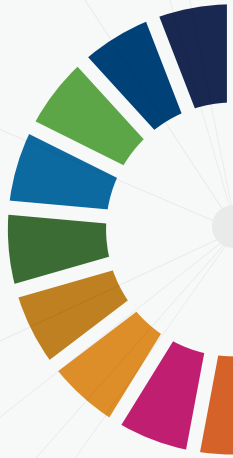


Korea e-Government

Best Practices for Sustainable Development Goals



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Part 01

e-Government Strategies

Intelligent Government Steering Plan

Toward a Wiser, Friendlier e-Government



As part of celebrations surrounding the 50th anniversary of South Korea's first effort toward electronic government, the Ministry of the Interior and Safety (MOIS) has established and announced the Intelligent Government Steering Plan, envisioning the creation of a wiser, friendlier e-Government for all citizens.

The immense reservoirs of public administration data, which the South Korean state has acquired over the last five decades of e-Government endeavors, offer almost infinite potential for AI applications. Through the convergence of AI, digital data and other advanced technologies, the Korean government aspires toward enhancing the rationality and efficiency of public administration and providing tailored and optimized services to the diverse needs of the citizen. The Intelligent Government Steering Plan represents the MOIS's effort for a more profound innovation and transformation of the governmental services in Korea.

e-Government		Intelligent Government
Problems raised by the public or civil servants → Finding solutions	Public administration	Problems automatically identified and solutions proposed by "Digital Brain" → Finding solutions
Led by the government	Policymaking	Led by the public
Centered on simple tasks	Service administration	Capable of solving complex problems
Providing large quantities of governmental services efficiently	Service goal	Ensure participation for the qualified and empathic public services
Diverse services tailored to specific lifecycle stages	Service focus	Detail-oriented services catering to niche needs as well as personal services based on lifecycle
Online and mobile channels	Service delivery	Demand-based multichannels (online and offline)



DIGITAL KOREA, PROUD KOREA

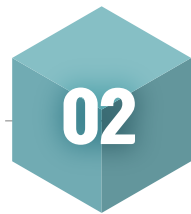
Aim | An Empathic and Trusted Intelligent Government



Provide Warmhearted Services for Unspoken Needs

The goals are to find and solve citizen’s problems and difficulties proactively, and to ensure that the solutions reach to all citizens.

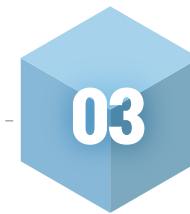
- Trace individual circumstances and service records in the mode of “personal assistants,” while understanding the complaints they register in an intelligent manner to ensure prompt and effective problem-solving.
- Improve the accessibility of all services so that the services could be reached to all groups, including people with reduced mobility and residents of rural areas.



Become a Self-Innovating, Evolving Administration

Redesign the entire administrative processes and realize data-centered, smart administration in which.

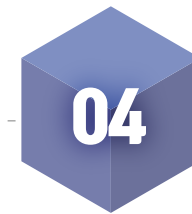
- AI assesses and improves work processes automatically, while Big Data is used to identify optimal policy measures and timelines. It facilitates the establishment and implementation of policies.
- Public opinions, expressed via diverse channels, are analyzed in an intelligent manner to be reflected in policymaking, while a national centralized data management system is established to provide systemic support for scientific policymaking and service development.



Facilitate a Participatory and Transparent Society

Use data to realize a just social ecosystem and platform-based public-private digital partnerships.

- Use Big Data analysis to detect signs of corruption in the public sector and administrative errors in advance, and predict and block tax evasion, abuse of the welfare system, and other violations in the private sector.
- Usher in a new digital ecosystem in which citizens themselves can produce the public services they need, and testbeds are provided for innovative technologies that support the realization of intelligent government.



Create a Proactive Smart Infrastructure

Foster a service environment capable of countering emerging risks and threats and ensuring safe and secure use of public services.

- Create an environment equipped with various intelligent safety and security networks against disasters, illegal activities, etc. where citizens can feel at ease
- Establishing the basis for a self-evolving, AI-based cyber environment to protect intelligent government systems and services against external threats.

Part 01

e-Government Strategies

Data and AI Economy Facilitation Plan

Data and AI Economy Facilitation Plan

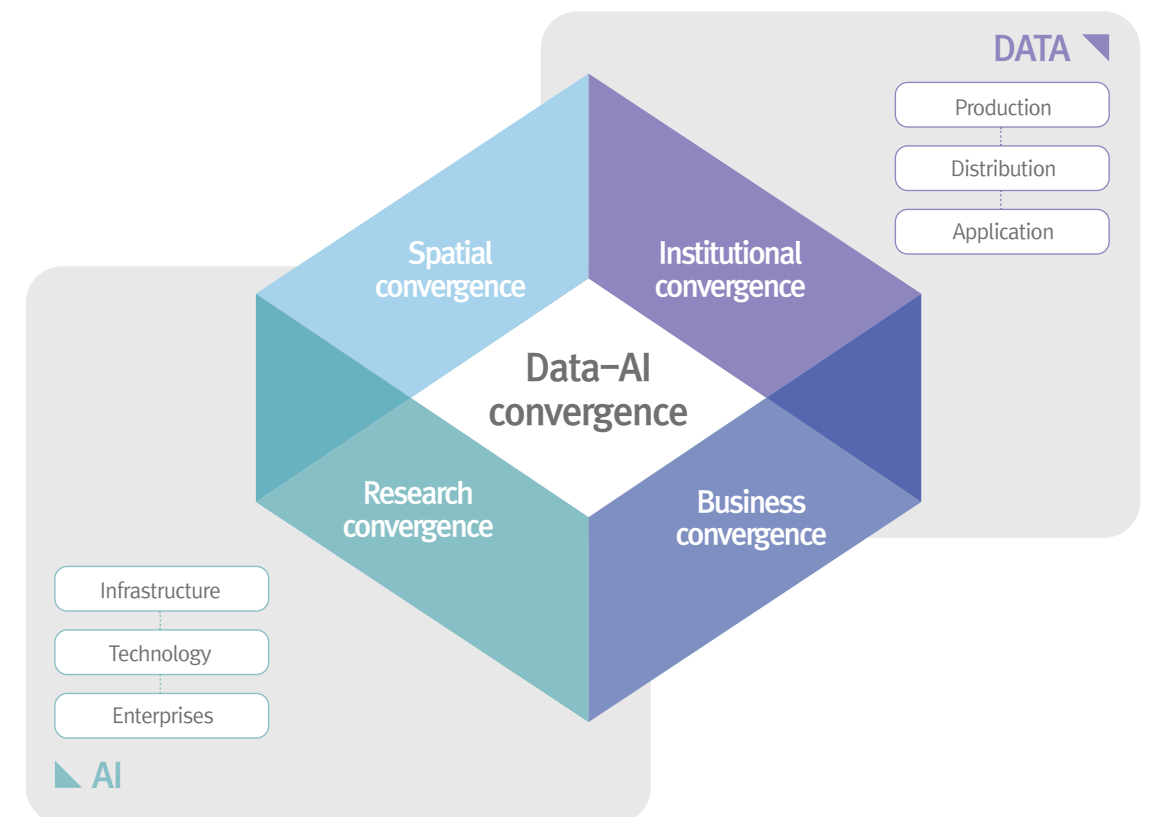
To make South Korea the global leader in secure data and artificial intelligence (AI) technologies, the Korean government announced its Midterm Plan for Fostering Data and AI Industries 2019–2023, also known as the **Data and AI Economy Facilitation Plan**, in January 2019.

VISION | Make South Korea the global leader in secure **Data** and **AI** technologies

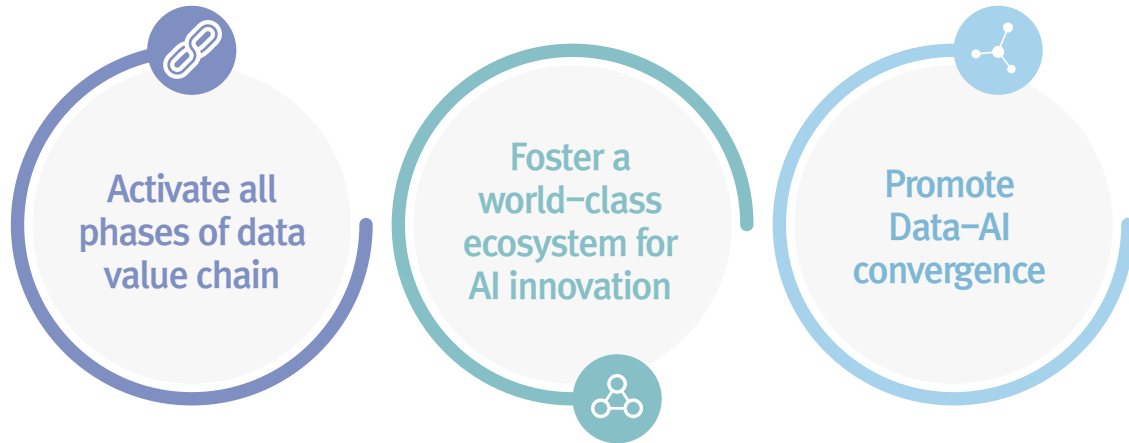
Objective | Establish an advanced Data and AI centered economy in South Korea

- 1 Increase data market value to KRW 30 trillion
- 2 Foster 10 “unicorn” AI enterprises

Strategy |

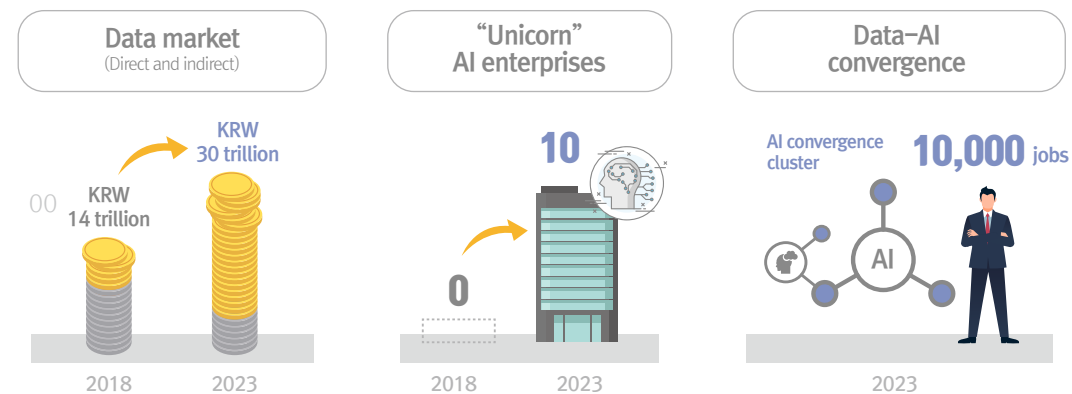


Policy Aims |



- 1 Systematically accumulate and share data
- 2 Create quality infrastructure for data distribution
- 3 Promote the use of data by individuals, businesses, and society
- 4 Establish an AI hub which provides comprehensive support for datasets, algorithms and computing power
- 5 Strengthen AI technology
- 6 Foster an ecosystem for the use of AI
- 7 Develop an AI convergence cluster (spatial convergence)
- 8 Foster social and industrial demand (business convergence)
- 9 Support institutional and research convergence

Data	Activate data production and utilization on a full cycle, including 100 big data centers and 10 big data platforms
AI	Build AI hubs that support algorithms, computing power, datasets, and others that are essential to AI service development
Data-AI convergence promotion	Create a synergistic cluster with data and AI intermingling



Appendix

10 Core e-Government Technologies

: See the Future with Technology

Korean government has identified 10 core technologies crucial to e-Government services for the future wellbeing of citizens.

- 01 Sensible artificial intelligence (AI)**
Sensible AI would analyze given not only text, but also situational context to ascertain causes and effects with greater accuracy. Such AI is needed to identify and design services that truly empathize with people and enhance their quality of life.
- 02 Informal data analysis**
It is important to collect and analyze not only formal but also informal data, from diverse (various, different) devices and channels in real time (text, images, video, etc.) to identify hidden policy needs and develop niche services.
- 03 Responsive Internet of Things (IoT)**
Over and beyond data-collecting sensors, responsive IoT devices would interact with one another in real time to perceive, decide, learn, and counter given situations, also in real time.
- 04 AI ethics**
A set of principles the government must abide by in designing and providing AI-based services for the public.
- 05 Multicloud**
Cloud barriers between the public and private sectors are to be brought down to minimize obstacles to collaboration and foster open work environments that effectively respond to user needs.
- 06 Edge computing**
Decentralized small servers (known as "edges") distribute and process data in real time. Edge computing minimizes the distances over which information travels, thereby facilitating immediate communication between users.
• Because the technology makes use of computing powers inherent to given devices, it is also expected to effectively supplement cloud technology, minimizing overloads generated by the central server and facilitating the processing of sensitive data.
- 07 Extended reality (ER)**
This innovative technology encompassing virtual, augmented, and mixed reality technologies and holograms is expected to enable immersive face-to-face collaboration over the telephone, e-mail, and other such channels.
- 08 Blockchain platforms**
Blockchain platforms are needed to ensure secure and efficient management of data and information, and also provide the basis for advanced e-government services.
- 09 Automatic AI security**
This technology for preemptive security systems will collect, learn, and evaluate data on new external threats on a constant basis (constantly), and detect and simulate potential risk factors to ensure the effectiveness of security programs.
- 10 5G infrastructure**
5G networks will be needed to process, with utmost efficiency, the massive amounts of data that are accumulated for and used in intelligent government services and also support the uninterrupted realization of a variety of immersive content.

Intelligent Service



Smart work environment



Mesh security and infrastructure



An accurate understanding of the latest technologies is key to preparing for the Fourth Industrial Revolution and paving the basis for an intelligent government.

e-Government Legal Framework



e-Government Legal Framework



01 Access to Information

For the Access to Information, Korea has the 'Official Information Disclosure Act' and 'Act on Promotion of the Provision and Use of Public Data', along with a series of special acts for each type of state organization.



