DEVELOPMENT PATH OF DIGITAL GEORGIA

Digitalization & Transparency

June 21, 2022

DIMITRI GUGUNAVA
LEPL Digital Governance Agency
Ministry of Justice of Georgia

General Overview

Area: 69,7 km²

Population: 3,7 mln

Life expectancy: 73.26

Capital: Tbilisi (1,2 mln)

Currency: Lari (GEL)

Official Language: Georgian (also Abkhazian – in Abkhazeti)

GDP per capita: $4,346 (nominal, 2018 est.)

SOVIET HERITAGE

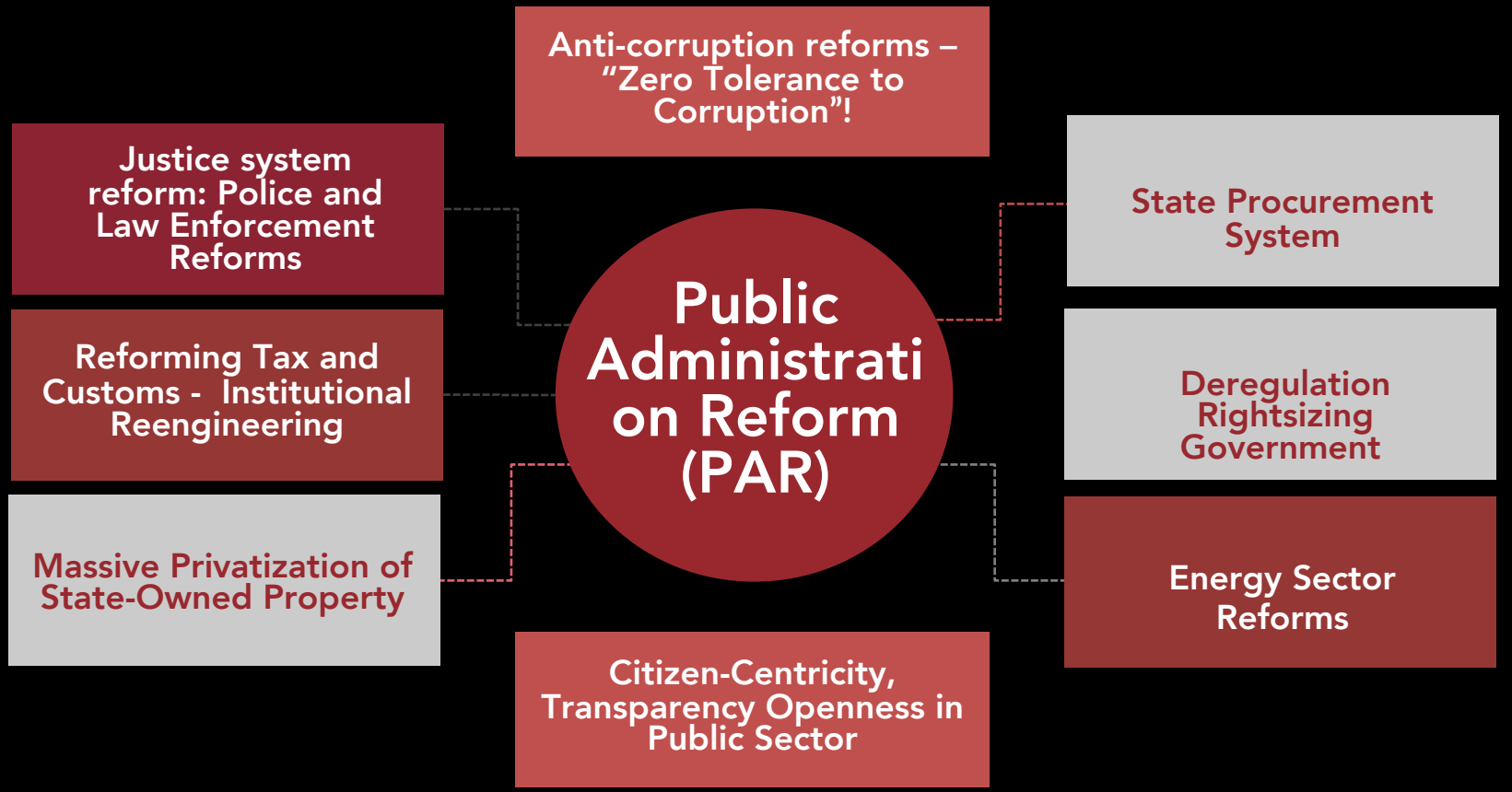
Property Registry - 2004

Business Registry - 2006

Strategy, Policy, Law.

E-GOVERNMENT INITIATIVES - OVERVIEW (2006 - 2022)

- Property registration, eAbstracts
- Business Registry
- Civil Registry
- eID and eSignature
- Biometrical Passport
- eFiling system in the Ministry of Finance of Georgia- 99% of taxpayers are actively using this system;
- Automation of tax and customs systems;
- eApostille
- Case management system of tax dispute resolution
- Central data storage and reporting system
- Electronic Treasury project. eTreasury
- Cash register management automation project-planned for next year;
- Electronic system for VAT refund
- Automation of the Ministry of Internal Affairs;
- Case management program for Ombudsman;
- Computerization of schools
- Schools are equipped with computers connected to internet
- Netbooks for all first graders
- Students' Information System
- Unified state registry of public registries and information systems
- National school exam online
- Automated case management system for court system;
- Centralized criminal case management is being introduced in judiciary
- eProcurement
- eAuction of state property
- eAuction of real estate of Tbilisi City Hall
- Automation project of Enforcement Bureau
- eNotary project
- Electronic Legislative Herald
- Automation project of Social Subsidies Agency
- Trade Facilitation system (TFS)
- e-Healthcare system under development
- Core Banking System of National Bank
- Electronic Chancellery systems - implemented in all ministries.
- Georgian Government Gateway
- Citizen's Portal
- Electronic monitoring system of financial declarations of political figures.
- Electronic case management in Tbilisi municipality for construction permits
- Open Data portal
- National Strategy on Digital Governance (ongoing)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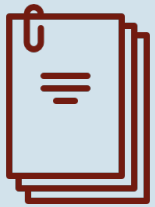

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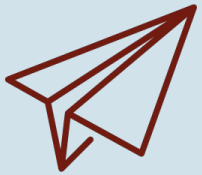

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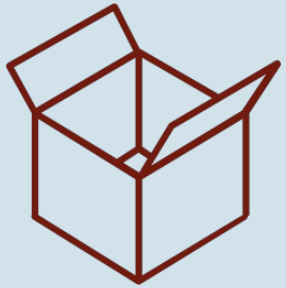

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Service Delivery Accessibility

Public
Service
Hall

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COMMUNITY CENTRE
საზოგადოებრივი ცენტრი
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Georgian Governmental Gateway (G3)

UNIFIED PORTAL FOR ELECTRONIC SERVICES

MY.GOV.GE

ONCE ONLY, ONE-STOP-SHOP FOR HUNDREDS OF E-SERVICES

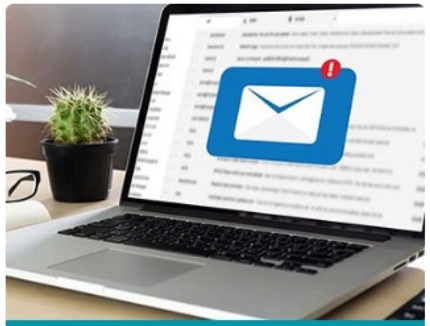
DIGITAL GOVERNANCE AGENCY

MY.GOV.GE

Log In

Main > Main services

Personal data



Correspondence with public institutions

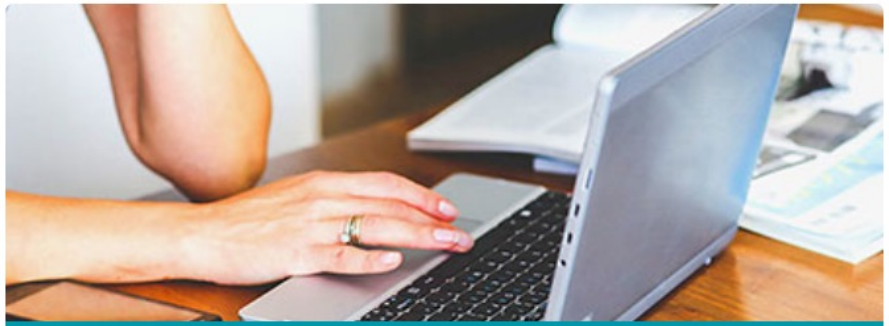
Participation in legal acts

Vehicles

Real estate

Border crosing

Debtor's registry



Information about the enforcement proceedings

MAIN CONCEPTS OF THE PORTAL

Once Only

- Safe and reliable solution for bringing e-services closer to citizens, entrepreneurs, and government officials
- E-services are available 24/7
- Channel for Electronic Communication with different public entities
- Once only principle is realized within the portal

User-friendly Ecosystem

- Designed in a simple and clean manner to help visitors find the information they need quickly and easily
- User-friendly ecosystem
- Customer-centric manner
- Registration is possible with Georgian e-ID cards; username and password are also possible

Single Window Concept

- MY.GOV.GE has recently added a dedicated section intended solely for legal entities
- Portal – is virtual single window concept for Citizens and Legal Entities

USERS, REGISTRATION/AUTHORIZATION ON THE PORTAL

DIGITAL GOVERNANCE AGENCY

Registration of the user on the portal is possible with these options:

- Username and password
  (in order to get the username and password, it is optional to visit Public Service Halls/Community Centers only once
- Using of Georgian eID card (residence permit card) when the registration can be performed by users independently, no needs of visits to PSH or CCs)

Authorization of the user:

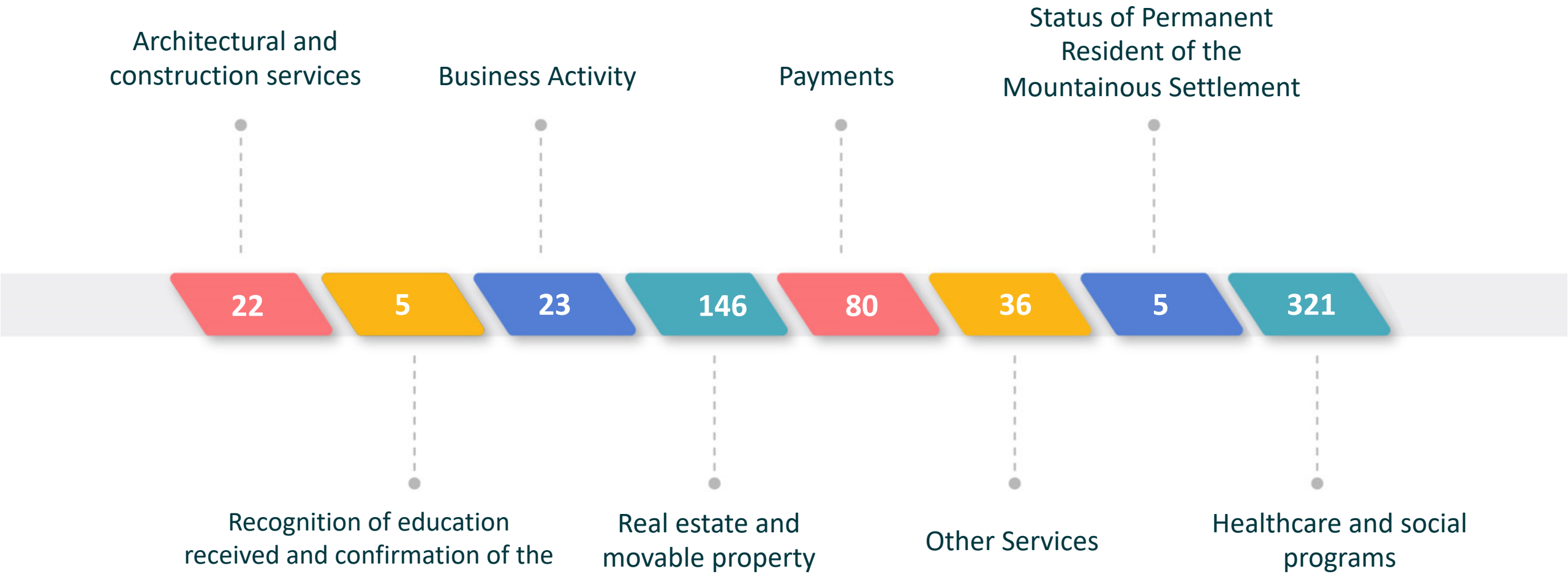
- Using of Georgian eID card (residence permit card)
  (card reader and authentification pin 1 is optional)
- Username and Password
  (Authorized user is able to use all services fully, integrated on the portal, but using of Georgian eID is neccessery in order to sign digitally)

BENEFITS OF THE PORTAL

- A possibility of unique authentication on the portal
- Access to all information about the authorized user, existing in different public entities
- Access to the data, existing and defining in civil acts and other documents without extra need of physical visit
- A possibility to receive more than 700 services online and with the concept of one window
  (It is possible to fill the application easily, attach the documents to be submitted, pay the fee necessary for the service, make qualified electronic signature and send the signed application and then track its processing, receive an answer and etc.)
- A possibility of using qualified electronic signature and stamp
- To involve and invite the third parties to sign the document digitally and track this process itself
- Issuing of electronic power of attorney
- Electronic storage of documents
- Private space for legal entities

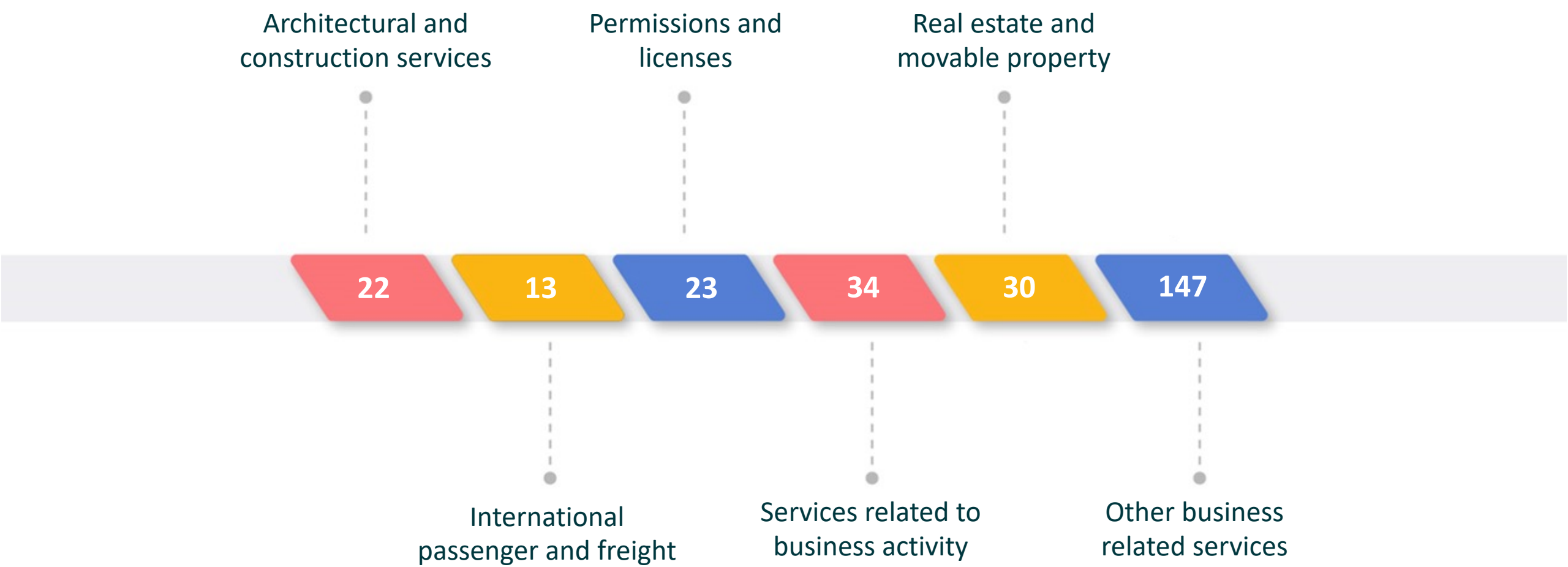
SERVICES FOR CITIZENS – 638

DIGITAL GOVERNANCE AGENCY



SERVICES FOR LEGAL ENTITIES – 269

DIGITAL GOVERNANCE AGENCY

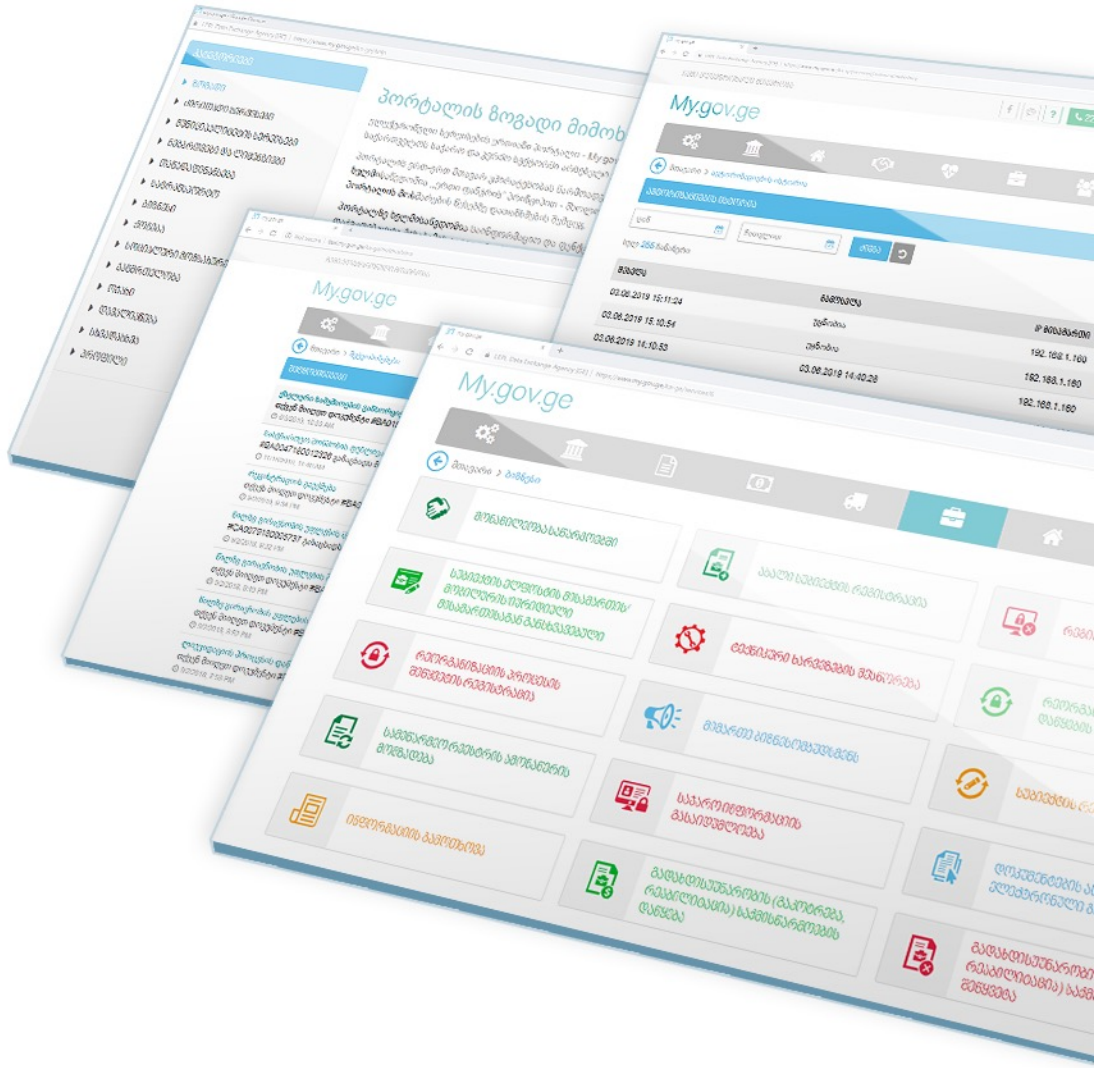


THROUGH THE PORTAL IT IS POSSIBLE

- To demand the help from the municipality within the scope of the approved healthcare and social programs
- To use the municipal services related to agreement upon Architectural and construction documents
- To invite the partners' meeting and vote the issues to be discussed electronically
- To communicate with public entities electronically (incl. FOI requests)
- To demand the status of permanent resident of the mountainous settlement
- To get the permissions and licenses regarding different activities
- To register the business

EASY TO USE

- Search component/mechanism
- Sms/eMail notification
- Instruction for users
- Feedback
- History (Authorization, Payments, Using Services)

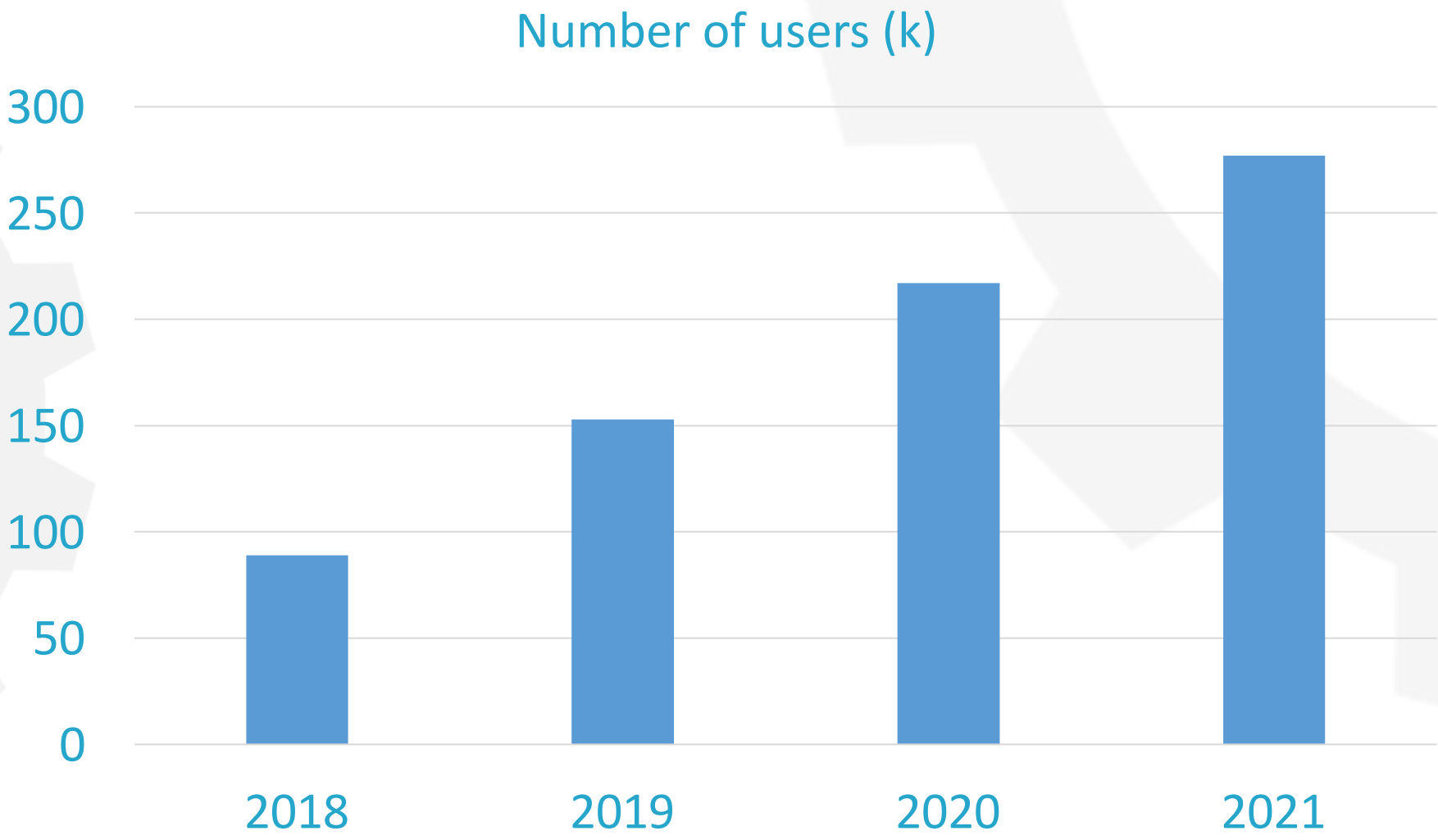


SERVICE INTEGRATION PLAN

DIGITAL GOVERNANCE AGENCY

1. TBILISI CITY HALL
2. REVENUE SERVICE
3. MINISTRY OF INTERNAL AFFAIRS
4. SERVICE AGENCY OF MINISTRY OF FINANCE
5. HEALTHCARE AND SOCIAL SERVICES
6. REAL ESTATE SERVICES

