (marriage, divorce, death, etc.) are registered in the municipal population register where the person lives. If a vital event occurs in a municipality other than the municipality of residence, it is recorded in the municipality in which it occurred. Using a dedicated online messaging platform, authorities in the registering municipality will communicate the event to the municipality of residence to be included in their register.

Each of the 355 municipal population registers in the Netherlands contains personal records, including legal identity information, address, and a range of other personal information, that is used to help determine eligibility for various services and rights. Records from the population register can be used as proof of legal identity and as breeder information to receive other legally accepted proofs of identity, such as national identity (ID) cards, passports, and driver's licenses.

The Dutch central population register, the Personal Records Database (BRP), mirrors all personal records from all municipal population registers. Each municipal population register connects to the central population register at least once a day to synchronize its most recent content. The central population register simplifies the process of sharing personal information with all public administrators and service providers within a regulated environment. Under the Ministry of the Interior and Kingdom Relations (Ministry of the Interior), the National Office for Identity Data is responsible for maintaining the central population register and resolving issues related to data quality, which also provides insight into the overall data sharing processes.

To avoid unnecessary bureaucracy, public administration and public service providers are not legally allowed to ask for personal information that citizens have previously registered in the population register. When citizens present their national identity card or unique identification number, all personal information that is required for the delivery of a specific service must be retrieved directly from the central population register. A Dutch citizen's unique identification number, also known as a Citizen Service Number, is generally the only information required to access personal information. Access to personal information in the population register is designed so that for each type of service, only a specific set of personal information is provided, which is determined to be proportional and sufficient to fulfil a specific service.

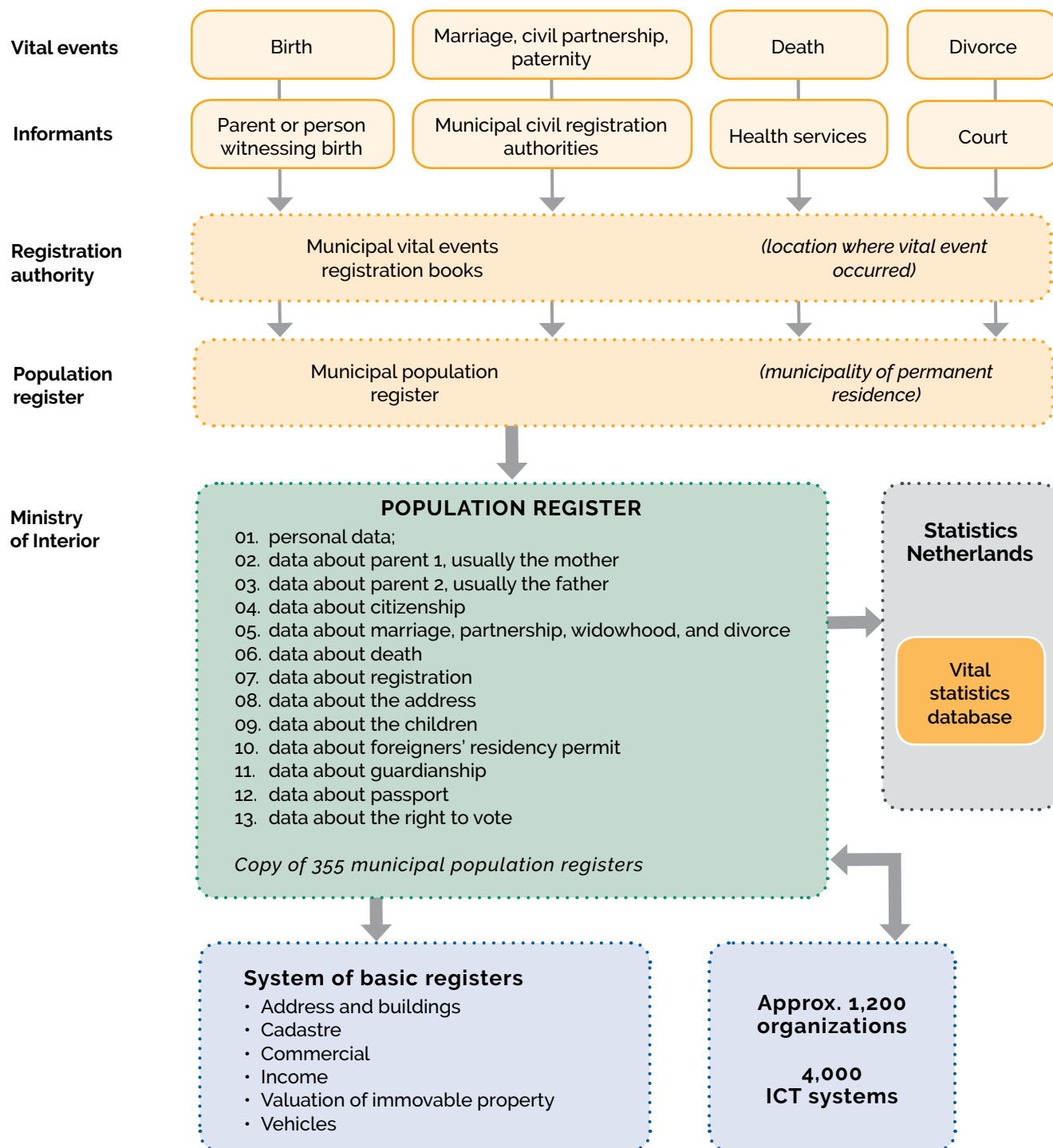


Figure 5.1: Overview of the Netherlands' civil registration, vital statistics, and identity system.

Source: Author

Summary of good practices

Original civil registration records are stored in dedicated vital event books and are referred to as the 'golden reserve of identity information.' When information on vital events is recorded in the population register, this digital record becomes sufficient proof of registered vital events and can be accessed online by all public administration authorities and service providers. Identity information stored in the population register reflects registered vital events and stands as the only legally valid source of identity data that can be used to personalize national ID cards, travel documents, or driver's licenses. Generally, a paper certificate is only required in exceptional circumstances, for which an official copy is provided. Original certificates remain with the municipality.

