CENTRE OF EXCELLENCE
for CRVS Systems

LE CENTRE D'EXCELLENCE
sur les systèmes ESEC

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

KYRGYZSTAN

CASE STUDY **3**

Prepared by Zoran Đoković

Global Partnership for Sustainable Development Data

KYRGYZSTAN

CASE STUDY **3**

Contents

Figures

Tables

Acronyms

ID	Identity
ICT	Information and Communications Technology
IT	Information Technology
SRS	State Registration Service
UIN	Unique Identification Number
UN	United Nations
UNDP	United Nations Development Programme
UPR	Unified Population Register
USAID	United States Agency for International Development

Acknowledgements

Executive summary

Kyrgyzstan's identity system is a good example of a holistic approach to civil registration, vital statistics, and identity management from birth until death. In Kyrgyzstan, a person's identity is legally recognized when their birth is registered. Certified birth information is later used to obtain other identification (ID) documents, such as national ID or travel documents. As subsequent life events are registered, new information is reflected on new identification documents that are issued by legally appointed government agencies.

Currently, Kyrgyzstan's identity system falls entirely under the authority of the State Registration Service (SRS). Although initially built using traditional paper-based civil registration, vital statistics, and identity management processes, the system was updated in 2014 to digitize the collection, processing, and retention of identity data.
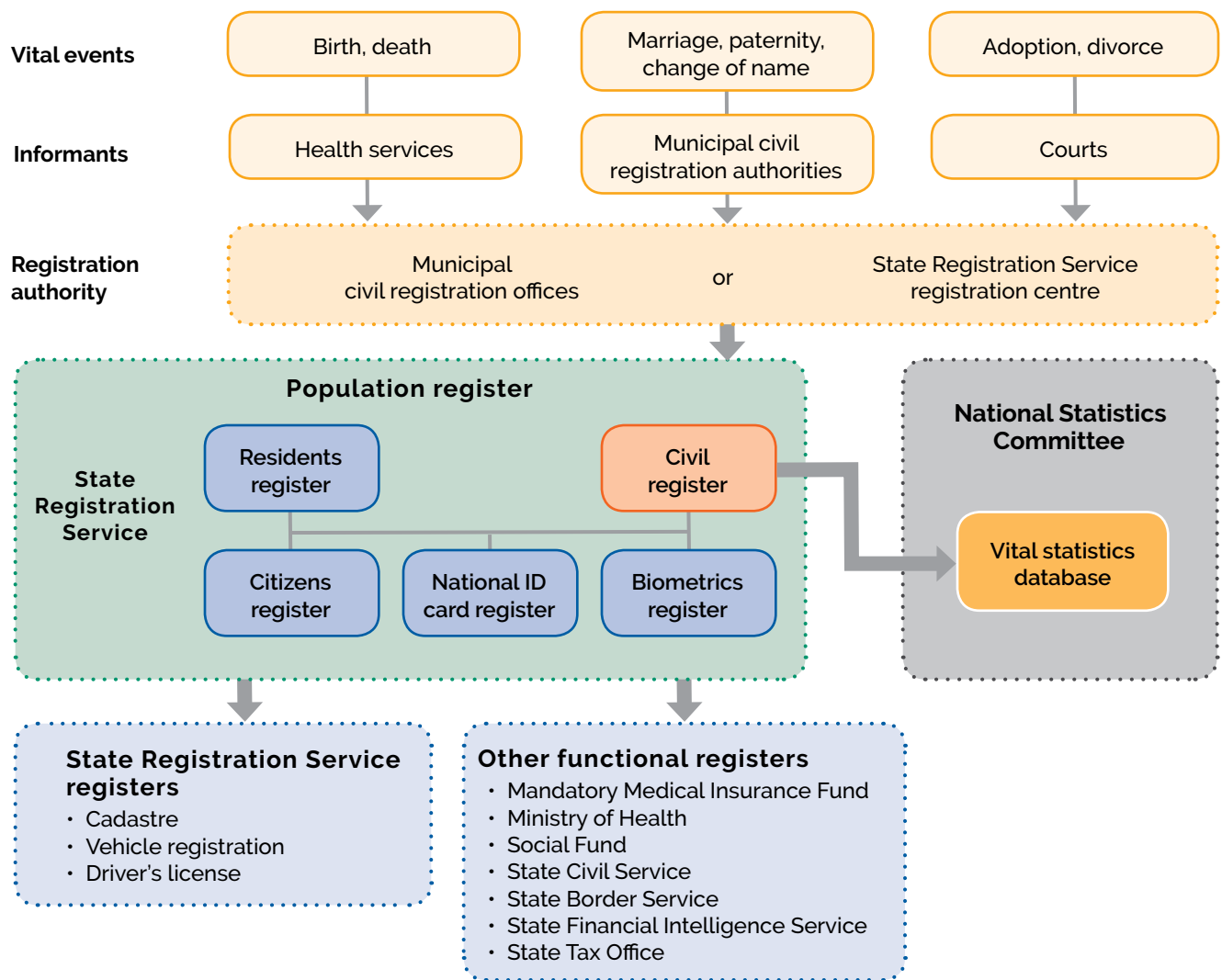

Figure 3.1: Overview of Kyrgyzstan's civil registration, vital statistics, and identity system.

Source: Author

Kyrgyzstan's identity system is based on registering vital events through civil registration. Vital events are documented and communicated to civil registration authorities by medical authorities (births and deaths), courts (divorce and adoption), or appointed civil registration authorities (marriage, paternity, and change of name). All vital events are registered digitally and linked using a unique identification number (UIN). The UIN is assigned at birth, stored in the central civil register, and recorded with each newly registered event or issued identification document.

The central civil register is part of a larger information and communications technology (ICT) system comprising different databases that store identity information. All of a person's registered vital events are linked by UIN (citizenship, address of residence, national ID cards, international travel document information, and biometric data). This ICT system, branded as the Unified Population Register (UPR), is one of four distinct ICT platforms operated by the SRS.