Official Information Disclosure Act

The purpose of this Act is to ensure people's rights to know and to secure people's participation in state affairs and the transparency of the operation of state affairs by prescribing matters necessary for people's requests for the disclosure of information kept and controlled by public institutions and the obligations of public institutions to disclose such information. The Act requires disclosure of information, which is classified as information to be disclosed, in advance even without request from a citizen and stipulates that no one shall be put at a disadvantage in terms of his/her status, including disciplinary measures, or be discriminated in work conditions on the grounds of legitimate information disclosure under this Act.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=38898&lang=ENG

Act on Promotion of the Provision and Use of Public Data

This Act forms the legal foundation for efficient data provision to and utilization by the private sector by guaranteeing the citizens to have the priority to utilize public data and imposing on public organizations the duty of data provision. The law prescribes matters regarding formulation of master plans for promoting provision and use of public data, evaluation of status of provision and management of public data, establishment and operation of a public data utilization support center, registration of lists of public data, establishment and organization of a Committee on Mediation of Disputes over Provision of Public Data, and foundation-building for development of new, highly value-added industries using disclosed public data.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=37882&lang=ENG

Other laws and regulations on data disclosure

Besides the above laws, Korea has enacted the 'Act on Special Cases Concerning the Disclosure of Information by Education-related Institutions (2007)' to promote academic studies and research on policies by providing for the duty to disclose information in order to encourage participation in school education and enhance the efficiency and transparency of educational administration. As for other state organizations except the area of the public administration, Korea is actively enforcing policies for data disclosure by establishing the 'Regulation on Disclosure of the National Assembly Information', 'Regulation on Disclosure of Court Information', 'Regulation on Disclosure of the Election Commission Information', and 'Regulation on Disclosure of the Constitutional Court Information'. The Ministry of Foreign Affairs has also established and enforced the 'Regulation on Disclosure of Diplomatic Documents', which prescribes the procedures and methods to release diplomatic documents that have been accumulated for more than 30 years.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=39749&lang=ENG

02 Digital signature and transaction

Korea has laws pertaining to national informatization, such as Digital Signature act and Framework act on electronic documents and transactions.



Digital Signature Act

The purpose of this Act is to establish the basic framework for the system of digital signatures in order to secure the safety and reliability of electronic messages and to promote their use, thereby stimulating the use of electronic records and communications on a national level and advancing social benefit and convenience. According to the law, the government may designate as a licensed certification authority an entity that is deemed to be capable of performing authorized certification work in a secure and reliable manner.

A licensed certification authority issues an authorized certificate to the person who applies for the issuance of an authorized certificate. In such cases, the licensed certification authority verifies the identity of the applicant. The government also adopts necessary measures to deal with the complaints filled or damages suffered by subscribers and users in a prompt and fair manner.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=42625&lang=ENG

Framework Act on Electronic Documents and Transactions

The purpose of this Act is to contribute to the development of the national economy by clarifying the legal relevance of electronic documents and electronic transactions, ensuring the security and reliability of electronic documents and electronic transactions, and creating infrastructure for facilitating the use thereof. As the Act prescribes, the government should formulate and implement policies to protect personal information and trade secrets of electronic transaction users in order to ensure the security and reliability of electronic transactions, and formulate and implement policies to protect the basic rights and interests of consumers relevant to electronic transactions and to ensure consumer credibility on electronic transactions pursuant to related statutes.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=38782&lang=ENG

03 Interoperability

Interoperability promotion in Korea is being carried out with two approaches – one, through interlinking of systems and two, through standardization. Interlinking of systems is defined in the ‘Electronic Government Act’, with in-depth specifications explained in the ‘Guideline for Adoption and Operation of Information Technology Architecture’, ‘Guideline for e-Government Service Interoperability’, and the ‘Act on the Development of Cloud Computing and Protection of Its Users’.

Interoperability promotion through standardization is specified in the ‘Regulation on Efficient Operation of Administrative Affairs’ and the ‘e-Government Standard Framework’.

Interoperability promotion through interlinking of systems

Electronic Government Act

This Act specifies ‘preventing duplicative investment and improving interoperability’ as one of the principles of e-Government (Article 4); requires e-government standardization and ensured interoperability from the developing stage of the e-Government master plan (Article 5); requires introduction and operation of information technology architecture (Article 47); includes interoperability of an information system as an indicator for Technical Evaluations for Securing Interoperability (Article 49); specifies standardization of official electronic documents, administrative codes, and computers and other devices commonly used by administrative agencies (Article 50); and promotes designation and utilization of standardized information resources (services for sharing) (Article 51).

 http://elaw.klri.re.kr/kor_service/lawView.do?hseq=42614&lang=ENG

Guideline for Adoption and Operation of Information Technology Architecture

This Guideline prescribes matters necessary for adoption and operation of information technology architecture in administrative institutions.

The purpose is to secure interoperability and build a foundation for streamlined ICT investment through integrated analysis and systematic management of components of the entire organization, such as work, application, data, technology and security based on the information technology architecture.

 <http://www.law.go.kr/admRullInfoP.do?admRulSeq=2200000023470>

Act on the Development of Cloud Computing and Protection of Its Users

This Act specifies the government’s adoption of cloud computing, which means an information processing system that makes it possible to flexibly use information and communications resources through information and communications network, into government services so the service providers can endeavor to ensure interoperability.

 <http://www.law.go.kr/lsInfoP.do?lsiSeq=169562&efYd=20150928#0000>

Guideline for E-government Service Interoperability – Ministry of the Interior Notification No. 2016-2020

This Guideline defines matters which administrative institutions should abide by in order to secure interoperability of e-Government services, and requires compliance with related standards and removal of non-standard technologies when developing a new website so the service can be provided equally on different web browsers.

 http://www.mois.go.kr/ft/bbs/type001/commonSelectBoard-cle.do?bbsId=BBSMSTR_00000000016&nttId=55354

Interoperability promotion through standardization of systems

Regulation on Efficient Operation of Administrative Affairs

The purpose of this Regulation is to define matters regarding operation of administrative affairs of administrative institutions, facilitating simplification, standardization, scientification and informatization of the administrative affairs ultimately to enhance efficiency of public administration. In particular, it requires administrative institutions to develop standards on the size, exchange and interlinking of information used in the Government Work Management System and the e-Document System and to follow such standards.

 <http://www.law.go.kr/lsInfoP.do?lsiSeq=163382&efYd=20141119#0000>

Government’s Electronic Document Exchange Standard (Ministry of the Interior Notification No. 2014-1)

This Standard defines functions and specifications necessary for safe exchange of documents between e-Document systems used by different organizations in order to stabilize a safe document management framework based on e-Document exchange.

 http://www.mois.go.kr/ft/bbs/type001/commonSelectBoardArticle.do?bbsId=BBSMSTR_00000000016&nttId=44523

E-Government Standard Framework

The E-Government Standard Framework is a development platform that provides the application architecture, basic functions and common components necessary for developing a web-based information system under the aim of upgrading the application software standardization, quality, and reusability.

<http://www.egovframe.go.kr>

Standards for Public Data Disclosure

The government has recently amended a set of common standards for disclosing public data by public organizations in order to facilitate public data use in the private sector.

In addition to the laws and guidelines, the Korean government established in 2011 the Government Integrated Data Center (currently, National Information Resources Service, <http://www.nirs.go.kr/index.jsp>) to physically integrate and manage the information systems of the central administrative institutions, local governments and public institutions, and the national information and communication networks for safe operation, integration, development and security of information resources.

04 Open Data

Korea has the 'Act on Promotion of the Provision and Use of Public Data', 'Official Information Disclosure Act', 'Content Industry Promotion Act' and 'Guidelines for Managing Public Data' for the open government and data.

Act on Promotion of the Provision and Use of Public Data

This Act aims to form the legal foundation for efficient data provision to and utilization by the private sector by guaranteeing the citizens to have the priority to utilize public data and imposing on public organizations the duty of data provision. The law prescribes matters regarding formulation of master plans for promoting provision and use of public data, evaluation of status of provision and management of public data, establishment and operation of a public data utilization support center, registration of lists of public data, establishment and organization of a Committee on Mediation of Disputes over Provision of Public Data, and foundation-building for development of new, highly value-added industries using disclosed public data.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=37882&lang=ENG

Official Information Disclosure Act

The purpose of this Act is to ensure people's rights to know and to secure people's participation in state affairs and the transparency of the operation of state affairs by prescribing matters necessary for people's requests for the disclosure of information kept and controlled by public institutions and the obligations of public institutions to disclose such information. The Act requires disclosure of information, which is classified as information to be disclosed, in advance even without request from a citizen and stipulates that no one shall be put at a disadvantage in terms of his/her status, including disciplinary measures, or be discriminated in work conditions on the grounds of legitimate information disclosure under this Act.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=38898&lang=ENG

Content Industry Promotion Act

This Act contributes to industry promotion based on information provision and utilization by requiring the state, local governments and public institutions to disclose the information they own and allowing content business operators to use such information in producing contents.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=39662&lang=ENG

Guidelines for Managing Public Data

The Guidelines for Managing Public Data, which requires all national organizations including the legislative, judicial and administrative bodies to abide by, provides legal and ethical guidelines for public data generation, collection, processing, operation, registration, management, provision, and post-management.



https://www.privacy.go.kr/inf/gdl/selectBoardArticle.do?nttId=7187&bbsId=BBSMSTR_00000000044&bbsTyCode=BBST01&bbsAttrbCode=BBSA03&authFlag=Y&pageIndex=1&searchCnd=&searchWrd=&replyLc=0&nttSj

05 Privacy and Security

Korea has 'Personal Information Protection Act', which prescribes general matters regarding protection of personal information, along with some acts on special cases in each area - including 'Act on Promotion of Information and Communications Network Utilization and Information Protection, etc.' in the area of information and communications and 'Credit Information Use and Protection Act' in the area of finance - in order to thoroughly protect personal data.

The 'Act on the Management of Presidential Archives' also requires protection of records concerning the private life of individuals, which may incur infringement on the name, body, property and honor of individuals and interested persons if disclosed to the public.

Personal Information Protection Act and its sub-level statutes

Personal Information Protection Act

The Personal Information Protection Act prescribes matters regarding processing of personal information for the purpose of protecting the freedom and rights of individuals, and further realizing the dignity and value of the individuals by protecting privacy from personal data collection, divulgation or misuse. Major contents are the basic principles, methods and procedures of processing personal information such as matters to abide by in each stage of collection, utilization, provision, and destruction of personal information as well as limitation to processing of sensitive information. The law also stipulates the duty of safeguards for safe management of personal information, rights of data subjects and rights to redress for infringement.

The purpose of this Act is to provide for the processing and protection of personal information for the purposes of protecting the freedom and rights of individuals, and further realizing the dignity and value of the individuals.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=35739&lang=ENG

Enforcement Decree of the Personal Information Protection Act

The purpose of this Decree is to prescribe matters delegated by the Personal Information Protection Act and matters necessary for the enforcement thereof.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=45683&lang=ENG

Enforcement Rule of the Personal Information Protection Act

The purpose of this Rule is to prescribe matters delegated by the Personal Information Protection Act and its Enforcement Decree and matters necessary for the enforcement thereof.

Guideline for Personal Information Protection Standards

This Guideline provides for detailed matters regarding the standards of processing personal information, types of personal information infringement, measures for prevention, etc.

Personal Information Safety Standard

This Standard defines the safety standard necessary to manage that the personal information is not lost, stolen, divulged, forged, altered, or damaged.

Notification on Certification of Personal Information Protection Management, etc.

This Notification defines matters necessary for certifying a management framework for personal information protection.

Regulation on Appointment of Self-regulatory Organizations

This Regulation defines matters regarding the appointment of groups or organizations to take self-regulatory measures for personal information protection so as to promote and support autonomous actions for personal information protection.

Notification on Personal Information Impact Assessment

This Notification sets out matters in detail regarding the appointment of assessment organizations and procedures of such impact assessment.

Act on Promotion of Information and Communications Network Utilization and information Protection, etc.

Enacted as the law for protecting personal information in the information and communications sector, this Act prescribes protective measures for each stage of personal information collection, utilization, provision, management, and destruction, along with stipulations on the rights of users.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=38422&lang=ENG

Standard for Technical and Managerial Protective Measures for Personal Information

This Standard provides the minimal standard for technical and managerial protective measures, which should be taken by an information and communications service provider, etc. to ensure safety and security of personal information processing so that the personal information is not lost, stolen, divulged, forged, altered, or damaged.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=35739&lang=ENG

Credit Information Use and Protection Act

With the aim of fostering a sound credit information business, promoting an efficient utilization and systematic management of credit information, and protecting privacy, etc. from the misuse and abuse of credit information properly, this Act defines matters regarding the collection, investigation, processing, distribution, use, management, and owner protection of credit information.



http://elaw.klri.re.kr/kor_service/lawView.do?hseq=42569&lang=ENG

06 Digital Rights

Republic of Korea has many statutes that uphold and protect the right to digital government. These include the Act on the Prohibition of Discrimination against Persons with Disabilities, Remedy against Infringement of Their Rights, etc. and the Electronic Government Act.



Act on the Prohibition of Discrimination against Persons with Disabilities, Remedy against Infringement of Their Rights

The purpose of this Act is to prohibit discrimination on the basis of disability in all aspects of life, and to effectively safeguard the rights and interests of individuals discriminated against on the ground of disability, thus enabling them to fully participate in society and establish their right to equality which will ensure their human dignity and sense of value. The disabled shall be provided necessary means, such as Korean sign language and writing, to ensure that disabled persons may access and use electronic and non-electronic information produced and distributed by such actors, etc. on an equal basis with persons without disabilities.

The State and local governments shall seek necessary support, including the development and distribution of tools to facilitate access to and use of telecommunication networks and telecommunication devices in view of the characteristics of the disabled persons.



<http://www.law.go.kr/LSW/eng/engLsSc.do?menuId=2§ion=lawNm&query=%EC%9E%A5%EC%95%A0%EC%9D%B8%EC%B0%A8%EB%B3%84%EA%B8%88%EC%A7%80+%EB%B0%8F+%EA%B6%8C%EB%A6%AC+%EA%B5%AC%EC%A0%9C+%EB%93%B1%EC%97%90+%EA%B4%80%ED%95%9C+%EB%B2%95%EB%A5%A0&x=0&y=0#liBgcolor3>

Electronic Government Act

The purpose of this Act is to facilitate the efficient realization of electronic government, enhance productivity, transparency and democracy in the public administration, and improve the quality of life of citizens by providing for fundamental principles, procedures, methods of promotion, and other relevant matters for the electronic processing of administrative affairs. According to this law, the Korean government strives to connect and integrate the disparate electronic systems of its administrative organizations and agencies with a view toward providing a comprehensive range of public services in an easily accessible manner.

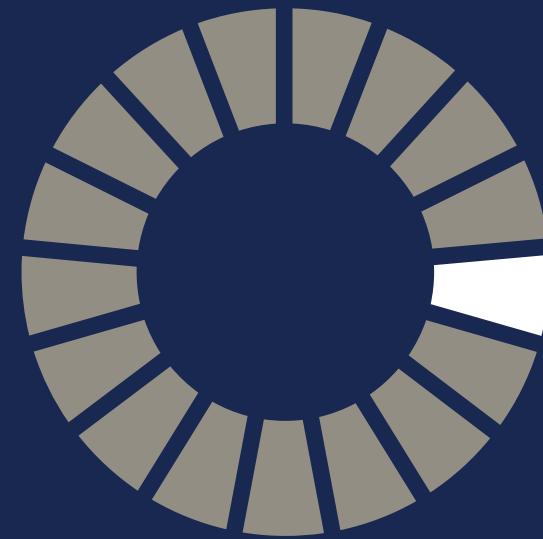
The law also requires civil servants to process their tasks electronically. Moreover, it defines the terms and conditions governing the disclosure of administrative information, research, and development on the realization of e-Government, and the secure and efficient management of various information resources.