The primary role of the central register is to allow external users to access data contained in all municipal population registers from a single location. The National Office for Identity Data also controls the quality of registrations stored in municipal population registers to ensure the integrity of the registration process across all municipalities.

In 2018, there were some 135 million searches and 315 million exchanges of information to and from the population register. These figures illustrate the register's importance to the functioning of public administration and government services, particularly in key sectors, such as health and welfare, pension funds, public order and security, social security, statistics, and taxes and other fees.

5.1 Introduction

General information

Country name	The Netherlands
Surface	41,500 km ²
Geographic location	Western Europe; bordered by the North Sea to the north and west, Germany to the east, and Belgium to the south. The country also shares maritime borders with France and the United Kingdom.
Total population	17.08 million (Eurostat 2017)
Share of urban population	91%
Official language	Dutch
Civil registration and identity management agency	Ministry of Justice (civil registration), Ministry of the Interior (identity management), municipalities
Birth registration rate	Complete
Death registration rate	Not available
Identification coverage	Not available

Table 5.1: Netherlands country information.



Figure 5.2: Netherlands geographical map.

With 17 million people and a population density of 488 people per km², the Netherlands is the most densely populated country of the European Union, and one of the mostly densely populated countries in the world. The total size of the Netherlands is 41,500 km². Although Amsterdam is the capital, the government resides in The Hague. The Netherlands is known as a politically stable country with sound financial policy. It has one of the most open economies in the world and is one of the world's top 10 biggest exporters.

The Dutch tradition of registering vital events stems from Napoleonic times. In addition to registering births, deaths, and other vital events, the Dutch introduced a population register on January 1, 1850 to record personal information about its citizens. This register records identity information through civil registration and collects information on residents' address of residence. Each municipality was required to create its own population register. Originally kept as books, population registers adopted a paper card system in 1938.

KEY DATES

- 1811** Napoleon introduced the civil registry in the Netherlands. The population register was introduced soon after.
- 1850** All municipalities were required to maintain a population register, ordered by address of the citizens.
- 1920** Family cards replaced address books.
- 1938** Personal cards replaced family cards.
- 1994** All municipalities were legally required to automate their population registers.
- 2007** Unique identification number (Citizen Service Number) introduced as part of the population register.
- 2014** The scope of population registers expanded by adding active enrollment of non-residents (i.e. Dutch citizens residing abroad).

Figure 5.3: A timeline of civil registration and identification.

Digitization of population registers began in the early 1990s. On October 1, 1994, municipal population registers began operating as digitized databases. Digitized registers have since undergone a number of technological and infrastructural changes. Most notably, these include the establishment of a central population register, the Personal Records Database (*Basisregistratie Personen* or BRP), administered by the Ministry of

the Interior. The BRP retains copies of all personal data collected by municipal population registers. It also provides access to personal data to all other public administrators. The BRP is part of the system of basic registers run by the Dutch government.

Other basic registers in the system cover firms and enterprises, buildings and addresses, and vehicles, among others. These interconnected registers aim to provide all governmental agencies in the Netherlands with up-to-date legal identity data and other personal information that define the relationship between the state and its residents as they relate to services and guaranteed rights. Population statistics that are compiled by Statistics Netherlands are based on digitized municipal population registers.

5.2 Legal and institutional arrangements

Legal framework

Under the Civil Code, vital event registration records are completed and stored in the municipality in which the vital events have occurred. There is a designated Registrar of Births, Deaths, Marriages and Registered Partnerships in each of the Netherlands' 355 municipalities. The Registrar is responsible for creating, processing, and retaining vital event registrations.

The *Basic Registration of Persons Act*¹ regulates entry and processing of personal information in population registers. It also defines the characteristics and components of the population register system. The details of the system are further prescribed in regulations at the ministerial level. These regulations guarantee that all municipalities apply the *Basic Registration of Persons Act* rules in a similar way.

In addition to registering residents' legal identity information and any legal identity data layers throughout a person's lifetime, the population register's key purpose is to keep up-to-date information on a person's address of residence. Dutch government officials rely on address of residence information to determine tax responsibilities and to provide health, education, social security, and welfare services.

The *Basic Registration of Persons Act* defines two types of population registers: one for residents and one for non-residents. Resident population registers are maintained in each municipality for people who live within its territory. Non-resident population registers are maintained by the Ministry of the Interior for Dutch citizens who live abroad and for non-Dutch citizens, such as migrant workers and students who reside in the Netherlands for a short period of time.

Institutional arrangements

Under the Civil Code, the Ministry of Justice and Security is responsible for coordinating and creating policies for the civil registration process in the Netherlands, while individual municipalities are responsible for registering vital events and maintaining records.

Municipalities also issue national ID cards and travel documents in coordination with the Ministry of the Interior. Applications for these documents are created by municipal authorities using identity data retrieved from the municipal population register and are forwarded with the person's photo to the Ministry of the Interior, where the documents are personalized.

Although the idea of establishing a central population register database has been debated since municipal registers became digitized, the keeping of population registers remains the responsibility of municipalities. Over time, all

municipal population register databases became interconnected using a national data transfer infrastructure. This means that when a person moves from one municipality to another, their digital personal record is transferred digitally to their new municipality and updated with the resident's new address. This is a straightforward activity that is carried out about 600,000 times a year.

All six Dutch Caribbean islands make use of the PIVA² system, or *Persoonsinformatievoorziening Nederlandse Antillen en Aruba*, the population information system for the [former] Netherlands Antilles and Aruba. The islands of Bonaire, Saba, and Sint Eustatius are recognized in the population registration system as specific Dutch municipalities. Their PIVAs are synchronized with the BRP to prevent duplicate enrollment. As independent countries within the Kingdom of the Netherlands, the islands of Aruba, Curacao, and Sint Maarten maintain their own population registers which are not connected to the BRP.

When people move away from a specific municipality to live abroad, their records are transferred to the non-residents' population register, which is operated by the Ministry of the Interior.

The *Basic Registration of Persons Act* appoints the Ministry of the Interior to maintain a central population register that aggregates and synchronizes all personal records daily with 355 municipal residents' population registers and the non-residents' population register. This process is designed to bridge any technical challenges that could arise from linking municipal population registers to public administration and service information and communications technology (ICT) platforms. The central population register facilitates access and information sharing with all other public administrators and service providers within a regulated environment. The National Office for Identity Data is responsible for overseeing the data

sharing process and resolving any issues related to data quality. Table 5.2 details responsibilities and tasks.