National ID cards and travel documents are issued upon request based on current identity information in the population register. The population register also compiles personal information that is communicated to the National Statistics Committee and used to generate vital statistics information. Identity data stored in the population register is also used by other government services such as cadastre, vehicle registration, and driver's licenses. Operated by the SRS, these systems use current identity information from the population register in their interactions with the public. Other government organizations with systems that require up-to-date population identity information can sign a memorandum of understanding to obtain access to identity data required for service delivery.

Summary of good practices

Digitizing civil registration and identity management has strengthened Kyrgyzstan's traditional holistic approach to civil registration, vital statistics, and identity management. Digitizing civil registration business processes and linking a person's registered vital events by UIN gives authorities a direct overview of all registered events that relate to personal identity. Digitization also prevents duplicate registrations of vital events and provides authorities with a range of instruments to mitigate the risk of fraud. For citizens, a paper registration certificate is no longer the only way to prove that a vital event has been registered.

Resident citizens who request a national identity card or travel document cannot add identity data to the document unless it has been updated in the population register. Any new identity information that should be reflected on an identification document must be first registered as vital event.

Identity management authorities and other government service providers can now access information electronically directly from the population register, which limits the risk of fraud by falsified or fabricated paper certificates.

As new identity data is entered into the civil register, it is automatically forwarded to other services that require this information. For instance, death registration triggers the removal of the deceased from the voter list, terminates their pension payments, etc.

3.1 Introduction

General information

Country name	Kyrgyzstan
Surface	199,900 km²
Geographic location	Central Asia; bordered by Kazakhstan to the north, China to the east and south, Tajikistan to the south and west, and Uzbekistan to the west.
Total population	6.202 million (World Bank 2017)
Share of urban population	37.4 %
Official language	Kyrgyz and Russian
Civil registration and civil identification agency	State Registration Service under the Government of the Kyrgyz Republic
Birth registration rate	98.9%[1] (boys 99.5%, girls 98.4%)[2]
Death registration rate	Not available
Identification coverage	Not available

Table 3.1: Kyrgyzstan country information.

Kyrgyzstan is a mountainous, landlocked country in Central Asia with a population of approximately 6.2 million. Bishkek, the capital and largest city (population 850,000) is in the north close to the Kazakhstan border. The other major population centres of Osh and Jalalabad are located in the south, where the majority of the population live, and where there are plentiful valleys and plains with more plowable land available for agriculture.

Figure 3.2: Kyrgyzstan geographical map.

Disclaimer: The boundaries used on this map do not imply official endorsement or acceptance by the United Nations.

In addition to close economic and social relations with its neighbours, Kyrgyzstan has strong historical links to Russia as a constituent part of the former Soviet Union. Previously, it was part of the Russian Empire. These links have strongly influenced the contemporary legal system, state institutions, administrative policies, procedures, and governance.

Kyrgyzstan has a long tradition of registering vital events that dates to the period when the country was part of the Soviet Union. Over time, a comprehensive administrative and legal framework was developed to ensure timely registration of vital events in line with UN standards and recommended practices. At present, registration rates are slightly below universal coverage.

Identification documents, such as internal passports and international travel documents, are remnants of administrative traditions used during the Soviet period. Aside from serving as identification, the Soviet internal passport also served as permit to reside in a specific local community and was used as an instrument to control migrations within the Soviet Union. The issuance of internal passport was subject to the individual presenting a certificate issued by civil registration authorities as principal evidence of identity.

Civil registration processes in Kyrgyzstan have remained largely unchanged until 2009, when legislative and institutional changes took place. However, the practice of using an identification document as a residence permit was abolished and the internal passport has evolved into a national identity card that serves as identification and proof of identity. Freedom of movement is guaranteed under the constitution. The state still requires people to register their address of residence, but this information is now used for planning and service delivery.

KEY DATES

1877 Oldest civil status recorded (kept in the Archive of Civil Status Registration Acts).

1924 Civil status registered. Internal passports issued by the Soviet Union local executive committees.

June 16, 1992
Authority over civil registration transferred to the Ministry of Justice in accordance with the Kyrgyz Republic Presidential Decree, "About Measures on Improvement of Activity of Bodies and Institutions of Justice of the Republic of Kyrgyzstan."

November 17, 2009
SRS established by Resolution No. 708 of the Government of the Kyrgyz Republic.

August 2014 – July 2015
Introduction of digitized registration of vital events in line with the Law of the Kyrgyz Republic, "On the registration of the biometrics data of citizens of the Kyrgyz Republic," from July 14, 2014. SRS completes country-wide registration of biometrics of all Kyrgyz citizens over age 16 to compile initial data for the population register.

August 1, 2016
Civil registration offices are authorized to assign a personal UIN to Kyrgyz citizens, resident noncitizens, and stateless persons.

Figure 3.3: A timeline of civil registration and identification.

3.2 Legal and institutional arrangements

Legal framework

Kyrgyzstan's existing legal framework provides clear, comprehensive guidance for registering vital events and issuing identity credentials.

The registration of vital events is regulated by the *Law on Acts of Civil Status*,[3] the Rules on Procedures for Civil Status Acts Registration, Codecs on Children, and the Family Code of the Kyrgyz Republic.[4]

Identity management and issuance of identification credentials is regulated by:

- Status of National Passports of the Citizens of the Kyrgyz Republic;[5]
- Decree on National Passports of the Citizens of the Kyrgyz Republic;[6]
- On the Approval of the Instructions on the Procedure for Receiving Documents, Registration, Fabrication (personification), Accounting, Issuance, and Destruction of an Identification Card Passport of a Citizen of the Kyrgyz Republic of 2017 format (ID-card), and a Common Citizen's Passport 2006 Kyrgyz Citizen;[7] and
- *Law on Internal Migration*.[8]

Privacy and data protection are regulated by the *Law of the Kyrgyz Republic on Personal Information*.