>700 Services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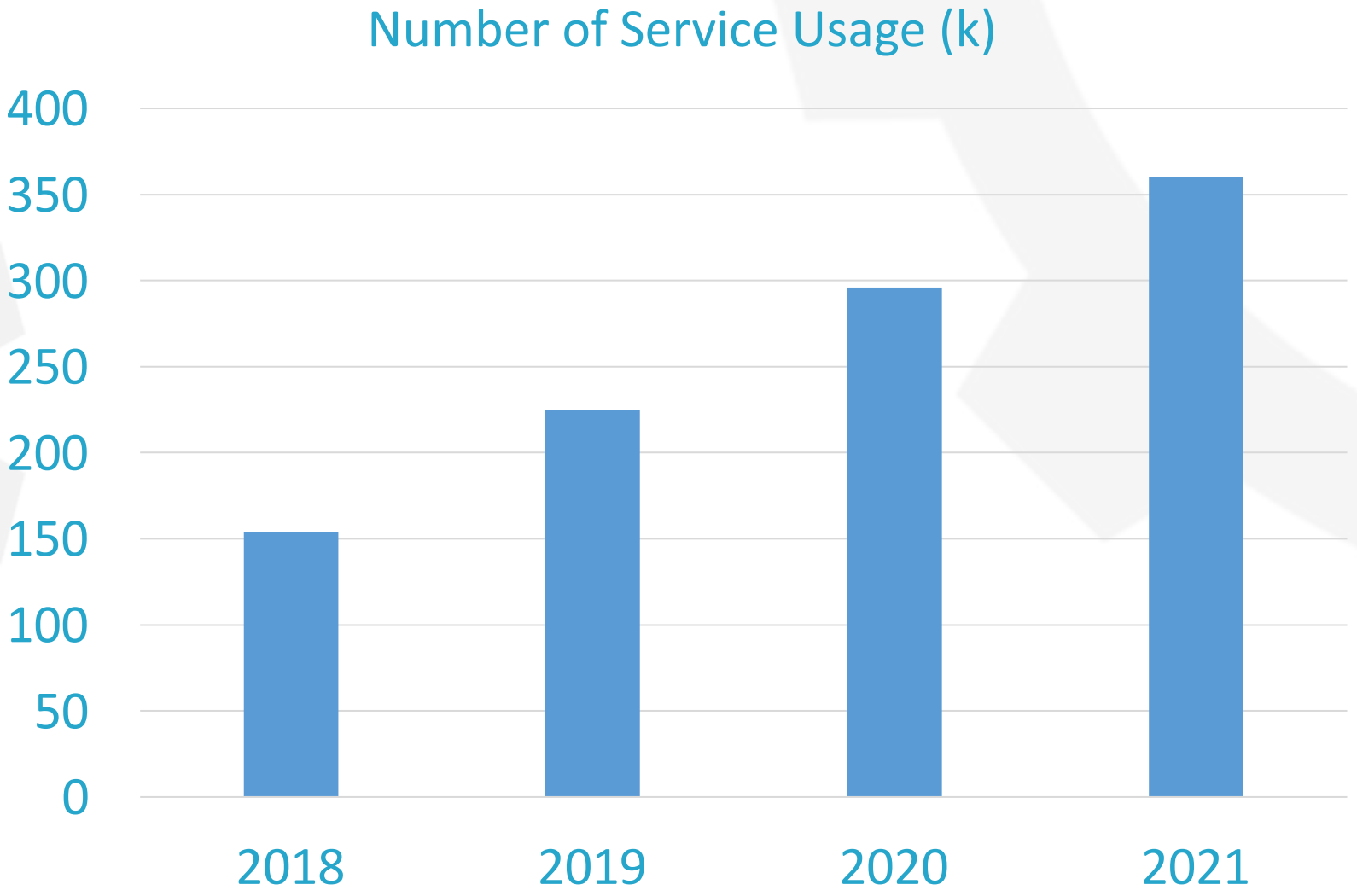
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Open
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Data.gov.ge

roi.gov.ge

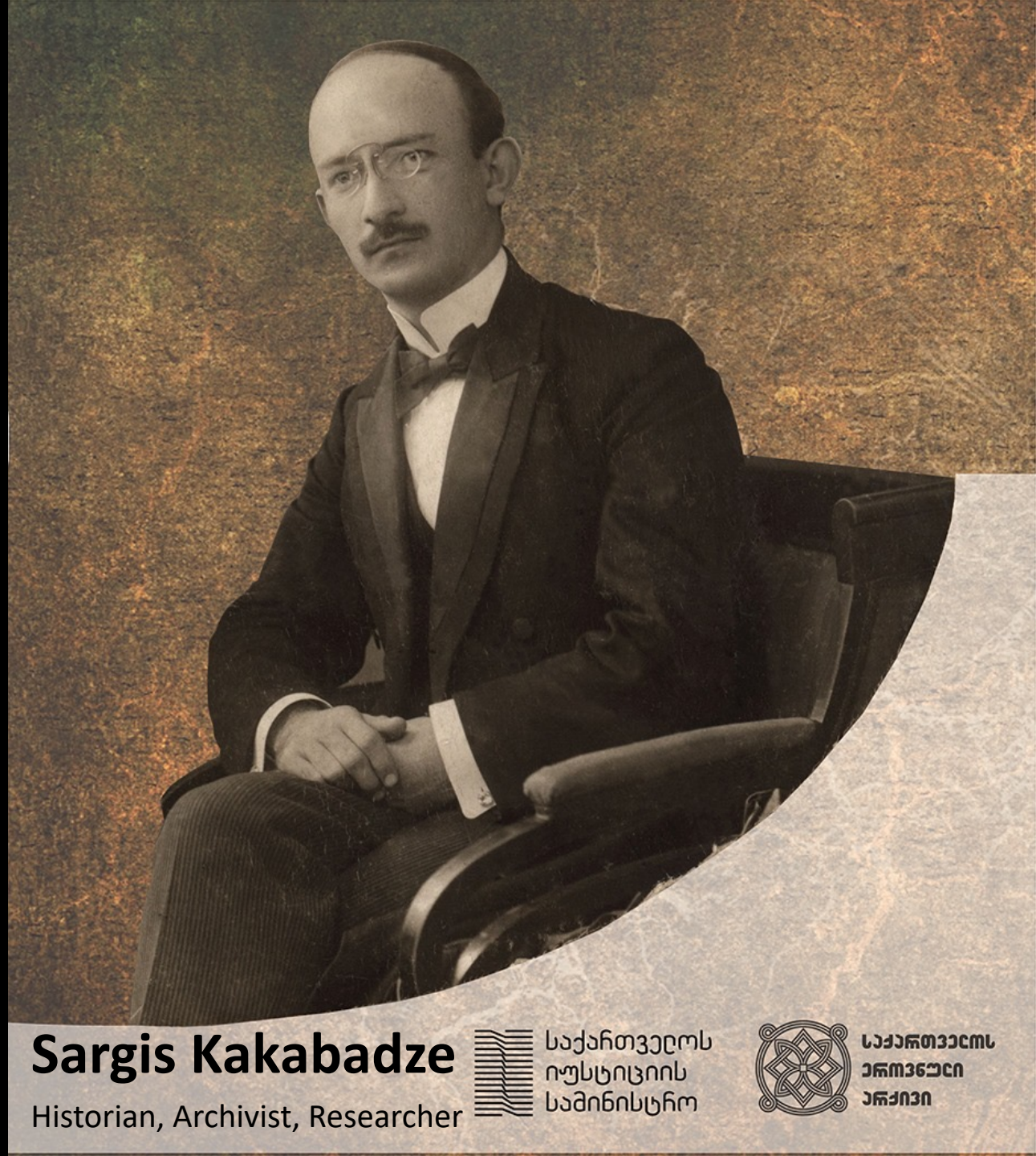
eProcurement

eAuction

eEnforcement

eArchive

for more transparency



Sargis Kakabadze

Historian, Archivist, Researcher

საქართველოს იუსტიციის სამინისტრო

საქართველოს ეროვნული არქივი

Ensuring information and cyber security, privacy and protecting personal data

Personal Data Protection Service

ACCREDITED BY
TI
TRUSTED INTRODUCER

GLOBAL INFORMATION ASSURANCE CERTIFICATION
GIAC

GIAC SYSTEMS AND NETWORK AUDITOR
GSNA

TRANSITS

CERT IS A MARK OWNED BY CARNEGIE MELLON UNIVERSITY
CERT
AUTHORIZED TO USE CERT
Software Engineering Institute
Carnegie Mellon

FIRST
Improving Security Together

IMPACT

bsi.

CISM
Certified Information Security Manager
An ISACA Certification

CRISC
Certified in Risk and Information Systems Control
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SANS

Privacy

Privacy by design

Transparency

THANK YOU FOR YOUR ATTENTION!

OVERVIEW OF GEORGIA'S DIGITAL GOVERNMENT

Digitalization & Transparency

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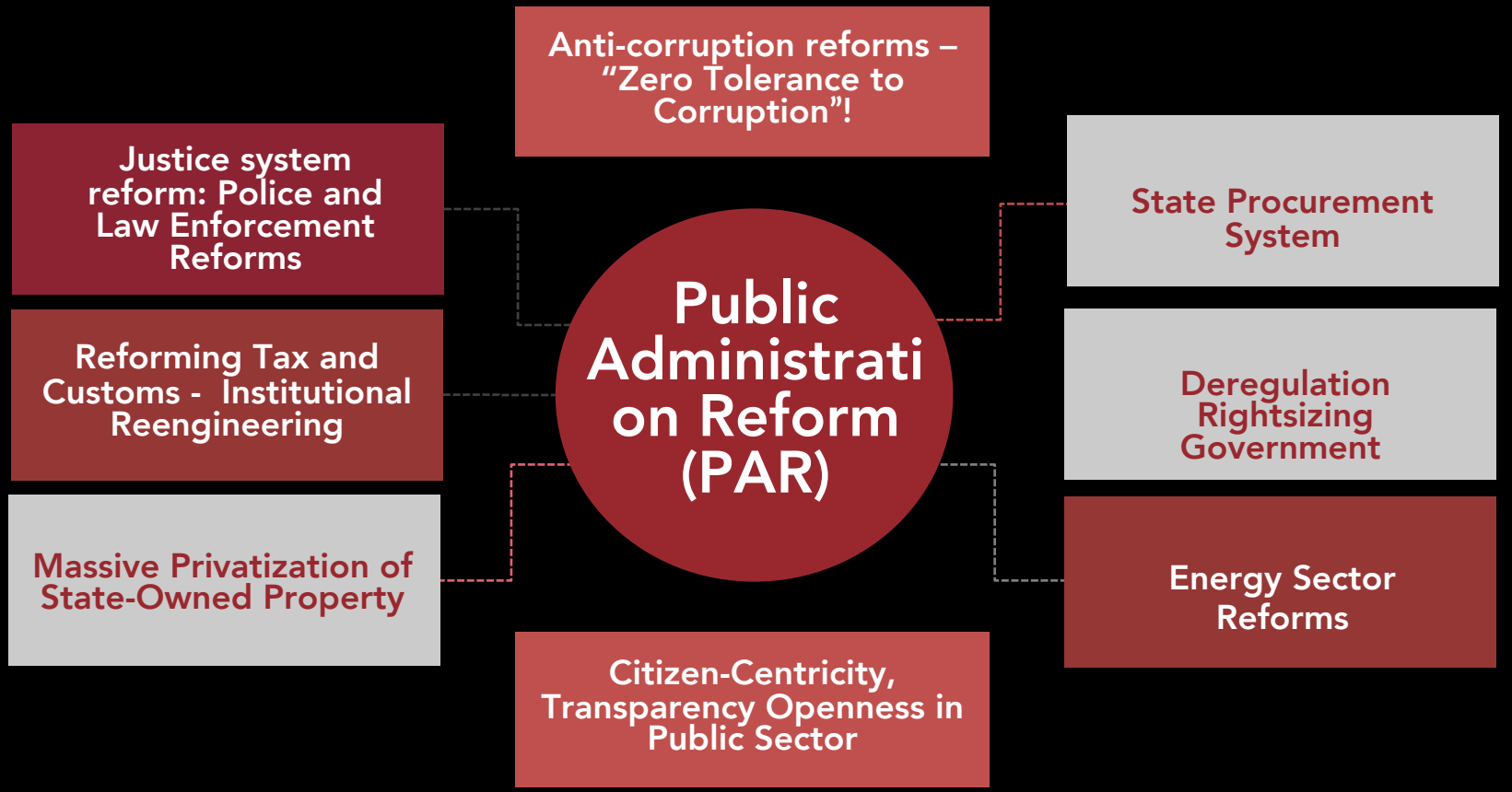
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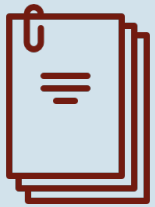

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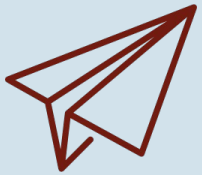

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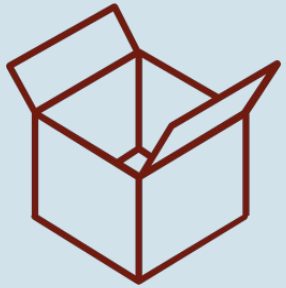

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UNIFIED FRONT DESK

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MY.GOV.GE

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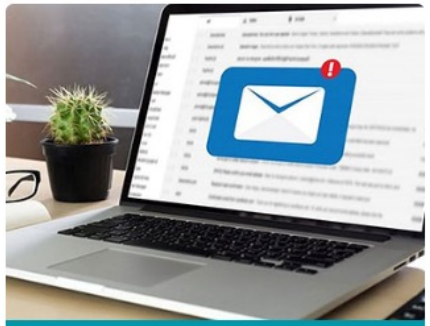

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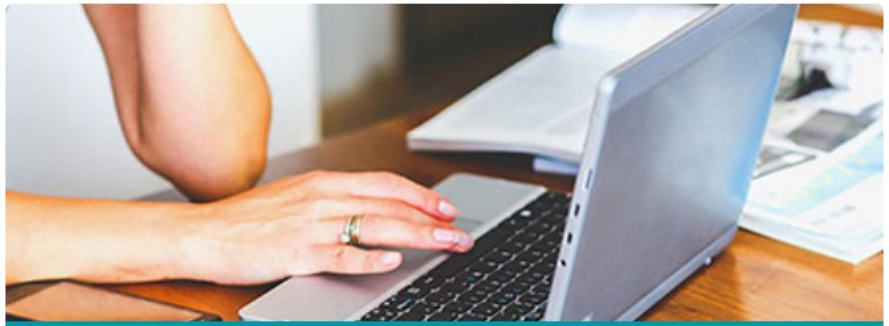

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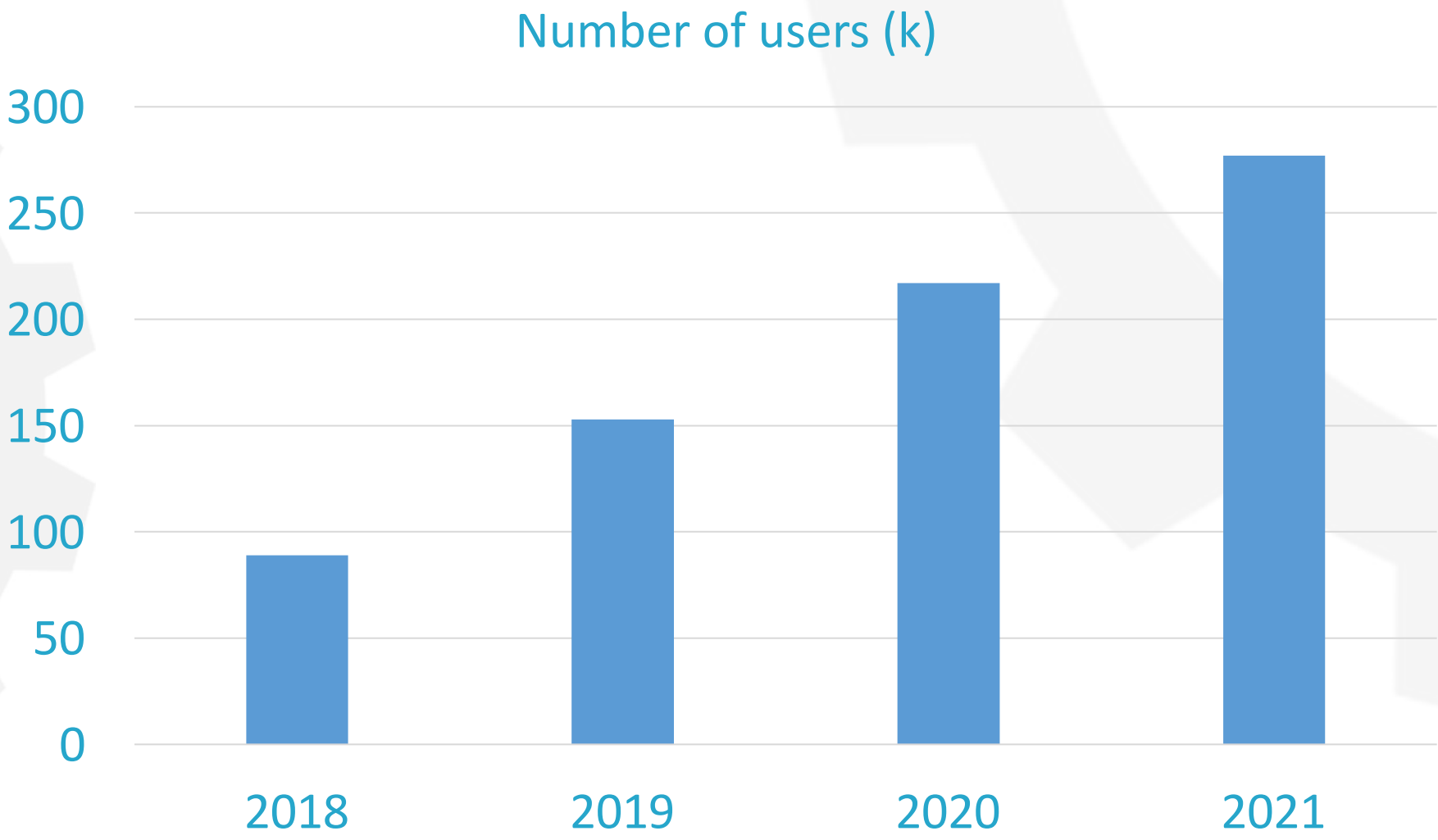
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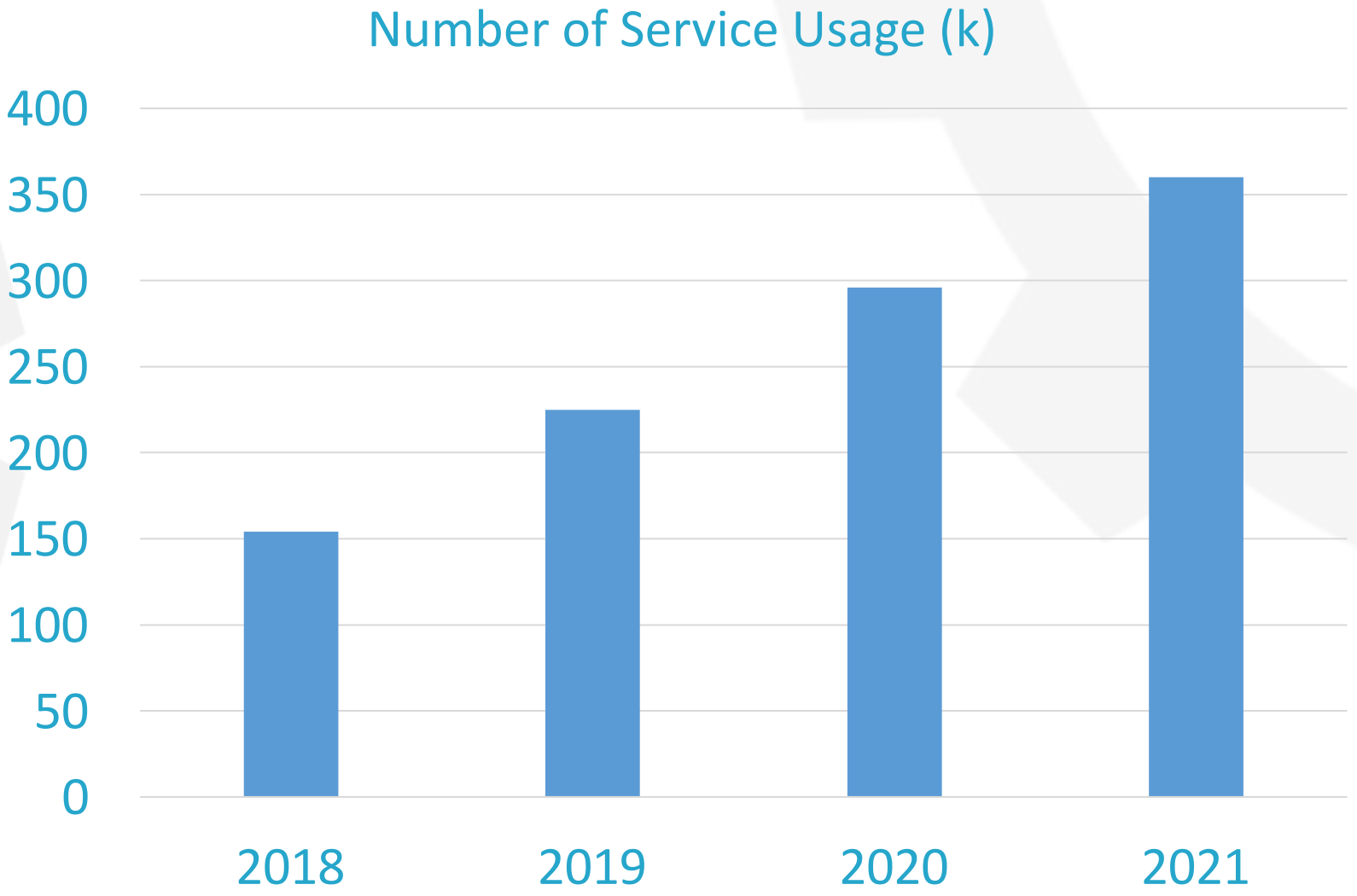
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Transparency

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Digital Governance Agency

The goals of operation of the Agency are as follows:

a) facilitating the introduction of digital governance principles in the process of public governance;

b) providing natural and legal persons with tailored, available, effective and transparent electronic services;

c) ensuring the interoperability of information systems in the process of using modern information and communication technologies;

d) developing and ensuring information security and cyber security within the scope of authority determined by the legislation of Georgia.

THANK YOU FOR YOUR ATTENTION!