Responsible	Task
Ministry of the Interior and Kingdom Relations	Policy and law, travel document regulations, population registry
National Office for Identity Data under the Ministry of the Interior and Kingdom Relations	Administrative office, travel document system management, population registry
Ministry of Foreign Affairs and embassies	Passports for Dutch citizens living abroad
Ministry of Justice and Security	Policy and law, regulations civil registry, registrations of foreigners without permits
Municipalities	Front office identification, travel documents, civil and population registry

Table 5.2: Civil registration and population registration institutional arrangements.

The main function of the central population register is to ensure that other public administrators and service providers can access and verify residents' personal information. This approach reflects the 'register once' principle, which relies on the premise that if the government possesses registered information, it should create an environment where this information can be retrieved any time the resident interacts with public authorities and service providers. The burden of providing identity information lies with authorities each time they interact with citizens. In direct interactions with citizens, authorities ask for a UIN (Citizen Service Number) and ID document to verify that the UIN belongs to person claiming it. All other personal information is retrieved directly from the population register.

5.3 Civil registration

Civil registration in the Netherlands is regulated by the Civil Code and is the responsibility of the municipal Registrar of Births, Deaths, Marriages and Registered Partnerships. Except in the case of death registration – which requires submission of a certificate from health authorities or from an undertaker – birth registration does not require presentation of a medical certificate and it is registered upon request. Marriages and registered partnerships are registered upon request, and paternity can be declared with municipal officials. Divorces are registered within a week following the court decision.

Every child born in the Netherlands must be registered at the municipal population affairs office within three days following birth. If parents miss this deadline, they may only be able to register the birth by court decision. The registration act (record) is created after one of the child's parents, or someone else who was present at birth, provides a parent identity document and a statement of the general practitioner or midwife with their request. The completed registration is recorded in a designated registration book.

If a birth or other vital event occurs in the same municipality where the person lives, the registration information is entered directly into the municipal population register to create a new personal record for the child. If the vital event occurs in a different municipality, the registration will be recorded in the registration book at the municipality in which the vital event took place. An electronic notification is sent to the person's municipality of residence, where a personal record is updated, or in the case of a newborn child, a personal record is created in the population register.

When parents register a birth, their identity information is automatically updated from the central population register and added to the personal record of their child.

The Registrar of Births, Deaths, Marriages, and Registered Partnerships is responsible for creating birth registration records, which are legal proof of a child's birth. The birth certificate is filed in the birth registration book and a copy is provided only if requested, for a fee. Population registration in the Netherlands has made online verification of identity information beneficial to the Dutch government and its citizens. Over time, the population register has eliminated the need for birth certificates from all government communications.

Although people may move several times throughout their lives, information on their place of birth or other vital events is permanently maintained in the personal file, making it possible to look up the original act in the municipality where it was originally drawn up.

Registration of marriages, registered partnerships, and divorces that take place within the Netherlands can involve authorities at the local, ministerial, or judicial level. Following the same approach, registration records remain with the authorities who registered the event. Information about the event is communicated to the person's municipality of residence to update that population register.

In addition to maintaining digital registration records in the population register and preserving original certificates in registration books, digitized registration certificates are also kept for backup purposes.

Good practice: Creating a 'golden reserve of identity information'

Original civil registration records are stored in dedicated vital events books and are referred to as the 'golden reserve of identity information.' When information from a vital event record is added to the population register, this digital record is sufficient proof of a registered vital event and can be accessed online by all public administration authorities and service providers. Generally, an official paper copy of a certificate is only required in exceptional circumstances. For instance, where people who register their vital events in the Netherlands and later move abroad, they may require a paper certificate as a proof of identity for authorities in the destination state. In this case, a person can request a paper certificate from the municipality in which the event was originally registered.

5.4 Population register

Originally, the goal of the population registration system was to ensure coverage of all citizens residing in the Netherlands. This meant that all newborns were registered in the system as long as their mother was a resident. In terms of residency status, the system was extended to include all visitors to the Netherlands who intend to live in the Netherlands for at least two-thirds of the next six months. Should residents decide to remain abroad for at least two-thirds of the next 12-month period, they must notify their municipality of residence and de-register from the population register. In these cases, their personal record is moved to the non-residents' register.

In 2014, the population registration system expanded to include non-residents. That means that any person who has a relationship with

Dutch government agencies is registered in the population register, whether they are citizens or residents of the Netherlands or not, such as people who studied in the Netherlands or received social benefits. The Ministry of the Interior shares this data with other government agencies, such as the Dutch Tax and Customs Administration, Dutch Institute for Employee Benefits Schemes (UWV), Ministry of Foreign Affairs, and National Health Care Institute (Zorginstituut Nederland the Sociale Verzekeringsbank), which implements national insurance schemes in the Netherlands and ensure that child benefits, pensions, or survivor benefits are allocated correctly and on time.³

Municipal population registers

Each municipal population register contains personal records that include identity and address, as well as a range of other personal information to facilitate decision-making on eligibility to various services and rights. Personal records in a municipal population register consist of specific categories of personal information (Table 5.3).

01.	Personal data
02.	Data about parent 1, usually the mother
03.	Data about parent 2, usually the father
04.	Data about citizenship
05.	Data about marriage, partnership, widowhood, and divorce
06.	Data about death
07.	Data about registration
08.	Data about the address
09.	Data about the children
10.	Data about foreigners' residency permit
11.	Data about guardianship
12.	Data about passport
13.	Data about the right to vote

Table 5.3: Categories of personal data stored in the population register.

The population register database is designed to retain previous identity data as new information is updated (i.e. change of family name). The only exceptions to this rule are data categories 7, 12, and 13, where old data is replaced with new data when it is entered in the population register. Old data is not retained for the registration of a transgender person nor for a child who has been adopted. Upon personal request, data on a person's former gender or the biological parents of an adopted child are erased from the register.