<http://www.law.go.kr/LSw.do?menuId=0&p1=&subMenu=1&nwYn=1§ion=&tabNo=&query=%EC%A0%84%EC%9E%90%EC%A0%95%EB%B6%80%EB%B2%95#undefined>

Part 02

Korea's e-Government
Best Practices for SDGs



Digital Divide



Ensuring Universal Access to e-Government Services: Enforcing Web Accessibility Standards

National Information Society Agency (NIA)

Overview

Pursuant to the Framework Act on National Informatization, a statute that is intended to help realize a sustainable knowledge- and information-based society in Korea and promote quality of life for its citizens by defining matters necessary for the development and implementation of policy measures on the public use of digital technologies, **Web accessibility standards have been developed and are now enforced across governmental organizations and the public sector**, ensuring consistency and universality of e-government services for the citizens.

In order to **ensure every Korean has access to e-government websites and foster a user-friendly environment for such services**, the means of information access for those with the disabled, the elderly, and other such disadvantaged groups have been expanded to include information and communication networks, while the scope of subject technologies has also been expanded to include applied software on websites and mobile devices. The Web accessibility standards are now referred to these targets, with **quality assessment, training, and other such programs for troubleshooting and feedback regularly enforced**.

Features and Functions

Providing excellence quality Web services to all Koreans by ensuring the web accessibility

- Under the Act on Prohibition of Discrimination against Persons with Disabilities, Remedy against Infringement of Their Rights, Etc. and the Framework Act on National Informatization, all e-government web services, and mobile devices (along with mobile applications and software) must be designed to ensure universal access and prevent information inequality.

Systematizing Web accessibility assessment criteria and expert evaluation

- 'W3C' accessibility is applied to evaluate the availability of e-government services. Expert evaluation based on the Korean Web Content Accessibility Guidelines is also provided to determine substantial changes and needed improvements. These are measures to enable all citizens to access and use e-government services irrespective of physical and technological ability differences.

Continuing quality assessment and training (15 years+) to raise public awareness and improve quality

- The Web accessibility of national and local government services has been assessed since 2005, with the number of target organizations increasing over time and the Master Plan for Web Standardization of e-Government and Enhancing Disability Access established and applied as part of the criteria for evaluating government services.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

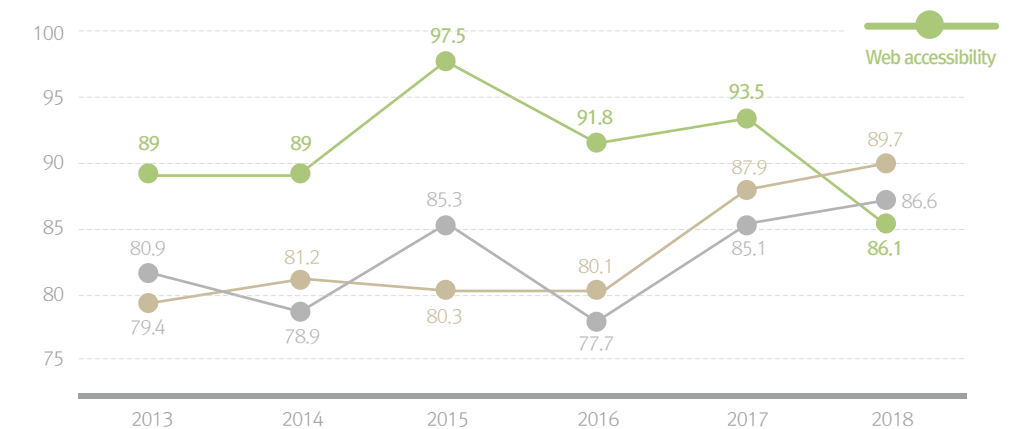
Related Sustainable Development Goals



Achievements and Anticipated Effects

Ensuring compliance with the Web accessibility standards as part of updating e-government and public services, and continuing quality assessment and certification to enhance information access

- A certification program has been introduced, issuing Web accessibility certificates for exemplary websites that comply with Web accessibility standards and ensure universal services for the disabled and the elderly.
- The three nationally-approved agencies issuing Web accessibility certificates are the KOPCO Institute of Web Accessibility Certification and Value (Korea Federation of the Organizations of the Disabled), WebWatch, and the Korea Blind Union (Korea Web Accessibility Certification Center).
- The certification program has increased the percentage of e-government websites qualifying for the certificate to 71 percent of all national government websites, 100 percent of all metropolitan and provincial government websites, and 83 percent of all local government websites.



The number of e-government websites receiving certification continued growing until 2017 thanks to the positive certification method. Switching to the negative method, however, has seen the percentage of certified websites fall since 2018.

Enhancing the quality of Web-based public services by assessing their quality with disability access tools and methods and evaluations by actual persons with disabilities and accessibility experts

- Government and public websites are regularly subjected to the user and expert evaluations
- The disabled (visual or physical) and experts test the websites and provide their satisfaction according to a five-point scale.

Informatization Education and Monitoring toward Greater Digital Equality

National Information Society Agency (NIA)

Overview

In acknowledgment of widening digital inequality on the wave of economic and social progress brought about by the advancement of technology, Korean government has introduced education and training programs for **Digital competency** aiming to achieve “an inclusive digital society” that ensures equality of opportunity for the participation of all.

The National Information Society Agency (NIA) in South Korea conducts the annual **Digital and Information Gap Surveys** to ensure quantitative and objective evaluation of the performance of digital equality policy programs and gather the basic data necessary for effective policy implementation.



Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Related Sustainable Development Goals



http://www.nia.or.kr/site/nia_kor/ex/bbs/List.do?cbldx=81623

Features and Functions

- Diverse education and training programs catering to a variety of information-alienated groups
 - Online and offline informatization courses for the disabled, senior citizens, residents of rural areas, low-income households, immigrant spouses, and North Korean settlers, as well as one-on-one sessions for people with severe disabilities and the elderly.
 - Specialized ICT education to increase social and economic opportunities for the information-alienated
 - Coding and other certificate courses are also provided to help enhance the employability of retirees and the disabled.
 - New technology testing courses to help the information-alienated adapt to the digital transformation
 - Drone and virtual reality (VR) testing and training courses are available for the disabled, senior citizens, and immigrant spouses.
 - Public contests and other special events to boost motivation for learning
 - The National ICT Contests are held to test and reward the computer and mobile skills of the disabled, senior citizens, and immigrant spouses, while the Digital Aging Festival is designed to encourage seniors to share their experiences with ICT education and training.
 - Digital and Information Gap Surveys to evaluate and enhance policy performance
 - These surveys measure the Digital Informatization Index* by evaluating the familiarity of information-alienated groups with wired and wireless computer settings in comparison to that of the general population (in terms of general conditions, accessibility, competency, usage and also by group, i.e., the disabled, people in their middle-age years and senior citizens, the poor, and residents of rural areas).
- *The Information Gap Index has been calculated annually since 2004. After the index became part of the National-ly Approved Statistics in 2006, it evolved into the Digital Information Gap Index in the light of both wired and wireless settings in 2016.

Informatization Education and Monitoring toward Greater Digital Equality

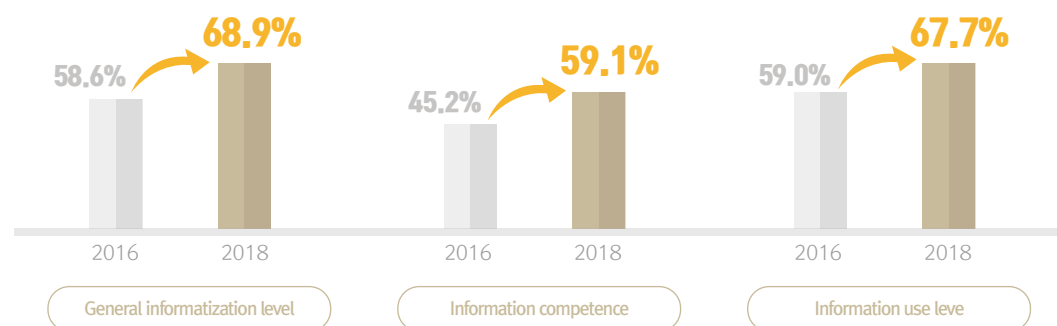
National Information Society Agency (NIA)

Achievements and Anticipated Effects

Digital Inclusion :
ICT for All (2018), a strategy towards the creation of an inclusive digital society for all, established. (2018)

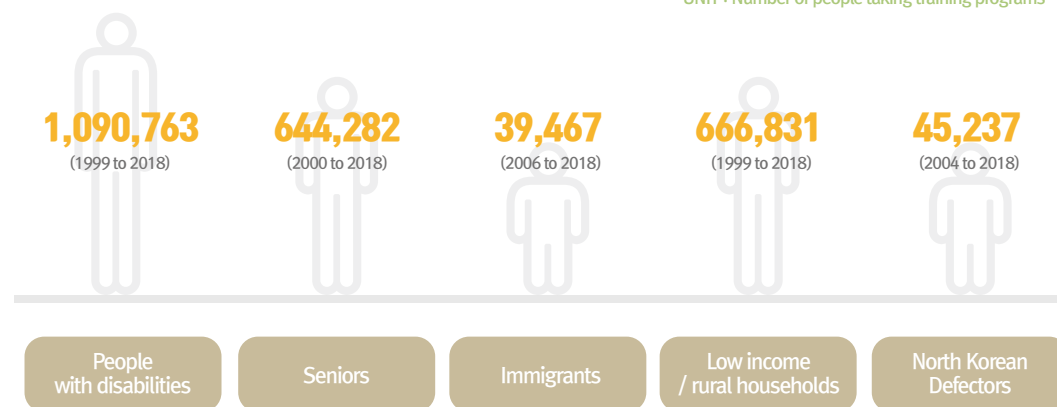
Increasing access to and use of digital resources by underprivileged groups

- The general informatization level of people in underprivileged groups have risen (58.6 percent in 2016 to 68.9 percent in 2018), information competency (45.2 percent in 2016 to 59.1 percent in 2018), and information usage (59.0 percent in 2016 to 67.7 percent in 2018).



Enhancing digital competency (i.e., the ability to use digital information) among those with disabilities, senior citizens, immigrant spouses, and other disadvantaged groups

UNIT : Number of people taking training programs



Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Related Sustainable Development Goals



http://www.nia.or.kr/site/nia_kor/ex/bbs/List.do?cbldx=81623

Providing opportunities to test out and learn new technologies to ensure inclusion in digital transformation

- Courses for testing new technologies :
VR/AR, drones, coding, etc. (at 9 disability-related organizations)
- Specialized training on drone navigation, coding and digital device repairing for the disabled and senior citizens.

New ICT-based social and economic opportunities for the marginalized

- Senior ICT Volunteers Corps launched (1,961 volunteers in total between 2006 and 2018), enabling skilled seniors to mentor and train their peers on using technology and producing video autobiographies.
- Support for entrepreneurial initiatives of ICT-trained seniors (e.g., 5060 Drone Cooperative, specializing in the production of drone-aided filmmaking, and Silver Nest, a social enterprise specializing in multimedia production) and employment and entrepreneurship for 42% of specialized trainees in 2018.
- Customized ICT training for the disabled to help them obtain ICT-related certificates and licenses (186 in 2018) and get jobs at welfare facilities (10 in 2018).

Effectively mobilizing diverse social resources through collaboration

- Facilities, contents, and human resources from diverse public and private organizations, including Korea Post, the Financial Supervisory Service, seniors' associations, associations for persons with disabilities, and individual volunteers, have been mobilized to provide customized digital education and training.

'Digital Intergenerational Partnership Project' for bridging the generational gap

- Students from nine elementary and secondary schools in Seoul helped the users at nearby senior centers learn how to use a smartphone.

e-Government Cooperation Center (eGCC) to Support Development of e-Government in Partner Countries

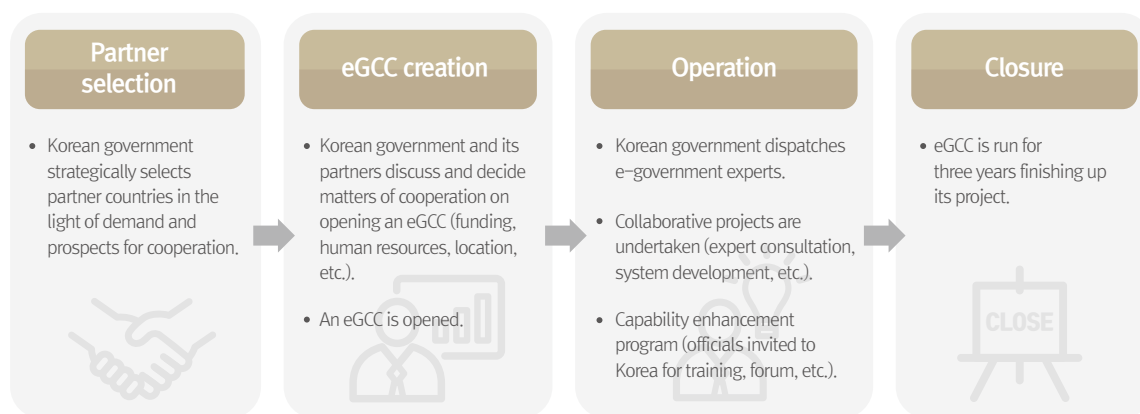
Ministry of the Interior and Safety (MOIS), National Information Society Agency (NIA)

Overview

The e-Government Cooperation Center (eGCC) Program was launched in 2003 as part of Korean government's efforts to increase international cooperation on the development of e-Government. The center supports collaboration on e-Government between Korea and partner countries.

Each eGCC provides support for a standard three-year term, providing expert counseling and other resources that partner countries require to establish and strengthen their e-Government services.

Process



Features and Functions

A major platform for undertaking intergovernmental collaboration on e-government

- eGCC serves as an international platform upon which the Korean government and its counterparts abroad can discuss and undertake e-government collaboration and policy projects.

A platform for undertaking collaborative projects with international organizations

- eGCC strengthens the prospects of success for e-Government projects by coordinating collaboration with international organizations, such as the Inter-American Development Bank (IDB) and the Charities Aid Foundation (CAF).

Providing expert consultation in informatization policy as well as technical and human support

- eGCC undertakes e-Government projects tailored to the needs of partner countries, thereby helping to reduce information asymmetry between nations.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Related Sustainable Development Goals



An international platform for probing into socioeconomic conditions of partner countries toward enhancing the realistic prospects of e-Government projects

- eGCC not only undertakes projects itself but also enable participants to determine problems to be solved and reforms to be made in partner countries toward strengthening e-Government. Through eGCC, the Korean government and enterprises establish sustainable systems of implementation after reviewing and updating the respective contributions they are to make to the development of e-Government in partner countries.

Achievements and Anticipated Effects

Providing expert consultation through collaboration projects for the development of sustainable e-government in partner countries, and strengthening policy and human exchanges between Korea and the partner countries through e-Government invitation training programs and forums.

