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e-Government for Better Civil Services: How the Korean Government Implemented the e-Registration System

KDI SCHOOL
KDI School of Public Policy and Management

PROJECT DATA

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Introduction

Over recent decades, governments throughout the world have increasingly attempted to leverage technological advances in information and communications technology (ICT) to provide more efficient services to their citizens (Yoon 2015). These "e-government"[1] initiatives are designed to streamline services and make them more responsive, among other objectives, and have occurred not only in developed and high-income nations, but also in developing countries.

With the advent of e-government, national identification systems have become more prominent as the basis for effective delivery of civil services.[2] The European states, for example, have not only periodically reformed and updated their domestic identification systems, but also they are currently seeking to introduce e-IDs for all EU residents (Eurosmart 2008). The US and Japan are also trying to introduce

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1   http://www.egov4dev.org/index.shtml.
2   Civil services are a collection of a wide range of services by governments to civilians directly. These are provided through a single access point across all levels of government through an online portal, Minwon 24. Instead of physically visiting multiple government agencies and bringing various supporting documents with them, Minwon 24 offers citizens the possibility to access 51 percent percent of public services online. By having this system, the government is able to provide online services, reduce government spending on civil services through online provision of registers and other documents, reduce workload for public officials, and improved quality of physical services through multi-service desks. https://www.oecd.org/governance/observatory-public-sector-innovation/innovations/page/minwon24.htm.

similar electronic ID cards to efficiently provide essential civil services (Yoon 2015). For less developed countries, not having a solid National ID system is a binding constraint in the development context. The difficulty of targeting public services to beneficiaries without proper ID has been documented, especially in rural areas of lower-income countries (World Bank & WHO 2014). For example, in the Dominican Republic, only three percent of the highest income quintile was unregistered at birth, compared with 40 percent of the lowest quintile (World Bank 2007). Unregistered individuals in the Dominican Republic faced problems later in life; for example, unregistered children were barred from post-primary education, creating an intergenerational cycle of exclusion (Gelb and Clark 2013).

Following this trend, South Korea has recognized the importance of e-government to global competitiveness (UNPAN 2015), and has been striving to use these tools to improve the efficiency of civil service delivery. This case study will examine one example of this: the establishment of the electronic residence registration system (e-RRS) as one of the national information systems over the past several decades. This effort ultimately allowed the state to move toward a more efficient provision of services using a single identification number—the residence registration number—to access a range of government public services, including obtaining a birth certificate, national health insurance, tax claims, pension, paying fines car tax, military service registration, and welfare compensation through accessing integrated government websites.

Due to the constant threat of war with North Korea following the Korean war in 1950, civil services in South Korea had an initial and heavy focus on security issues and control of territory and population, rather than efficient customer-friendly service delivery; later on, this system would act as a booster for infrastructure and economic development programs. The Residence Registration Law is an example of this, as it was instituted to control and monitor the mobility of the population nationwide.

Meanwhile, President Park recognized the value of computer systems for efficient administration and launched the First Government Computerization Plan in 1978. Although this plan was implemented in a limited scale, it was continued until 1982. After this first plan, the Administration made the Second Government Computerization Plan from 1983 to 1986, further expanding the scope of computerization. Hence, in the late 80s, the South Korean government was somewhat ready in terms of digital literacy and mindset, enabling the

recognition that efficient and citizen-friendly civil services based on ICT is crucial for sustainable development.

The National e-Government Development Program was launched to construct an e-RRS from 1992 to early 2000s. However, for the first decade of the program, the e-RRS was used by each organization separately due to the lack of inter-organizational coordination for information sharing. For this reason, it had minimal impact on provision of civil services, despite its goal of ensuring more efficient service provision and reducing the number of administrative processes and the quantity of paperwork necessary for citizens to access civil services and retrieve personal data ranging from passport renewal and birth certificates to change of address forms.

As a result, the Public Information Sharing Act was enacted in 2004, and the Public Information Sharing Center was established in 2005, with a vision of promoting the coordination of information sharing among the ministries. To ensure information sharing, the Public Information Sharing Committee was instituted under the Prime Minister's Office, and the Prime Minister and a private sector member were appointed as the co-presidents of the committee.