While the citizen service number (CSN) is used in general interactions between citizens and government agencies to confirm identity data in the population register, the system also uses sectoral identifiers, or administrative personal identification numbers (AdmPINs). AdmPINs are only used within the electronic system to link different data categories pertaining to a specific person. In technical terms, the population register can store AdmPINs for related individuals (spouse, parents, and children) within the same record, allowing the system to link to current data on the UIN, name, sex, date of birth, country of birth, and place of birth of related individuals.

The information in the population register is either supplied by relevant authorities or concerned individuals. Local municipal registrars supply information on births, deaths, marriages, and registered partnerships. Similarly, courts supply information on divorces, and the Ministry of Justice provides information on changes in citizenship. Finally, concerned individuals are required to personally report to municipal authorities when moving residence within the country, immigrating or moving abroad, or to record any vital events that happened abroad. While residents generally report vital events in a timely manner, they may face a fine of 325 EUR if they deliberately fail to report a new vital event of residency status.

Personal Records Database

The Personal Records Database is the Dutch central population register. It is designed as a database that mirrors all personal records from 355 municipal population registers and the register of non-residents. Each municipal population register connects to the central population register at least once daily to synchronize its content with its municipal counterpart.

Good practice: Using a central population register as a single source of identity information

The primary role of the central register is to allow data users to access information in all municipal population registers from a single location. The National Office for Identity Data controls the quality of registrations stored in the municipal population register to ensure the integrity of the registration process across all municipal population registers. However, it has no authority to change information in the central or municipal registers.

The National Office for Identity Data defines the technical and software requirements for the implementation of municipal population registers. It monitors externally procured ICT solutions and ensures that they meet the necessary requirements and standards. The Office also defines standards and protocols for application programming interfaces to allow external users to access the central register.

While access to the central population register is limited to public authorities and services, each request for access is individually assessed and access is granted accordingly. This function reveals the full value of the population registration system. As of 2019, approximately 1,200 organizations operating within government structures benefit from access to personal data in the central population register. This further extends to approximately 4,000 individual ICT systems within these organizations. For instance, while the Notary Office appears as a single organization accessing personal data, in practice, there are 900 individual Notary ICT systems connected to the central population register via the National Notary Hub.

As residents become users of specific services, service providers have ongoing access to changes in relevant identity and address data that affect service delivery. This information is equally

important to all authorities that grant access to specific rights and entitlements determined on the basis of residence or other personal information criteria.



Figure 5.4: Number of external government data users with access to the central population register.

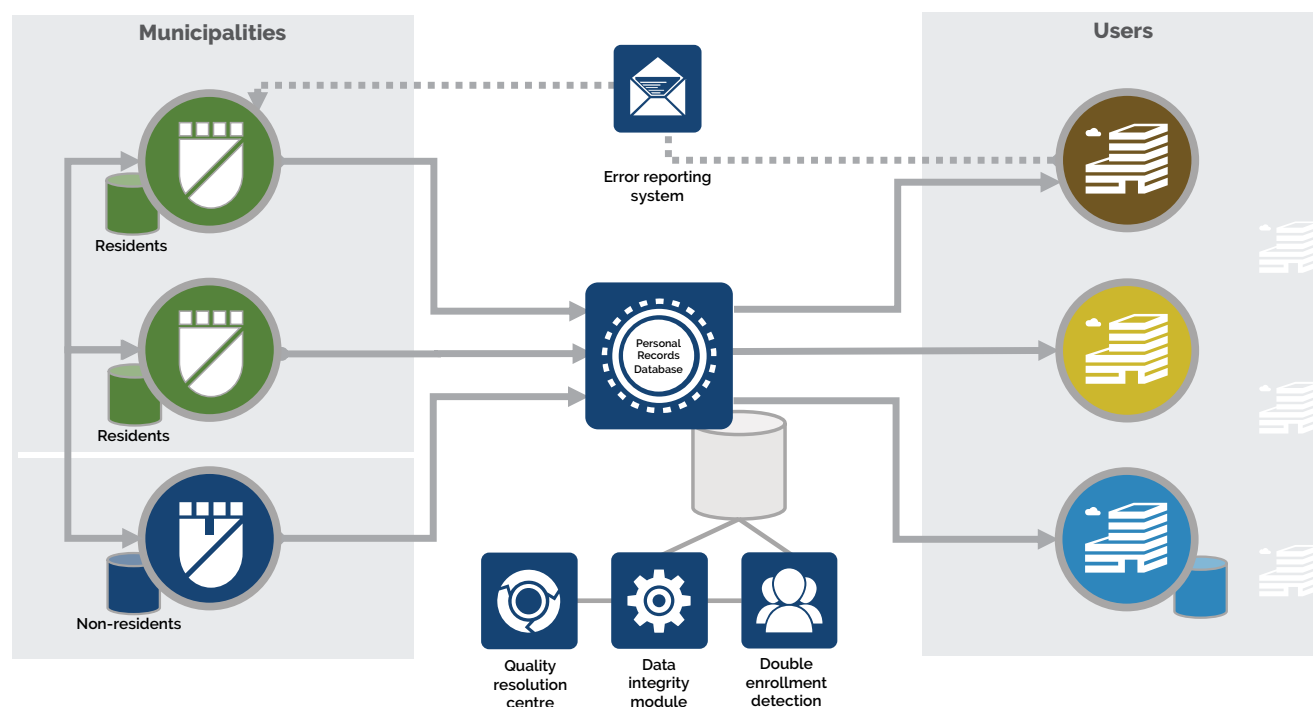


Figure 5.5: The flow of personal identity data in the Netherlands' identity system.

Source: National Office for Identity Data

The National Office for Identity Data defines the technical standards and protocols for data sharing with external users. Functional registers maintained by external users copy predefined sets of personal information from the central population register, either automatically as people become eligible, or as they apply for services. When a person is enrolled in a specific functional register, the system creates a flag in that person's record in the population register. This flag is used by the system to indicate that the institution that keeps information of that person in its functional register is "subscribed" to receive updates about changes in personal data copied in the functional register. As changes in personal information are communicated from the municipal population register to the central population register, these changes are shared with all subscribed organizations.