- Since the first eGCC in 2003, three are currently operating in Indonesia, Peru, and Kenya. As of May 2019, 67 projects, 76 consultation programs, and 100 local workshops/seminars have been undertaken in total.
 - Helped the Uzbek government establish its Local Informatization Master Plan.
 - Helped the Indonesian government establish its e-Government Roadmap.
 - Helped the Peruvian government establish a BPR/ISP system for sharing public information.
 - Helped the Kenyan government establish an e-Office.

History of eGCC

* Number

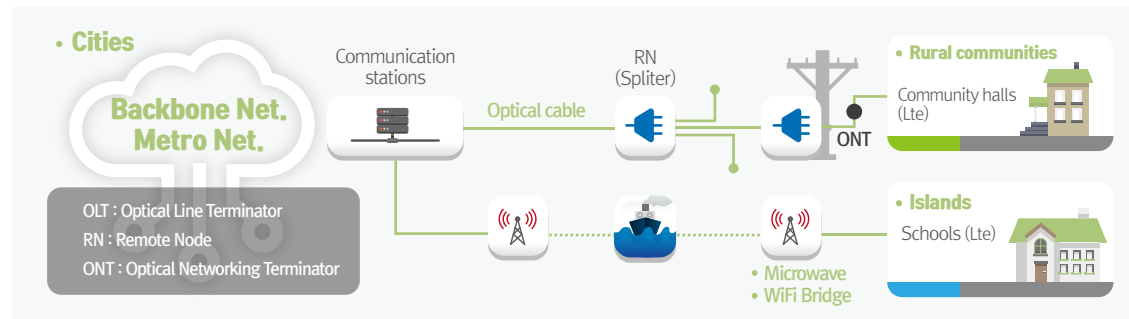
e-GCC	Project*	Consulting*	Workshop, Seminar, etc.*
Korea-Bulgaria (2010)	10	5	12
Korea-Vietnam (2011)	26	13	18
Korea-Uzbekistan (2013)	14	27	32
Korea-Indonesia (2016-2019)	9	13	17
Korea-Peru (2017-2019)	4	10	17
Korea-Kenya (2017-2019)	4	8	4
Total	67	76	100

Broadband Convergence Network (BcN) Infrastructure to Narrow the Urban–Rural Information Gap

National Information Society Agency (NIA)

Overview

With the aim of reducing the information and communication infrastructure gap between cities and rural communities, Korean government expanded its optical cable networks for 100–Mbps Internet to all rural regions, providing combined Internet TV (IPTV), Internet telephone (VoIP), and smartphone services for rural residents at the same affordable rates as for urban residents. The expanded broadband convergence networks will also be used to support advanced application services for education, finance (ATMs), and farm produces transactions.



Features and Functions

Expanding BcN infrastructure to remote rural regions

- Korean government built a public–private partnership (local governments and service providers in a 1:1:2 financing arrangement) to extend the BcN infrastructure to include remote rural regions and islands with fewer than 50 households each. During the eight years from 2010 to 2017, a total of KRW 140 billion was invested in expanding the BcN network and service to 13,462 rural households.
- Future-oriented optical cables and FTTH–EPON were used to connect to farming and mountainous villages, while MicroWave or WiFi–Bridge were used to connect islands. As a result, all households in Korea today can access the Internet at a speed of 100 Mbps or higher.
- Quadruple play bundling services (IPTV, VoIP, 4G mobile communication and the Internet) can now be provided to households even in the remotest rural and island regions at the same affordable rates as for urban residents.

Boosting the development and distribution of new services for rural communities

- Moreover, the Korean government intends to support the development and distribution of new ICT services using these expanded networks and strengthen the participation of rural residents.
- Examples include smartphone video chats between grandparents in rural areas and their grandkids in cities, online legal counseling and other such help for immigrants, Internet video chats between immigrants and their families abroad, farming techniques and management information provided online, financial services (including ATMs), monitoring of farming facilities, and crime prevention camera systems.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Wired : FTTH–EPON, etc.
Wireless : WiFi–Bridge, 4G, etc.
Services : IPTV, smart farms, etc.

Related Sustainable Development Goals



Achievements and Anticipated Effects

Construction of optical cable–based communication networks even in small, remote rural villages has paved the way for the use of advanced ICT all across Korea.

- Conditions are ready for futuristic services, such as 5G mobile communication, virtual or augmented reality–based farming training, smart energy, and self–driving cars, even in remote rural communities.

Analysis of 250 rural households in communities where the networks were installed between 2010 and 2016 revealed that expansion of the BcN infrastructure would generate KRW 160.45 billion in total economic value (KRW 28 billion in business savings annually and KRW 132.45 billion in increased income), reduce the urban–rural information gap, and significantly improve quality of life in rural communities.

CASE 1 Children at Imja Elementary School in Jeollanam–do are able to dream new dreams. A 12–year–old girl, for example, has been able to improve her English by regular video chatting with American college students. She wants to learn to code drone–operating software on her tablet PC.

CASE 2 Dogye Village in Jeollabuk–do has been named an “Exemplary of Informatization Village.” Residents learn new technologies using the dozen or so computers installed at the village hall. The village leader frequently communicates with other villagers via smartphone. The kimchi and bean curd that locals produce are sold online. Vietnamese immigrants can also video chat with their family members in Vietnam for free rather than making expensive international phone calls.

The expanded infrastructure is expected to relieve the concentration of resources in large cities and the emptying of rural communities, and thereby contribute to balance in national development.

- Rural communities have been losing people for decades as more and more move to cities in search of better income, jobs, better healthcare, better education, and more cultural opportunities. In the meantime, cities have been plagued with overpopulation, pollution, and the results of climate change. (The UN projects the urbanization rate worldwide will rise from 54 percent in 2015 to 68.4 percent by 2050.) The expansion of communication infrastructure to rural communities is expected to help resolve these problems related to the urban–rural divide.

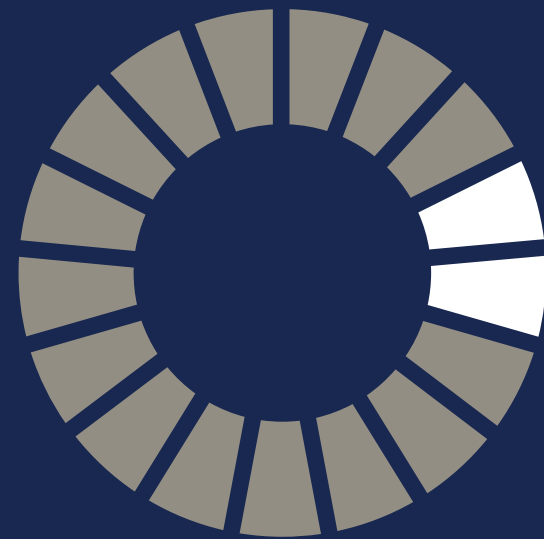
Awards and Recognition

An OECD study has rated South Korea second in terms of rural access to the Internet (and first in terms of urban access)

Source OECD, “Bridging the Rural Digital Divide,” February 2018.

Part 02

Korea's e-Government
Best Practices for SDGs



Mobile Government



m-Voting Mobile Voting System

Seoul Metropolitan Government

Overview

In March 2014, the Seoul Metropolitan Government launched 'm-Voting' (Mobile Voting System), which is an application to communicate with the citizens on policy-making through a real-time voting system. It collects citizen's opinions directly via mobile devices as well as vote results which can affect the decision-making of various key issues in the policy meetings. M-Voting can minimize social costs and secure the timeliness of the administration by deciding through a vote using the application when necessary.



Features and Functions

Open Vote for Everyone (G2C)

- Regardless of which department in SMG is involved, the SMG officers can request a vote when Seoul citizen's opinions are required. Thus, SMG officers would be able to understand what the citizen's preferences are and how they differ depending on the modes (e.g., emergency message channel vs. traditional notice, website notice, and social media posts) and opinions from citizen.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Mobile

Related Sustainable Development Goals



<https://mvoting.seoul.go.kr>

Targeted Vote in Specific Context (G2C)

- Based on the existing Seoul database, mVoting offers the SMG officers the option of opening a targeted vote to specific citizens depending on age, municipality, job, and gender. Specifically, targeted votes enable the SMG to generate specific policies and to store the data on the specified.

Making a Poll by Citizens (C2G)

- Just as Seoul officers can use the voting function of mVoting to ask citizen's opinions, Seoul citizens can also suggest a voting poll on specific policy and other issues of interest.

Location Based Vote with GPS, register and QR (G2C)

- In many cases, policies are related to a location's unique context such as traffic signs and city hall events. In order to inform those kinds of policy problems, mVoting can provide a GPS-based vote (e.g. to citizen who are within a radius of 2 miles).

Achievements and Anticipated Effects

- As of May 2019, 6,481 voting agendas have been posted on M-Voting – 6,481 by citizens, 2,587 by the government – and 790,000 citizens have participated in voting. There have been at least 652 cases in which m-Voting results have reflected to the formation and implementation of policies

- Through the collaboration of people in the decision-making process, m-Voting contributes to the promotion of participatory and consensus democracy

- m-Voting reduces the cost of citizen participation and draw citizens into the SMG's Policy Formation Process by expanding and providing more convenient channels

- It is also used as a tool for implementing the philosophy of citizens as administration owner, and for civic collaboration and conflict adjustment

Integrated Service on Personalized Living information : Government 24

Ministry of the Interior and Safety (MOIS)

Overview

This is one of the major services of "Government 24," a representative government portal that integrates and provides government services, civil complaints, and policy information online 24 hours a day, 365 days a year. This online service which enables citizens to check all living information needed in their daily lives at a glance without need to visit various agencies, provides information on health, pension, finance, unreturned refunds, etc. in real time through information sharing and collaboration among the agencies.



Features and Functions

- Provision of living information in 12 Categories
 - Korean Government Services consolidates 90,000 different types of government services available to the public and classifies them into 12 categories. Korean government provides customized services in a variety of ways that are tailored to each citizen's life.
- Online government service, anytime and anywhere
 - Citizens can access information on the competent authorities, required documents, fees, processing deadlines, related laws and regulations for over 5,000 types of civil petition online anytime, anywhere without physically visiting government agencies. Also, more than 300 of these services accept applications through mobile platforms.
- Multi-channel access
 - Use the service conveniently anytime, anywhere via PCs and smartphones, and the mobile app is designed based on a UI structure optimized for each device by considering mobile utility
- Personalized living information
 - Browse personalized living information results after logging in (www.gov.kr) with an accredited certificate and going through a living information service usage agreement procedure,

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Mobile

Related Sustainable Development Goals



<https://www.gov.kr/main?a=AA210LifeSvcInfoApp>

Achievements and Anticipated Effects

- Solve inconveniences experienced by citizens in having to check the living information needed in daily lives by physically visiting agencies or related websites
- Ensure people's healthy lives and promote their welfare by providing schedules for health checkup and vaccination
- Ensure equal rights to financial resources by providing access to not only various pensions but also financial services such as Akkim-e loan, Bogeumjari loan, an emergency fund for post-retirement, etc.
- Ensure and promote opportunities for learning by giving information on various student loans
- Prevent disadvantages and loss of multiple benefits by providing information on employment subsidy, children subsidy, dormant deposits, dormant insurance, refunds in pending, moving-in order of reserved residents, etc.
- Prevent disadvantages caused by a breach of responsibilities or failed payment by providing administrative requirements and information on various dues
- Vitalizes online services of government and public agencies and improve administrative efficiency
- Appear an active use of the Government 24 with 11,165,491 visitors, 11,110,157 members, and 182,699 times of app downloads by April 2019



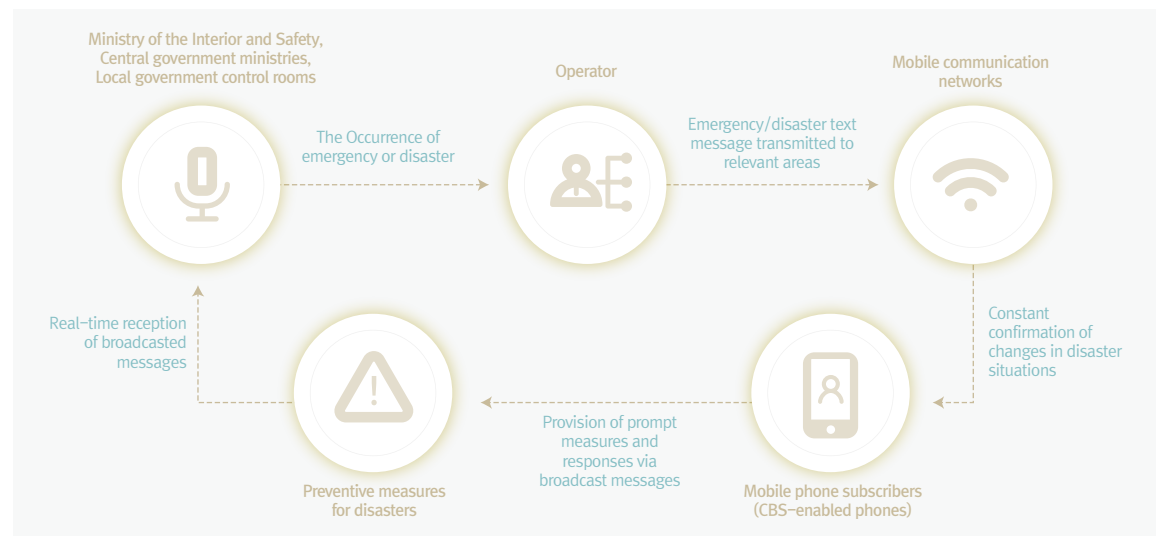
Disaster Alert Cell Broadcast Service, Safety Diddim-dol App

Ministry of the Interior and Safety (MOIS), Central Ministries, and Local Governments

Disaster Alert Cell Broadcast Service

Overview

A disaster alert cell broadcast service (CBS, a system for sending messages to multiple mobile phone users in a defined area by base station at the same time), which sends messages to users with CBS-enabled mobile phones in real time in areas where disasters have occurred or are expected to occur, giving receivers time to take action and respond to the situation, and help protect life and property.



Features and Functions

- Send messages en masse to all CBS-enabled cell phones within the areas covered by the base stations in disaster areas
 - Send messages simultaneously to all customers within the areas covered by base stations in disaster areas through point-to-multipoint communication.
- Allows real-time information service through multicasting
 - Promptly sends disaster-related messages to all cell phones when a disaster occurs or is expected to occur.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

CBS, OPEN API, responsive hybrid app

Related Sustainable Development Goals



Safety Diddim-dol App

Overview

Safety Diddim-dol App is a government disaster and safety portal app, providing a variety of essential information to the public when disasters occur. This information includes emergency/disaster text messages, news on disasters, locations of civil defense corps shelters, hospitals, and pharmacies, and other content, as well as the ability for users to report emergencies.