국세청
National Tax Service

Digitalization of Tax Administration

NTS, Republic of Korea

June 2022

국세청
National Tax Service

I Footsteps

II NTIS Overview

III Outcomes

IV Way Forward

I Footsteps

국세청 National Tax Service

Step 1
Embark on Digital Age

1971

Introduce computer

1975

Launch GIT

1977

Launch VAT

Step 2
Development

1997

Tax Integration System

2002

Hometax

2005

Cash Receipt

2009

E-tax Invoice

Step 3
Take off into Digital Age

2015

Neo Tax
Integrated System

2019

Establish
Big Data Center

I Footsteps

국세청 National Tax Service

Step 1
Embark on Digital Age

Introduce computer and deal with tax document electronically for the first time

Challenges

- **Launch PIT (1975)**
  - need to integrate all income data by taxpayer
- **Launch VAT (1977)**
  - need to compare sales and purchase data of tax invoice

How to address

- **Introduce computer for the first time (1971)**
  - massive process of tax data acquired from all tax offices

I Footsteps

국세청 National Tax Service

Step 2 Development — Digitalization began in earnest with TIS

Challenges

- **ICT revolution reached doorstep**
  - wide spread of PC
  - increase in internet user
- **Launch taxation on financial income**

How to address

- **Launch TIS (1997)**
  - Nationwide network linked all tax offices
  - Turn most tax affairs into digital phase

I Footsteps

국세청 National Tax Service

Step 2 Development — Digitalization began in earnest with TIS

Challenges

- **ICT revolution reached doorstep**
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How to address

- **Launch Hometax (2002)**
  - provide internet-based e-filing service
- **Launch Cash Receipt (2005)**
  - world 1st infrastructure on cash transactions
- **Launch e-Tax Invoice (2009)**
  - capture false tax invoice

I Footsteps

국세청 National Tax Service

Step 3 Take off into Digital Age — Launch NTIS by integrating separated systems

Challenges

- **Separated IT system**
  - increased operating cost
- **Rise of Open Standardized System**
  - Replace main system
- **Big Data Area**
  - Challenges in integrated analysis

How to address

- **Launch NTIS (2015)**
  - provide various and faultless tax notice
  - Basic framework for 4th industrial revolution

NTIS
NEO TAX INTEGRATED SYSTEM

II NTIS Overview

국세청 National Tax Service

Overview

Establishment of NTIS

Budget
202B KRW

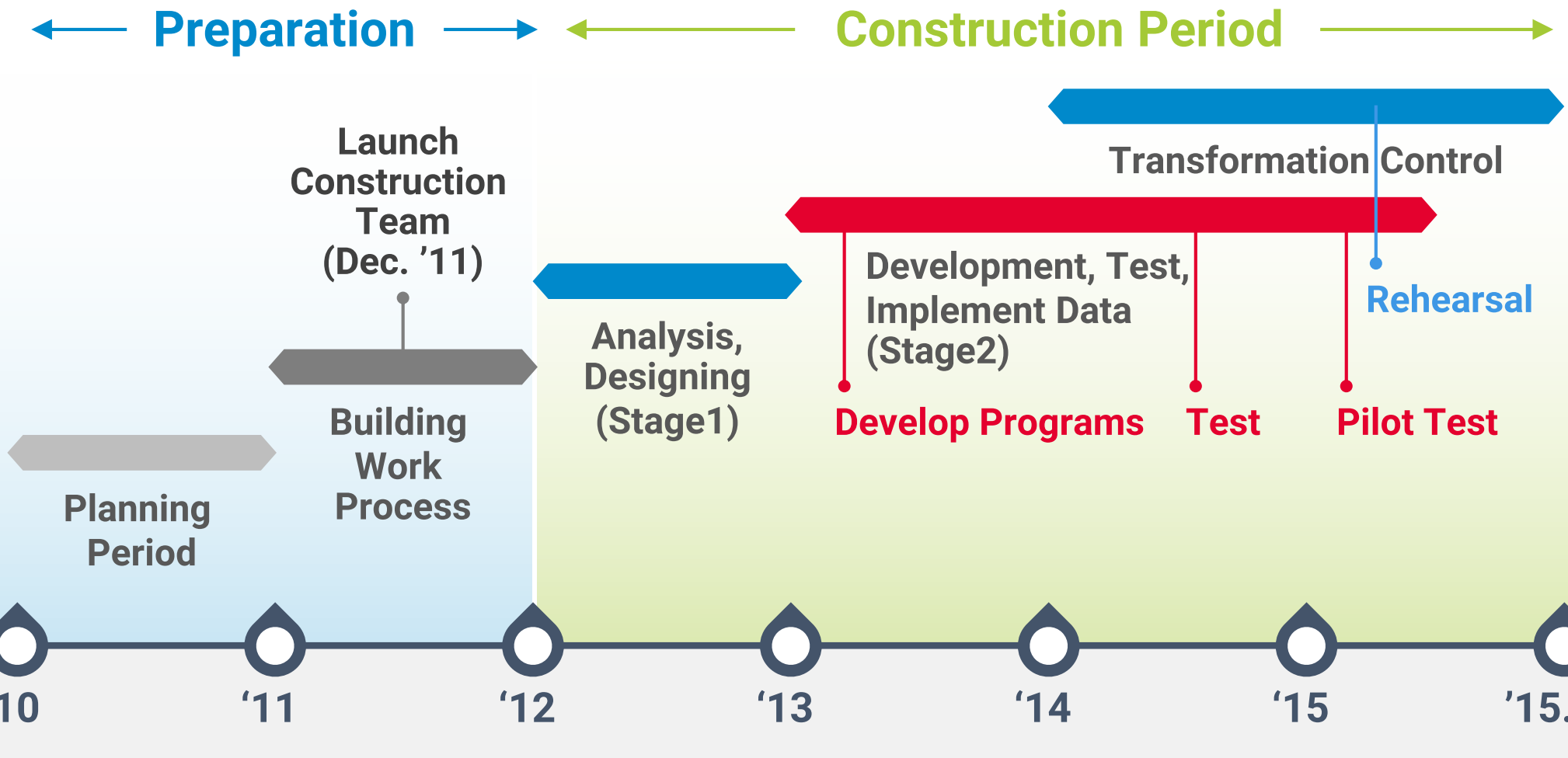
Workforce
560 people

Program
22,300 programs

Data Transformation
180B cases

II NTIS Overview

Process — Establishment of NTIS



II NTIS Overview

Structure of NTIS

Internal Portal

A platform of all internal work process **for NTS staffs**

Hometax

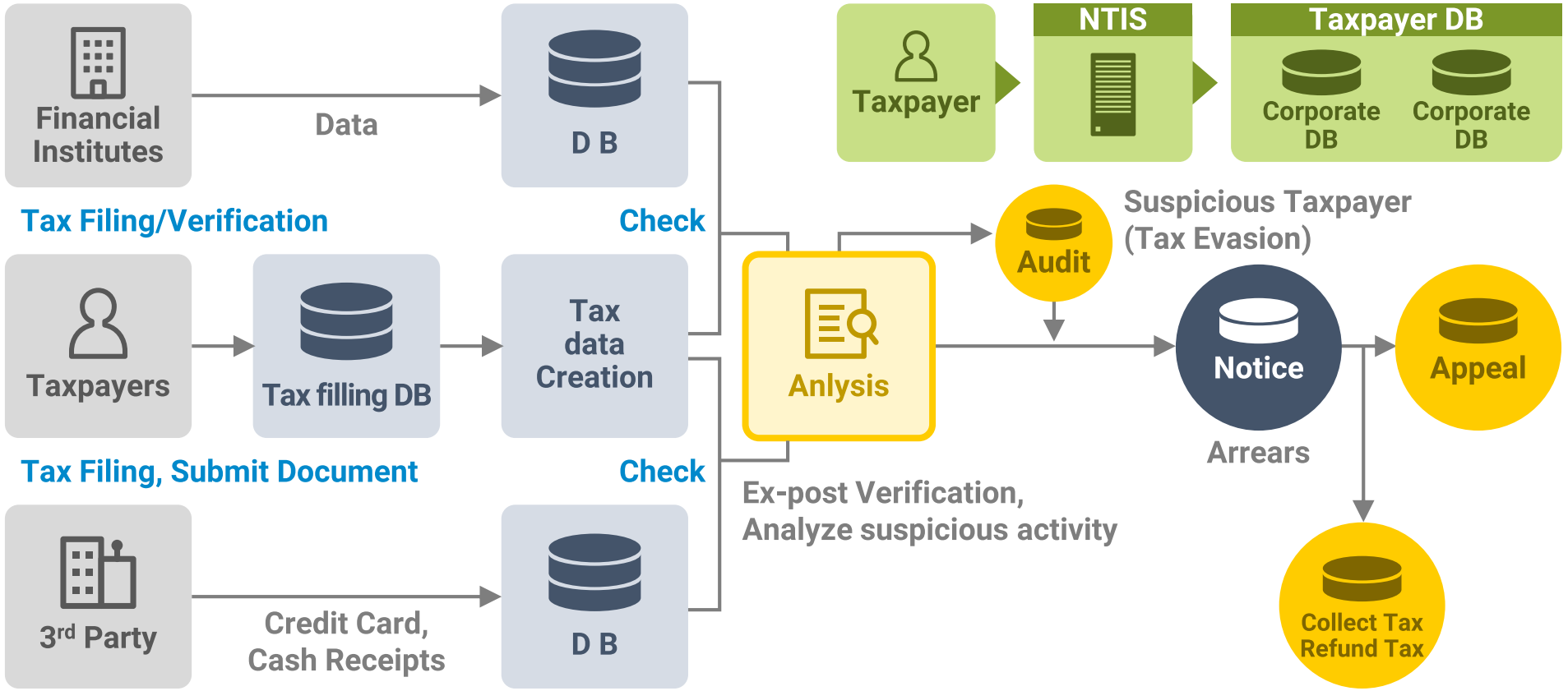
An online tax service platform **for taxpayers**

II NTIS Overview

Work Platform

Work Process

- Registering Taxpayers
- Receiving Tax Returns
- Collecting Data
- Analyzing Data
- Conducting Tax Audit
- Managing Tax Appeal
- Collecting Tax

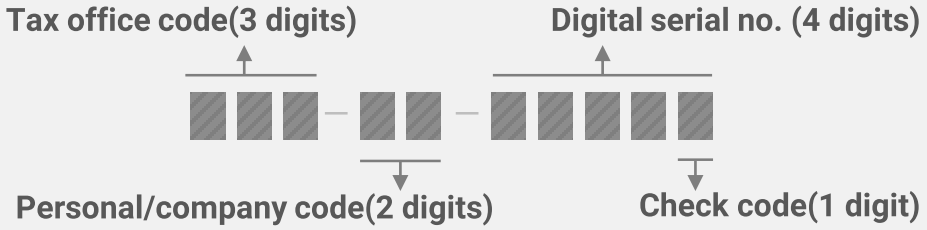


II NTIS Overview

Tax DB Platform

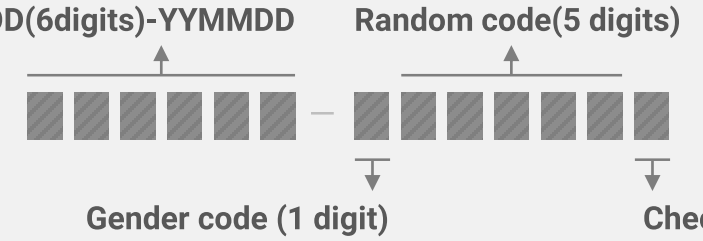
Business Registration ID (Tax ID)

Provide 10 digit business registration ID



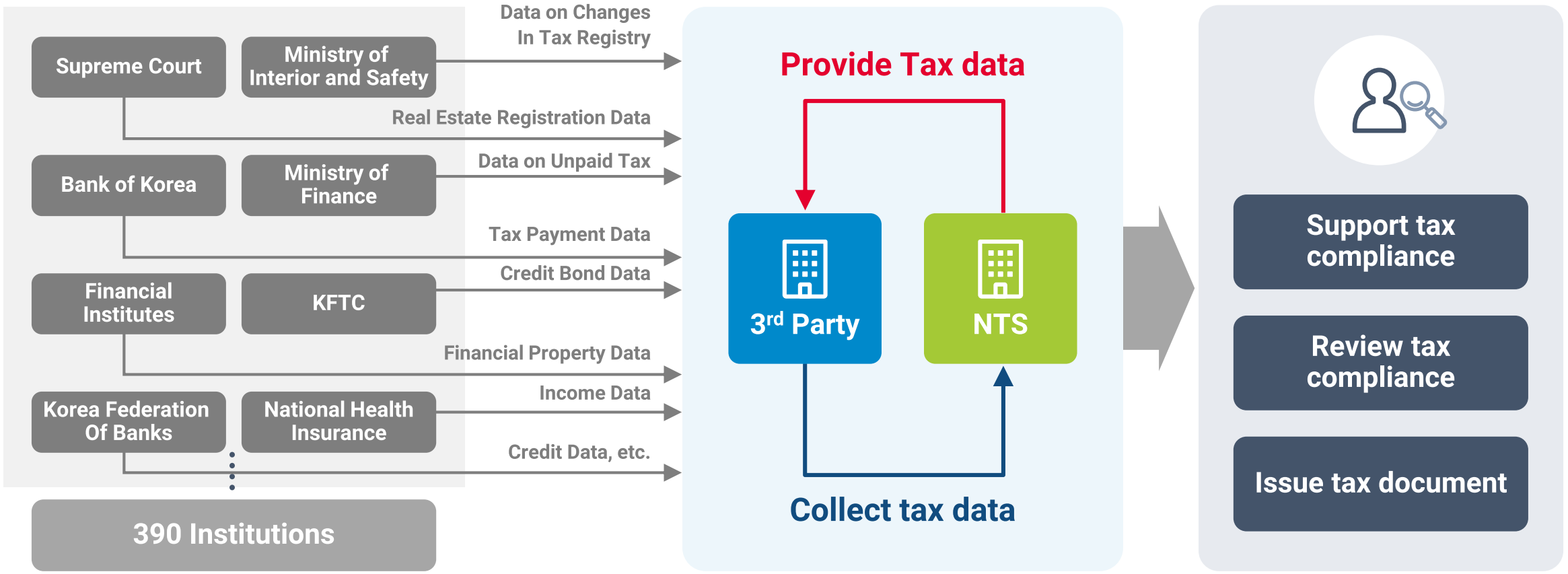
Resident ID

Collect 13 digit resident ID from other government bodies



II NTIS Overview

Cooperation with 3rd Party Institutes



II NTIS Overview

Integrated Data Management

Internal/External Data

Data on Taxpayer Property
- Real Estate
- Deposits
- Movable Assets
- Insurance
- Stock
- Membership
- ...

Data on Income
- Global Income Tax
- Corporate Income Tax
- Capital Gains Tax
- ...

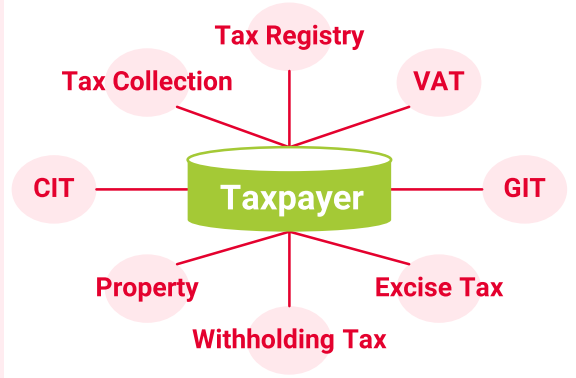
Data on Taxpayer Expenditure
- Cash Recipt
- Credit Card
- ...

Data from 3rd Party
- Financial Institution
- Governmental Body
- ...

Building DB

Data Sector

By Group



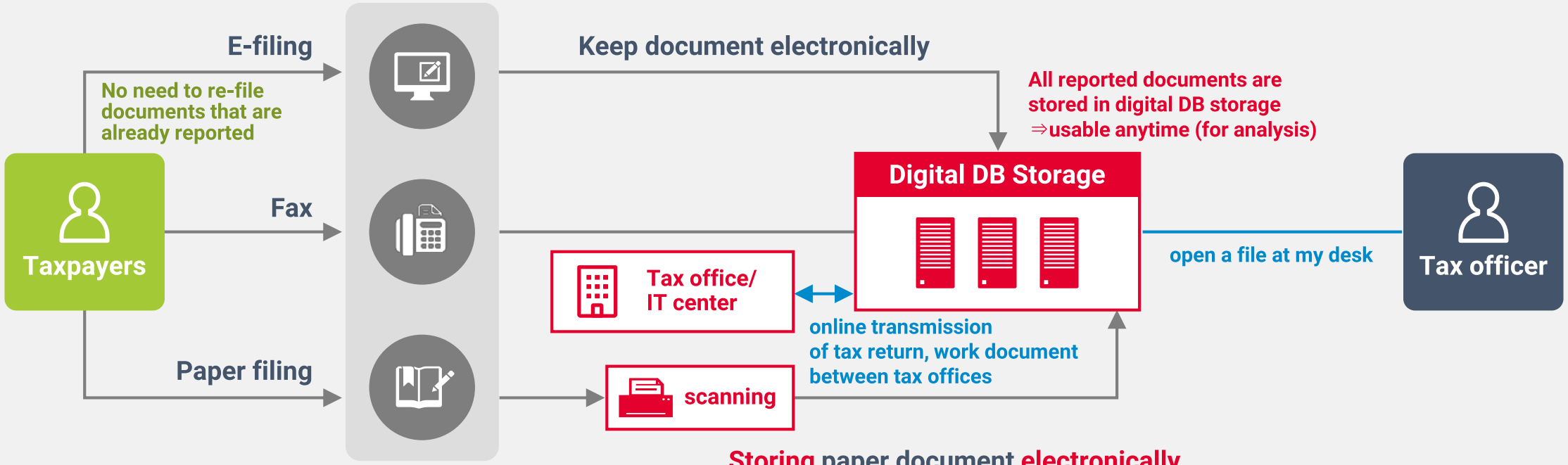
By Analysis Purpose
- Tax/Statistics Table
- Taxpayer Analysis
- Expenditure Analysis
- Hidden Assets of Delinquent Taxpayer