The activities of the newly launched committee and the center established enhanced the level of information sharing, leading to higher efficiency in the provision of civil services and proving that a system for information sharing was critical in providing efficient civil services by using e-RRS. Now over 4,000 government administrative services, including online processing of 400 different categories of complaints and publicly accessible information for 20 different ministries and government departments, are provided online at Minwon24[3] (www.minwon.go.kr), is a one stop government website that provides government administrative service requests and documents on-line.

Development Challenge: Streamlining Public Services

Overview of the Evolution of RRS in Korea

Based on the Resident Registration Act (RRA) enacted in 1962, the RRS is a national ID system that monitors

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3   Minwon literally means 'a service citizen requested' in Korean.

and manages residence information. A National ID is called a "Resident ID" in Korea. The system is called the *resident registration system* because the system is based on a resident's address where the local government is in charge. This act requires each citizen to register his/her personal information and provides a unique ID number that cannot be changed. Under this act, each household is obligated to register with the local administration and provide moving-in data when it moves to a new house (Articles 2, 6 and 10, RRA).

This RRS was initially used to control and monitor the mobility of the citizens, and used to manage the civil defense force to prepare for escalating tensions between the two Koreas. Due to these security concerns, collecting personal data was prioritized over privacy issues (Yoon 2015). In this way, the RRS served the administrative purpose of identifying and keeping track of community populations and migratory trends, and then used the information to decide on necessary administrative actions.

To meet this administrative purpose, the system was initially designed as a distributed-information system, where local governments collect and manage raw information from its residents. Each local government transferred summarized resident information to another local or provincial government or the central government for the use of various civil services that requires inter-organizational information sharing. Tracking the location of a citizen was considered important, as the civil services for the citizens were provided through local government offices at that time (to some extent, this arrangement has been retained to the present day). It is noteworthy that China, Japan, and Vietnam have similar national ID systems. For example, the Japanese government runs a national ID system, but until recently it provided different ID numbers for different services (Yoon 2015).

The RRS evolved over time to improve public services (see Table 1). The third amendment of the RRA in 1975 lowered the age requirement for the residence registration card (RRC) to 17 years and introduced reinforced penalties for failure to get and carry RRCs. The amendment also introduced a whole new design for RRCs and switched the 12-digit RRNs to 13-digit ones. The amendment in the 2000s reflected the development of e-RRS. In 2001, when the e-RRS was finally opened, a new provision was made to allow a copy of the resident registration certificate to be printed automatically on certain printers. Since 2004, resident registration information can be viewed through the e-RRS system from all levels of government.

Table 1: Major Changes of the Korean RRS During 1962–2004		
Date	**Legal ground**	**Description**
May 10, 1962 (effective as of June 25, 1962)	Statute No. 1067	• New RRA enacted. • Citizen/provincial resident registration systems still retained.
RRA amended (3), July 25, 1975 (effective as of August 26, 1975)	Statute No. 2777	• RRC age requirement lowered to 17 years. • New RRC design introduced. • 13-digit RRNs introduced.
RRA amended (12), January 26, 2001 (effective as of April 27, 2001)	Statute No. 6385	• New legal grounds for assigning RRNs established. • New legal grounds for issuing copies of resident registers via automatic document printers established. • Online RRS reference system developed (on eight items of resident registration information, accessible from 23 central government departments, provinces, cities and districts nationwide).
RRA amended (13), March 22, 2004 (effective as of March 22, 2004)	Statute No. 7201	• Legal grounds for Electronic Resident Registration Information Backup System established. • Copies of resident registers now available for view and issuance at *eup* (village), *myeon* (town), and *dong* (township) offices. • Legal grounds for resident registration-related reports and requests filed online established. • Legal grounds for electronic verification of RRCs established.

Source: Public Service Handbook (2014).

Construction of e-RRS for Efficient Civil Services

Recognizing that government efficiency is a key global competitive advantage, the Korean government set a policy objective in 1986 to provide people and government officials an efficient and convenient one-stop access to online civil services by constructing the national information system (NIA 2005).