Features and Functions

- Provides emergency/disaster text messaging service for 3G phone users (approx. 1.6 million) who cannot receive CBS
- Includes a function that allows users to report emergencies in addition to providing news and information on disasters and severe weather
- Provides a variety of disaster and safety information, including public guidelines, and the location of civil defense corps shelters, hospitals, and pharmacies

Achievements and Anticipated Effects

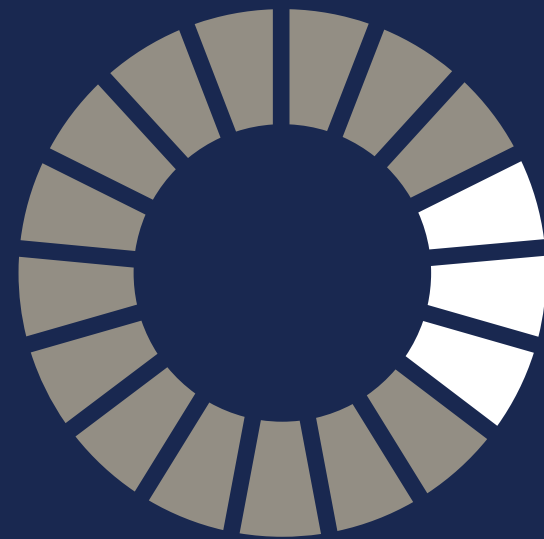
- Provides 125 types of disaster information services
 - Disaster text messages and news, report on disaster (6), response guidelines for the public (62), disaster and safety information (53)
- Operation performance: 2.96 million downloads (as of May 2019)

Awards

- Grand Prize at App Award Korea 2017, hosted by Digital Chosun Ilbo (November 14, 2017)
- 11th most downloaded app of 1,235 apps from government and public institutions (government app analysis data from 2016)
- Best mGov Award at the Best mGov Awards, hosted by the UAE (February 11, 2015)
- First Prize at the 2014 Outstanding Public Mobile App Contest, hosted by the (former) Ministry of Security and Public Administration (November 14, 2014)

Part 02

Korea's e-Government
Best Practices for SDGs



Open Data



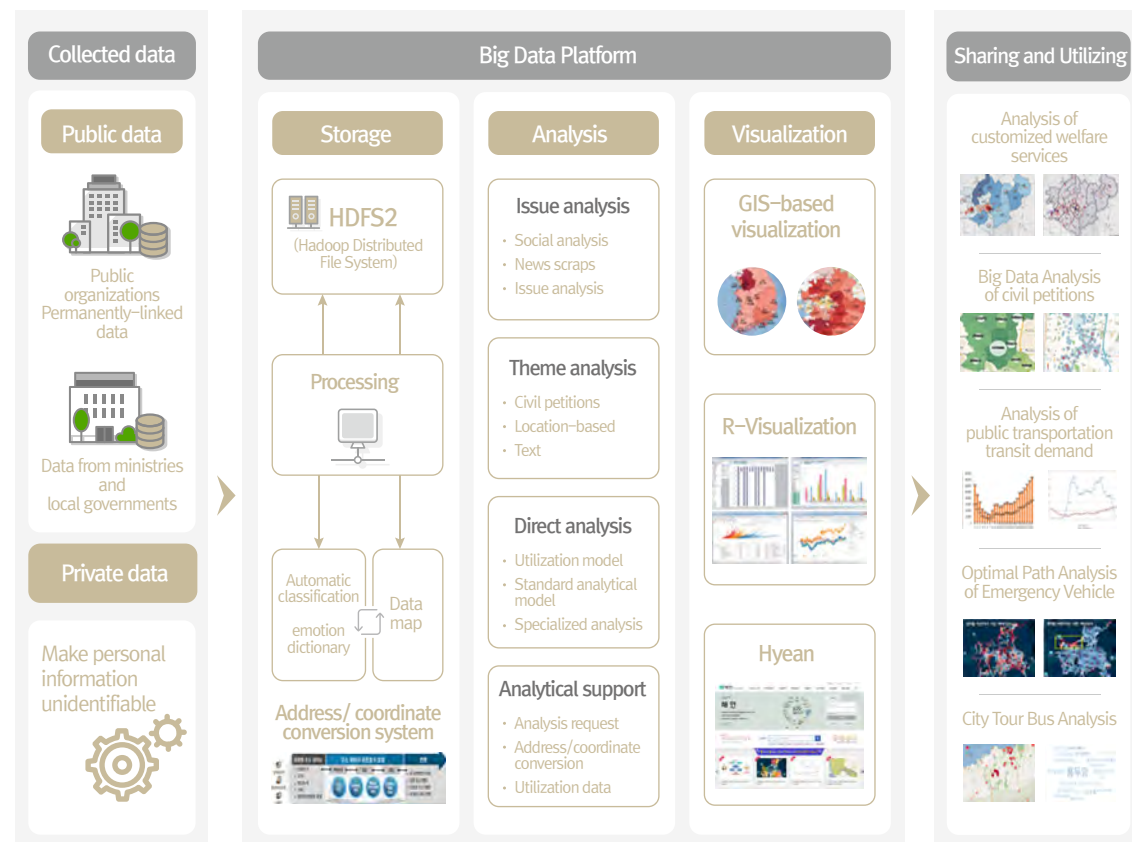
Hyeon

National Information Resources Service (NIRS)

Overview

Big Data Platform “Hyeon” (in Korean, which means “the wisdom to see through everything”) is a pan-governmental (central ministries and local governments) Big Data analytical system that connects/collects, stores/processes, analyzes/visualizes public and private data, and shares/utilizes the analytical findings. The Ministry of the Interior and Safety’s National Information Resources Service (NIRS) support data-based administrative activities through the establishment and operation of Insight and thereby contributes to the realization of a capable government.

Concept map of Hyeon



Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Big Data, machine learning/deep learning

Related Sustainable Development Goals



www.insight.go.kr - an administrative network that can only be accessed by Korean government employees

Features and Functions

Hyeon provides a variety of services (online analysis, special analytical tools, etc.) that can be utilized to carry out Big Data analysis through its web portal. Also, the Big Data Analysis Department shares outstanding analytical cases, and offers liberal education to strengthen abilities of government employee to analyze Big Data. Moreover, the portal operates a user-participatory communication channel for continued improvement.

Hyeon Portal



Issue Analysis

- Providing a variety of analytical visualization services (social analysis, customized issue analysis, local government issue analysis, etc.) based on social data collected in real-time by Hyeon to gain a prompt understanding of media trends and public opinion on various issues.

Hyeon

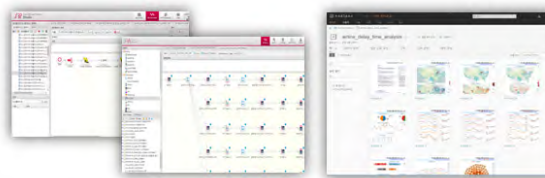
National Information Resources Service (NIRS)

Themed Analysis



- Establishing an automated web service for analysis of petitions and location-based analysis, high in demand by Hyeon users, and upload data to provide various types of visualization.

Direct Analysis



- Providing specialized analytical tools based on Hadoop 2.0 for Big Data processing, analysis, and visualization for a more intensive and diversified analysis.

Joint utilization of Hyeon



- Hyeon is jointly utilized by ministries and local governments to prevent overlap in funding for the establishment of separate big data platforms. Constant updates are made to the analytical environment through periodic linking of data between Hyeon and Ministerial and Local government systems.

Analytical Support



- Providing a training service to strengthen the ability of government employees to analyze Big Data; sharing of excellent analytical cases; participation and communication service for continuous improvement of Hyeon.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Big Data, machine learning/deep learning

Related Sustainable Development Goals



www.insight.go.kr - an administrative network that can only be accessed by Korean government employees

Achievements and Anticipated Effects

Hyeon is striving to improve the quality of its functions. Currently, it has over 100,000 registered users and is leading the government's shift to data-based scientific administrative activities. Analytical experts from the Big Data Analysis Department have been cooperating with a number of organizations to identify and promote influential analytical tasks and are making achievements in a variety of areas including security, safety, and the environment.

Major achievements of Hyeon

Major achievements of Big Data Analysis

01 Analysis of police crime scene logs

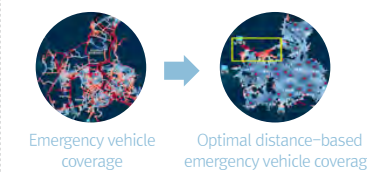
Identify similar crimes and resolve unsolved crimes through analysis of crime scene logs



02 Analysis of factors that delay emergency response

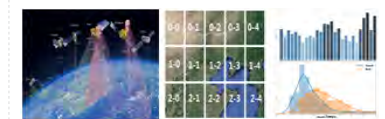
Identify optimal routes to ensure timely response through analysis of factors that delay rescue vehicles

- Calculate the area that can be covered by firetrucks and ambulances based on GPS data
- Confirm commonly congested areas and assign centers based on shortest travel distance for emergency vehicles

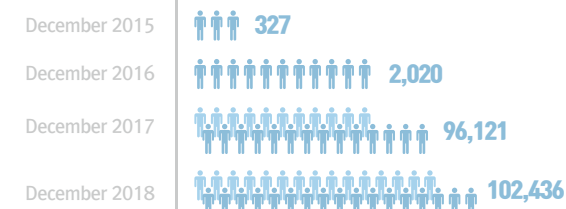


03 Fine dust forecasting

Provide forecasts for fine dust using NASA satellite data and fine dust data for Incheon area



Number of registered users



Number of visitors



Number of registered analytical reports



Open Data Sharing Policy

Ministry of the Interior and Safety (MOIS), National Information Society Agency (NIA)

Overview

Under the Act on Promotion of the Provision and Use of Open Data (“Open Data Act” or “PDA”), open data must be made available in South Korea for anyone to access and use, whether for commercial or nonprofit purposes. Users should be able to download freely, duplicate, use, and disseminate open data from the Open Data Portal.

Open Data Portal (www.data.go.kr) A centralized channel via which all open data produced, acquired, and administered by all public organizations and agencies can be accessed. The website provides data in diverse formats, including files, open APIs, and graphics.

Other measures with which the Korean government encourages the provision and use of open data include

- 1 Establishment of the Open Data Center
- 2 Total surveys of all open data in the public sector’s possession
- 3 Development of the National Data Map
- 4 Enforcement of an open data quality assurance program
- 5 Operation of the Open Data Mediation Committee
- 6 Operation of the Open Data Forum

Features and Functions

- Open Data Center**
 - A public body specialized in supporting the provision and sharing of open data, for both the public and private sectors, with expertise and competence on the production, sharing and use of open data. It aims to encourage public institutions to share quality data.
- Complete surveys of open data in the public sector’s possession**
 - The goal is to ascertain and identify all data owned and shared by all public organizations and agencies, with a view toward encouraging the sharing of more data and developing a national data management system.
- National Data Map**
 - To show the locations of data owned and shared by the government and public organizations as well as their correlations.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Related Sustainable Development Goals



www.data.go.kr

Open data quality assurance

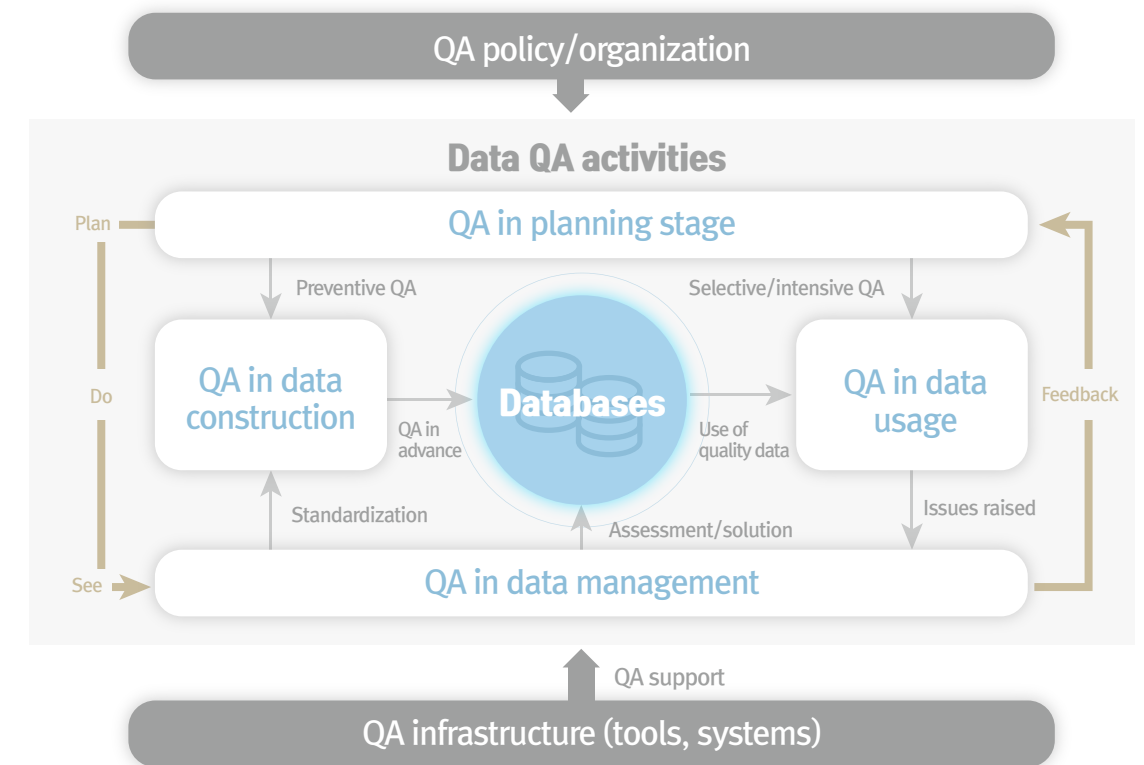
- The Korean government enforces a quality assurance program to ensure that the open data provided by all public organizations and agencies remains up to date, accurate, interoperable, and useful to users. The government also provides guidelines, training, and advice on managing such quality, helping public organizations and institutions build and enhance their capabilities in this area. The Korean government assesses open data quality assurance according to a five-level rubric and provides organizations and agencies with the needed technical support to take actions required after their assessments.

Data dispute mediation

- Users who find that the open data they need is no longer available or that their requests for access to the open data they need have been denied no longer need to go through the complicated administrative litigation procedure. Instead, they can appeal to the Open Data Mediation Committee, which will then review and decide on the legitimacy of the decisions to withhold data.