To ensure ongoing improvement in the population register, users of population register data also report any inconsistencies in the data that they originally received. For example, since birth registration is an entirely declarative process, parents could register a fictitious birth. Indeed, there have been instances where parents registered the birth of twins when they had only one child. Such fraud attempts are usually attempts to gain additional child benefits. The population registration system will record this information, which is then shared with health authorities who will arrange initial vaccination for the newborn within four days. If a child is not brought for vaccination and subsequent house visits confirm that the child does not exist, this information will be communicated to the municipality where the fictitious identity was registered. If confirmed, municipal authorities will deem the identity fictitious and annul the birth registration.

Another example of user feedback involves death reporting. Reflecting a death in the population register can be a challenge for people who move abroad. In these cases, when a death occurs, it is often reported to civil registration authorities in the destination country. Pension authorities require that their beneficiaries residing abroad report back regularly using a designated form to ensure they are still alive. If pension authorities determine that the person has died, the information is also communicated to the non-resident population register. This notification can be used as sufficient proof to mark a person as deceased.

If there is uncertainty about whether the person has moved from their reported address or resides at a different address, municipal authorities may conduct spot checks to determine whether allegations are justified.

The integrity of the population registration system is further verified through internal data quality checks:

- **The Data Integrity Module** contains a business rules engine with approximately 3,000 data integrity rules, which are run on a weekly basis to check the entire database. Any violations are reported to responsible municipalities.
- **The Quality Resolution Centre Module** is a web application for all municipalities that contains results from the Data Integrity Module, the questionnaire for yearly self-evaluation, and other quality control instruments.
- **The Double Enrollment Detection Module** inspects all new enrollments into the database to detect double enrollments using smart profiles: name changes, transliteration problems, etc. Results are reported to the responsible municipalities.

Citizen Service Number

A Citizen Service Number (or unique identification number, UIN) is assigned to each resident and non-resident when their personal record is created in the population register. This number is used by all public ICT systems to ensure fast and accurate identification of personal records in their functional register, or to retrieve updates from the central population register. Agencies that do not store personal information can use the UIN to directly access the population register and obtain legal identity data for the person.

When a person starts working, their employer usually only needs the employee's UIN to manage formalities with institutions like the tax administration and pension fund. The Dutch healthcare system also uses the UIN for their ICT systems, and as such, it may be required at a hospital, a pharmacy, or to apply for home care. Personal information required for any of these services is drawn directly from the central population register.

Generating a unique identification number (UIN)

The UIN is designed as a random number that can be mathematically verified as valid number, but does not contain personal information that can be attributed to the person. UINs are generated by the National Office for Identity Data and distributed to municipalities in batches of 500 UINs to be allocated locally.

Privacy and data protection framework

Privacy protection legislation provides general guidance on the conditions for sharing information from the central population register with other public administrators and service providers. Only services under government authority can legally benefit from access to the central population register. To gain access to specific personal information in the population register, the requesting authority must prove that their service is defined by relevant sectoral law and that the service requires the use of personal data. A dedicated review board set up by the National Office for Identity Data assesses the merits of each request and defines, in consultation with the requesting authority, the types of personal data that are required for service provision. Data can be shared by copying personal data into a service's designated functional register or by looking up the personal information directly in the population register when a request for service is made. Each decision to grant access to the population register for a specific purpose is published on the Ministry of the Interior's website.

Privacy legislation requires that the Ministry of the Interior logs each request for personal information made by external users and public authorities. Citizens have the right to access information on the agencies that have used their personal information, and for what purpose, within a specific timeframe.

According to privacy legislation, Dutch citizens have the right to

- inspect the data recorded about them;
- have data corrected, if incorrect; and
- know which organizations have used their data, when, and for what purpose.

Vital statistics

Following the established procedure for granting access to a specific set of personal data in the population register, Statistics Netherlands has been authorized to receive all data required to compile population statistics, including vital statistics, in line with the United Nations Department of Economic and Social Affairs (UN DESA), Eurostat, and Council of Europe requirements and standards. To compile vital statistics, Statistics Netherlands has acquired several types of authorizations that collect information by triggering the release of personal information, such as date of birth or date of death, to Statistics Netherlands when a new vital event is recorded. Data on marriages and divorces are obtained in a similar fashion.

Access to specific data is approved once it has been deemed necessary to produce specific statistical analysis and that the amount of data that is shared is consistent with the amount required. Data sharing with Statistics Netherlands is achieved by subscribing the agency to authorized data types. Registration of new information in the subscribed data type also triggers an electronic message communicating new information to Statistics Netherlands.

5.5 Identity management system

Municipal authorities are responsible for issuing legal identity credentials, such as national identity cards, passports, and driver's licenses. Biometric data, such as photos for national ID, passports, and driver's licenses, are stored in a separate database kept by the issuing agencies. However, all other personal information printed on these documents is drawn directly from the central population register.

When information is entered into a personal record in a municipal population register that is different from the information on identity credentials, or marks a person as deceased, that information is shared via the central population register. The information would generally originate when a person registers vital life events. This information is shared via the central population register to be marked as invalid with the database that issued the most recent identity credentials. The Ministry of the Interior maintains a separate database of stolen, lost, and invalidated ID credentials. The police and Border Control have full access to this database and can use mobile units to communicate with the central database via GSM mobile networks.

Public administrators and service providers primarily use national IDs for identification purposes and to collect personal data that they require directly from the population register.

Private service providers rely heavily on verification of legal identity information and the validity of issued identity credentials for their business processes, especially if they enter into contractual agreements with individuals. Commercial organizations can verify the authenticity of issued identity credentials and the validity of issued documents by accessing the database of identity credentials.