Internal Portal System

NTS Officer
- Conduct Tax Audit
- Collect Tax Arrears
- Manage Tax Resource

Paperless work process

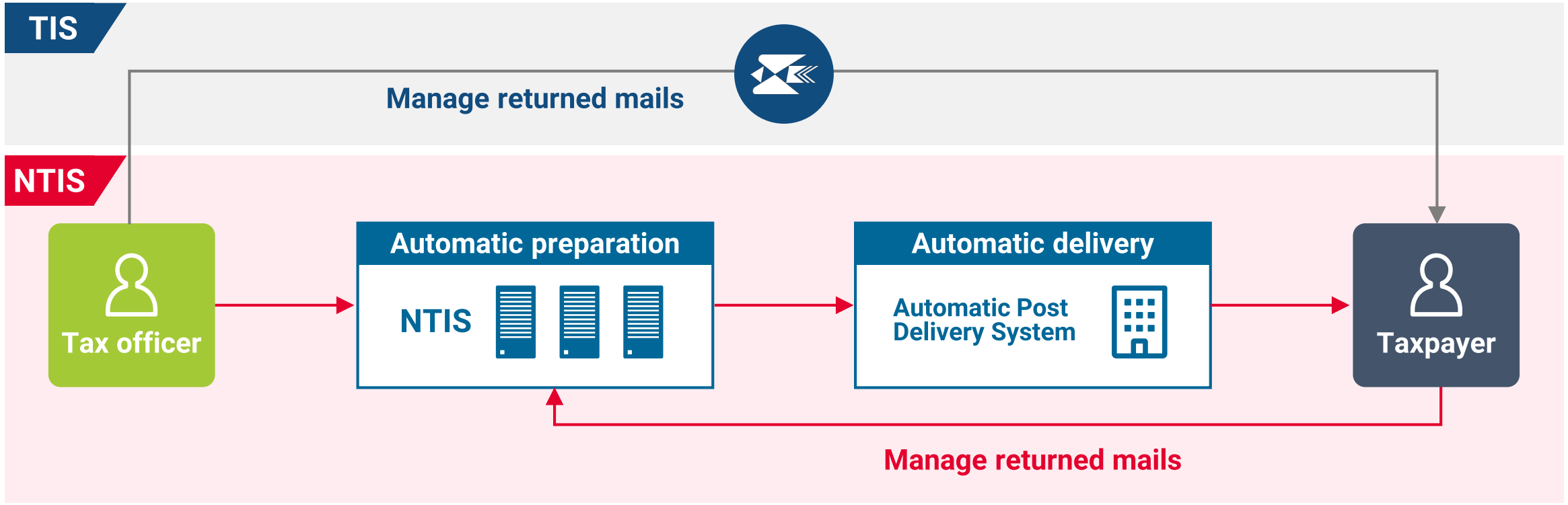
Digital DB Storage System



II NTIS Overview

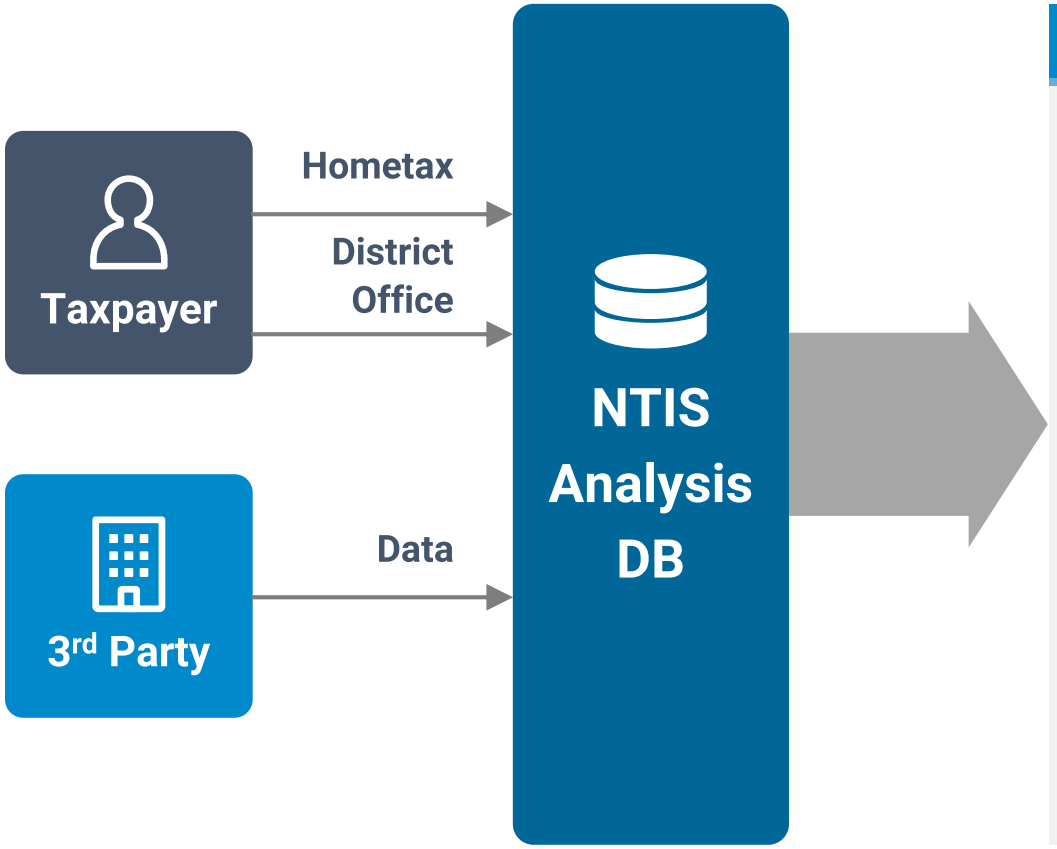
Automatic post delivery system

Change in post delivery process via Automatic Post Delivery System

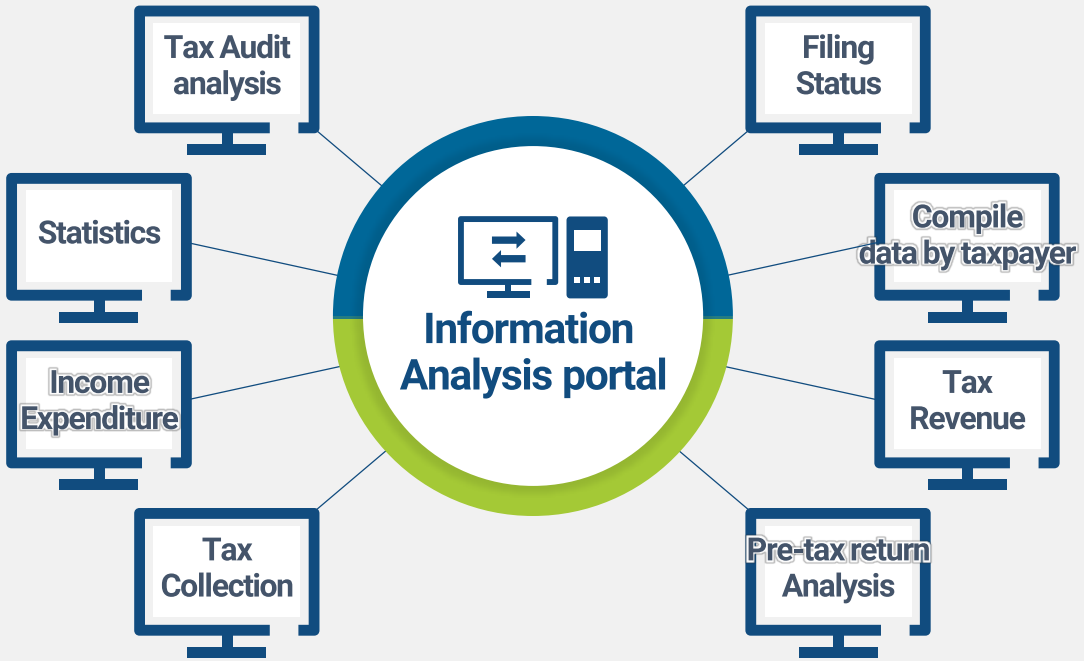


II NTIS Overview

Information Analysis Portal



Information Analysis System



II NTIS Overview

Guidance on Tax Compliance

Provide Various Pre-analysis

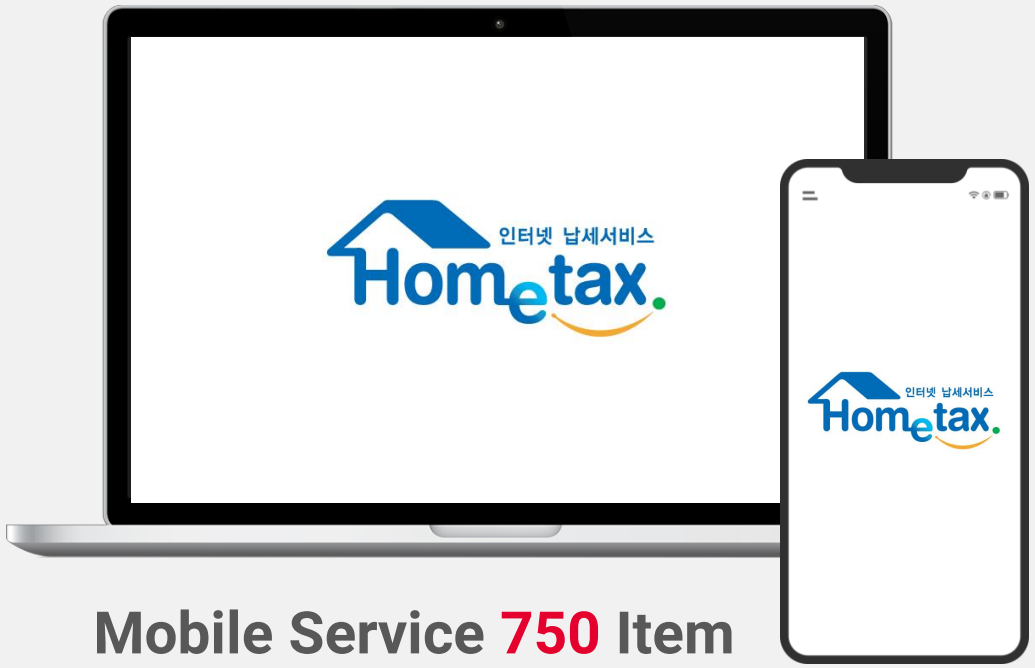
- Risk areas by company
- Comprehensive analysis by taxpayer
- Transaction Data
- Data collected from The 3rd Party

Improve Accuracy of Analysis

Provide Guidance on Tax Compliance

II NTIS Overview

Overview of Hometax



Mobile Service **750** Item

- **No.1** Public administration site **No.1**
- **365 D** Operating hour **24/7**
- **30 M** Subscriber **30M** people
- **14 B** Visitor **13,393M people**(total)

II NTIS Overview

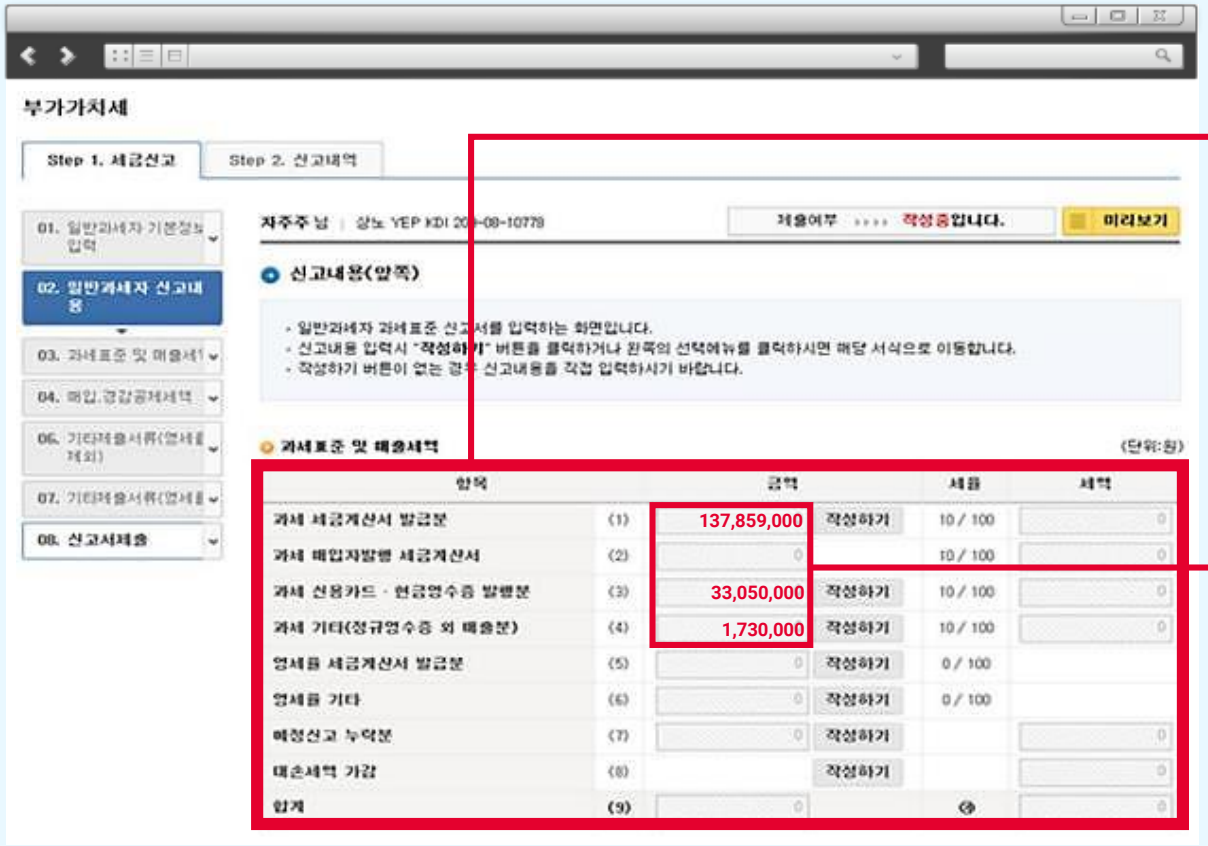
E-tax filing

E-tax filing is available for most of tax items

Filing relevant document is also available

II NTIS Overview

E-tax filing

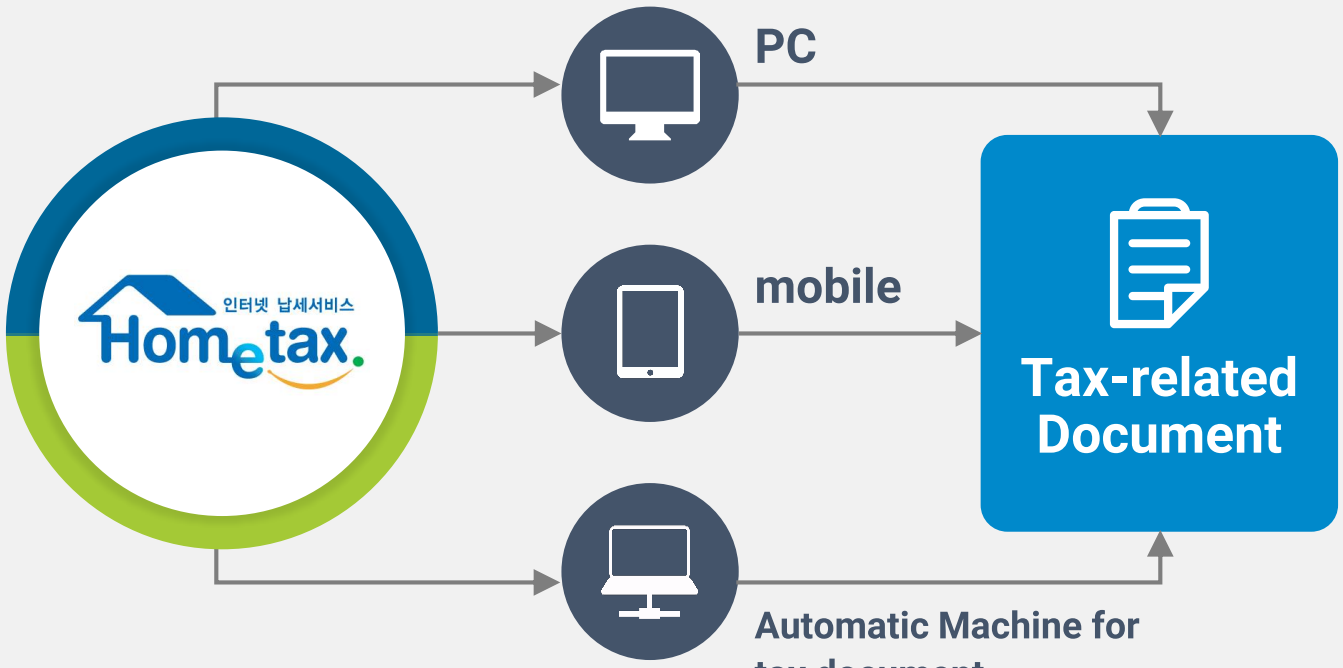


Designed as the same as the paper tax return

Pre-filled service (full-filled service)

II NTIS Overview

Issue Tax Document



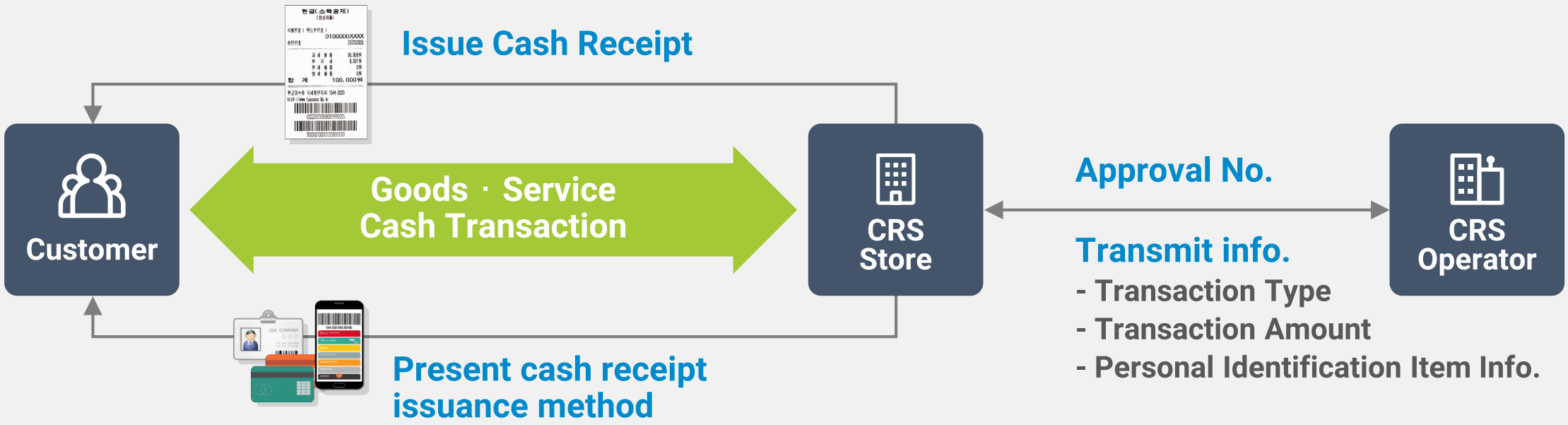
Adapt forgery Prevention technology

Taxpayer

II NTIS Overview

CRS : Cash Receipt System

- Under this program a CRS store issues a cash receipt to its customer when the customer pays a cash, while the transaction information is transmitted to a CRS operator in real time



CRS operators transmit the transaction data of CRS stores to NTS everyday (one time)

II NTIS Overview

국세청 National Tax Service

e-tax Invoice

Thru Internet

Thru Mobile

Thru representative

ARS

ASP·ERP

Schedule submission

NTIS

Operation
- Data keeping, internal support

Analysis
- Early alert
- Data analysis

Issuance, view, filing

- Internet issuance
- View invoices
- Convenient VAT filing

126 Call center ARS issuance

External parties

KISA Korea Internet & Security Agency

Korea Internet Promotions Center

Certification organizations

Ⅲ Outcomes

국세청 National Tax Service

Secure national revenue with stable revenue budget

Less Compliance Burden | **Fair & Just Taxation**

System NTIS(Neo Tax Integrated System)

Work force	Organization
21,744 tax officers	HQ, 7 regional Offices, 133 district offices

Ⅲ Outcomes

국세청 National Tax Service

Less compliance burden

Hometax – Internet-based all-in-one tax service

☑ Service

- All tax filing service
- 750 services including e-filing, e-tax documents

☑ Outcome

- 30M subscribers from 50M citizens
- 13B accumulated visitors, mega public governmental service

☑ Success Factor

- intuitional support : tax credit for e-filing
- convenience : pre/full-filled service

Ⅲ Outcomes

국세청 National Tax Service

Less compliance burden

Hometax – Internet-based all-in-one tax service

- **Simplified tax deduction data service**
  (full-filled service for salary earners -income tax filing-)

- **1.9B annual tax deduction data**
  - medical/educational expense, credit card, donation

- **Full-filled service**
  - items for earned income, deduction on tax return
  - for 150M salary earners (75% of all wage earners)

Ⅲ Outcomes

국세청 National Tax Service

Fair & Just Taxation

Electronic Tax Resource Management Framework

01

Increase in credit card use

02

Cash Receipt
현금영수증가맹점

Cash receipt

03

e세로

e-tax invoice

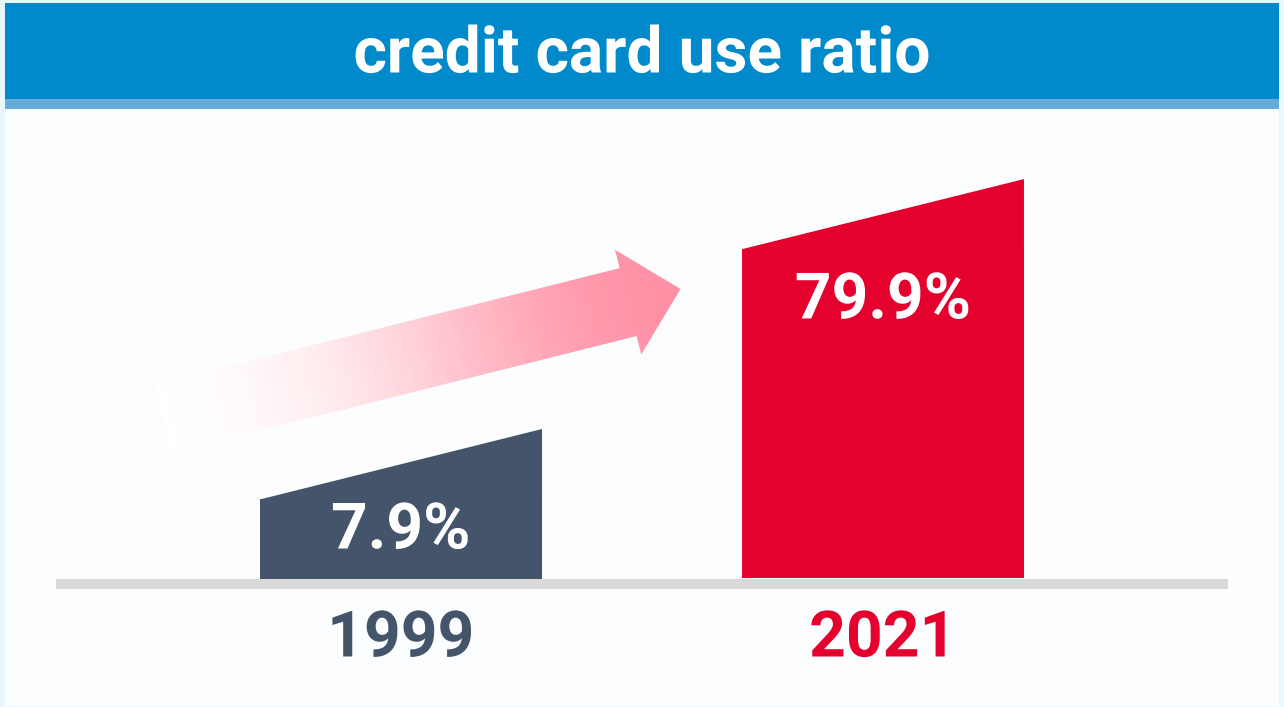
Ⅲ Outcomes

Fair & Just Taxation

Electronic Tax Resource Management Framework – increase in credit card use

- **Income deduction**
  - for the amount on credit card use

- **Early warning system**
  - collect transaction information, prevent illegal/irregular transaction



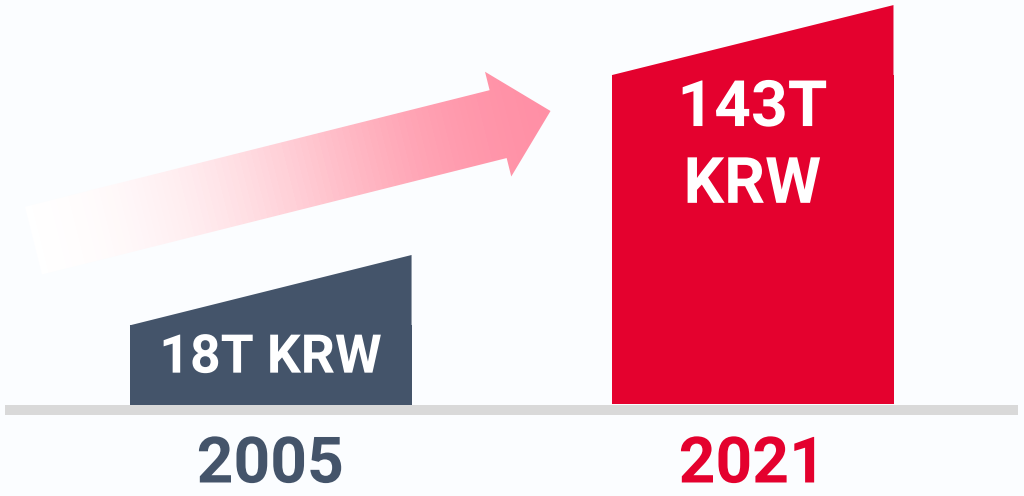
Ⅲ Outcomes

Fair & Just Taxation

Electronic Tax Resource Management Framework – Cash receipt

- **Income deduction**
  - for the amount issued by cash receipt
- **Award for reporting violation activity**
  - on the issuance of cash receipt
- **Mandatory issuance**
  - cash transactions over a certain amount of amount

amount issued by cash receipt



Ⅲ Outcomes

Fair & Just Taxation

Electronic Tax Resource Management Framework – E-tax Invoice

- **Early warning system**
  - Real-time prevention on false tax invoce

- **Step-by-Step implementation**
  - expand subject scope of mandatory issuance of e-tax invoice

e-tax invoice issuance ratio

2021

Ⅲ Outcomes

국세청 National Tax Service

Fair & Just Taxation

Electronic Tax Resource Management Framework – success factor

PENALTY

Mandatory issuance
Penalty tax
(fail to issue, delayed issue …)
ETC

Voluntary participation of taxpayers

INCENTIVE

Income deduction
(for customer)
Tax Credit for VAT
(for business operator)
ETC

Ⅳ Way Forward

Changes in tax environment

Less compliance burden

- **Mobile First Age**
  - start IT-centered service
- **Digital generation**
  - demand for Innovative e-tax service
- **Increase in aged taxpayers**
  - risk to be in blind spot for taxpayer service

Fair and just taxation

- **IT Development creates new tax resource**
  - virtual currency, personal media, etc.
- **Aggressive tax avoidance scheme by digital IT entities**
  - utilize advanced technologies (Blockchain, cloud)
- **Limit on exercising on taxation right due to globalized economy**
  - intelligent offshore tax avoidance supported by experts

Ⅳ Way Forward

국세청 National Tax Service

Metaverse

Blockchain

NTIS
NEO TAX INTEGRATED SYSTEM

AI, Bigdata

Cloud

Thank You

국세청
National Tax Service

Ministry of Justice of Georgia

PUBLIC SERVICE DEVELOPMENT AGENCY

Public Service Development Agency

Speakers:
Tamar Tchampuridze

June --, 2022

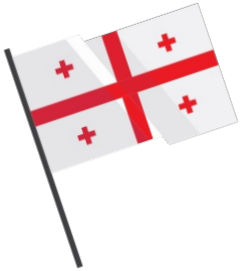
Tbilisi, Georgia

PSDA's Goals

- Facilitating development of public services
- Introducing new and innovative services
- Supporting projects and reforms that are important for the development of the country
- Fostering creativity and innovation in public services
- Maintaining and continuously improving the civil registry
- Updating the population database