Institutional arrangements

Until 2009, civil registration and identification followed institutional arrangements inherited from Soviet times. Civil registration fell under the authority of the Ministry of Justice, while address registration and issuance of the internal passports and national ID cards remained the responsibility of the Ministry of the Interior. In November 2009, the Kyrgyz government issued a decree that marked the turning point for institutional arrangements for civil registration and identification. Resolution No. 708 mandated the creation of the State Registration Service (SRS) as a new agency responsible for

- registering civil status acts and place of residence;
- issuing national ID cards and travel documents;
- registering real estate rights and maintaining the land cadastre;
- registering vehicles and driver licensing; and
- maintaining the population records in the State Archive.

Since the establishment of the SRS, the Department of Population and Civil Status has been strategically working towards tightening integration and digitizing different registration processes.

3.3 Civil register

In Kyrgyzstan, the basic characteristics of an individual's identity have traditionally been registered by civil registration authorities as part of the ongoing process of registering vital events.

Until 2014, the civil registration system was entirely manual and paper-based, with registrations for each type of vital event recorded in a dedicated registration book across 60 civil registration offices and 519 local government authorities. A second copy of each completed registration was transferred to the central civil register archive in the capital of Bishkek, and a third copy transferred to the central statistics authority to process vital statistics.

In keeping with the *Law on Acts of Civil Status*, responsible registration authorities are mandated to register birth, marriage, divorce, change of name, parenthood, adoption, and death. The system can also accommodate corrections, which means that in some cases, registration dates and other data can be modified.

Birth registration is initiated upon receipt of notification from the health authorities that a birth has taken place. The information communicated by the health authorities also contains basic information on the identity of the person giving birth. The health authorities also provide such notification in instances when the birth has taken place at home. A parent coming to register the birth of their child identifies themselves with a valid identification document (for example, national ID card). Registration officials must ensure that the identity information on the provided identity documents match the identity information recorded on the notification from health authorities.

Only then can the act of registration of birth be produced. One copy of the registration act is kept at the local branch of the Department, while a second copy is transferred to the state archive of birth registration acts. Once the registration is complete, authorities issue a birth certificate that recipients may use once they are eligible to obtain other ID documents.

When registering other types of vital information, particularly those that update a person's identity information, such as marriage, divorce, or name change, authorities verify the applicant's identity using identification documents, such as the internal passport.

A birth certificate that is issued by civil registration authorities is legally defined as the principal proof of identity information. Registration certificates continue to be required as a person's identity information changes throughout their lifetime. While other documents such as an identity card or passport can also be used as proof of identity, the identity information copied on these documents must be identical to the civil register. In the event of a discrepancy between the information on the document and the information stored in the civil register, the information in the civil register legally prevails.

As civil registration records began to offer up-to-date identity information, other public administration systems that processed personal information also needed to reflect new layers of identity information as registered. Information from the civil register became essential to certify changes in identity information in other registers that used a paper-based identity management system.

Good practice: Providing proof of up-to-date identity information

> Generally, a vital event certificate is first required when a person requests a national ID card at the age of 16. In this case, a person's identity credentials must mirror the information on the birth certificate.
>
> People must provide a marriage certificate in order to update the marital status on their national ID card.
>
> To change or update their first or last name, applicants must provide a certificate from the civil register before these changes can be applied to their ID card.
>
> The process of issuing travel documents involves a similar approach.

Kyrgyzstan's identity system extends to a range of functional registers operated by relevant agencies to cater for delivery of specific service or to ensure access to guaranteed rights. The Social Fund beneficiaries register has traditionally been the most comprehensive single database; it was digitized well before the civil registration system. The voter register has been also been continuously updated as one of the largest databases of personal information of the adult population. Large databases of personal information were also found in the education and health sectors, in cadastre, tax authorities, and registers of vehicles and issued drivers' licenses.

In order to operate with up-to-date and legal identity information, many of these registers depended on civil registration certificates as legally valid documentary evidence. Enrollment of the non-adult population in the education system, health services, and social support schemes for families with children depends upon the presentation of a birth certificate.

For enrollment in the functional registers storing the adult population's information, a national ID card was used as the main source of identity information. Under this analogue system, changes in the characteristics of a person's identity, in most cases, were further propagated to functional registers after they were reflected in a re-issued national ID card.

In many instances, certain rights and services could only be accessed upon presenting a relevant certificate from the civil status registration book.

Good practice: Requiring presentation of relevant documents from the civil register

> Kyrgyzstan's State Registration Service Department of Cadastre and Registration of Rights to Real Estate requires that marriage certificates reflect ownership rights over specific real estate.
>
> Inheritance rights over the property of a deceased owner are determined based on certified information about immediate family members in the civil register.
>
> Families must present proof of death registration to remove the name of a deceased beneficiary from specific services. This procedure helps properly compile voter lists, operate social protection schemes, and manage pension funds or taxation services.

Digitizing the civil registration system

Early on, Kyrgyzstan decided that establishing a centralized civil register would be fundamental to creating a unified population register. As a result, the civil register was the first system to be digitized and has been operating digitally since 2014.

To complete the process of digitization, 58 civil registration offices across the country were computerized and connected to a central civil register database. Digital connection to the civil register database was also extended to include 24 Kyrgyz diplomatic missions, 363 information kiosks at post offices, and 11 local authorities. Separate digital databases were created within the central digital civil register to mirror the practice of keeping information on registered vital events in dedicated vital events registration books. Registration records are updated sequentially. Digitizing the civil registration system allowed all newly registered civil registration acts (or records) to be linked using UIN and aggregated within a single database, giving the State Registration Service (SRS) oversight over the registration of civil status acts in all local civil registration offices.

Assigning a unique identification number at birth

A unique identification number (UIN) is key to operating a digitized civil register. UIN links all of a person's registered vital events, allowing the generation of up-to-date identity information. It further allows authorities to identify how specific characteristics of a person's identity have changed over a specific period. A UIN also ensures that a person's vital events can only be registered once.

The SRS was legally appointed as the authority responsible for issuing personal UINs. Since August 1, 2016, civil registration offices are also authorized to assign UINs to Kyrgyz citizens, resident non-citizens, and stateless persons. The UIN is automatically assigned when a birth is registered. The same UIN is linked to all subsequent vital events recorded under that person's name.

For people born before 2016, the SRS creates a UIN using the sectoral unique identification number assigned by the Social Fund, which previously operated as the largest functional digitized register of beneficiaries in the country.