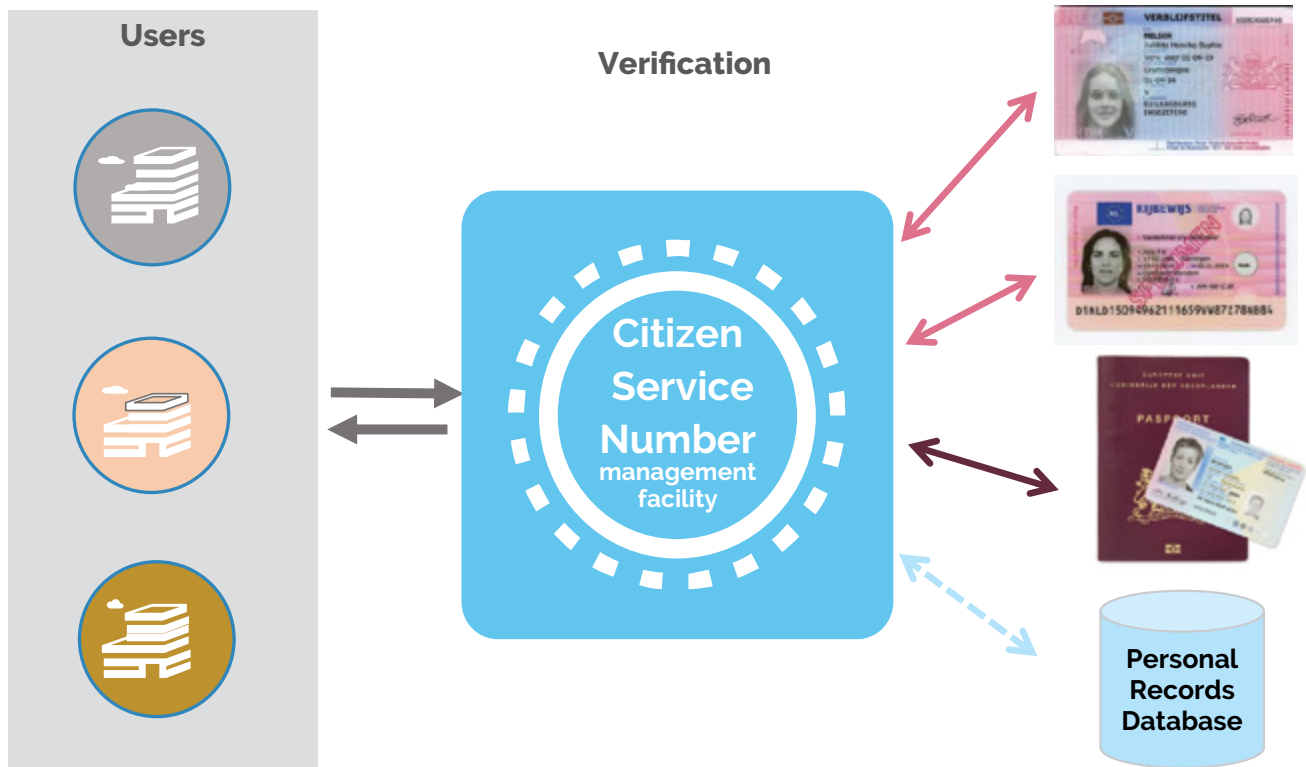


Figure 5.6: Process to verify the validity of identification credentials in databases of invalid identification credentials.

Source: National Office for Identity Data

However, access to personal information by commercial organizations is strictly limited. Their query in the database of invalid identity credentials will yield a response of "valid document" or "invalid document." This service is widely used by

- banks;
- insurance companies;
- medical organizations;
- mortgage lenders/credit companies;
- notaries;
- rental companies; and
- telecom companies.

Figures 5.7 and 5.8 summarize the most recently available data, which shows that the number of queries from commercial organizations reached 20.1 million in 2018. This represents a steady increase over 9.1 million queries in 2011. More importantly, Figure 5.7 demonstrates the number of valid or accurate ID documents in circulation. When a request for validation of presented of ID documents was made in 2018, the system flagged 130,000 invalid document responses – almost four times higher than in 2011.

With many services becoming digitized, the Ministry of the Interior has developed digital systems to identify people who apply for government services online.

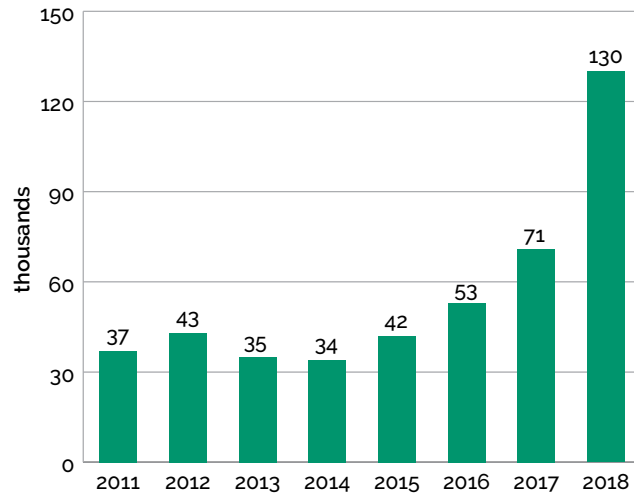


Figure 5.7: Number of requests for verification that returned an "invalid document" response.

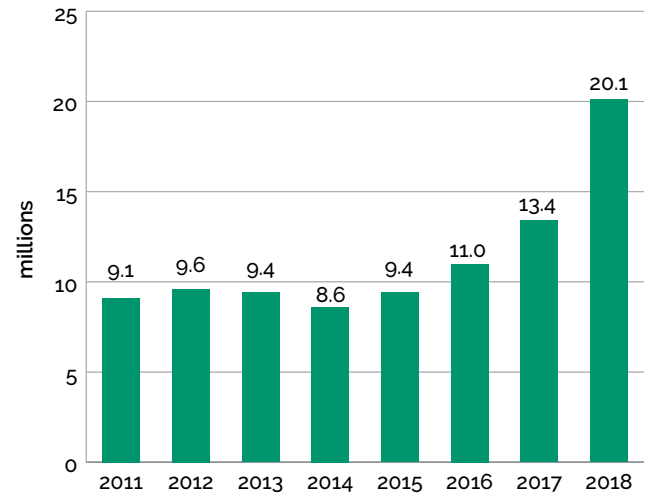


Figure 5.8: Number of requests for verification of identity credentials from commercial entities.

DigiID is a digital identity credential that has been used in the Netherlands since 2007. Its use has grown to mirror the increase in government services available online. DigiID is issued upon request to residents and non-residents who are enrolled in the population register. It consists of a username and a password, which is mailed in a sealed, non-transparent envelope to the resident's registered address. Non-residents can obtain a DigiID at the airport when visiting the Netherlands. Identification involves matching the authenticated username and password with up-to-date identity data and other personal data from the population register. Changes to identity information through civil registration do not require a new DigiID, as the population register always provides the most up-to-date personal information to authenticate DigiID credentials.