Main Directions of PSDA

Civil acts, Identity Documents, Registration



Citizenship and Migration

Apostille and Legalization

Online Services

Qualified Trust Services

Identification Verification

SERVICE LAB

Innovative Service Lab

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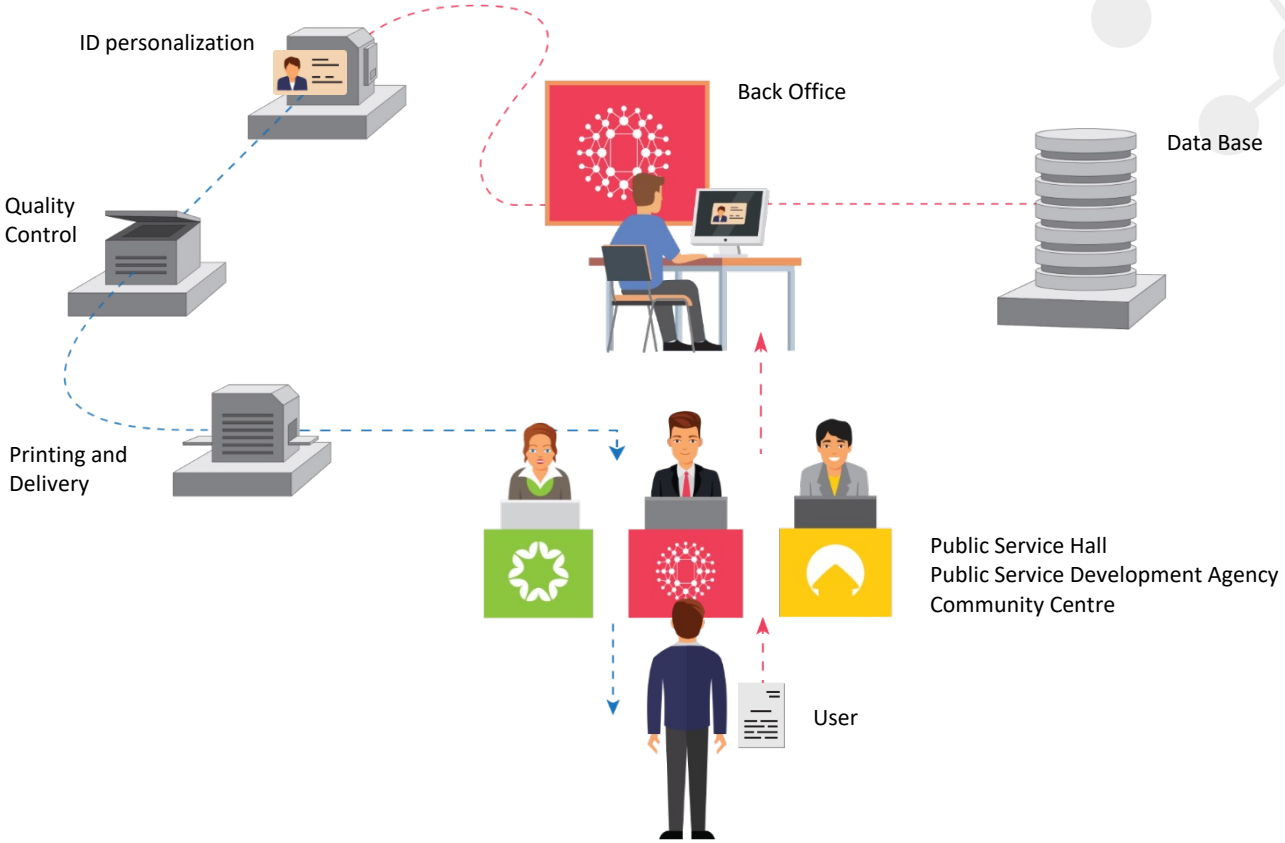
PUBLIC SERVICE DEVELOPMENT AGENCY

Service Delivery Process



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PUBLIC SERVICE DEVELOPMENT AGENCY

Types of Civil Status Acts

- Birth
- Establishment of paternity
- Marriage
- Divorce
- Adoption
- Change of name/surname
- Death

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PUBLIC SERVICE DEVELOPMENT AGENCY

PSDA and Electronic Trust Services

Qualified Trust Services

- eSignature
- eSeal
- Time – stamp
- OCSP
- CRL

Trust service

- Biometric encryption
- Preservation and decryption

Georgian Legislation

- **The first Law** of Georgia on "Electronic Signature and Electronic Document" was adopted in 2008 (compatible with Directive 1999/93/EC)

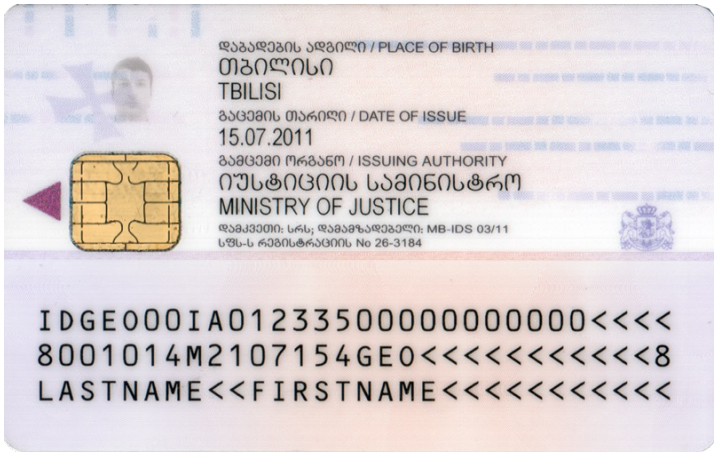
- In 2017, it was substituted with **the new law** "On Electronic Document and Electronic Trust Services" which is **based on eIDAS regulation** (Regulation No 910/2014)

- Fully entered into force on July 1st, 2018

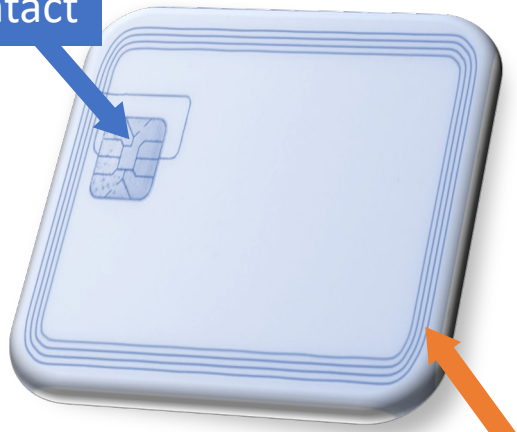
For all electronic document exchange with the government (C2G, G2C, B2G, G2B, G2G), Qualified Electronic Signature or Qualified Electronic Seal is mandatory

eSignature Creation Devices

Electronic ID Card (Since 2011)



Contact



Contactless

Temporary Residence Card

Permanent Residence Card

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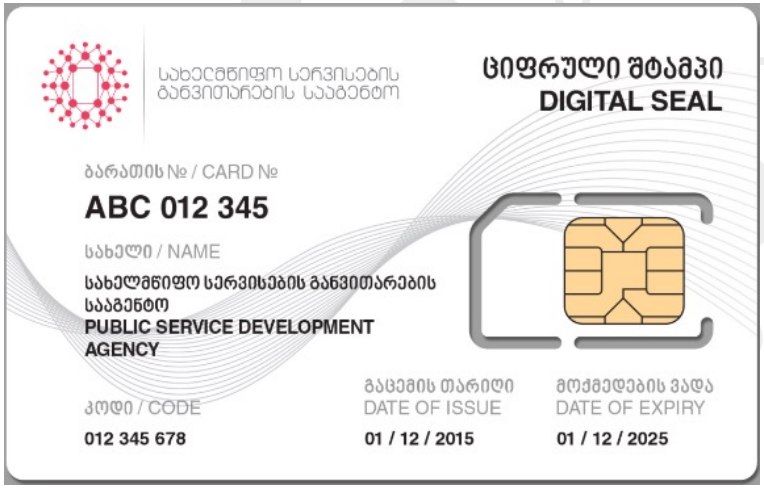
eSeal Creation Devices

eSeal

- Agency's Token
- Subscriber's Token
- Agency's HSM
- Subscriber's HSM



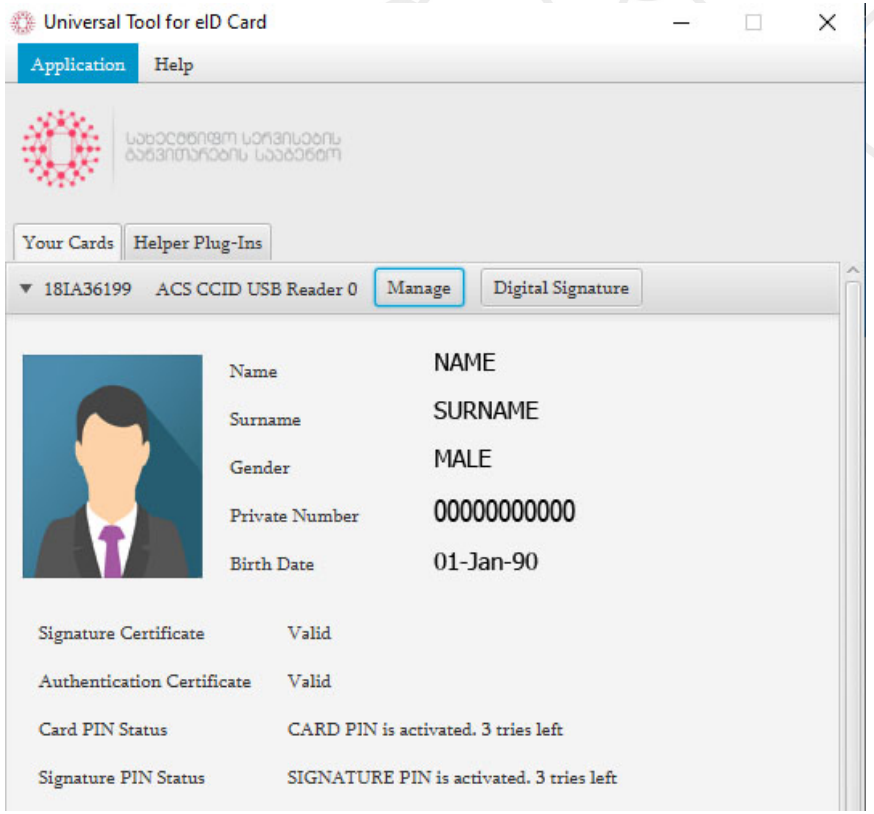
Georgian ID Card Tool

Availability

- Freely downloadable from https://id.ge/download
- Available for Windows & Mac
- For Linux in experimental mode
- Automatic updates

Functionality

- View card data
- PIN code management
- Certificate renewal
- Authentication
- Qualified electronic signature
- Document time-stamping



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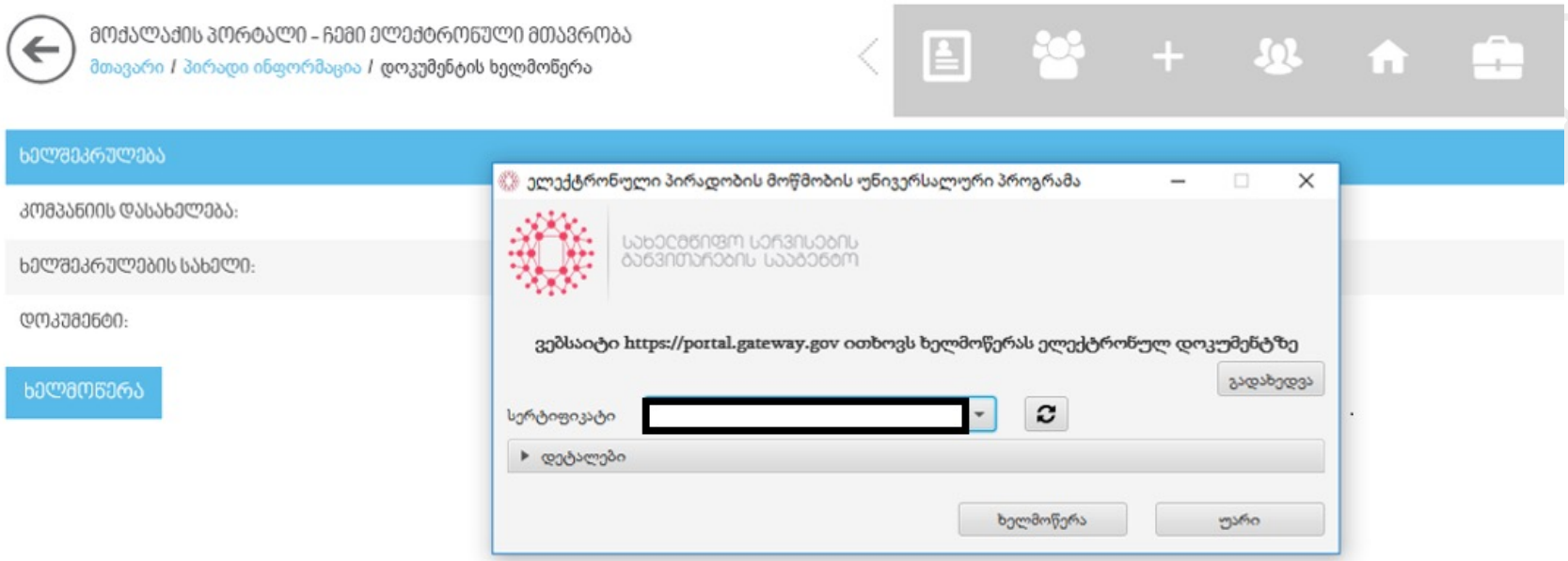
PUBLIC SERVICE DEVELOPMENT AGENCY

Web-based Signing/Authentication



საქართველოს რკინიგზა
GEORGIAN RAILWAY

TAXI

My.gov.ge

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PUBLIC SERVICE DEVELOPMENT AGENCY

Web Services for Identification/Verification

- More than 250 organizations
- Public Sector organizations
- Private sector (mainly financial) representatives
- Data protection

Issued Certificates Statistics

4 815 958

9 553

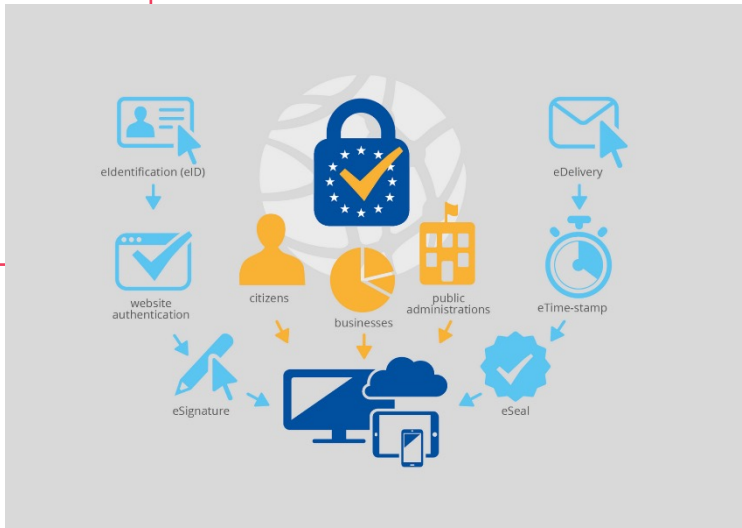
As of April 11, 2022

Ministry *of* Justice *of* Georgia

PUBLIC SERVICE DEVELOPMENT AGENCY

Identity & Trust Service Delivery in 2021

- Qualified Time Stamp (TSA) More than 77 Million
- Online Certificate Status checks (OCSP) - More than 123 Million
- Personal data provisioning via web service more then 345 Million
- Electronic Covid passport signing (Visual Digital Sign) more than 6 Million in 2 months



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PUBLIC SERVICE DEVELOPMENT AGENCY

Centralized Authentication System

Purpose

- Authentication of the natural and legal persons
- Verified online identity

Technology - open and widely used protocols

- SAML2 – used by many corporate systems
- Open ID Connect – emerging standard used by Google, Facebook and other top players

Centralized Authentication System

Authentication Credentials

- Electronic ID card
- Username/Password from my.gov.ge

Enhancement Capabilities

- Adding existing users of:
  - Government organizations
  - Public sector representatives
- Adding other identification methods
  - mobile ID
  - Biometric identification
  - Etc.

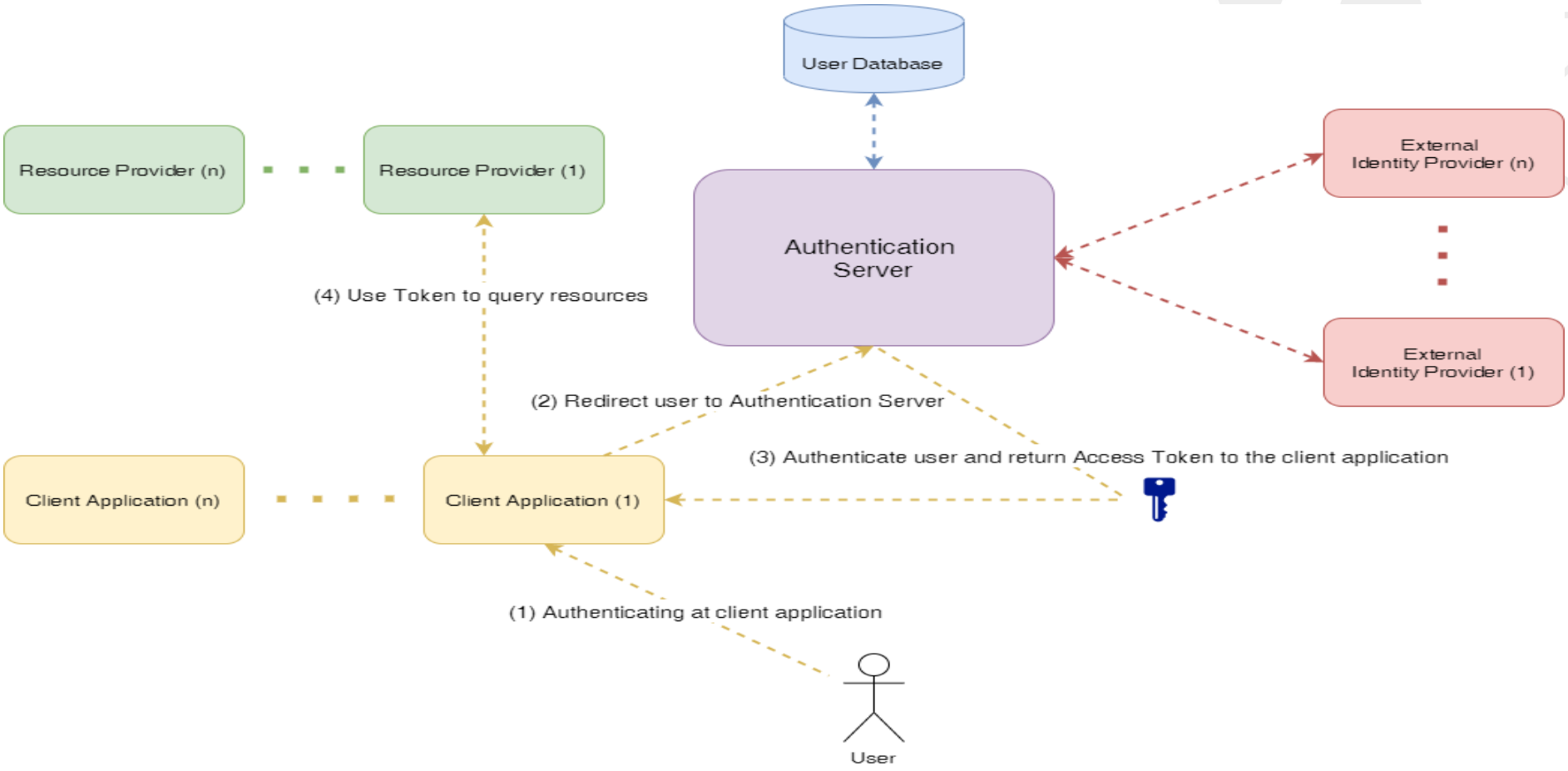
საპენსიო სააგენტო
PENSION AGENCY

MIA

NAPR

RS

Centralized Authentication System



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Future plans for authentication system

Attribute Sharing

- Age verification
- Sharing other personal data

GDPR compliant

- Using subject's consent
- Choosing what to share

Future Plans

More qualified trust and identification services

- Mobile ID

- eDelivery

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sda.gov.ge

정부혁신 보다나은 정부

Introducing
「Government24」

< Table of Contents >

1. Background
2. What is Government24?
3. Progress
4. Service Type
5. Main Services
6. Service Provision and Utilization Status
7. Future Plans

1. Background

☐ Implementation of One Touch and One GOV

➢ Citizens have long been inconvenienced because of searching for the distributed services of each institution on multiple administrative and public institution websites.

Issue	Necessity
▪ Confusion and inconvenient access to public services ▪ Duplicate website management by institution ▪ Insufficient service tailored to each individual's needs	▪ Unification of service channels for citizens ▪ Demand for integrated service management system ▪ Improving the efficiency of service use

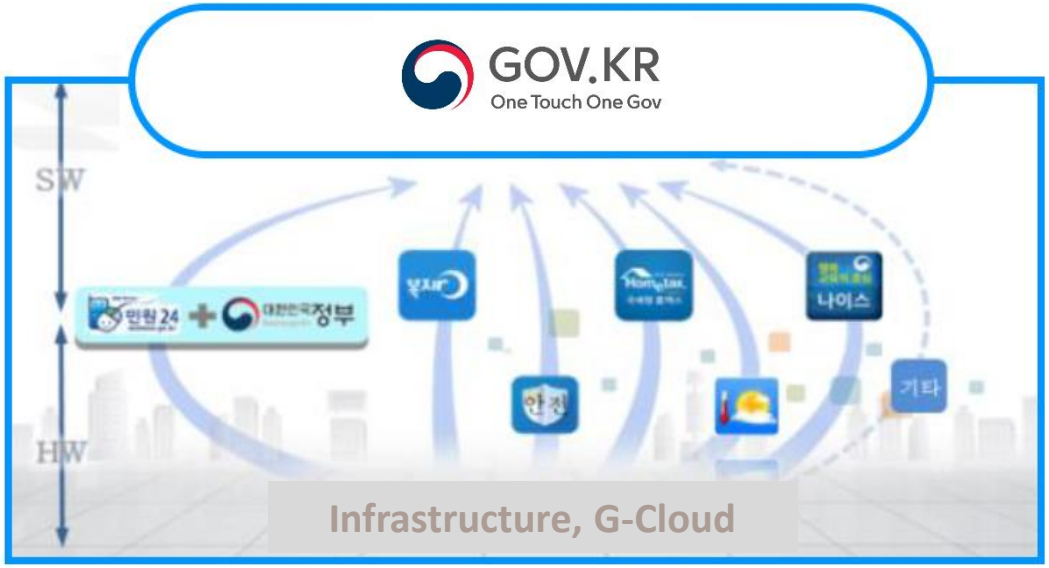
➢ Minwon24 (www.minwon.go.kr) has significantly strengthened its online civil service since its introduction as "G4C (Government for Citizen)" in 2002 and established itself as an integrated online window for the public.

➢ **Established and operated "Government24" (July 26, 2017) to help citizens use distributed government services, policy information, and civil services in one platform.**

◈ What is “Government 24”? = “One Gov” + “One Touch”

We linked civil services, public services, and policy information from each department and integrated them into a mobile-oriented one-stop portal called “Government24” to allow citizens to access everything in one place.

* Established the integrated portal "Government24" in 2017, linked the portal with the major services and policy information of other institutions in 2019, and set up "One Gov" in 2020.