When registering vital events, registrars benefit from a broader range of information stored in the UPR, such as personal information about parents who are registering their child. When people register a change of name or a marriage, registrars can verify their national ID cards through the National ID cards database. For citizens, a digitized system allows registered information to be easily retrieved, allowing new and duplicate certificates to be issued at any civil registration office.

Good practice: Digitizing the civil registration system

> Digitizing civil registration and identity management has strengthened Kyrgyzstan's traditional holistic approach to civil registration, vital statistics, and identity management. Digitizing civil registration business processes and linking a person's registered vital events through a UIN gives authorities direct information on all registered events that define the characteristics of one's identity.

Vital statistics

Civil registration in Kyrgyzstan has traditionally been a source of data for the production of vital statistics. Aside from registering information about a person's identity, the birth and death registration process generates medical statistics data on a designated form. This form is not the part of the vital event registration record. Rather, it is completed using information forwarded by medical authorities on the medical certificate and subsequently transferred to the National Statistics Committee to process vital statistics.

Digitization has made data sharing with the National Statistics Committee more efficient. The National Statistics Committee also benefits from a wider range of information available in the population register, particularly demographics and population movements. Up-to-date vital statistics data are also available on the National Statistics Committee's website.[9]

The SRS is working with health authorities to establish a process to digitize medical certificates and communications with civil registration authorities. Currently, these certificates are completed manually and transmitted on paper. The SRS has identified this as a bottleneck in the process of drawing up registration records, and more importantly, in compiling vital statistics records for subsequent processing by the National Statistics Committee.

3.4 Unified population register

Combining registration authorities within one agency created the basis for streamlining business processes to make operating the State Registration Service (SRS) more cost-effective. Since each registration service under the SRS authority uses personal data, the system needed to include measures to eliminate discrepancies in identity information across all services. The Unified Population Register (UPR) was designed to link the digitized civil registration system with the digitized systems used to issue national ID cards and travel documents.

This approach also ensures that all of a person's legal identity information and personal information required for identification can be easily retrieved and shared with other registers within the SRS authority. In a regulated environment, this information can be shared with functional registers operated by public authorities or commercial entities. In addition to complementing existing civil registration and civil identification data, the population register integrates the residents and citizenship registers, which provide information on address of residence and citizenship.

Although the SRS identified digitizing registration services as a strategic goal early on, implementation only intensified after 2014. Digitizing registration services involved establishing a unified population register (UPR) system designed to combine independently developed digitized systems to record civil registration, register address of residence, and issue ID cards and travel documents. The SRS also introduced a digitized citizenship register and implemented a system to capture and store digitized biometric information.

These digitized systems were modelled and built around traditional paper-based business processes. They use a system of digitized databases to mirror the traditional processes of recording vital events in registration books and national ID card/travel documents in application archive registers.

The registration process follows the procedures defined in the legislation and do not differ dramatically from the paper-based system. The similarities with the legacy paper-based system end at the point of entering registered data in the digitized system. The way registered information is stored in the system and shared with other databases within and outside of the unified population register shares almost no similarities with the legacy system. For the visual presentation of the system (Figure 3.4), it is useful to present each register in the unified population register as a separate database. However, in the physical world, each of these registers is implemented as software applications or databases hosted on one server or data centre, or distributed across several servers or data centres.

CIVIL REGISTER
- **Vital life events**
- **Legal identity**

Name, surname, patronymic, date of birth, sex, marital status, date of death, **UIN of mother, UIN of father**

Personal UIN

NATIONAL ID CARD
- **Identity data** (copied from the civil register)
- **Address of place of residence** (copied from residents register)
- **Issuance date**
- **ID serial number**

Personal UIN

Personal UIN
- **Identity data** (copied from national identity database and civil register)
- **Address of place of residence**

RESIDENTS register

Personal UIN
- **Identity data** (copied from national identity database and civil register)
- **Citizenship status**

CITIZENS register

Personal UIN
- **Identity data** (copied from national identity database and civil register)
- **Fingerprint data**
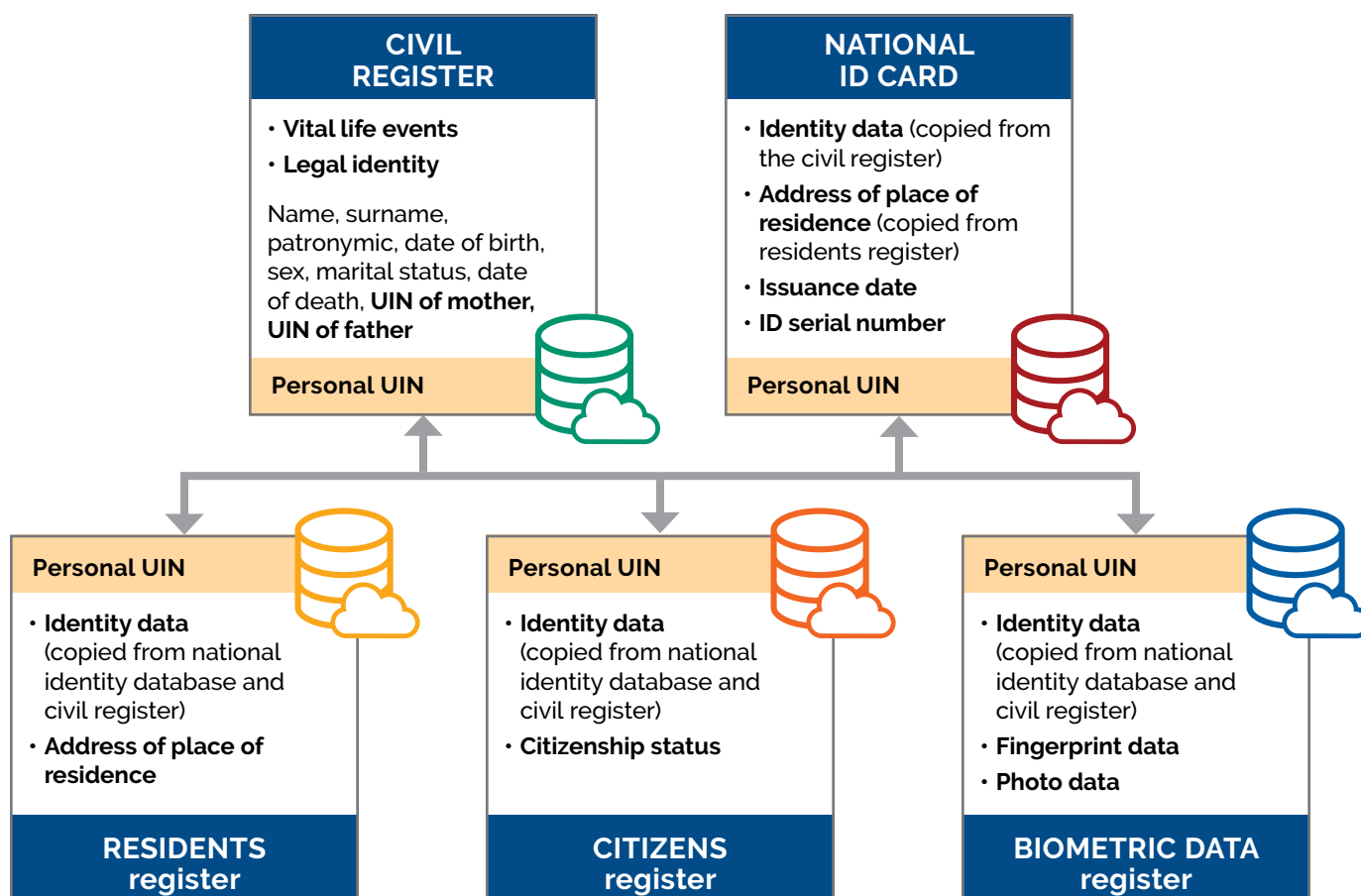- **Photo data**