In particular, the first stage of the "National Basic Network Digitalization Project" was launched in 1987, and the program was continued as the second stage of the "National Computer Network Infrastructure Program" from 1992 to 1996. Using the US National Information Infrastructure policy as a model, the Korean government launched a number of important projects to construct a national information system. As one of the subprograms of the National Computer Network Programs, e-RRS was regarded as a basic information system where databases of different ministries and the local government could share information and provide efficient civil services.

However, developing the e-RRS to streamline civil services was not easy, as the original paper-based residence registration system was developed in a regionally distributed information system, where each local government collected and managed the information and kept it in storage at the local government level. For this reason, local governments claimed that they had the ownership of the residence registration database and they resisted sharing that with the central government or other local governments, when the central government suggested digitizing the resident information as one national database.

As a result, the central government had to accept to recognize the local governments' ownership of the database to initiate the construction of the e-RRS, leading to the start of construction as a pilot project at the local government level. Following pilot projects in three local governments in Seoul, Gyeonggi-do was selected as a provincial government for the pilot project (NIA 1992).

In 1994, copies and abstracts of resident registration certificates became issuable anywhere in the country regardless of a resident's location, and the e-RRS enabled registration of the resident by only reporting the moving-in address, which enabled provision of all the basic services, such as education, healthcare, and welfare. However, since data from all local governments were transmitted through local and provincial governments' information systems, copies or abstracts of resident

Type of Training & Education	2001	2002	2003	2004	2005
Table 2: Training and Education Provided for IT Literacy					
Offline	10,026	8,695	6,527	6,246	6,256
Online	456	1,383	1,803	2,403	3,592

Source: Public Information Sharing Steering Committee (2007).

registration indicating the new residence could be issued three days after reporting the moving-in address, because the local governments had to go through its own administrative processes in completely updating the move-in data of the individuals (Yoon 2015).

To back up resident registration information and support efficient management, computerized resident registration information centers were established based on article 28, and article 46 in the Resident Registration Act. To enhance IT literacy and capacity to use the e-government systems, many training and education programs were provided to central and local officials, as well as high-level and low-level government officials. The training and education were provided in both offline and online versions (see Table 2). Moreover, the Ministry of Home Affairs appointed 21 provincial and local governments as mentors for other provincial and local governments.

During an interview, Dr. Jong-Tae Kima recalled that when resident registration certificate issue centers were established in 1997, the local governments gave up maintaining the RRS on their own sites, realizing that maintaining the e-RRS at the local government level was expected to cost more than maintenance at either the provincial level or national level when upgrading to a new technology.

Delivery Challenges

By the late 1990s, the system was complete, and was expected to provide efficient civil services. The civil service focused on reducing the additional documents requested to check the citizen's identification and complementary information, as e-RRS enabled interlinkages to other ministries' databases.

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3   Interview with Dr. Jong-Tae Kim. Dr. Kim is a vice CEO of the Solideo Systems, an IT outsourcing company in Korea, operating the local government information system that was contracted out by the Korean government. He was involved in various government IT projects.

Table 3: Reasons for Limited Public Information Sharing					
Reasons for limited provision of information	Noncooperation between departments	DB standardization problem	Legal/institutional constraint	Technical linkage problem	Lack of procedures and guidelines
Ratio	28%	26%	19%	16%	11%

Source: Ministry of Government Administration and Home Affairs (2006c).

In particular, the e-RRS was constructed based on the resident registration number, a unique identifier, and this number enabled linking all the necessary information for providing essential civil services, such as tax reference, medical service, education, and welfare benefits. Therefore, many people believed that the construction of the e-RRS would realize the objectives of e-government, where ministries and government organizations could share necessary information by using the resident's registration number, without requiring citizens to submit the complementary documents.

However, even after investing millions of dollars for constructing the e-RRS, civil services were not provided as efficiently as expected. The government officials reported that they continued providing civil services through traditional paper-based business processes, even after the e-RRS was installed.