Integration/Linkage Concept Map

Government services

89,000 types of government services provided by fields and needs

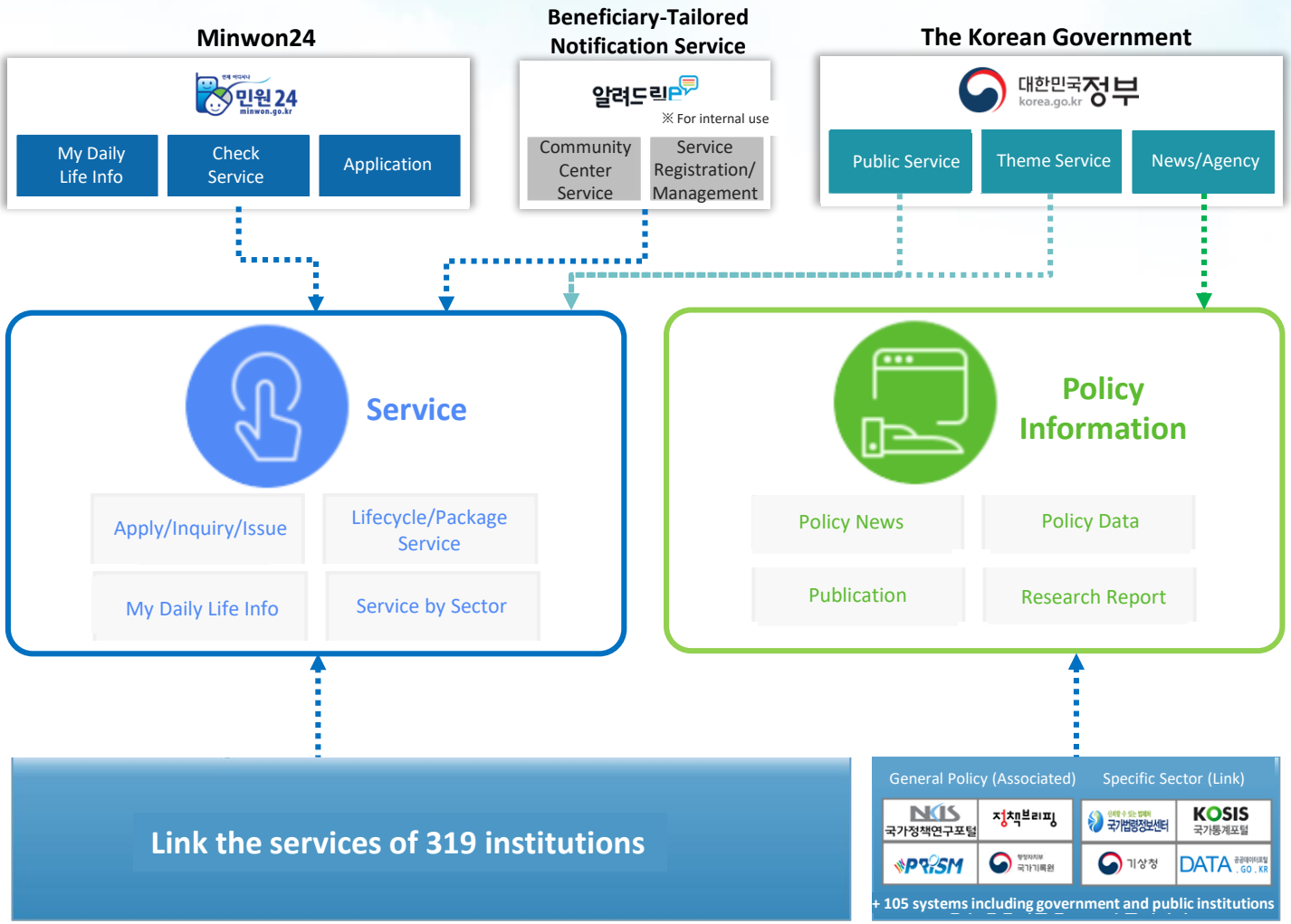
Civil services

5,800 types of civil services information
More than 1,200 types of civil service applications/issuances

Policy information

Share the main policy information of the government and institutions

2. What is Government24? (2)



1. Services

- Integrate government services and civil services of individual institutions.
- Existing specialized services (tailored service, lifecycle service) are integrated and configured to be used separately.

2. Policy and information

- Government policies and information are provided separately from services.

※ Phased linkage of policy information

2. What is Government24? (3)

◈ “Government24” is divided into “Services” and “Policy Information.”

Classification	Services		Policy information
	Government Services (Beneficial)	Civil Services	
Service Definition	• Cash/in-kind benefits, vouchers, or discount services provided to persons who meet specific requirements such as the elderly, the disabled, veterans, etc., in accordance with the relevant laws and regulations. • Support for payment, facility rental, loan/loan facilitation, education, facility use, and information provision	• Provision of services for guiding, applying, issuing, and accessing legal civil services stipulated in laws and regulations * Article 7 (Application, etc. for Electronic Processing of Civil Petitions) * Article 9 (Processing of Civil Petitions without Appearance)	• A public service offered by the government and public institutions to provide benefits to or receive applications from citizens, or public service (regulations, obligations, and various general information provided on each institution's website) that targets citizens (businesses)
Service Target	• Focused on specific beneficiaries with certain requirements defined in legislation. Some services target all citizens.	• Citizens who apply for and issue a legal civil petition	• All citizens
Service Example	• Local tax reduction and exemption for low-income people, childcare cost for families with multiple children, and income support for the severely disabled • Support for part-time jobs and start-ups • Support for self-sufficiency work and residential lease • Information literacy education for farmers and those who return to the farm and rural areas	• Miscellaneous certificates/services, including resident registrations • Notifications of moving-in, mail-order business, etc. • Licensing, including permission for fishery, etc. • Confirmation of authenticity of issued documents, resident registration card, etc.	• Simplified year-end tax settlement • Information on the National Pension Service • Maternity leave system

3. Progress (1)

Minwon24 + The Korean Government + Beneficiary-Tailored Notification Service

Minwon24	Korean Government	Beneficiary-Tailored Notification Service
(2000-2007) Established G4C (Online civil service) (2009-2011) Developed advanced civil service (2013-2015) Established daily living information service	(2009-2011) Set up Korean government portal	(2013-2015) Established beneficiary-tailored notification service

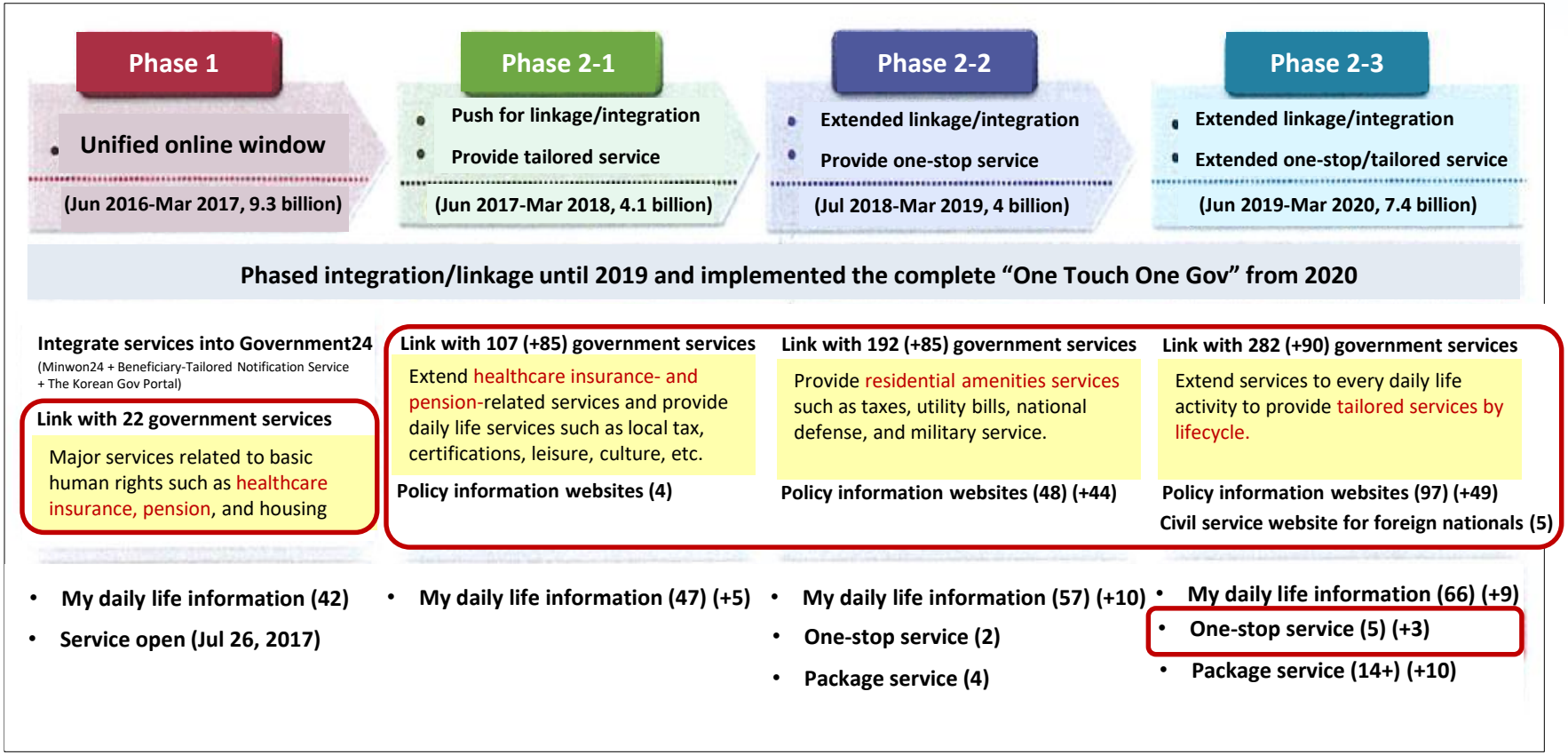
Government24

- ☑ (2015) ISP/BPR for integration of civil affairs and suggestions services
- ☑ (2016-2020) Integration of civil affairs and suggestions services
  - Integrated public portals and public official window
  - Extended service linkage (government service, policy information, etc.)
  - Expanded mobile services (fingerprint authentication, etc.)
  - Upgraded one-stop, package, and foreign national services, etc.
- ☑ (2020-2022) Establishment of tailored services for national subsidies(「Subsidy24」)
  - Integrated guide and application service for tailored services

3. Progress (2)

□ 「Government24」 aims to unify service channels for the citizens, such as various civil affairs, government services, and policy information shared by departments. Under this goal, the service started by integrating three sites, including Minwon24, beneficiary-tailored notification service, and the Korean government portal in 2017.

A total of KRW 24.8 billion was invested in service establishment projects.



3. Progress (3)

☐ 「Subsidy24」is a service that allows you to check and apply for beneficiary services provided by the government or local governments at once by one-time logging in through Government24

A total of KRW 19.2 billion was invested in service establishment projects.

	Phase 1	Phase 2	Phase 3
	·Provide central government Customized information (May 2020-Jan2021, 5 billion)	·Provide local government Customized information (Mar 2021-Dec 2021, 7.2 billion)	·Provide public institutions , office of Education Customized information (Apr 2022-Dec 2022, 7 billion)
Servise Target	• Central government service (1043) • Customized information service(348) • Online application service(25)	• Local government service (6430) • Customized information service(3196) • Online application service(315)	• Publlic institutions, office of Education (2,200) • Customized information service(+420) • Online application service(+500)
Information Linkage	Qualification·supply information (115)	Qualification·supply information (118)	Qualification·supply information (90)
	'21.4.28. service opening	'21.12.16. service opening	
Beneficiary	oneself, children under 14	oneself, spouse, children	oneself, spouse, children, one's parents
	• Household Register • Parental consent for use of information on children under 14	• Household member consent	• Certificate of relations Family member consent

※ (1~2Phase) '22.4.30. Reference date

4. Service Type

Guidance

Civil Service Information and Application

Issuance of Resident Registration Certificate (Abstract)

Application	Internet, visit	Processing Period	Immediately (3 hours during business hours)
Fee	1 copy (KRW 400)/For persons interested (KRW 500)/ Internet issuance (Free)	Application Form	Application form for perusal of resident registration card or issuance of certified copy, power of attorney for issuance (Enforcement Regulation of the Resident Registration Act: Addenda 7, 7-2, 9) * For the application form, refer to the final article of the Act. <Examples of application form>
Required Documents	Yes (Refer to the bottom)	Eligibility	Principal or agent (Online application is unavailable for an agent)

Apply

* Provide information such as application guide for civil services, basic in formation, processing agency, required documents, etc.

Inquiry

Register Service Schedule

My Daily Life Information

서비스 일정 등록

My Daily Life Information (Details)

Information	Passport expiry date		
Service Group	Housing/Welfare	Service	Passport expiry date
Processing Due Date		Remarks (Amount, etc.)	-
Details			

Passport expiry date is ___.

- Name (Korean):
- Name (English):

* Information sharing services related to application details and daily life info rmation, etc.

Application

My GOV / Logout / Gov24 Overview / Sitemap

Service | Policy Information | Agency Information | Customer Center

Issuance of Resident Registration Certificate (Abstract)

Resident Registration Certificate	Resident Registration Certificate (Abstract)	Resident Registration Certificate (English)	Resident Registration Certificate (English/Abstract)

Apply | Cancel

* Apply for civil/government services, one-stop service, etc.

Issuance

Gov24 Print

Service Application Details

Online Application | Submit to 3rd party or agency (Send)

For applications made 3 days earlier, please enter the date range to check the details.

Date range 2021 3 15 - 2021

Receipt No. [Application Date] | Service | No. of Copies | Progress

[Mar 16, 2021] | Issuance of military service certificate | Completed | Print

Auto Print

Document Confirmation No. : 1615-8782-7542-0242

Enforcement Regulation of the Military Service Act [Addenda 5] <2019.2.27>

The certificate can also be issued at Goverment24 (www.gov.kr).

Military Service Certificate

Issuance No. 059400 Expiry Date: None

Use | Declaration (Public officials, etc.) | Other

Personal Info. | Date of Birth

Military (Alternative) Service | Discharged | In Service

- Enlistment
- Rank
- Service number
- Branch
- Arms of service (Occupational specialties)
- Date of enlistment (commission) / Date of call-up
- Date of discharge (discharged from call-up)
- Type of discharge (discharged from call-up) (Reason)

Military Service Information

* Print out issued documents for applied service.

◈ Government24 Service Composition

Civil Services

- **Integration of guides, applications and issuance services related to 5,800 types of civil services in connection with 319 institutions**, including central and local governments

- **(Central Departments) A total of 30 institutions** including the Ministry of the Interior and Safety, the Ministry of Health and Welfare, the Ministry of Land, Infrastructure and Transport, and the National Police Agency
  * Linked to 51 systems such as Wetax, Resident registration information system, Social security information system, Real estate administration intelligence system, etc.

- **(Local Governments) A total of 245** local governments (16 cities/provinces, 229 cities/counties/districts/Sejong Special Self-Governing City)
  * City/Provincial administrative system, *Saeol* administration information system, etc.

- **(Public Institutions) A total of 39 institutions**, including the National Pension Service and the National Health Insurance Service

Government Services

- **Integration of guides on/the provision of government services that were distributed across 3,900 sites, including central and local governments, and related guides.**

* About 89,000 services = **Beneficial services (85,000)** + Non-beneficial services (4,000)

Policy Information

- **Integration of the provision of 1.69 million policy information**, including **policy news, research reports, and publications by linking the portal with 105 websites.**

- National communication channel: A total of 15 channels (Safety e-Report, e-People, Information Disclosure Portal, Electronic Gazette, Korean Law Information Center, etc.)

Institution Information

- Information on the central government and 17 cities and provinces, and 228 cities, counties, and districts.

- Local government news, festivals/events, and contests.

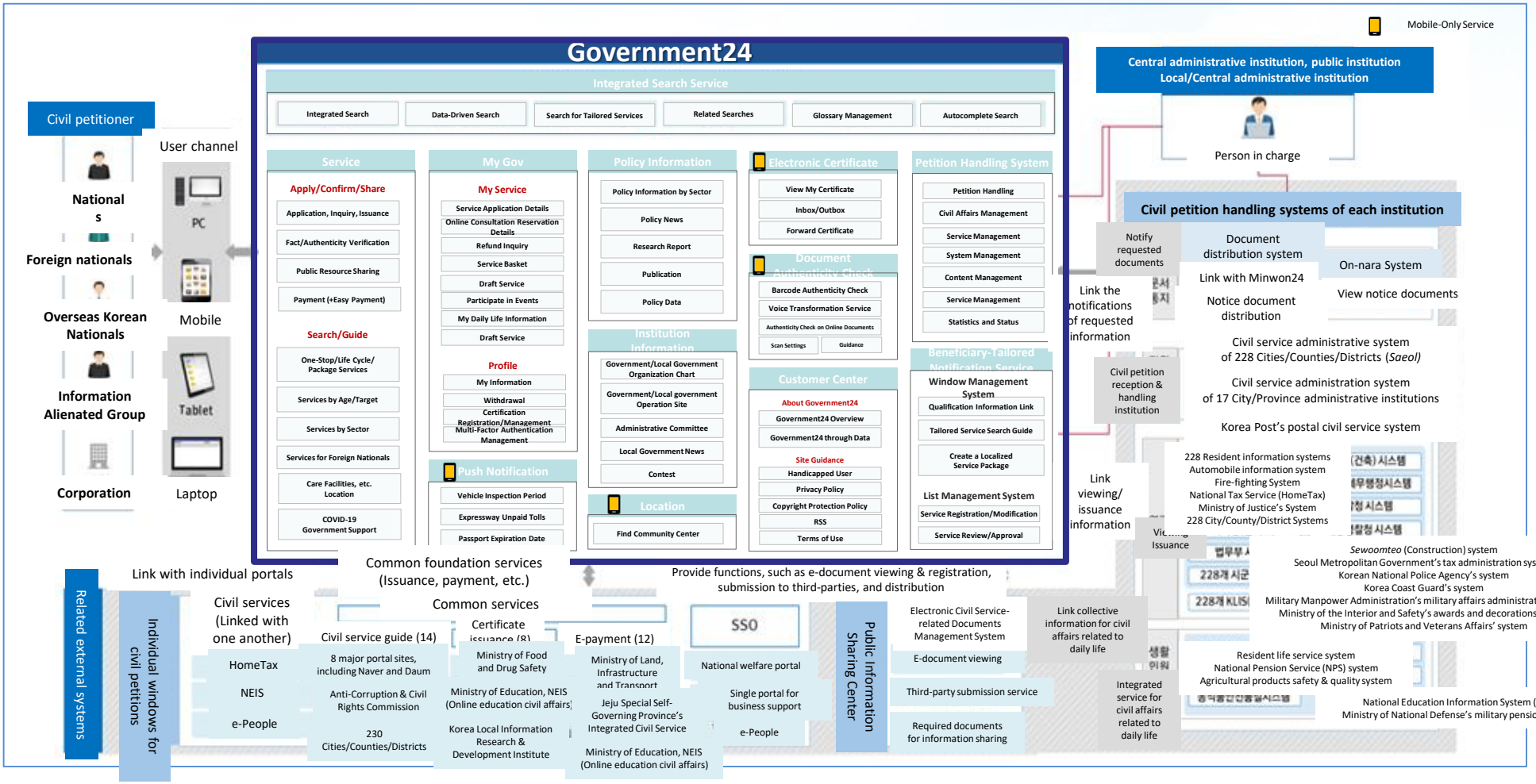
5. Main Services (2)

- Central government and local government policy promotion
- Collection of frequently requested civil services
- Integrated application for major services, including pregnancy, childbirth, childcare, etc.
- Government news and events such as contests
- Publications of government institutions

5. Main Services (3)

☐ Offer service applications and issuances, policy information, institution information, customer center, personal window, etc.

It consists of an operating system to handle civil petitions for public officials and a beneficiary-tailored notification service.



Government24 Portal Configuration

6. Service Provision and Utilization Status (3)

☐ Representative Government Website 「Government24」 (gov.kr)

[As of April 30, 2022]

Monthly Visits

36.04 million

(Daily Average: 1.2 million)

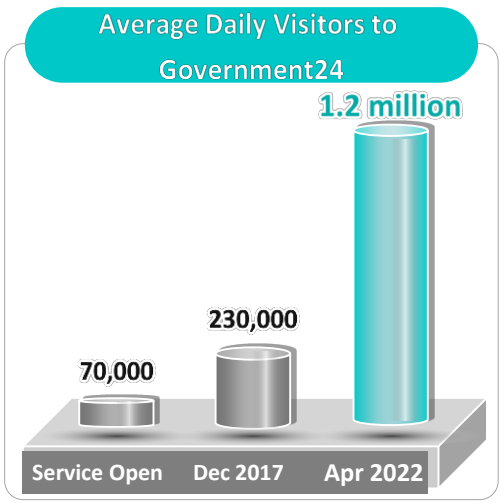
No. of registered accounts

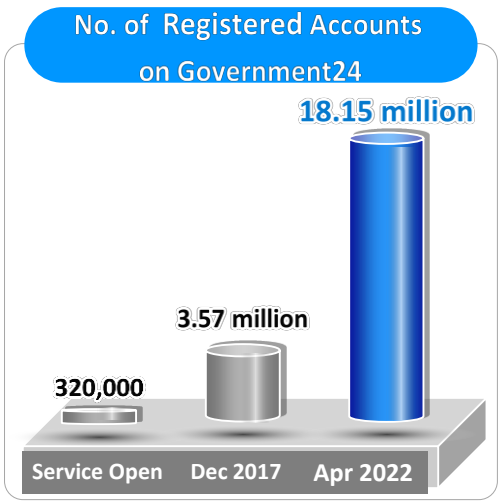
18.15 million

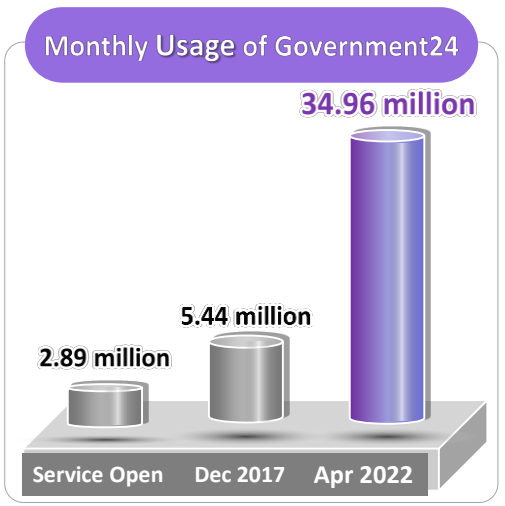
Monthly Usage

34.96 million cases

(Daily Average: 1.16 million)

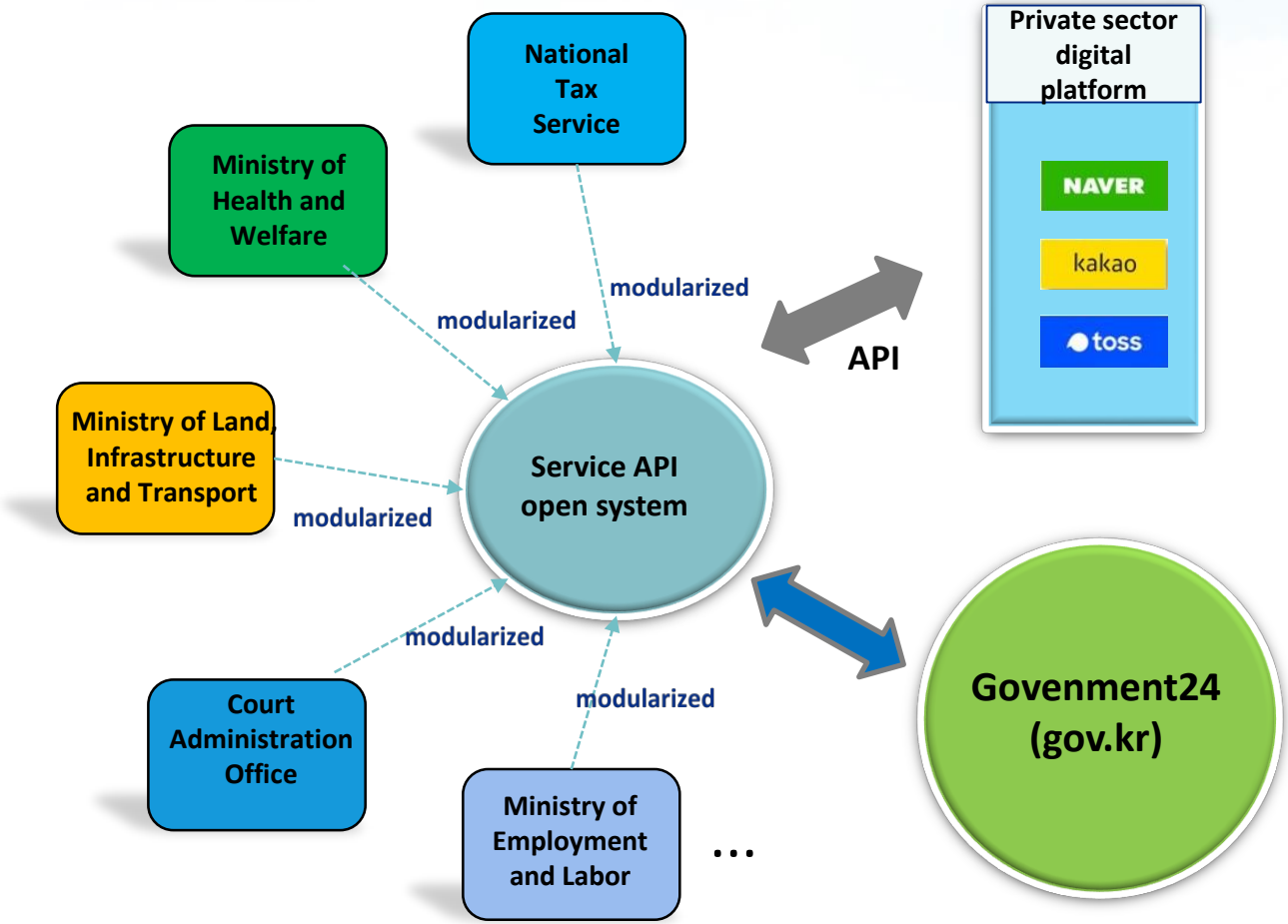






7. Future Plans

☐ In the future, Government24 is developing and operating public services using the modularized service registered in the ‘Service API open system’



Thank you

Ministry of the Interior and Safety

Journey to Excellence of Digital Transformation

Mobile ID

Korea's Mobile Driver's License

2022. 6.