BIOMETRIC DATA register

Figure 3.4: Schematic representation of a unified population register.

A key component to digitizing registration records and operating the UPR was legalizing the requirement to use a UIN in all databases that store personal information operated by all levels of government. Introducing the UIN using the principle "one person – one UIN" allowed for specific personal information to be dynamically linked across all registers/databases.

In addition to the five digitized systems built around traditional registers, the UPR also relies on two newly established databases:

◉ **Personal biometric database** stores current biometric personal data collected during initial enrollment and when national ID cards are reissued. It provides biometric verification services to other systems.

◉ **Address registe**r catalogues legally approved cities, towns, local communities, street names, and assigned building numbers. The address register is permanently updated and used when assigning a permanent or temporary address of residence in the resident register.

Finally, the UPR benefits from a payment gateway application that allows cashless payments of registration fees. Although these systems formally have the role of auxiliary databases, they are fairly elaborate digitized systems that provide critical information to other systems.

The UPR is fully operational, and all newly completed registration records are entered digitally. The UPR provides regulated online access to current information on a person's legal identity, identification information (photo or fingerprints), and documents issued to that person.

Although the register is designed to retrieve personal data to support the application/registration request in the civil registration database, not all records are available in digital format. To complete the digitization of civil registration records, the SRS continues to digitize historical civil records, focusing primarily on death registration. Further, birth certificates continue to be digitized as people apply for national ID cards or travel documents.

While the UPR integrates data collected by all services under the SRS authority, the information available to each service is strictly limited. Each service can register and update only the type of personal information for which it is legally authorized, as outlined in the table below.

Civil register	Name, family name, patronymic, sex, date of birth, marriage status
Citizenship	Citizenship status
Residents	Address of place of residence
National ID card	Information on issued ID document
Travel documents	Information on issued travel document
Biometric data	Personal biometric information

Table 3.2: Information contained in the unified population register.

Further, the UPR is designed to ensure that each service can access and view only specific types of personal data that are legally required to complete the registration process. The civil registration system can access specific personal data stored in other databases. When registering vital life events, civil registration authorities can view

◉ citizenship status from the citizens database;

◉ information on issued national ID from the identity documents database;

◉ information on parents' national ID from the ID documents database for birth registration; and

◉ information on registered address of residence from the residents' register.

While the civil registration process benefits from direct access to specific types of personal information in the population register, information contained in the civil register database also supports other services by providing access to up-to-date personal information.

Components of the UNIFIED POPULATION Register (UPR)	· Registers and provides information to other UPR components	· Requires information from other UPR components
CIVIL register	· **Vital life events** · **Legal identity data**	· Citizenship · National ID card · Residents · Address register
CITIZENSHIP register	· Citizenship status	· **Civil register** · National ID card
RESIDENTS register	· Temporary residence · Permanent residence	· **Civil register** · Citizenship · Address register
NATIONAL ID CARDS register	· National identity data	· **Civil register** · Citizenship register · Address register · Residents register
TRAVEL DOCUMENTS register	· Travel document data	· **Civil register** · Citizenship register · Address register · Residents register
BIOMETRIC DATA register	· Biometric data · Legal identity data	· National ID card register · Residents register · Address register

Table 3.3: Civil registration as a source of data for other subsystems of the unified population register.

Citizenship conferral process

A digitized system supporting the process of citizenship conferral is designed to retrieve legal identity data from the civil register to determine whether a person meets citizenship requirements. In the event that a citizenship certificate must be produced, the citizenship information system will print the certificate while automatically confirming legal identity data from the civil register.

Registering address of residence

A digitized information system that supports registering addresses as place of residence draws on the latest legal identity information from the civil register to locate the applicant's most recent personal data, assign an address, and update the record in the database.

National ID cards

The digitized system that issues national ID cards automatically assigns personal identity information retrieved from the civil registration system. Applicants' national ID card only includes the information that is automatically generated from the civil register. To obtain an ID card using different identity information, the information must first be registered in the civil register as a vital event. The national ID card information system will not issue a card if the civil register includes a death registration for that person.

Travel documents

The process for obtaining travel documents mirrors the approach used to issue and reissue national ID cards. As many travel documents are issued to children or minors, the travel documents issuance system can automatically retrieve parents' ID data for verification purposes.