A major reason was that each ministry narrowly regulated the range of shared administrative information among the ministries and agencies, so that citizens and government officials did not feel the difference between the existing process of accessing services and the new e-RRS based services (Kim et al. 2007). There was no incentive for the ministries to share information in order to provide civil services. Officials in each ministry went through duplicated processes as the hard copy attachments were still required for the petition, and the citizens had to visit the local government office to get the documents or to receive the documents for processing the services (Hwang et al. 2007).Since the government kept its focus on improving the speed of issuing the government documents instead of changing a process to eliminate the quantity of certificates, such as the certificate of disabled person, the certificate of subjects of educational protection, and the certificate of subjects of educational support, being issued.

A good example of this problem is in the G4C (Government for Citizens) system, based on e-RRS, constructed and opened in 2000, as a core project of Korean e-government projects. The G4C was an Internet-based service platform allowing citizens to request and monitor services through the Web. Since sharing the administrative information of government organizations is essential to reduce required resident registration documents, the G4C at that time also technically enabled all administrative agencies to jointly share and review necessary information, such as resident registration, and family relationship registration.

However, when G4C was opened for several months, there were reports indicating that information was not shared as expected (Hwang et al. 2007). Moreover, the rate of G4C usage continuously trended downward over time (The Electronic Times 2003.7. 28).

The G4C, beginning from the ambitious goal to increase people's benefits, with a hope of creating an electronic government to serve people better, reached a situation where G4C was perceived, from the citizens' perspective, as just a duplicated system. Due to the lack of inter-departmental information sharing, the number of documents that were issued from one agency and submitted to another agency, public institution, or financial institution reached 440 million per year by 2005 (Ministry of Government Administration and Home Affairs 2006).

Moreover, when a survey was conducted by the Ministry of Government Administration and Home Affairs on the reasons for limiting the administrative information sharing, the major reasons were reported to be "the lack of inter-departmental coordination" and "restrictions by legal systems" (see Table 3).

Tracing Implementation: Overcoming the Delivery Challenge through the Public Information Sharing Policy

As addressed in the previous sections, although the South Korean government constructed the e-RRS during the 1990s, the expected benefits of e-RRS were not realized,

Table 4. Number and Types of Paper Certificates Issued Per Year			
Personal certificate	Real estate certificate	Automobile certificate	Other certificate
222 million	190 million	26 million	5 million
Resident registration, seal impression, family register, etc.	Land, certified copy of register, real estate, etc.	Vehicle registration, two-wheeled vehicle reporting	Bid, construction business, business registration, etc.

Source: Public Information Sharing Steering Committee (2005).
Note: 443 million paper certificates were issued in 2004.

because existing rules and practices of administrative processes were not changed.

As a result, starting in 2004, the South Korean government enacted a key policy requiring ministries and government agencies to actually share information when providing the services that required inter-organization information sharing.

For example, many institutions customarily requested the required documents for providing their own services. In particular, the number of paper certificates issued per year by various administrative agencies reached approximately 443 million including the copies and abstracts of resident registration (150 million), certified copies of real estate register (96 million), and certificates of personal seal impression (53 million) in 2004 (see Table 4). Personal ID certificates, such as copies of resident registration, account for 50 percent; real estate related certificates, such as copies of land ledger and certified copies of real estate register, account for 43 percent; automobile related

certificates account for six percent; and other certificates, such as business registration certificates, account for one percent of the certificates issued.

As shown in Figure 1, the survey showed that a total of approximately 67 percent of certificates issued were submitted to government agencies (19.8 percent), public institutions (10 percent), and financial institutions (37.1 percent).

Considering the economic, social, and administrative costs incurred due to the issuance and submission of required documents—fees, time, and administrative costs—abolishing issuance and submission requirements was considered a fundamental solution for delivering efficient civil services. Therefore the reduction of required documents through the public information sharing center was presented as an alternative in Korea.