Open Data Quality Assurance Program

Source: Open Data Portal

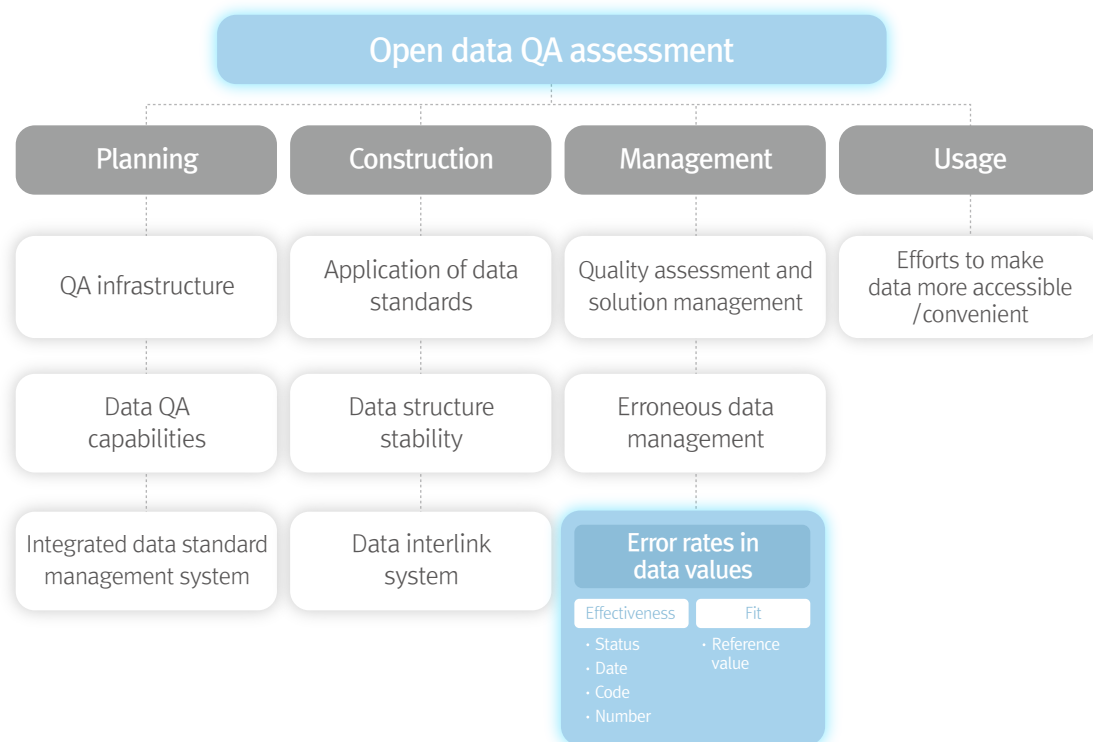


Open Data Sharing Policy

Ministry of the Interior and Safety (MOIS), National Information Society Agency (NIA)

Open Data Quality Assurance Index Source: Open Data Portal

• Assessment Structure



• Levels defined

Level 1 (Optimized)	The organization has succeeded in establishing a virtuous cycle of data QA, ensuring consistent improvements in the quality of data it provides.
Level 2 (Systematized)	The organization has an organization-wide data QA process in effect and is capable of undertaking its data QA activities in a systematic manner.
Level 3 (Managing)	The organization manages and controls necessary activities for data QA and has the potential to improve the quality of data it provides accordingly.
Level 4 (Introductory)	The organization has begun to recognize the need for data QA and to introduce basic activities for it, including quality assessment.
Level 5 (Pre-QA)	The organization has not yet recognized the need for data QA and is incapable of undertaking part or the entirety of basic QA activities.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

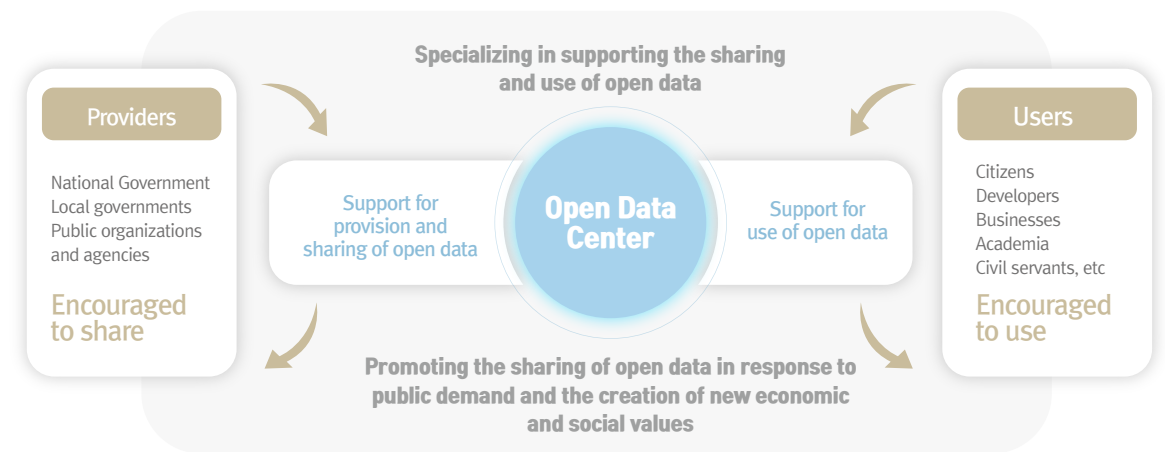
Applied ICT

Related Sustainable Development Goals



www.data.go.kr

Open Data Center: Roles and Responsibilities Source: Open Data Portal



Achievements and Anticipated Effects

- Over 28,000 open data entries had been shared as of 2018.
- Standards have been introduced (types of data to be provided, properties, formats, etc.), the percentage of open-format data has been increased, and other efforts have been made to ensure increased availability of quality data.
 - Open data standards introduced: 11 in 2013 → 109 in 2017 → 120 in 2018 (11 up from the previous year).
 - Percentage of open-format data: 6% in 2013 → 78.8% in 2017 → 81.9% in 2018 (3.1 percent up from previous year).
- As of the end of 2018, open data had been accessed and used over 7.54 million times via the Open Data Portal – 542 times up from the first time the portal was introduced in 2013. The usage of open data continues to increase steadily from year to year.
 - Number of times open data has been used (cumulative): 3,923 in 2013 → 3,871,984 in 2017 → 7,549,179 in 2018 (up nearly 3.68 million from the previous year).
- South Korea came out at the top in two consecutive OECD evaluations of open data (2015 and 2017). The World Wide Web Foundation counted Korea among the five leading countries in its Open Data Barometer (2017) and ranked it fourth in 2018.
- There are numerous mobile applications, now available from open markets, that have been developed with open data.
 - Koreans continue to develop a variety of services using open data to cater to diverse needs, including transportation, healthcare, environmental protection, and education.

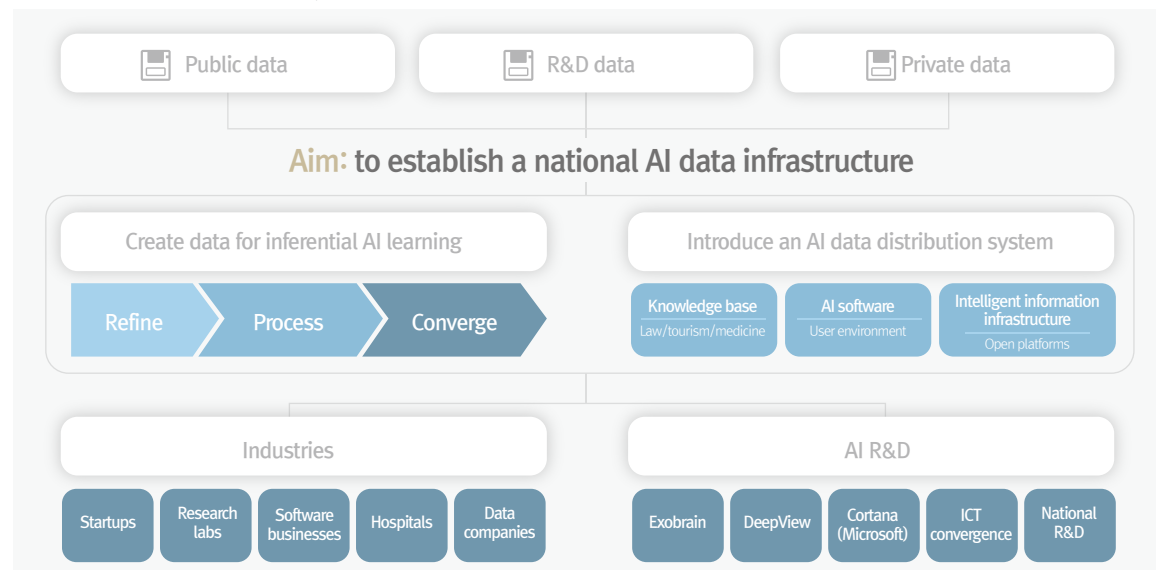
AI Hub

National Information Society Agency (NIA)

Overview

AI Hub is a platform that provides a comprehensive range of services in support of research and development (R&D) on AI and its applications.

It provides AI data, software, and computing powers for AI researchers and corporations. The resources it provides are easily accessible and available to anyone who needs them.



Features and Functions

- AI data**
 - AI Hub gathers, processes, and provides data for machine learning for prospective industries. It has made legal, patent, image, general knowledge, healthcare, tourism, and agricultural data available, and will continue to expand the range of data to be shared.
- AI software**
 - Original visual, language, and other recognition technologies that have been developed through AI R&D projects are shared via open API to support the development of prototypes at startups and SMEs.
- AI computing**
 - AI Hub provides high-performance GPU-based cloud computing services to support the development of AI applications.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Visual, language and voice recognition (AI)

Related Sustainable Development Goals



<http://aihub.or.kr>

Achievements and Anticipated Effects

Identifying industries with a pressing need for AI data and a high potential for growth, and providing them with datasets for machine learning

- Shared in 2018**
 - Law**: Dataset on national statutes concerning car accidents, neighborhood noise, and authorization and licensing for entrepreneurship, including text, case law, and legal glossaries
 - Patents**: Dataset on electric/electronic patents filed and granted in Korea, including application details, review details, and technical glossaries
 - General knowledge**: Dataset on general knowledge most commonly searched on Wikipedia Korea
 - Images**: Dataset on images of Korean faces and food
- Shared in 2019**
 - Healthcare**: Dataset on retinal images about major ophthalmological diseases
 - Tourism**: Dataset on images of restaurants and facilities in tourism zones, along with information in multiple languages (names, locations, menus, and other tourism-relevant information)
 - Agriculture**: Dataset on images of blights and vermin that affect crops in Korea
 - Patents**: Dataset on electric/electronic/mechanical/chemical patent applications, claims regarding granted patents, and technical glossaries
 - Law**: Dataset on laws of divorce, single-parent households, school violence and retirement pensions (including statutes, case law, court cases, and glossaries)
 - Images**: Dataset on images of Korean faces and Korean-made cars (100 models)
 - Voices (Korean)**: Dataset of voices (spontaneous continuous speech, different noise environments, etc.) intended to improve Korean voice recognition
 - Conversations (Korean)**: Dataset of standard conversation templates in Korean, intended to support the development of a Korean chatbot for use in small businesses
 - Multimodal**: Multimodal image dataset containing data on facial expressions, voices (intonation) and speech of characters featured in videos
 - MRC**: Machine reading-and-comprehension (MRC) dataset, with a deep-learning AI model inferring correct answers to questions based on information provided in text

The AI data made available via AI Hub can help startups and SMEs in Korea to develop and commercialize their products and services, to improve the performance of their AI solutions, to attract investment, and to file patent applications.

Part **02**

Korea's e-Government
Best Practices for SDGs



e-Participation



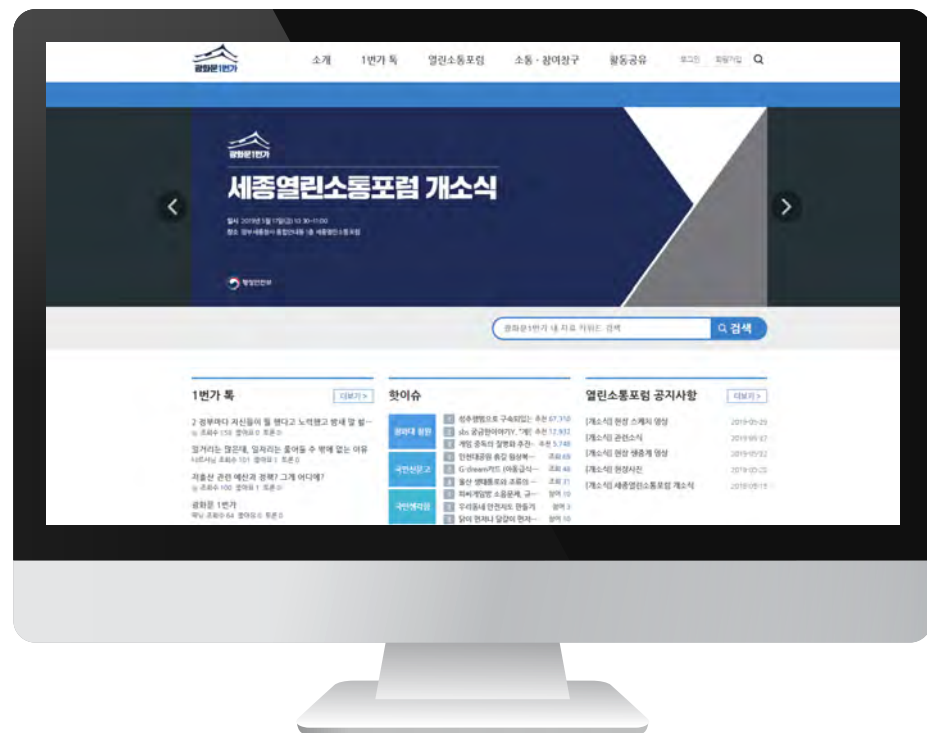
Gwanghwamoon 1st Street

Ministry of the Interior and Safety (MOIS)

Overview

Gwanghwamoon 1st Street is the name of an online forum for civic discourse and participation, through which the government and the public can actively communicate, and Koreans can participate in the policymaking process. It also provides a comprehensive list of links to the websites of government departments and agencies as well as local governments.

Gwanghwamoon 1st Street also provides both online and offline forums for an open conversation on policy issues, encouraging lay citizens and government officials to discuss ways to solve policy problems.



Features and Functions

1st Street Talk for making policy suggestions

- Any policy suggestion that has garnered at least 60 “likes” (or 10 comments) in 60 days can become a topic of discussion on the ‘Open Communication Forum’ and be reviewed by relevant officials/organizations.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Big data analysis, data mining

Related Sustainable Development Goals



<https://www.gwanghwamoon1st.go.kr>

Open Communication Forum (on- and offline policy debates)

- Citizens are invited to participate in the Participatory Policy Planning Group along with policy experts and government officials to decide topics for debate. These topics are then discussed and broadcasted in real time on the Open Communication Forum, with offline panelists discussing and spectators participating online through streaming and commenting on the live debates, all toward finding practical solutions to policy issues.

The policy suggestions shared on the Open Communication Forum are then referred to the Government Innovation Steering Council for further debate and possible policymaking. Policy suggestions that have made their way into actual policies are announced online for continued public feedback.

Communication and Participation Window (a comprehensive list of links to other governmental platforms open to civic participation)

- The Communication and Participation Window displays posts made on six other governmental platforms for civic participation, namely, Gwanghwamoon 1st Street, Open Propositions (Gukminsinnungo), Gukminsaeenggakham, the National Participatory Lawmaking Center, Policy Briefing, and the Seoul Metropolitan Government’s Participatory Budget. The window also introduces other platforms for participation available from central government departments and agencies and local governments.