Over time, two-factor authentication was introduced using short message service (SMS), or texting. Currently, a system is being developed to allow for two-factor authentication using a mobile app.

DigiID by the numbers

305 million authentication requests were processed in 2017.

14 million residents and non-residents have a DigiID.

650 organizations accept DigiID as identification.

20 requests were made per person in 2017.

Figure 5.9: Statistics on the use of DigiID by citizens and external data users.

5.6 Sharing information with other functional registers

When legal identity data is recorded in the population register for a birth, this information is communicated to other stakeholders to trigger specific services, such as the newborn vaccination program. Upon receiving birth data from the population register, health authorities issue an invitation for vaccination within four days following the birth. The child's parents are notified at specific intervals for subsequent vaccinations.

Good practice: Legalizing the 'register once' principle

Throughout a person's lifetime, they will interact with the state administration more frequently, which increases the amount of personal data that is linked across several digitized registers. In the Netherlands, there are 10 separate, fundamental, and interconnected registers that operate on agreed system standards to ensure interoperability between them. The main purpose of the system of basic registers is to allow the Dutch government to collect data only once and retain it in one register. Each time a government agency requires information, they must retrieve it from the appropriate basic register. For example, if the Dutch Tax and Customs Administration needs someone's address, they are not permitted to ask the person for the information. They will instead collect it from the Personal Records Database (BRP). Legally, citizens must only provide data once, and all government agencies must use the same data.

Figure 5.10 below illustrates how personal information from the central population register is used as a source of personal data for other basic registers, linking directly to 6 out of 10 basic registers:⁴

- **Addresses and Buildings Key Register** contains municipal basic data on all addresses and buildings within the municipality. Kadaster – the Netherlands' Cadastre, Land Registry and Mapping Agency – manages the register and provides data to public offices, institutions, companies, and private citizens.
- **Income Register** contains the total income or taxable annual income of everybody who files an income tax return. Government organizations use the register to determine supplements, subsidies, or benefits.
- **Valuation of Immovable Property Register** consists of a range of data of immovable property that help establish the value of the property.
- **Commercial Register** contains information on all businesses and legal entities. All other economic players are also listed in this register, which guarantees legal security when doing business. All government agencies are required to use this register. For instance, a municipality will consult the commercial register when searching for company information.
- **Vehicles Register** lists data on vehicles, vehicle registration documents, and people to whom the vehicle registration document was assigned. The Netherlands Vehicle Authority provides this information to authorities, citizens, and businesses.
- **Cadastral Register** consists of the cadastral registration and the cadastral map. Cadastral data is used by many clients as the foundation for their own work processes.

Other basic registers, such as the Topography Register, the Large-Scale Topography Register, and the Subsurface Register, are not directly linked to the central population register.

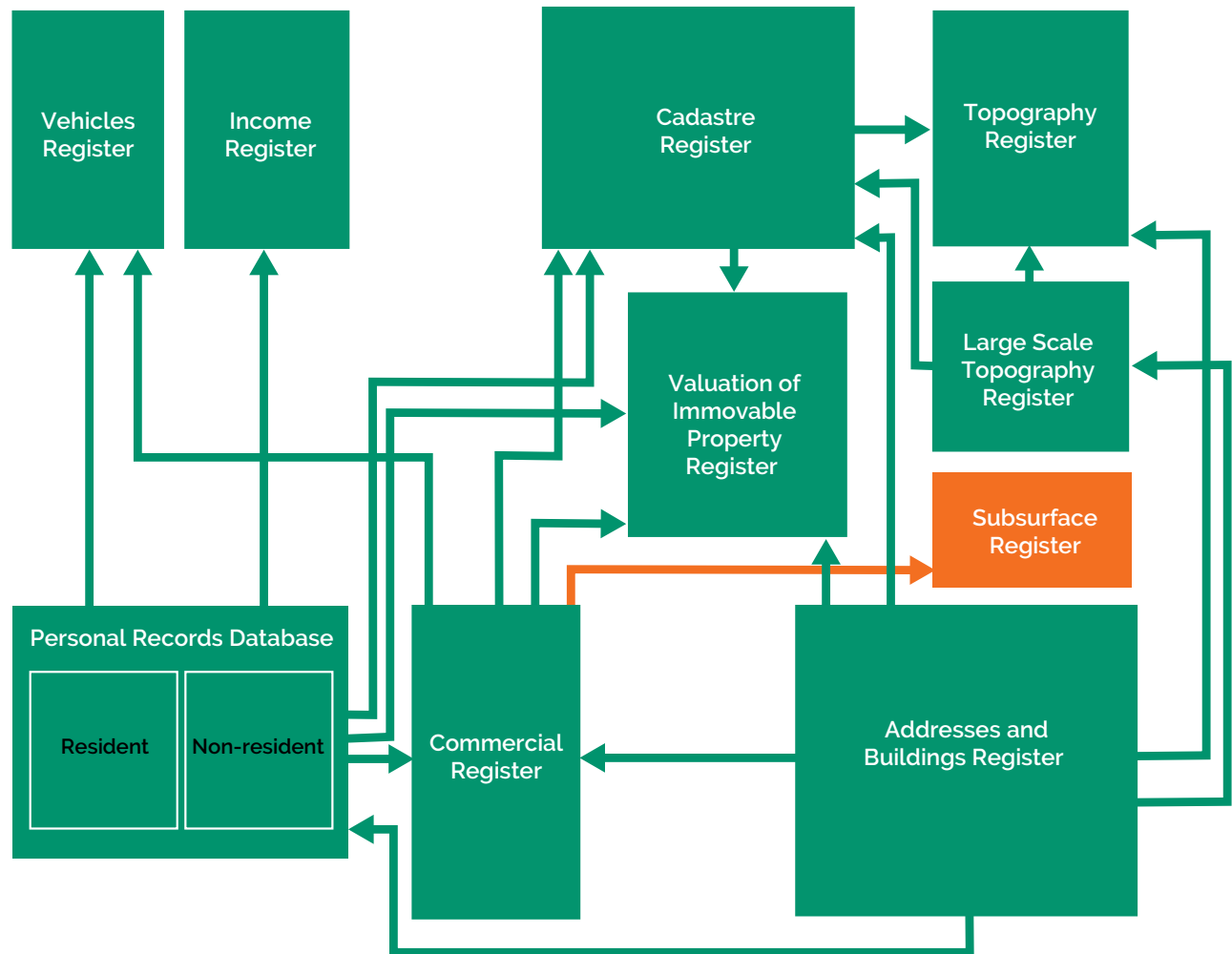


Figure 5.10: Ten basic registers operated by the Netherlands government and the direction of data sharing between individual registers.