Setting Up the Public Information Sharing Promotion Committee and Working Group

The Ministry of Government Administration and Home Affairs was in charge of monitoring and managing the use of public and civil information systems. It recognized and reported to the president that limited information sharing among ministries was a key impediment to efficient civil service delivery, even though the e-RRS was set up to link all of the ministries' databases and share information among them. Civil servants were burdened with overlapping workloads due to limited information sharing among the ministries, and with unchanged administrative procedures this continued to be the case even after the construction of the e-RRS (Kim et al. 1997; Yoon 2015). Subsequently, the president announced plans to focus on information sharing among ministries, and the public information sharing policy was designed and implemented.
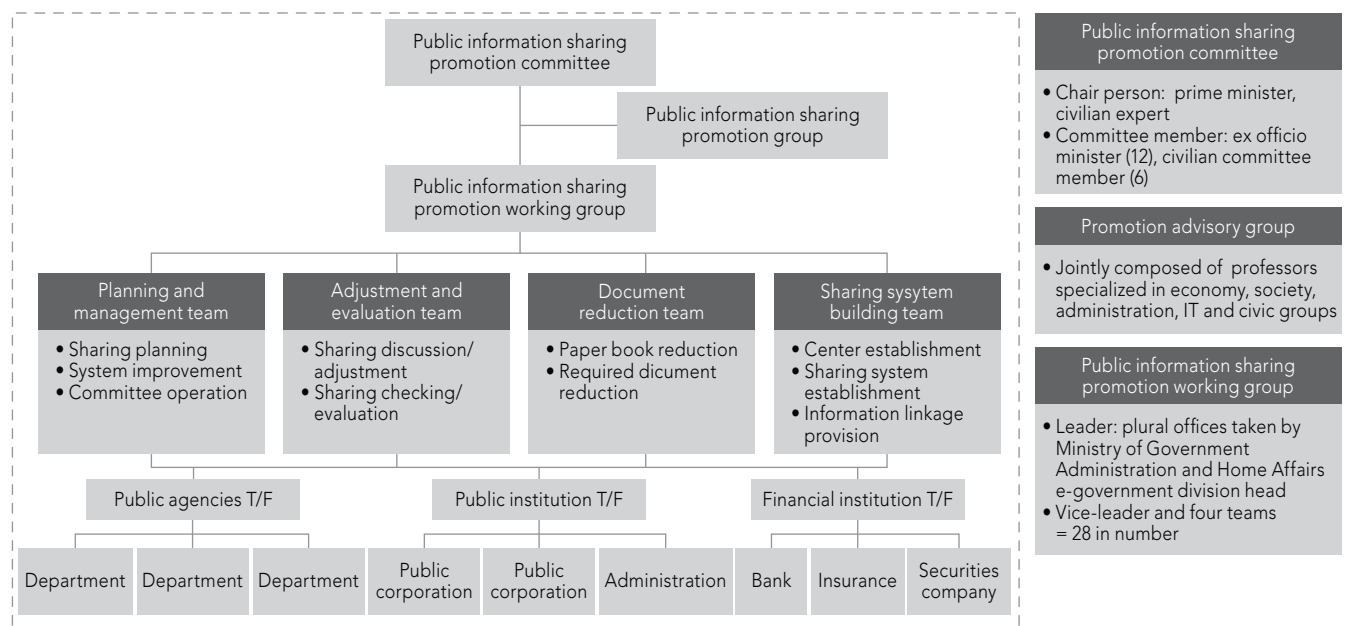
In particular, the Public Information Sharing Promotion Committee (PISPC) was organized under the Prime Minister's Office, and executive organizations—the Public

Figure 1: Shares of Official Documents Issue by Type of Use
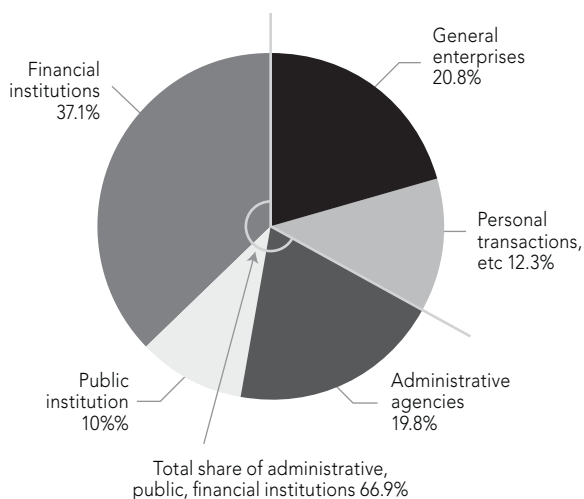
Source: Administrative Information Sharing Promotion committee (2005).