Activity Sharing (presenting examples of participatory policymaking)

- Activity Sharing introduces examples of successful policymaking inspired by civic participation and initiatives, such as the National Design Group and the Social Problem-Solving Project. It also lists a variety of participatory events organized by central government’s department and agencies and local governments.

Achievements and Anticipated Effects

Translating citizens’ policy suggestions into policymaking through the Open Communication Forum

- In 2018, 10 Forum debates were held, giving rise to 72 civic proposals. Forty-five of these were adopted by 14 governmental organizations (62.5 percent adoption rate) in making new policies.
- The results of the review by each organization are published online for continued public participation and feedback.

Promoting civic participation in policymaking, both online and offline

- Gwanghwamoon 1st Street is expected to empower more citizens to express their policy views and participate in policymaking.

Information Disclosure Portal

Ministry of the Interior and Safety (MOIS)

Overview

An information disclosure service that discloses the information created, held, and managed by government organizations, local governments, and other public institutions, guarantees the citizen's right to know and aims to provide more information as a way of attracting citizen's participation in government operations based on more information.



Features and Functions

Advanced Information Disclosure Service : Disclosing information before people request it

- Disclosing information on public institutions, such as policies that have a significant impact on citizen's lives or national projects that involve large amounts of government funding, before people officially request to see it.

Aiming to ensure citizen's right to know by having each Ministry, Local government, and public institution independently identify and share information or disclose 100 standard model information.

※ Standard model information categories: auditing/ethics, planning/finances, legal/labor, personnel /general affairs/accounting, and other categories

Sustainability topics

- ✓ Social sustainability
- ✓ Economic sustainability
- ✓ Environmental sustainability

Applied ICT

Related Sustainable Development Goals



<https://www.open.go.kr>

Original Information Disclosure Service : Disclosing original documents as they are

- Disclose original documents that have been created by civil service employees in central government ministries, local governments, offices of education, and public corporations and approved by ministers, mayors, and governors.

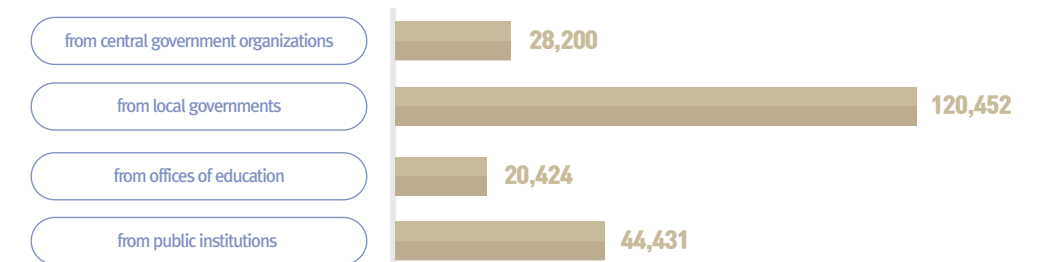
Information Disclosure Request Service : Disclosing information when requested by the people

- Transparently disclose information within 10 days when information held by public organizations is requested online, through a personal visit, by fax, mail, or any other way by any citizen, corporation or organization of the Republic of Korea, or foreign residents (those who live in Korea or are staying temporarily in the country for study or research).

Provide the service so that people can officially submit requests about organizations and have their questions answered on the Information Disclosure Portal.

Achievements and Anticipated Effects

Central government organizations, local governments, offices of education, public institutions, etc. provided 213,5047 pieces of information in advance (as of April 2019)



Ensuring the citizen's right to know and improving transparency through disclosure of original documents

- Organizations subject to original document disclosure : 49 central government organizations, 243 local governments (17 metropolitan governments, and 226 fundamental local governments), 17 offices of education of cities and provinces, and 129 public institutions

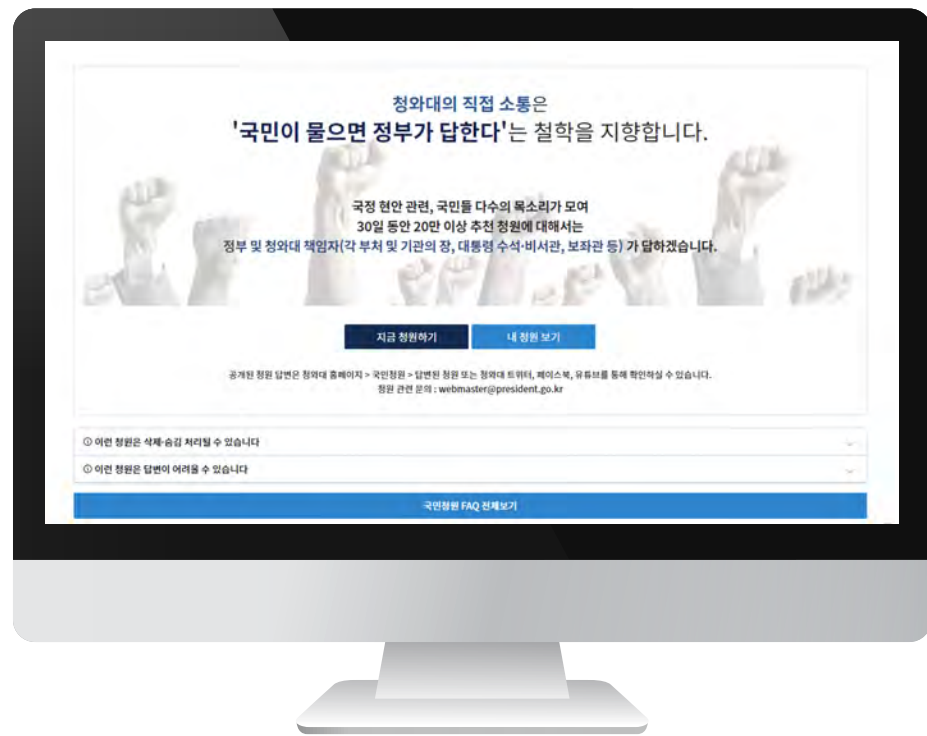


Cheong Wa Dae (The Blue House) National Petitions

Cheong Wa Dae (The Blue House)

Overview

Under the slogan, "People Ask, Government Answers," the **Cheong Wa Dae Civic Petitions** webpage allows citizens to register petitions on pressing policy and social issues. Government and Cheong Wa Dae officials (including Cabinet ministers, the President's secretaries, and aides, etc.) are to respond to petitions that garner over 200,000 signatures within 30 days.



Features and Functions

Citizens may register petitions freely

- 17 Categories for the petitions: Political reform; foreign affairs, unification and defense; employment and jobs; the future; new engines for economic growth; rural affairs; health and welfare; childcare and education; safety and environmental protection; increasing the birth rate and countering population aging; administration; pets; transportation, architecture and infrastructure; economic democratization; human rights and gender equality; culture, the arts, sports, and the press; and other.

Sustainability topics

- Social sustainability
- Economic sustainability
- Environmental sustainability

Applied ICT

Related Sustainable Development Goals



<https://www1.president.go.kr/petitions>

A channel of direct democracy which allows citizens to propose new policy measures and express their views freely

- Users do not need to create new accounts or passwords. They can log in by using existing social media accounts and register or sign up for petitions.

A sphere of public discourse

- Any citizen who has been frustrated by unfairness, corruption, crime, and so forth or who believes specific changes can begin a petition, which can give rise to society-wide discourse.

Achievements and Anticipated Effects

A channel of active and direct communication between Cheong Wa Dae and the public

- In the 19 months since the Moon Jae-in government came into office on August 17, 2018, 434,000 petitions have been received, and Cheong Wa Dae has posted official responses to 92 of these petitions (as of April 2019). The responses were provided not only in text but also recorded video statements.



- As of April 2019, the petition that has garnered the greatest number of signatures is the one concerning the murder of a part-time worker at a cyber cafe in Gangseo-gu, Seoul, registered on November 16, 2018 (1,192,049 signatures in total).

Petition Response No. 57

Man Responsible for the Gangseo-gu Cyber Cafe Murder Again Pleads Temporary Insanity

Petition registered [2018. 10. 17]	Petition registered [2018. 11. 16]	Number of participants [1,192,049]	Response posted [2018. 12. 11]
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- The content of the civic petition was converted into a bill that was enacted into a new statute by the National Assembly.

Source : Cheong Wa Dae and Yonhap News

Part 02

Korea's e-Government
Best Practices for SDGs



Leading Approach



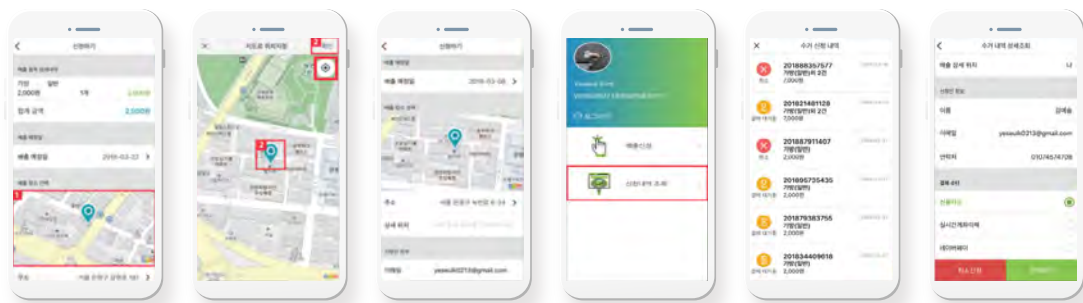
AI-Based Large Waste Processing Service Using Object Recognition Technology

Eunpyeong-gu District Office, Seoul

Overview

The Eunpyeong-gu District in Seoul has adopted an innovative system that uses artificial intelligence (AI)-based object recognition technology to process and support the collection of, and transactions on, different types and quantities of large-sized household waste automatically.

Object Recognition Technology and Administrator's Page



Source : Eunpyeong-gu District Office, Seoul

Features and Functions

A large waste processing system in a smartphone application

- Users can handle the entire process through their smart devices, from filing requests for the disposal of large-sized waste to registration, billing and payment of service fees, and collection and disposal

AI-based (object-recognizing) system for automatic billing

- When a smartphone user takes and uploads a picture of the massive waste the deep-learning system identifies the object as belonging to 1 of 120 categories of furniture images in its database, bills the user, enables the user to make a mobile payment, and ensures timely pickup and disposal of the object.

Automatic transmission of GPS data on waste for timely and accurate collection

- The system helps private waste collection agencies optimize their transportation routes through real-time updates on the objects to pick up.

Sustainability topics

- ✓ Social sustainability
- ✓ Economic sustainability
- ✓ Environmental sustainability

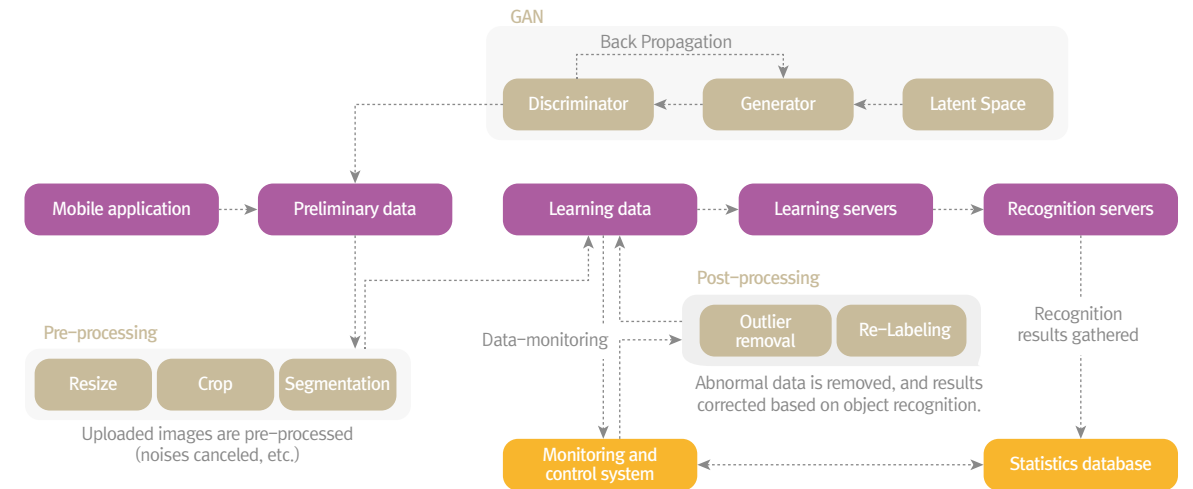
Applied ICT

Deep learning (GAN, Active Learning), LBS, fintech

Related Sustainable Development Goals



<https://www.ep.go.kr/>



Source: Eunpyeong-gu District Office, Seoul

Achievements and Anticipated Benefits

Improving the convenience and satisfaction of residents with their local government by simplifying disposal of large waste and eliminating the need to visit community service centers:

- Before the introduction of this system, residents had to report large objects they intended to discard either by visiting a local community service center or logging onto the district office's website. They had to pay the service fees and obtain the necessary stickers, which were then attached to the objects being discarded. Until the district office authorized collection agencies, these large objects remained abandoned in the streets, with the stickers sometimes destroyed or lost, complicating the collection process.