Initiating the Unified Population Register

The most important aspect of the establishment of a Unified Population Register (UPR) is the transformation from paper-based to digital data processing. When the decision to develop the UPR was made, few services were using digital data, and in these cases, the information had been only partly digitized.

Although the digitization of the civil register was identified as a critical component of the UPR, creating digital copies of civil registration archives meant transferring approximately 15 million archived civil registration records. Another challenge was ensuring that all of a person's civil records were identified and linked using a UIN. Waiting until paper-based records were completely digitized would have been costly and would dramatically delay the UPR's implementation.

A turning point in determining the optimum approach to digitizing and implementing the UPR came with the decision to transfer voter registration from the Central Election Commission to the SRS. For many years, the Kyrgyz electoral process suffered from a lack of trust in the accuracy of voter lists. Voter lists were traditionally created by local authorities based on the registered resident records and aggregated in a central database operated by the election authorities. The lack of trust in voter list accuracy was manifested in widespread allegations of inaccuracies and the inclusion of the deceased on voter lists. This was compounded by a lack of trust in the authentication of voters' identities at polling stations.

After lengthy public consultations, the SRS was determined to be the best option to compile voter lists, given that it maintains records on identity and address information for all voters. By Presidential decree, the SRS was given authority to produce voter lists and create conditions for biometric authentication of voters at the polling station.

Once the law on biometric data collection was adopted, the SRS began a country-wide biometric rollout that included transferring identity data from the legacy ID card into a digitized database, coupled with a photo and ten fingerprint biometric data. At the end of the process, more than 3,155,000 citizens had been enrolled in biometric registration and introduced in the Voter List Management Information System. Everyone over the age of 18 who had enrolled their biometric data was included on the voter list. The system was successfully implemented in the Parliamentary elections of 2015 and has received broad trust and endorsement from politicians and the general public.

The successful compilation of the voter list gave the SRS a further boost and increased public support to create the UPR. At the same time, the digital data collected as part of the biometric rollout became a basic repository of digital personal information around which other systems are digitized.

In practical terms, this approach has several important consequences:

◉ When people request new ID card, they must present a relevant set of civil registration certificates. If the information is not available in the digital civil register, registration certificates are scanned and stored digitally. When a person reapplies for an ID or travel document, they do not need to resubmit the certificate, as the scanned version is already available. Also, all vital events registered after 2015 are available electronically in the system and do not require submission of a paper certificate.

◉ As part of the ongoing process to digitize civil status acts, the SRS digitized all death registration records since 2009. As such, any attempt to obtain an ID, travel documents, or other services using the identity of a deceased person will be blocked by the system. This is particularly important for services where biometric authentication is not enabled. In the case of ID and travel documents, this provides added security for the issuance of a first ID card or travel document, as subsequent documents will require biometric verification.

◉ As part of the ongoing process to issue a new generation of ID cards, all submitted birth certificates have been scanned. As the entire population will receive new generation ID cards, almost all birth certificates of the adult population will be digitized. Over time, the volume of civil registration records remaining to be digitized will decrease and will be limited to people born before 2015 who are not yet old enough to apply for a mandatory ID document. Nevertheless, as the volume of data to be digitized shrinks, the SRS may choose to clear the backlog by designing dedicated digitization projects.

Digitizing civil registration and linking registered information through the UPR with other parts of the identity management systems provides a range of improvements for civil registration. Prior to digitization, there was no way to check for duplications of a person's vital events. By introducing a digitized system and a UIN, the system automatically prevents the duplication of records. Furthermore, digitizing historical records will identify whether any such attempts have been made in the past.

3.5 Sharing information with other functional registers

The Unified Population Register's (UPR) main purpose is to unify all legal identity information including information that can be used to identify persons claiming a specific identity. Another important function of the UPR is to share this information with other sectoral functional registers that form part of the broader identity system and are maintained by either public institutions or commercial service providers.

In addition to civil registration and civil identification, the State Registration Service (SRS) is legally responsible for some key functional registers in the country, such as cadastre, voter register, driver's license register, and motor vehicle register. Digitized systems supporting these functional registers are part of a larger ICT platform operated by the SRS, with each of these systems linked to the UPR and able to access up-to-date legal identity information, including other types of personal information kept in the UPR.

Kyrgyzstan's voter registration system relies exclusively on data from the UPR. Using identity information from the national ID cards register and address information from the residents' register, the SRS has developed an application that can extract and print voter lists directly from the UPR in line with the predetermined geographical boundaries of polling stations. The application also verifies voter identity information against information in the civil register and prevents names of the deceased from being added to the voter lists. The voter register system also generates a digital copy of the voter lists with corresponding voters' biometric data. This information is uploaded on computers that are delivered to designated polling stations and used for biometric authentication of voters on election day.

The information subsystem used to issue driver's licenses benefits from direct access to personal information stored in the national ID register. Eligible people who apply for a driver's license need only to present their national ID and sign an application that is prefilled with identity and other data from the population and driver's license registers. The same approach was also implemented for motor vehicle registration.

SRS has implemented an elaborate ICT platform to share data between ICT subsystems that support specific SRS services. To accommodate the data needs of other functional registers operated by other public authorities or commercial entities, the SRS developed a digital platform that allows ICT systems of other government institutions to access information in specific SRS databases.

The SRS also concluded a memorandum of understanding with a number of government institutions to allow access to specific types of information within a regulated environment. This allows institutions to instantly verify documents provided by people who enroll for specific services. Institutions can also access the UPR to verify that the identity information in their registers corresponds with the most current legal identity information, or to obtain information on deceased individuals who should be removed from their functional register. Table 3.4 highlights the importance of accessing up-to-date legal identity information from the civil register.

In addition to the institutions listed, the Ministry of Internal Affairs and the State Committee for National Security also have access to identity information in the civil register database.