Figure 2: Administrative Information Sharing Promotion Organization Chart

Source: Public Information Sharing Promotion Committee (2005).

Information Sharing Promotion Working Group (PISPWG) and Advisory Group (PISPAG)—were organized under the committee to implement the policy (see Figure 2).

The PISPC consists of 20 members where the Prime Minister and a professor were co-chairmen and 18 members were from both government and private sectors: 12 ministers from the relevant ministries, three professors, and three chairmen of the industry associations. PISPAG consists of 10 advisors, where seven members are from academia and three members from the government-funded research institute and law firms. Finally, the PISPWG consists of 37 government officials from various ministries, agencies, local governments, and relevant experts.

From November 2005 to November 2007, the committee met 17 times to monitor, review and decide the policy to require that ministries share and collaborate in using public information. The working group met 18 times to specifically implement the policy guidelines of the committee.

Amending and Enacting the Relevant Laws and Providing Incentives to Link Civil Services Online

In October 2005, the presidential decree was announced that would allow the PISPC, the PISPWG, and the PISPAG to be established and operate. Having ordered, by way of the decree, the reform and streamlining of all the organizations involved in the new information sharing system, the government enacted new laws and rules in relation to the categories of public information to be shared. Organizations providing and using shared public information were also required to establish specific policies on the terms and conditions of information sharing (Kim et al. 2007).

For example, after the "Civil Petitions Treatment Standard Table" in the Law of Managing Civil Petitions was amended in December 2005, 25 civil documents eliminated complementary attachments that were previously required. Through this amendment, 24 types of required documents, such as the copies of resident registration, would be checked by public officials through the Public Information Sharing System instead of requiring their receipt from the citizens (Ministry of Government Administration and Home Affairs notification no. 2006-39).

In addition, based on the information sharing policy, the PISPC and PISPWG monitored and evaluated compliance of central and local government officials in terms of how they were sharing information and collaborating. For example, from Jauary 2006 to June

2007, the working group visited 125 central and local government offices to monitor information sharing, information security, and misuse of public information (Public Information Sharing Promotion Committee 2005). They gave the monitoring results to the Ministry of Home Affairs so that the information sharing efforts could be reflected in the annual evaluation result that affects the monetary incentive of the civil servants.

Efforts to informatize public services and to share information were included as performance indictors in the government evaluation system during that period. The performance evaluation was carried out by the National Informatization[4] Fostering Committee, under the Prime Minister's Office in Korea (Basic Law of Informatization, Article 9). All central and local governments were evaluated annually for their performance in this area.

Training Central and Local Government Officials

Since the information sharing policy was intended to change the behavior of both government officials and the private sector in providing services based on public information, it was crucial for the committee to provide training sessions for those using the public information system.

The training related to the public information sharing was provided in two tracks. One track was for central government organizations along with public and private organizations that were using public information. The PISPWG provided a nationwide training to around 4,000 people in total in ten sessions in November 2006 (Nan Goong, 2007).

The second training track was for the local and provincial government officials, and focused on the change of business processes based on the changed laws and rules dealing with public information including information
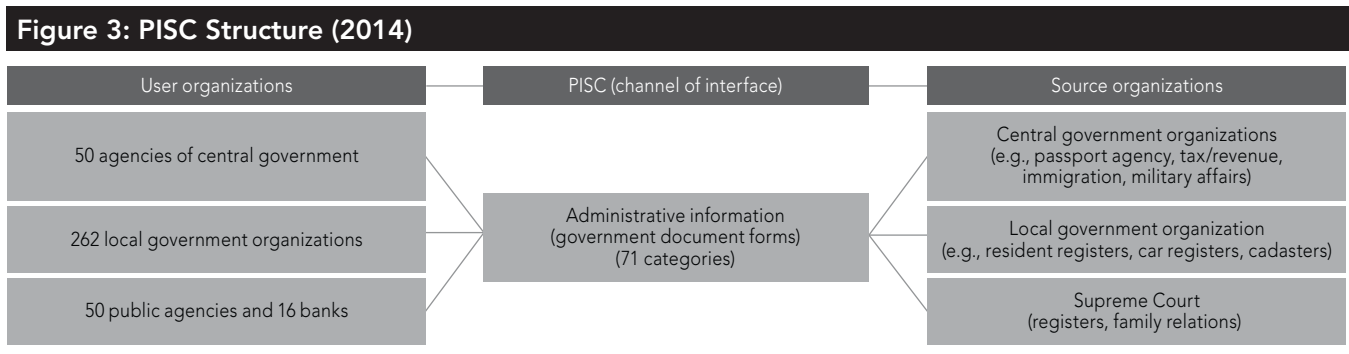
security, collecting, and managing information systems. In particular, due to the law of public information sharing, it was crucial to provide training to local government officials on reviewing the information online to provide civil services and submitting required forms when they need to cross-check the information without complementary attachments (Public Information Sharing Steering Committee 2007).