Reducing workload on local civil servants and saving time and money, with economic and social benefits valued at KRW 9.12 billion a year

Minimizing the need for manual recordkeeping on massive waste, reducing civil complaints about uncollected objects, and enhancing the efficiency of local government services

Improving living conditions and quality of life for locals by ensuring the timely collection of waste

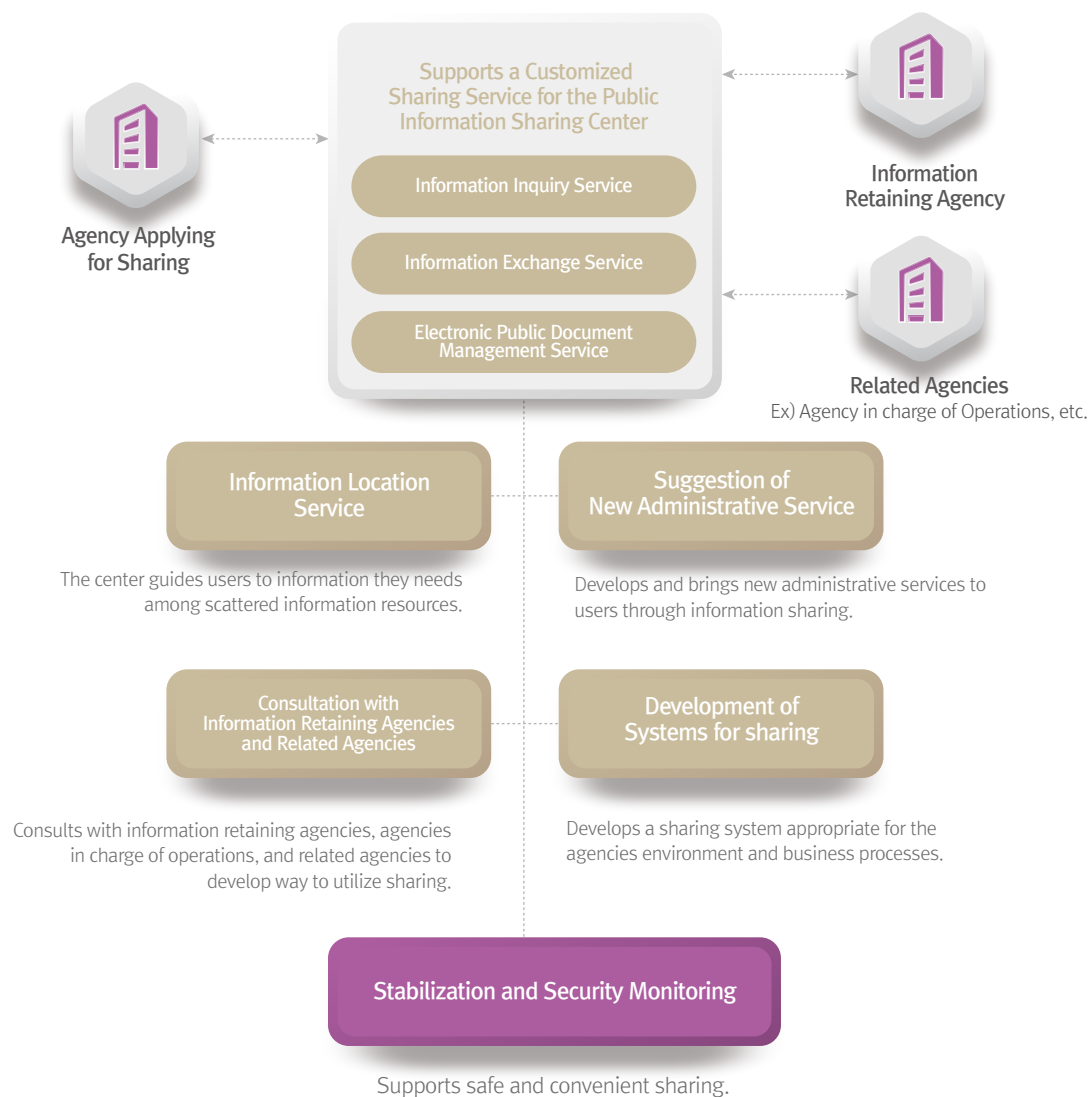
Public Information Sharing

Ministry of the Interior and Safety (MOIS)

Overview

In Korea, civil servants can access and view the documents when they need to handle various tasks and services instantly over the authorized networks without requiring citizens or other such stakeholders to submit such documents.

The creation of a government-wide administrative information system has realized a seamless work process based on extensive interdepartmental and public-private collaboration, and dramatically increased the efficiency of government services and functions.



Sustainability topics

- ✔ Social sustainability
- ✔ Economic sustainability
- ✔ Environmental sustainability

Applied ICT

Deep learning (GAN, Active Learning),
LBS, fintech

Related Sustainable Development Goals



<http://www.pisc.go.kr>

Features and Functions

Electronic Document Management: No need to visit a government office

- Koreans today can apply for government services online. The documents they submit and the documented results of their processed requests are digitalized for easy the access and use later.

The system provides comprehensive packages of documents needed for civil servants to process applications for government services. These packages include document authentications, PDF conversions, specialized viewers, and 2D codes for voice recordings.

Administrative Information Viewing Service: Dramatically simplified handling of requests for government services.

- Documents of 160 types needed to process over 2,500 types of government service requests (including applications for passports and old age pension benefits) can now be viewed electronically.

e.g.) Confirmation of recipient of social welfare



1. Resident Registration household(individual) Register
2. Building Register (General)
3. Certificate of Automobile Tax Payment
4. Certificate of Local Tax Payment
5. Certificate of Foreigner Registration
6. Automobile Registration Ledger (Gap)
7. Certificate of Military Service
8. Land (Forest Land) Cadastre

Public officers gather eight different types of paper-based documents adove from related agencies and confirm the documents.



Online Inquiry using the Information Inquiry System

Public officers directly inquire and confirm all the required documents online.

Public Information Sharing

Ministry of the Interior and Safety (MOIS)

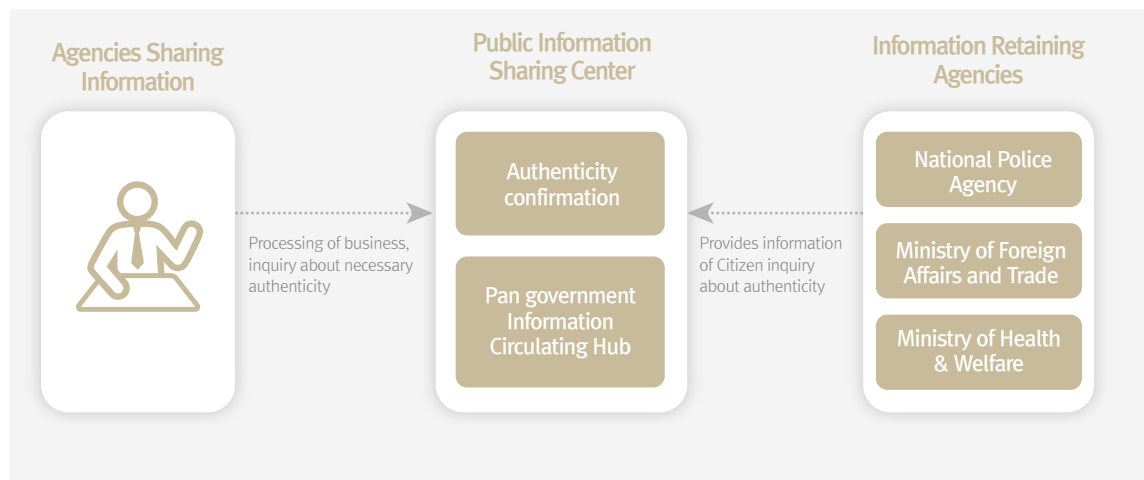
Tailored information displays

- The system protects personal information and privacy by excerpting and displaying only documents and knowledge necessary for the given task and nothing else.

Authentication service

- Certain types of information, such as whether a given citizen completed his military duty or paid taxes, are provided in a yes-or-no format only to prevent the abuse of personal information.

The system provides authentication what civil servants need in real time to streamline their work processes.



Sustainability topics

- ✓ Social sustainability
- ✓ Economic sustainability
- ✓ Environmental sustainability

Applied ICT

Deep learning (GAN, Active Learning),
LBS, fintech

Related Sustainable Development Goals



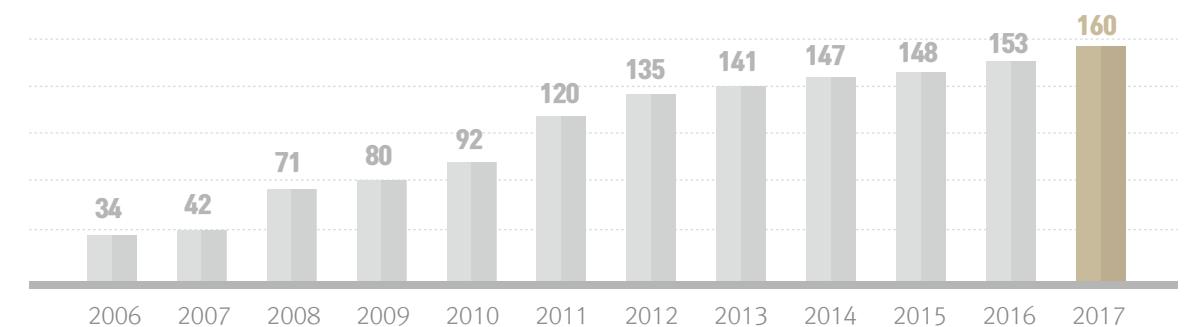
<http://www.pisc.go.kr>

Achievements

Government services dramatically simplified without requiring submission of hard documents

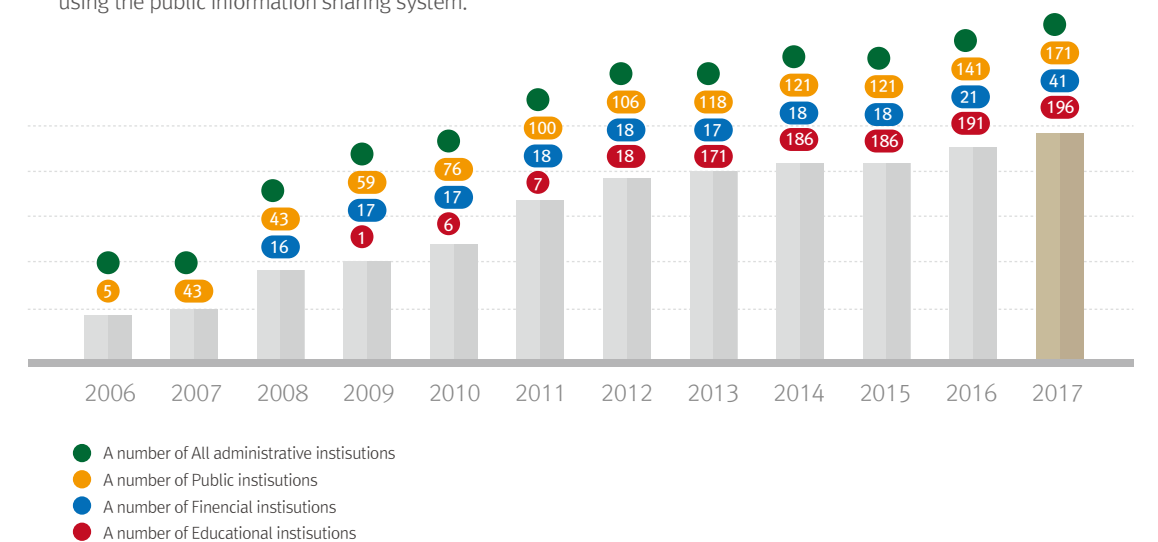
- Without having to visit government offices to submit required documents, citizens can now obtain 160 types of government documents they need, including original and certified copies of resident registry records, seal certificates, diagnostic reports, and income statements.

Unit : Number of types of government documents provided online



Increasing participation by administrative institutions in public information sharing

- All administrative institutions, 174 public institutions, 41 financial institutions, and 196 educational institutions are using the public information sharing system.



Together with Civil Society: Digital Social Innovation Project (2015–2018)

National Information Society Agency (NIA)

Overview

The rapid evolution of intelligent information technologies, growing social complexity, escalating conflicts between groups, and the persistent disparity of economic and cultural resources between local communities raise new and diverse policy issues that cannot get solved with state-centered solutions alone. There is, in other words, an increasing demand for innovative solutions to these social problems.

The National Information Society Agency (NIA) launched the Digital Social Innovation Project in 2015, with the goal of bringing diverse stakeholders (individual citizens, communities, social enterprises and cooperatives, governments, and the public sector) together to deal with difficult social problems, such as inequality, polarization, air pollution, population aging, and the collapse of rural communities. The project encourages and enables participants to devise innovative applications using the latest information communication technologies (ICTs), such as Big Data, cloud, mobile applications, and devices, to solve these issues.

Digital Social Innovation

Concept

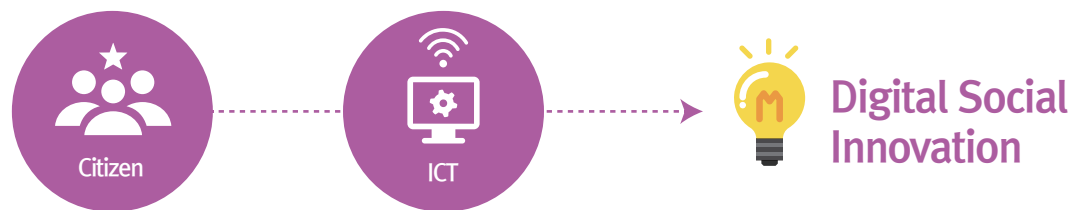
Organizing a process by which **the general public, through active participation and innovative digital technologies**, can solve various social problems and realize **social values**.

- ① Civic leadership, ② New ideas, and ③ Cooperation are the keys to solving social problems.

Focus

Promote digital social innovation in diverse ways reflecting the changing times and technologies.

- Foster attempts that prioritize **social values** over economic ones. Shift the social problem-solving process from a top-down, state-centered approach to a bottom-up, public-centered one.
- Emphasize ICTs not only as important tools for digital social innovation but also as instruments to encourage and maximize the participation of diverse citizens by allowing anyone capable of using ICTs and related devices to participate in social innovation daily.



Sustainability topics

- ✓ Social sustainability
- ✓ Economic sustainability
- ✓ Environmental sustainability

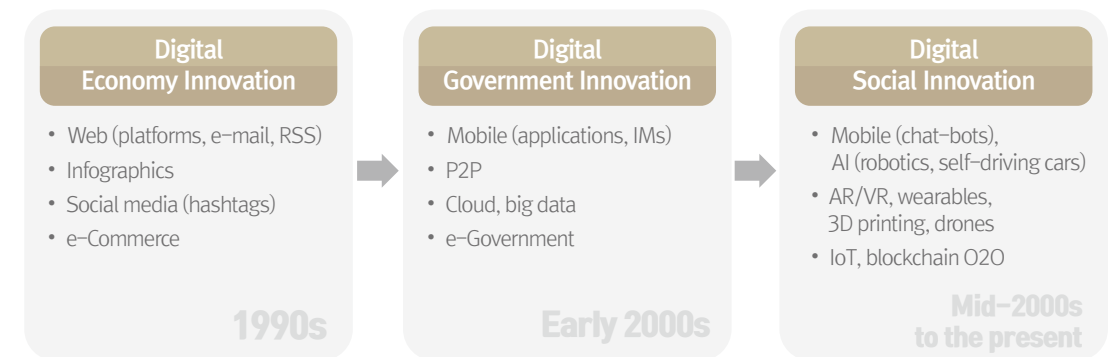
Applied ICT

IoT, Digital technologies
such as 3D, Bigdata, Cloud, etc.

Related Sustainable Development Goals



The emergence of 'Digital Social Innovation'



Korean Approach to Digital Social Innovation: ICT Good Imagination

- The ICT ("I Create Towns") Good Imagination Project was launched in 2015 as an innovative policymaking model centered on solving local community problems. The project brings citizens and their national and local governments together to work on pressing local issues in ways that reflect social values. Experimental and pioneering "Good Imagination" models are shared as the best-practice cases with other nongovernmental organizations and local governments participating in the Digital Social Innovation Project toward encouraging civic participation and promoting social values.

Korea has expanded one of the ICT Good Imagination models into the 'Gonggam-e-Gadek, to be applied by all local governments across the country, starting in 2018.

Three examples of ICT Good Imagination projects are shown with their respective screenshots and descriptions:

- Cheongju**: Safe Yellow Bus Campaign (2017). Screenshot shows a mobile app interface for a bus campaign.
- Buk-gu, Gwangju**: Yongbong Community Building Project (2016). Screenshot shows a community building project interface.
- Hack Your Life**: Mommy App for Immigrant Women (2018). Screenshot shows a service menu for the app.



Korea e-Government
Best Practices for
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