Creating Trust & Value
KOMSCO
Korea Minting, Security Printing & ID Card Operating Corp.

KOMSCO
Korea Minting, Security Printing & ID Card Operating Corp.

Mobile ID

Contents

Ⅰ KOMSCO at a glance

Ⅱ Understanding of Mobile ID

Ⅲ Korea's MDL & Use Cases

Ⅳ Expected Values

I KOMSCO at a glance

Who are we?

About KOMSCO

[Background]

70 years — State-owned enterprise with a long tradition

50 years — Experience in exporting Banknotes, Coins, NIDs, Passports, Security inks, etc.

1400 people — Seasoned workforce with comprehensive knowledge

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What KOMSCO provides …

[Business portfolio]

Security Printing

Mintage

Security Paper & Inks

ID Products

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And… Solutions from Core Competencies

[Business portfolio]

Brand Protection

Mobile Payment

Mobile ID

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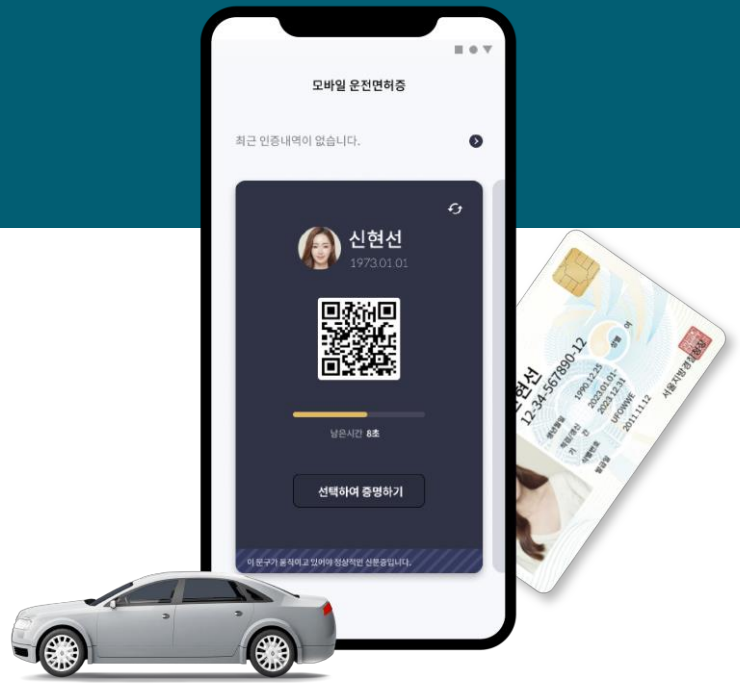
II

Understanding of Mobile ID

What is Mobile ID all about?



II-1. Understanding of Korea's ID Concept

Korea's Top 3 ID cards

	Resident Registration Card	Passport	Driver's License
Issuer	행정안전부	외교부	경찰청
Related Law	Resident Registration Act	Passport Law	Road Traffic Law
Type	Plastic card (Forgery prevention technology applied)	Electronic Passport with IC Chip(Unique)	Plastic Card (Forgery prevention technology applied)

Issued according to the relevant laws and regulations by the government

The state formally certifies an individual's identity

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II-1. Understanding of Korea's ID Concept

However, the current identity authentication system is...

Offline

Financial institution
Public institutions

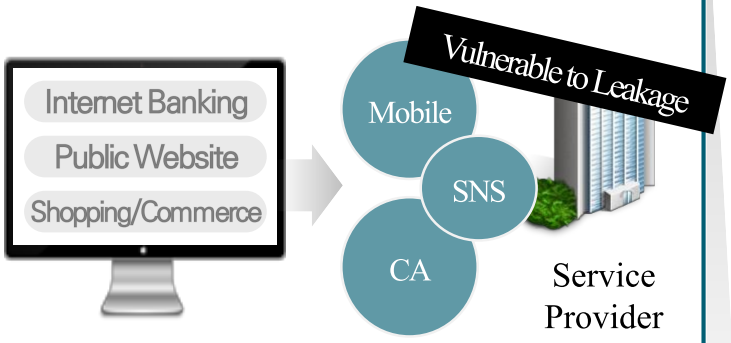
Identification
with a physical card

- Identity verification with a plastic card with disclosed information
- Inconvenience, vulnerable breakage
- Concern of Forgery and tampering

ID authentication method

"Confusing"

Online



- Various authentication in untact era
  - public certificates, mobile authentication
- Mass personal information leakage
  - Big brother issue
- Concerns about surveillance society

Vulnerable to personal information leakage

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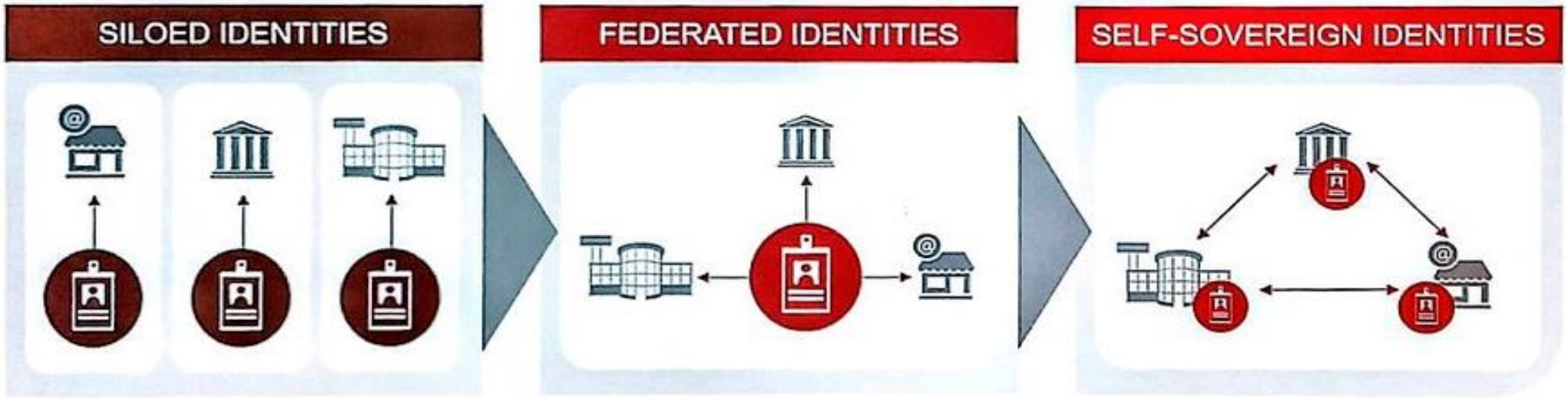
II-2. Paradigm Shift to Digital ID



Siloed(Centralized)

- Personal information is stored and managed by each service provider by governing the Personal Information Protection Act
- In order to use the service, personal information should be provided. IDs/PWs are different from each service provider and should be maintained by person efforts and the inconvenience of memory
- Still popularly used system

Federated

- Reliable 3rd party authentication method to conquer disadvantages of siloed identities
- Oauth service providers such as Google, Naver, and Kakao are representative.
- As a result, personal information is becoming more centralized, increasing the threat of massive personal information theft attacks, and 3rd party dependence.

Decentralized

- Personal information is owned by individuals, not service providers, and used for authentication
- As the service provider can authenticate without storing personal information, only the amount of personal information necessary for the service is stored
- The duty and right for the handling of personal information is moved from a service provider to an individual
  – the technical implementation of self-sovereign identity is DID(Decentralized ID).

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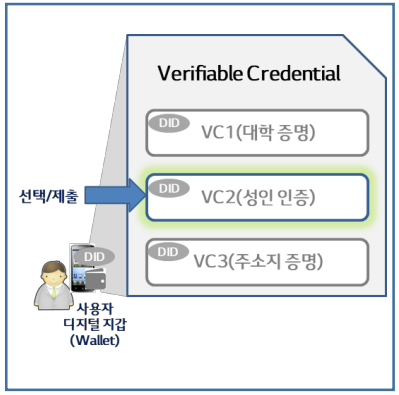
II-3. DID & VC

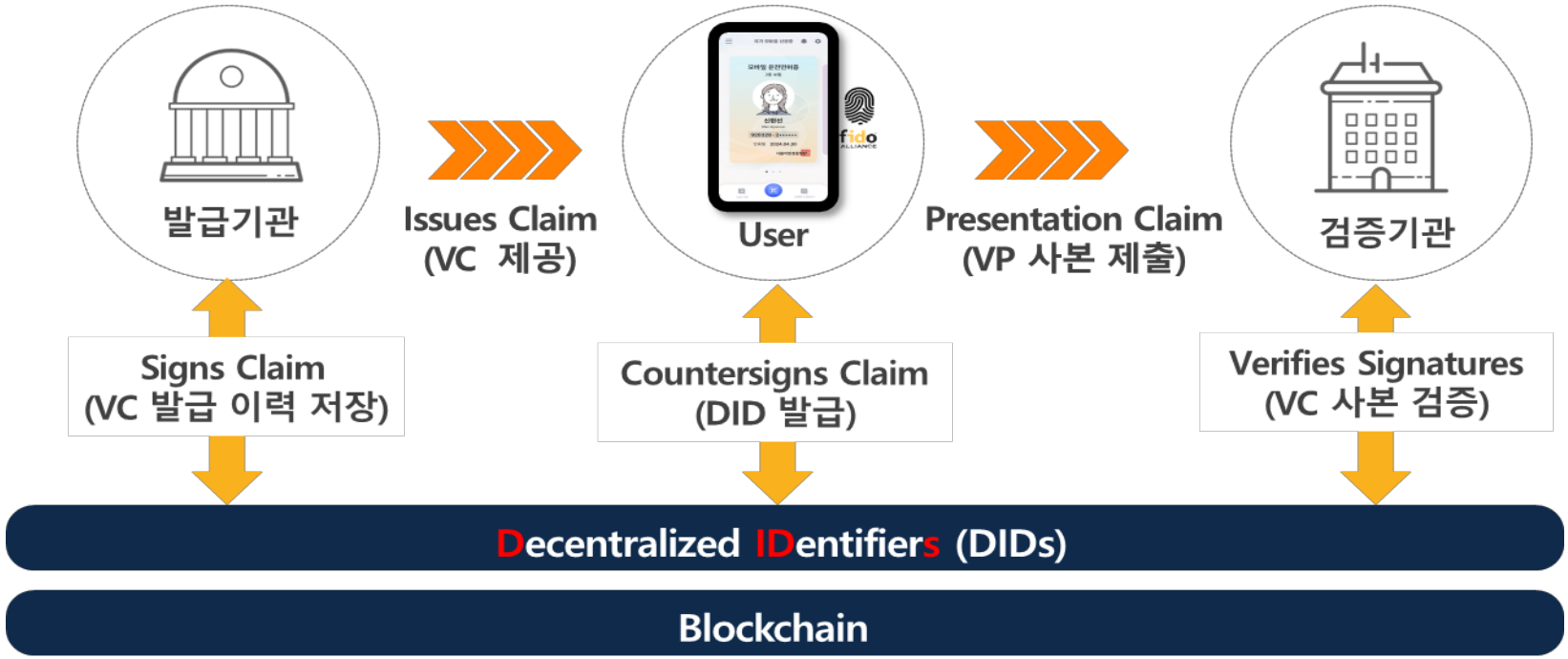
DID(Decentralized Identity/Identifier)

- DID(identity) is a SSI's technical implementation model and identity information authentication system in which a personal information management entity generates and manages IDs.
- DID(identifier) in a narrow sense is the only identifier in the DID blockchain network.
- Example “did : komsco :3k9dg345adf4958djfik”



VC(Verifiable Credential)

- VCs include DIDs, details of certified qualification for DID owners, and individuals can own multiple VCs, just like they own several IDs.
- The signature of the agency that issued the VC is included for example adult certification, driver's license, resident card, university graduation certificate, student ID, home address, etc



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II-4. Mobile ID: Gov't shall deliver for the digital future…

Objectives

1. **(Citizen) Provide the minimum personal Info online and offline**
   - Self Sovereign Identity enables Users to present and authenticate personal Info
2. **(Government) Establish ONE national digital ID platform**
   - Enhance quality of nationwide public services and make better policy decisions
3. **(Service Provider) More useful services by guaranteed security**
   - Lessen burden of ID authentication and costs of usage of private certification

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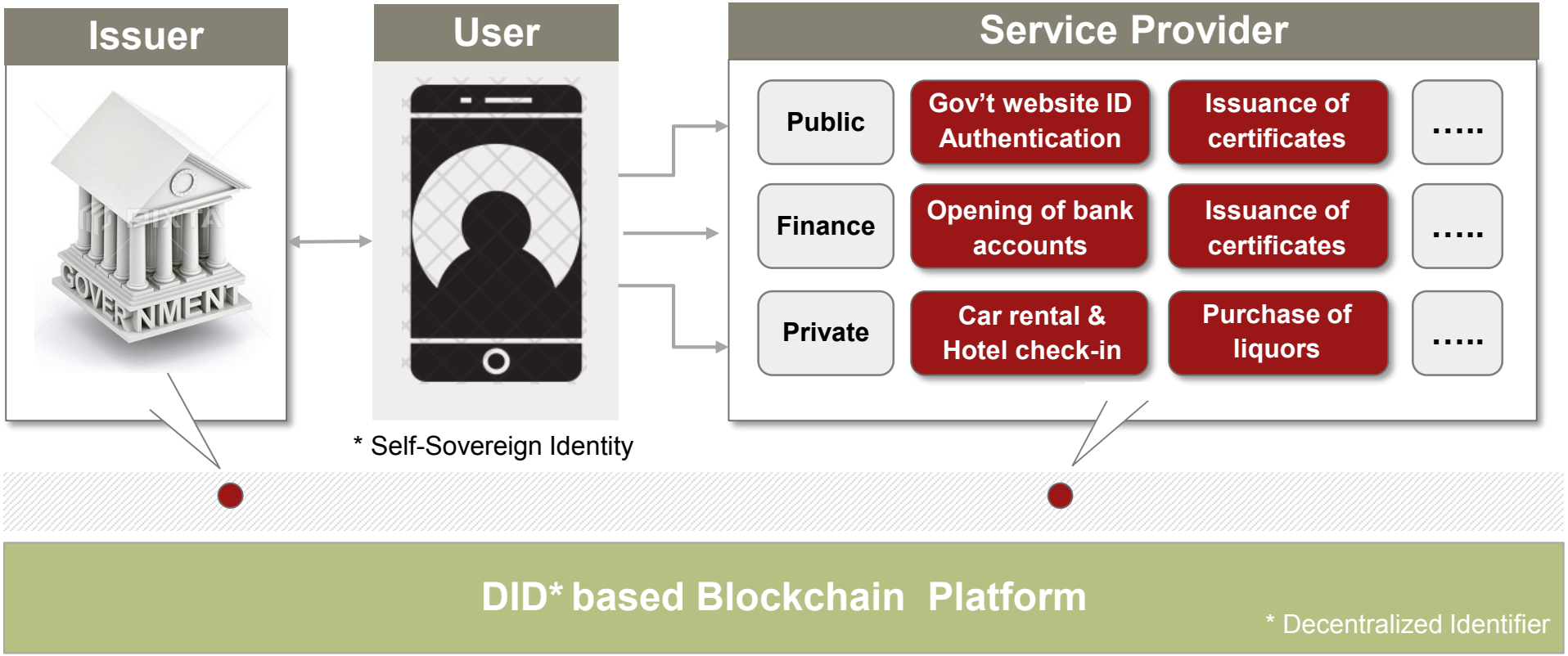
Can be **a shortcut** to accelerate digital transformation

An inclusive solution ONE mobile ID enables citizens to prove who they are online, authenticate to website, confirm transactions, and digitally sign documents



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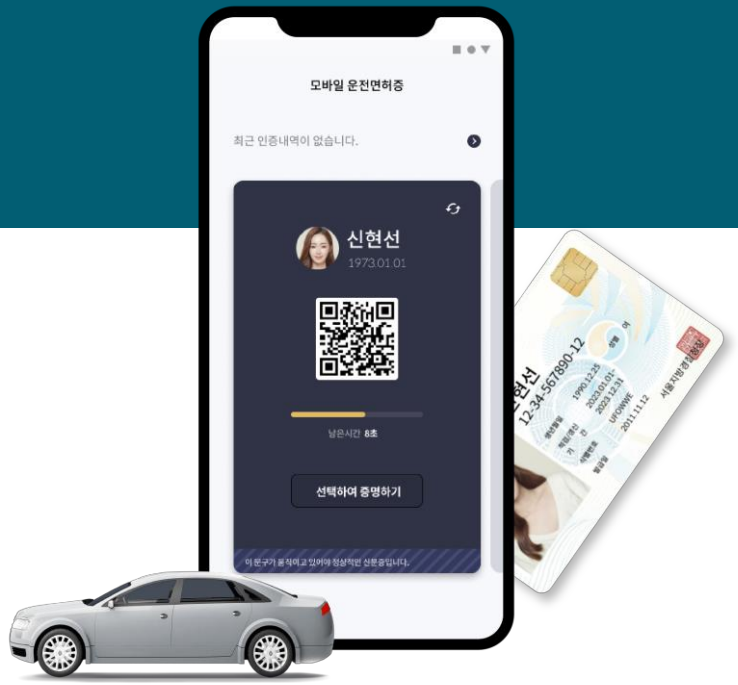
III

Use case: Korea's Mobile ID projects

What is the progress of the world first national DID reference?



Roadmap for National Digital ID

It is the on-going long term journey with phase by phase project.

Pilot (2020)

Mobile Public Officer ID

The Ministry of the Interior and Safety,
National Personnel Office

Era of national digital ID

Phase I (2021 ~ 2022)

Foundation

In Progress

Mobile Driver's License
(National Police Agency
Road Traffic Authority)

Distinguished service to Veteran
(Ministry of Patriots and Veterans Affairs)

Phase II (2023 ~ 2024)

Expansion

Certificate of registration for the disabled
(Ministry of Health and Welfare)

Youth card
(Ministry of Gender Equality and Family)

- Public and private converged services
- Review and design of various civil services

Phase III(2025 ~)

Completion

Foreigner registration card
(Ministry of Justice)

Additional expansion plans
(resident card)

- Converged services In-App implementation
- Implementation of various civil services

DID/blockchain based
mobile identification platform

DID/blockchain-based
National ID card common platform

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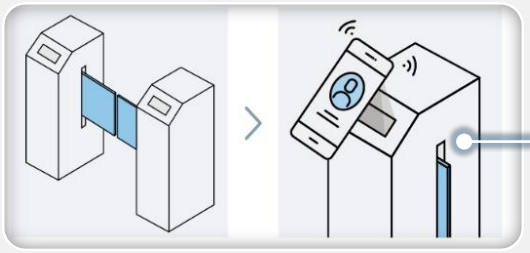
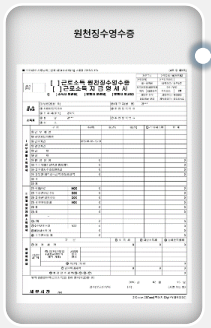
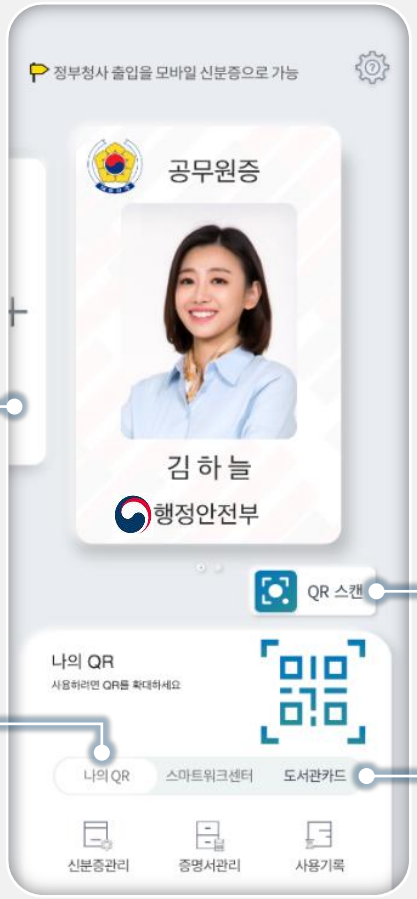
III-1. Mobile ID of Public Officer

(Entering the government building)







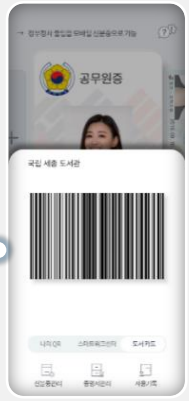
(System Log-in)

Scanning
QR

SWC

5G Notebook

Library



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III-2. Mobile Driver's License

Identify yourself with your mobile, whatever you want anywhere

Issuer/Operator

Issuance: KoROAD 도로교통공단

Operation: KOMSCO Korea Minting, Security Printing & ID Card Operating Corp.

Publicly trusted ID card issuance/operating agency

Holder

Self-Sovereign Identity

Integrated online and offline authentication

Verifier

Public	Web Verification	Certificates ...
Financials	Bank Account	Certificates ...
Private	Rent Car	CVS ...

ID Verification

Decentralized (DID) Blockchain Platform

Schedule	Jun. 2021.	...	Sept.	...	Dec.	Jan. 2022.	...	July 2022.
Milestone	Starting Project		Development of MDL system		Pilot Operation	Pilot period Legal amendment of MDL act		Roll out Nationwide

As a national ID,
Guarantee Creditworthiness

Safe and reliable
Establishing a common national platform

Useful and various
Service Expansion for people

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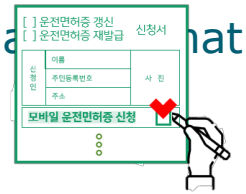
III-3. Major Considerations

How can you trust someone in online? Is DID/Blockchain enough?