Establishing the Public Information Sharing Center

The Korean government established the PISC to oversee strategies related to public information sharing and reform related institutions and policies (see Figure 3). Hence, the PISC identified and prioritized the categories of public information to be shared, integrated the information sharing functions of ministries and departments, and launched the Inter-Departmental Public Information Sharing Review Committee to resolve any conflicts among different departments. PISC was also in charge of the practical tasks of interfacing databases and developing new integrative systems (Public Information Sharing Steering Committee 2007).

In order to interface major administrative databases, the government first developed an online sharing system and then had administrative databases incorporated into it phase by phase. The online sharing system first included core categories of information in demand across government organizations for handling their tasks and services. A summary database was thus created, based on the identification and analysis of types of information most in demand. This allowed administrative organizations to

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4   The writer defines Informatization as "information management through digitalization."

Figure 3: PISC Structure (2014)

User organizations	PISC (channel of interface)	Source organizations
50 agencies of central government		Central government organizations (e.g., passport agency, tax/revenue, immigration, military affairs)
262 local government organizations	Administrative information (government document forms) (71 categories)	Local government organization (e.g., resident registers, car registers, cadasters)
50 public agencies and 16 banks		Supreme Court (registers, family relations)

Source: PISC (2014).

begin accessing and sharing the most relevant information on a real-time basis (Public Information Sharing Steering Committee 2007). The system originally included all agencies of the central government, all local governments, 50 public agencies, and 16 banks. It integrated administrative information kept by central administrative organizations, local governments, and the Supreme Court of Korea with PISC, so that government agencies could access and share that information as well (see Figure 3).

Use of e-RRS to Share Public Information for Civil Services

As mentioned earlier, in order to provide efficient and convenient inter-departmental services, the South Korea government required ministries to share information that is necessary for civil services using e-RRS. There are three methods to share information among the ministries in the Korean government.

First, when providing services that rely on from multiple ministries, ministries share information through electronic document interchange (EDI), the most ideal form of information sharing. Thus, the information is linked across the ministries to the e-RRS, and necessary information is directly shared to provide public services.

The second way is registering the items of information that can be shared in advance to link the information through the e-RRS using the public information sharing center, when the information needs to be shared to provide public service. This is intended to protect specific information in each ministry's database, while pursuing the efficiency of providing public service.

Finally, there are methods of sharing information offline such as receiving computerized resident registration information on a USB. This method can involve higher risks than the first two methods, because the USB can be infected or break down so that information cannot be properly provided.

The amount of provision of computerized resident registration data shared between systems directly connected through EDI has been steadily increasing over the last ten years. Specifically, the Ministry of Government Administration and Home Affairs provided other departments approximately 40 million pieces of computerized resident registration data through EDI in 2011, and approximately 58 million pieces of data were provided as such in 2014 (see Table 5). The continuous increases in the use of administrative information through linkages with dedicated systems and registrations for use of administrative information sharing seems to indicate that the benefit of sharing administrative information between ministries is now recognized and spreading.

The major effect of the policy of sharing information is the reduction of hard copy attachment of complementary certificates or identification documents that were previously required. Since the public information sharing policy was implemented, attached documents that had been requested in the past have been reduced dramatically by searching and using information through the interconnected system.