Source: National Office for Identity Data

5.7 Benefits of strengthening the role of civil registration in the identity system

In the Netherlands, vital event registration is universal and takes place as vital events occur for everyone who resides in its territory. With population registers in use for almost two centuries, it has become the norm to obtain identity information from vital event registrations. Further, Dutch authorities continue to register additional personal information layers until a person dies and their personal record is permanently moved to the non-resident category and marked as deceased.

All communications between citizens and the state rely on this information, with administrative systems designed to draw from the population register. This process was effective when the population registration was entirely paper-based, and it remains reliable now that information is processed digitally. Digitization has reduced the importance of mass mailing as a means of communicating information to citizens. As a result, address information has become less important, although it is still extremely relevant in determining the value of state benefits that depend on the number and type of residents who live in a specific household.

Operating the Social Fund efficiently through a digitized population register

The Dutch Social Fund, which distributes 40 billion EUR in pension benefits and 3 billion EUR in child benefits each year, depends entirely on information from the population register. For instance, all residents qualify for a state pension when they reach age 65. Residents receive written notification six months in advance to let them know when their pension payments will start. Personal information, such as date of birth, allows the Fund to plan expenditures and enroll new beneficiaries. When existing pensioners report that they are moving abroad, their record is transferred to the non-residents' register, which triggers the Social Fund to transfer pensions to a designated account abroad. The Social Fund also combines data on parents' income, marriage status, and the number of residents at an address to determine the value of child benefits. All of this happens with very little intervention from citizens. On the operational side, digitizing population registration has allowed the Social Fund to cut its workforce by 50%, as most of the processes are automated. Social Fund officials estimate that digitizing the benefits process saves some 120 million EUR annually.

Good practice: Generating census data from the population register

The Netherlands is one of the countries in Europe that does not run a national census as a separate project with a massive budget. Instead, census data is produced directly from data in the population register and other digital registers.

Financial considerations

Under the law on central population register, the Ministry of the Interior and agencies that use data from the population register share the responsibility of governing its operation. This requirement is designed to ensure mutual understanding on how the population register should operate. In the event of a lack of agreement on specific points, the Ministry of the Interior is authorized to make a final decision.

The financial benefits to keeping a population register in the Netherlands are taken for granted, and long ago stopped being calculated. External users provide a portion of financing for population registration that is determined through the decision processes in the Consultative Council.

A Consultative Council is responsible for implementing this decision-making arrangement. This council includes six representatives from the Ministry of the Interior, three municipal representatives, three officials from municipal and non-municipal agencies that supply the Ministry with data about non-residents, and six representatives from agencies that use population data.

Good practice: Determining financial contributions by agencies to the BRP population register system

One of the most important tasks of the Consultative Council is to determine the amount of financial contributions required to support the operation of the central population register. Contributions cover operational and human resource costs required to maintain and operate the register. According to Dutch law, the amount of information that an agency acquires from the population register will determine its level of financial contribution. Contributions are directly proportional to the volume of information obtained from the central population register.

Statistics Netherlands falls under the sector named Statistics Netherlands and other agencies. Other members of this sector include the Netherlands' Cadastre, Land Registry and Mapping Agency; the 12 Netherlands provinces; Chamber of Commerce; and the Royal Dutch Association of Civil Law Notaries. Statistics Netherlands represents this sector in the Consultative Council.



Conclusion

The Netherlands' identity system demonstrates a deeply rooted understanding of how interactions between public authorities and citizens can be supported by a robust system that recognizes, registers, and manages identity information. It further illustrates how a government's overall efficiency depends on access to readily available, up-to-date identity information, including address of residence.

Registering identity and address of residence information in municipal population registers is a longstanding tradition in the Netherlands. While the system has remained fundamentally unchanged since its inception, it has gradually been upgraded to take advantage of new ICT technologies as they emerge.

Municipal population registers in the Netherlands have traditionally reflected a holistic approach to civil registration, vital statistics, and identity management. Each new layer of identity information from birth until death is recorded in the population register using information on registered vital events. This information is used as a source of identity data to issue ID documents and update identity data in other government functional systems.

The Netherlands' identity system is built around the 'register once' principle. In practice, this means that residents and non-resident citizens need to register new identity information only once. The system is designed to ensure that new identity-related information is made available to all government systems that require the information, which at present includes approximately 1,200 government organizations and 4,000 government ICT systems. The 'register once' principle is so critical to the functioning and efficiency of the system that legal provisions have been implemented to prohibit government authorities from seeking personal information data from citizens if that information has been previously registered.

Civil registration and vital statistics systems are fundamental to the Netherlands' identity ecosystem. Registered vital events are used in the digitized population register and later processed by other government systems. While civil registration paper records are still meticulously kept and preserved, they are used only as a 'golden reserve of identity information' for situations where identity information cannot be accessed digitally. ●

Endnotes

- 1 Wet basisregistratie personen (*Basic Registration of Persons Act*), Government of the Netherlands. wetten.overheid.nl/BWBR0033715/2019-02-03
- 2 Persoonsinformatievoorziening Nederlandse Antillen en Aruba (Personal information provision in the Netherlands Antilles and Aruba). rvig.nl/caribisch-gebied/persoonsinformatievoorziening-nederlandse-antillen-en-aruba-piva
- 3 Prins, K. Population register data, basis for the Netherlands' population statistics. Statistics Netherlands, 2016. cbs.nl/en-gb/background/2016/01/population-register-data-basis-for-the-netherlands-population-statistics
- 4 Digital Government. Government of the Netherlands. nldigitalgovernment.nl



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