Public authority	Granted access (upon request) to SRS databases
Mandatory Medical Insurance Fund	**Civil register**, national ID register, and biometric data database
Ministry of Health	Residents register, **civil register**, national ID register
Social Fund	Residents register, citizenship, **civil register**, national ID register
State Border Service	Travel documents register, **civil register**, national ID, residents register
State Civil Service	Residents register, citizenship, **civil register**, national ID
State Financial Intelligence Service	Biometric data database, **civil register**, national ID, register of resident non-citizens, residents register, motor vehicles register, driver's licenses register
State Tax Service	Citizenship database, real estate register, **civil register**, national ID, residents register, motor vehicles register

Table 3.4: Civil registration as a source of data for broader identity management infrastructure.

Good practice: Sharing data with other registers to establish a state-wide electronic interoperability layer

In 2016, Kyrgyzstan introduced a state-wide electronic interoperability layer, allowing digital data to be shared among ICT platforms. The interoperability layer is built around the X-Road platform, an open source data exchange layer solution that allows organizations to exchange information over the Internet. X-Road provides a standardized, secure way to produce and consume services and ensures confidentiality, integrity, and interoperability between data exchange parties. The X-Road platform in Kyrgyzstan, Tunduk, was named after the X-shaped roof structure of the yurt, a traditional house built by ancient Kyrgyz tribes. The interoperability platform is operated by the State Enterprise Electronic Interaction Center under the State Committee of Information Technologies and Communications of Kyrgyzstan.

In addition to its own digital platform for data sharing, the SRS uses the Tunduk platform to allow access to civil registration and other data in the UPR for the following agencies:

- Mandatory Medical Insurance Fund;
- Ministry of Foreign Affairs;
- Ministry of Health;
- Ministry of Internal Affairs;
- Social Fund;
- State Border Service;
- State Committee for Information Technology and Communications;
- State Committee of National Security;
- State Commission for Religious Affairs;
- State Customs Service;
- State Financial Intelligence Service;
- State Personnel Service; and
- State Tax Service.

The National Statistical Committee also uses Tunduk to access civil registration data and collect vital statistics information. While most agencies access information upon request, changes in legal identity information in the civil and national ID registers are shared daily with the Social Fund and State Tax Service.

Access to Suinchu social service

Leveraging Tunduk's digital platform, the State Registration Service (SRS) is taking the lead in developing electronic services that link different public and commercial entities to facilitate access to specific social services. One such initiative is Suinchu, a term describing a gift given to mark the birth of a child. This service aims to support the Ministry of Labour and Social Development in distributing financial grants of 4,000 SOM (US$57) to all families with a newborn child.

Traditionally, citizens were required to collect a range of paper certificates to prove their eligibility when applying for financial grants. The SRS will now allow parents to complete an electronic grant application when they complete a birth registration. This electronic application will be automatically pre-filled with legal identity data for the newborn obtained from the civil register, and parents' identity data retrieved from the national ID database.

As part of the application process, parents will be invited to select the commercial bank where the grant will be transferred to a specific account created in their name. The application is then transferred via Tunduk to the Ministry of Labour and Social Development, where it is processed, and the grant is authorized. Acting on this electronic application, the selected bank creates an account to which the Ministry of Labour and Social Development will transfer the funds.

The SRS has developed relationships with commercial banks, microcredit institutions, and notaries that are granted access to the UPR to verify their customers' identity. The banks are generally interested in changes to personal identity data to pre-empt fraud attempts. The SRS plans to expand access to notaries or microfinancing banks to help them verify a person's identity for loan applications. Verification relies on establishing whether the ID a person provides reflects the identity data contained in the population register. Usually, this type of verification only requires confirming that the data presented matches the data in the population register, rather than full disclosure of identity data.

3.6 Benefits of strengthening the role of civil registration in identity management systems

The Kyrgyz experience shows the mutual benefits of a holistic approach to CRVS and identity management. It also proves that digitizing the two systems and having them work collaboratively results in significant benefits, such as the ability to introduce a wider range of automated checks and balances in the identity management system. It also provides registration authorities with complete oversight over the registration process, allowing them to intercept or prevent attempts to introduce false information in any part of the identity system, whether through multiple registrations or fabricated certificates.

Preserving system integrity

With paper-based registration systems, a person could register the same vital event more than once, with no preventative measures other than the threat of legal sanctions. As a person's vital events were registered, they were scattered across different books, often in different locations. There was no way to confirm the person's most up-to-date identity information. Since it was difficult for civil registration authorities to confirm the latest identity information, it was even more difficult (and sometimes impossible) for other government functional systems to determine whether a person enrolling in services was presenting a certificate for the most recent registered vital event.

Although various security features were introduced, certificate documents eventually became less reliable and prone to fabrication and falsification. In Kyrgyzstan, this resulted in a growing number of child marriages that were legalized using falsified civil registration certificates. There was no systemic way to crosscheck civil registration records or prevent multiple marriages.

Digitizing registration processes and aggregating data in the UPR established built-in safeguards that link individual vital events records and national ID records and help mitigate all risks.

Transforming data sharing processes

Under the previous paper-based Legacy system, identity information was shared on paper certificates. When a person requested a national ID or enrolled in a functional register to gain access to certain services, the individual was required to visit the location where identity information was registered, obtain the certificate, and then deliver it to the requesting authority. Digitization transformed this approach entirely.

Good practice: Using digital identity records to certify identity information

> Except where specific vital events registration books have not been digitized, citizens no longer need paper certificates to request a national ID or to enroll for specific services. When a person presents an ID and UIN, their current civil registration data is instantly available.

The progress that Kyrgyzstan has achieved by digitizing its registration system and allowing access to external systems for various functional registers has allowed officials to track precisely how different information is being used across different parts of the broader identity management system. Monitoring data sharing between different systems reveals the importance of civil registration to identity management systems. Kyrgyzstan's identity management system has grown to become a large data sharing platform, with 14,989,013 requests processed in 2018. At the same time, the civil register is the third most frequently cited data source, which demonstrates the importance of civil registration in operating an entire identity management system.

Digital database	Number of requests
Residents register	5,466,600
National ID register	2,909,116
Civil register	**2,034,741**
Motor vehicles and drivers' licenses	1,492,572
Resident non-citizens register	1,102,044

Table 3.5: Top five State Registration Service digital databases as per number of processed requests.