As shown in Table 6, there has been significant reduction in the number of certificates issued for submission and required attached documents. For passport issuance, necessary information such as resident registration, military service details, and driver's license is checked online so that 3.5 million copies of certificates were reduced per year. For social welfare (for instance, to select recipients of national basic livelihood guarantees), data from the Ministry of Government Administration and Home Affairs, National Tax Administration, and four major insurances are linked to share 14 kinds of information related to incomes and properties so that the number of attached documents is reduced by approximately 17 million per year. In the case of four major insurance types (national health insurance, national pension, industrial accident compensation insurance, and employment insurance), 53 kinds of administrative information from 10 institutions are utilized

Table 5: Trend of Electronic Resident Registration Information Sharing				
Year	Total	Linkage with dedicated system (EDI)	Registration for administrative information sharing	Offline (USB)
2014	1,016,145,383	583,076,959	13,432,978	419,635,446
2013	979,760,868	549,517,356	16,468,374	413,775,138
2012	1,130,119,858	580,256,082	13,174,090	536,689,686
2011	1,104,145,997	404,416,227	11,041,266	688,688,504

Source: Internal data of the Ministry of Government Administration and Home Affairs (2015).

Table 6: Examples of Public Information Sharing		
Service category	Effect (numbers of required documents reduced)	Description
Passport issuance	3.5 million copies saved each year, including resident registration copies.	Issuing authorities can view applicants' resident registrations, military records, drivers' licenses and other such forms of information directly online.
Social welfare	17 million copies saved each year, including income and property records.	Authorities involved can view 14 categories of records on income, properties and other such matters kept by MGAHA, NTS, and providers of four mandatory public insurances.
Four mandatory insurances	82 million copies saved each year.	10 public organizations handling four mandatory insurances—National Health Insurance, National Pension, workers' compensation insurance, and Unemployment Insurance—share 53 categories of public information.

Source: Kim, et al. (2007).

so that the number of certificates issued per year is reduced by 82 million (Kim, et al. 2007).

Another example is information sharing between the Ministry of Government Administration and Home Affairs and the Military Manpower Administration to manage civil defense information systems. Before the information sharing policy, the personal information for managing military service was not shared between the Ministry of Government Administration and Home Affairs and the Military Manpower Administration. As a result, in order to match the information between the two ministries, 5,000 additional staff members were needed, and military services—such as notification of civil defense training—was delayed. Additionally there were mismatches with the real residences of male citizens.

When the information was linked between the two database via e-RRS, which allowed the synchronization of the move-in information of a person in Korea, the Military Manpower Administration was able to automatically organize military service details, reduce the number of staff by approximately 5,000, and improve the quality of administrative services (Kim Yeong-Mi, et al. 2007).

Lessons Learned

Strong Political Support for a Robust Coordinating Mechanism is Crucial

Sharing information is always difficult, as many employees or organizations regard it as a first step toward losing control over their areas of responsibility. As a result, there need to be incentives as well as compulsory mechanisms to create willingness to share information.

The Korean Public Information Sharing Promotion Committee, supported by the president, was established in 2005 with a mandate to make different organizations use e-RSS to coordinate among themselves. A special law was enacted in 2005 to provide authority to the committee, and various sub-committees were formed with members from various organizations and experts in various fields. Each sub-committee had a mission to enable public information sharing policy, such as changing laws and procedures, providing training and education, reducing documents, and setting up systems.

Information sharing was monitored and evaluated by a unit in the Prime Minister's Office, making salient the political linkage, and the evaluation results were included in the annual national performance evaluation.

Purposeful Efforts to Overcome Resistance to Change in Procedures are Crucial to Enact Meaningful Change

It is not unusual to see resistance to a new system from users who are not accustomed to the existing rules and procedures. After an ambitious set up of the e-RRS, the Korean government was embarrassed with a fact that ordinary people were not using it to its potential.

The Korean government established the Public Information Sharing Center, which facilitated each ministry in changing existing administrative procedures and rules of doing business by using e-RRS. This center worked as a third party agent for linking the information via e-RRS among ministries and government organizations.

Moreover, all government officials, regardless of the ranking and location, were provided extensive training

and education in the use of e-government systems and information sharing. Both online and offline training were provided, and mentor and mentee relationships were formed to provide intensive training for government organizations.

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