The civil register plays a vital role to the wider identity management system, given that both the national ID register and the residents register seek to reflect the most current identity information possible. National ID cards are mandatory for

people aged 16 years and older. However, since national ID cards are issued upon request, there is generally a delay between the registration of new vital events and the request for new national ID with updated identity data. In fact, other users of the UPR will often request an updated identity card, as the system will alert them that there has been a change in identity information. Table 3.6 illustrates how frequently these changes can occur, using data on the number of vital events registered in 2016 and 2017. Events such as marriage, divorce (which leads to a name change), and name changes would generally trigger the need to obtain a new national ID.

While statistical information is not available, many functional registers require marriage and family relationship information that is available only from the civil register, such as the Social Fund, tax authorities, and cadastre.

Number	Type of registration	2016	2017
1	Birth	159,584	155,036
2	**Marriage**	**48,936**	**43,325**
3	**Divorce**	**9,098**	**9,594**
4	Paternity	29,341	26,858
4	Adoption	1,025	980
6	**Name change**	**37,206**	**33,430**
7	Death	33,547	33,143
	Total	**318,737**	**302,366**

Table 3.6: Number of registered vital events.

Financial considerations

The setting up of the UPR was almost completely financed through allocated budget resources. The Kyrgyzstan government provided financing for a US$4.8 million biometric enrollment process to allow the initial digitization of citizens' identity data.[10] External agencies, including the South Korean Development Agency, the Japanese government, and UNDP provided additional funding to set up a biometric voter registration system to begin issuing new biometric ID cards. Since the UPR was established, all system upgrades and historical record digitization have been completed using existing allocated budgetary resources.

While the system has become increasingly efficient, there are also significant savings for citizens. Communicating personal information is now accomplished by automatically matching data in the electronic system, whereas in the past, it was transferred in person by paper certificate. This reduces travel costs to the registration office and the cost of taking time off from regular work. These costs, multiplied by the number of requests processed in the system, may provide an indicative perspective of aggregated savings to citizens.

USAID and the Estonian Foreign Ministry contributed US$560,325 to create the data exchange layer on which the e-governance in Kyrgyzstan is built, and to provide training to civil servants and IT specialists. Some estimates indicate that introducing Tunduk will result in savings of up to $300 million per year[11] in the national budget.

Conclusion

Reforms to the Kyrgyz identity ecosystem demonstrate that with strong political commitment and government funding, traditional paper-based identity systems can be transformed into highly integrated digitized systems within several years. The results of this transformation have quickly materialized into a range of benefits for many government services and have contributed to an overall increase in public governance efficiency.

The political commitment for this initiative stemmed from the realization by key political stakeholders that digitization and reforms of the country's identity system would solve some of the burning political and governance issues.

Implementing the UPR in conjunction with biometric registration helped mitigate the lack of public trust in the accuracy of voter lists and relax the country's political landscape. Since the population register was established and successfully trialled during the 2015 parliamentary elections, its value has been further recognized. It has also been linked to a wide range of other government functional systems that benefit from access to up-to-date identity data. As a result, these functional systems no longer need to run expensive operations to ensure that their beneficiaries' identity data is always current.

Reforms to civil registration and identity management systems were designed knowing that the value of the information in the population register and the overall system depends on the system's ability to provide reliable, up-to-date identity and place of residence information. Maintaining a rate of high vital event registration, digitizing vital events records, and digitally aligning this information with the identity management system within the population register all contributed to keeping identity data current.

Kyrgyzstan's experience with introducing a digitized population register shows that setting up population registration requires interim and creative solutions. The initial data in the population register was collected in less than a year through mass enrollment of biometric personal information. This enrollment also allowed authorities to digitize all identity information in the population register, as a one-time only exercise. From that point onwards, identity information can updated by registering new identity information as a vital event in the civil register.

Having a reliable source of identity data has made it easier to introduce a digital interoperability data layer between government ICT systems. It has also provided a significant boost to the overall digitization of Kyrgyzstan's governance system. ●

Endnotes

1   UNICEF 2018. **https://mics-surveys-prod.s3.amazonaws.com/MICS6/Europe%20and%20Central%20 Asia/Kyrgyzstan/2018/Snapshots/English.pdf**

2   Kyrgyz Republic Multiple Indicator Cluster Survey 2018. **stat.kg/media/files/c50def33-f18c-44d3-aecb-1f45786034dd.pdf**

3   *Law on Acts of Civil Status*. **cbd.minjust.gov.kg/act/view/ru-ru/1655**

4   Rules on Procedures for Civil Status Acts Registration, Codecs on Children and the Family Code of the Kyrgyz Republic. **cbd.minjust.gov.kg/act/view/ru-ru/1327**

5   Regulation on the Passport of a Citizen of the Kyrgyz Republic of 2004. **cbd.minjust.gov.kg/act/view/ru-ru/55628/10?cl=ru-ru**

6   Regulation on National Passports of Citizens of the Kyrgyz Republic. **cbd.minjust.gov.kg/act/view/ru-ru/99891**

7   On the Approval of the Instructions on the Procedure for Receiving Documents, Registration, Fabrication (personification), Accounting, Issuance, and Destruction of an ID Card Passport of a Citizen of the Kyrgyz Republic of 2017 format (ID-card), and Common Citizen's Passport 2006. Kyrgyz Citizen. **grs.gov.kg/ru/eid/regulations/444-ob-utvierzhdienii-instruktsii-o-poriadkie-priiema/**

8   *Law on Internal Migration*. **cbd.minjust.gov.kg/act/view/ru-ru/350/10?cl=ru-ru**

9   Population Statistics. National Statistical Committee of the Kyrgyz Republic. **stat.kg/en/statistics/naselenie/**

10 Security Document World. 2014. "Kyrgyzstan to register citizens' biometrics – paves the way for ePassports." **securitydocumentworld.com/article-details/i/11643/**

11 Kyrgyzstan Newsline. 2018. "Tunduk system to save up to $300 million of budget money annually." **https://newslinekg.com/article/757610/**