1 Must visit the driver's license test center

2 Fill out the issuance application form (Persona nation)



3 Authentication and reception (Face-to-face mandatory)

4 QR/IC Card

5 Issuance of mobile driver's license at site

6 Registration of authentication method (Biometrics)

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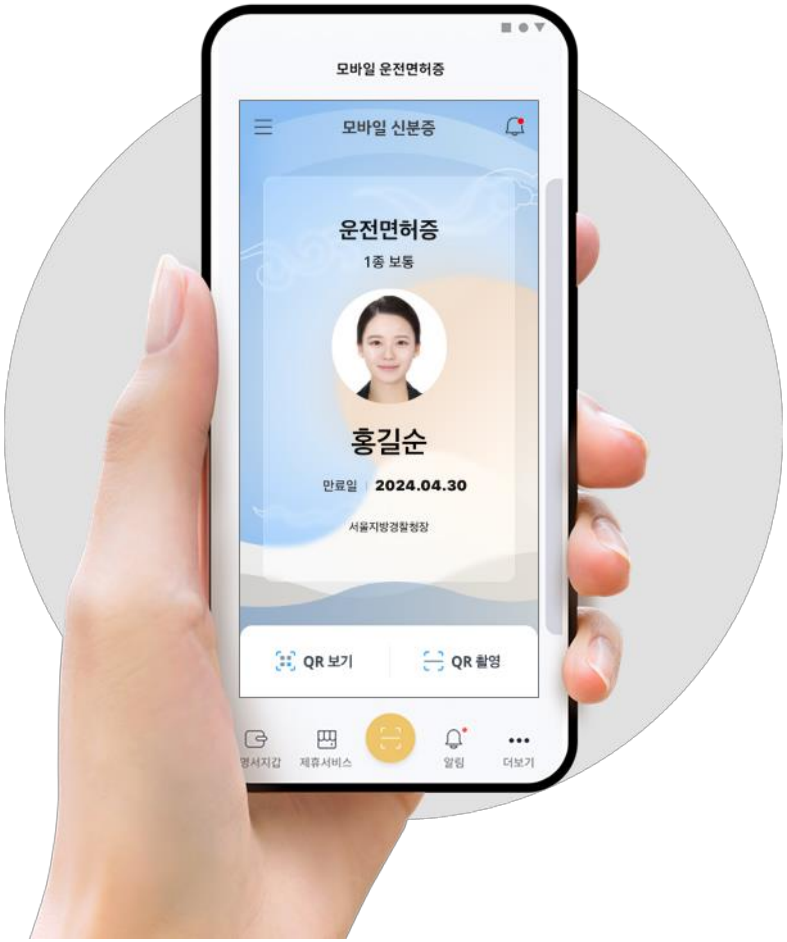
III-4. Our final effort, Korea Mobile Driver's License

Mobile Driver's License App



+

Smart driver's card equipped with the same IC chip as the e-passport

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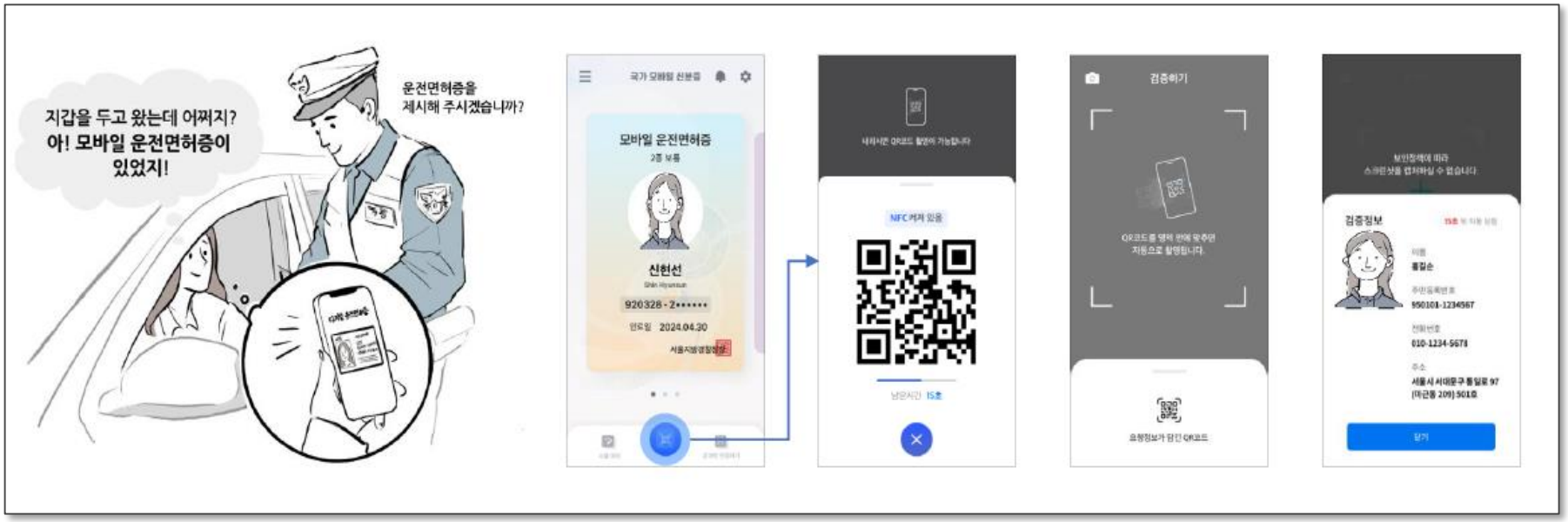
Use Case 1

How does Mobile ID work in real life?

QR Presentation

1 *Confirm identification by law enforcement official*

ID Request	Presentation	QR Code Submission	QR Code Verification	Completion



Request to present ID	Open Mobile ID application	Create a code on request	Photo the QR code	Complete the verification

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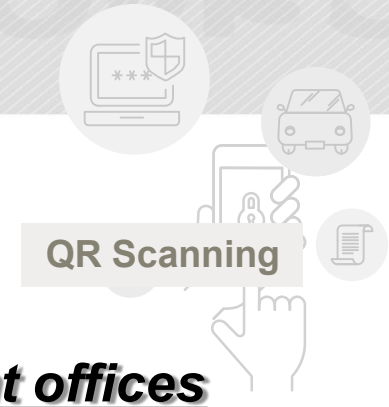
Use Case 2

How does Mobile ID work in real life?



2 *Confirm identification by civil servants at government offices*

ID Request	Open Mobile ID App	Photo QR Code	Approval of Info provision	Verification

Request to present QR code for ID	Open Mobile ID application	Photo the QR code	Pop up messages of the request	Complete the verification

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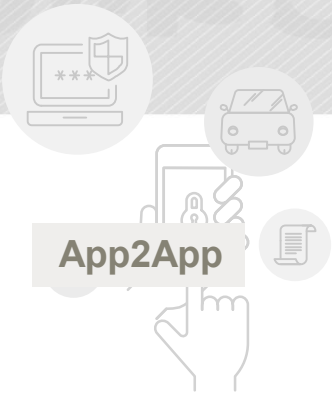
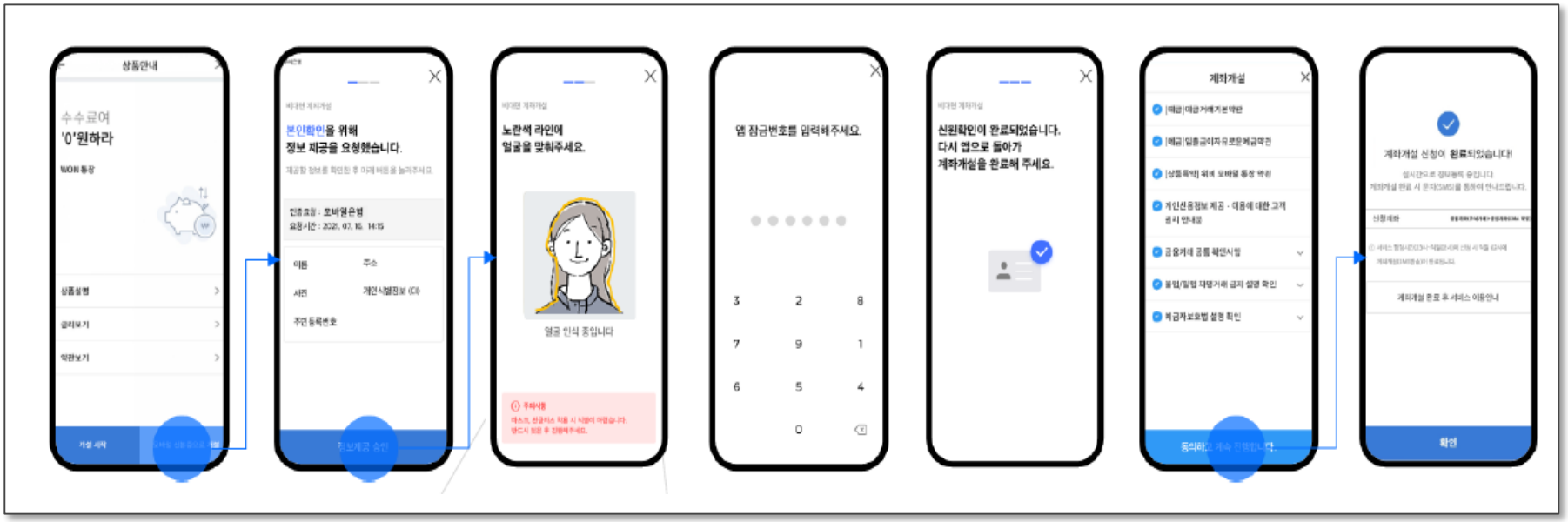
Use Case 3



How does Mobile ID work in real life?

3 *Open a new bank account by untact*

Open a Bank App	Approval of Info provision	Verification of ID	Agreements on Terms	Completion



Begin to open an account with Mobile ID	Face recognition	Enter a pass code	Completion of verification	Process of opening an account

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Use Case 4

How does Mobile ID work in real life?

Notification Message

4 *Confirm identification on e-government websites*

Select a way of ID verification at a website → **Push notification** → **Request of verification** → **Verification process** → **Completion**

Enter personal Info & Select ID verification	Check push notification	Process of verifying identification requested on the website

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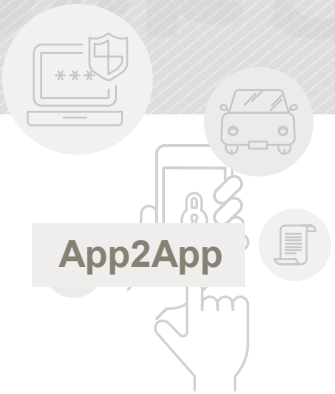
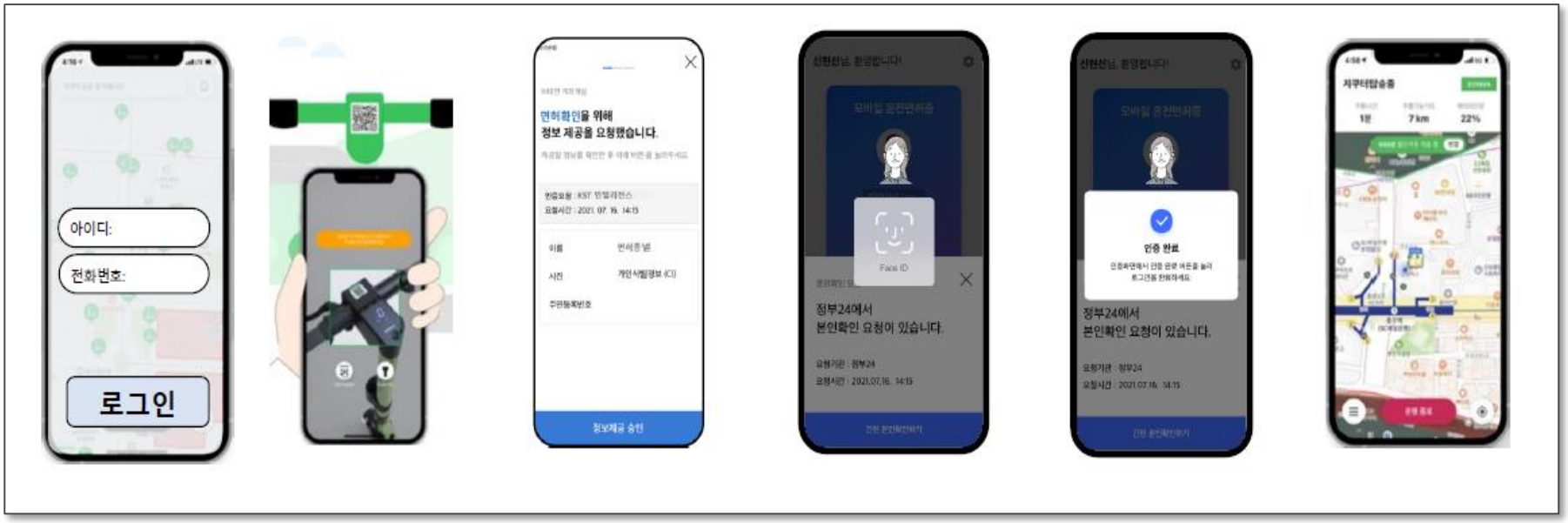
Use Case 5



How does Mobile ID work in real life?

5 *Confirm identification for renting a e-scooter or a car*

Log in to service website	Approval of Info provision	Verification driver's license	Completion



Open Mobile ID App and photo QR on a scooter	Service App(Scooter) requests to verify ID	Verification requested on Mobile ID App	Ride a scooter

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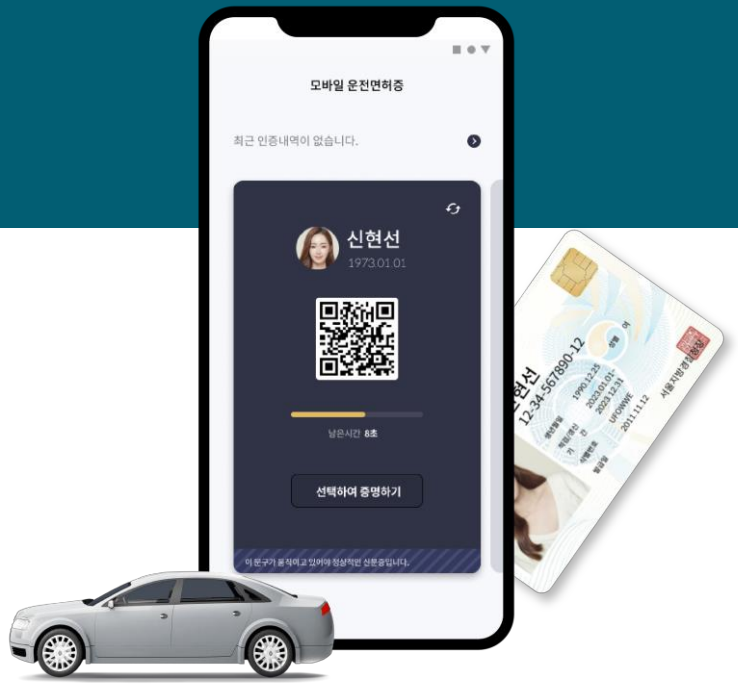
IV Expected Values & its Ecosystem



Expected Values

When the mobile driver's license are available

Issuer	Holder	Verifier
With a national digital ID common platform	By having control over personal information with self-sovereign identity	As reliability and security are guaranteed, in various places
Versatile and Safe	**Only Necessary Info.**	**more reliable and more useful**
• As a trust national backbone network, it will be jointly used for issuing various ID cards. • Leading national innovation in the ID authentication system to improve public services and support rational policy decision.	• Manage my personal information more securely both on & offline • As a sovereign data, providing minimal information where it is absolutely needed	• Reduce the burden of ID verification • Reducing the burden of certification payment costs • Easily utilize provided SDK

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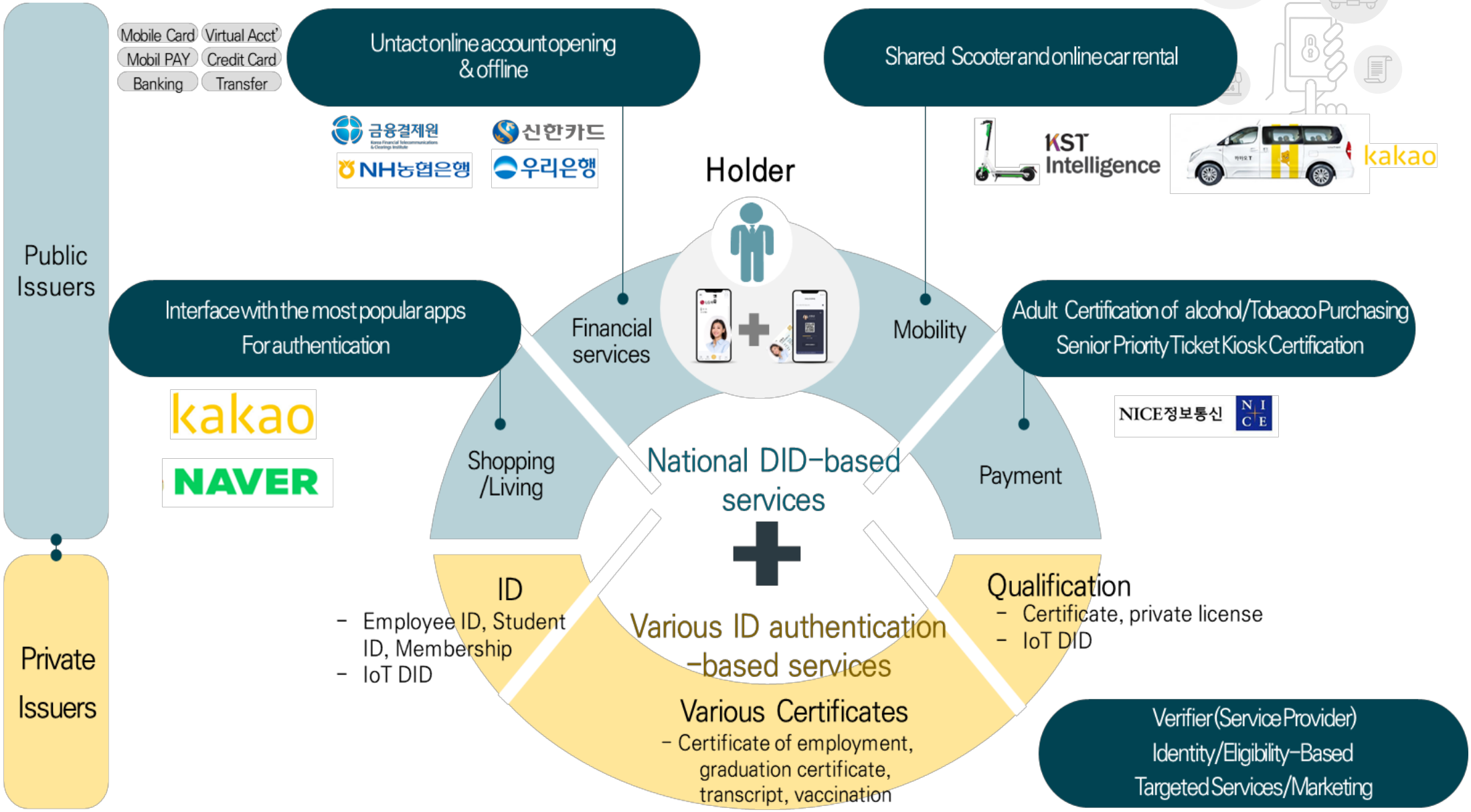
DID-based Ecosystem



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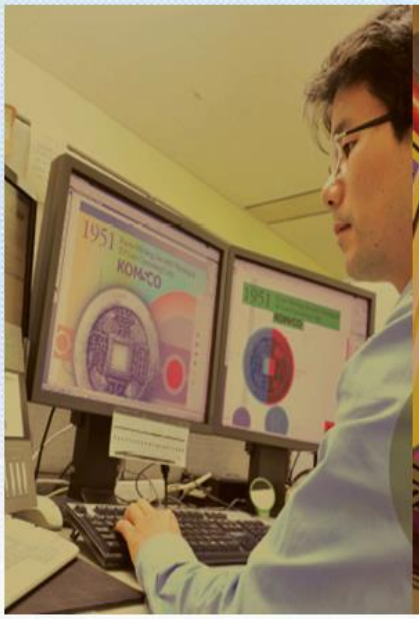
KOMSCO **“Creating Value, Connecting Trust”**

[Thank you]



HOMEPAGE www.komsco.com

SHOPPINGMALL www.koreamint.com

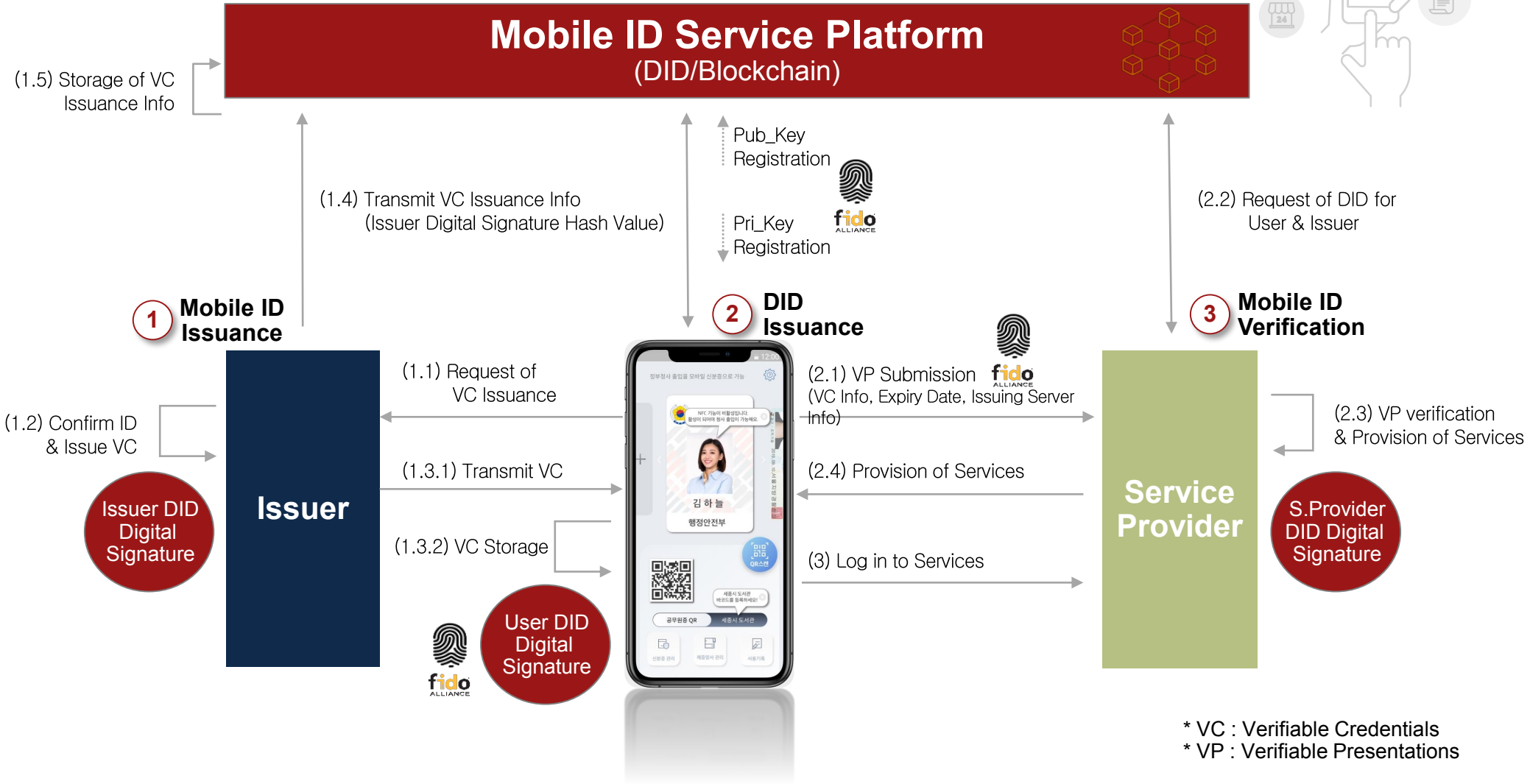
FACEBOOK facebook.com/komsco

TWITTER twitter.com/komsco

BLOG komsco.tistory.com

YOUTUBE youtube.com/user/prkomsco

[Back-up] Mechanism of DID based Mobile ID



* VC : Verifiable Credentials
* VP : Verifiable Presentations

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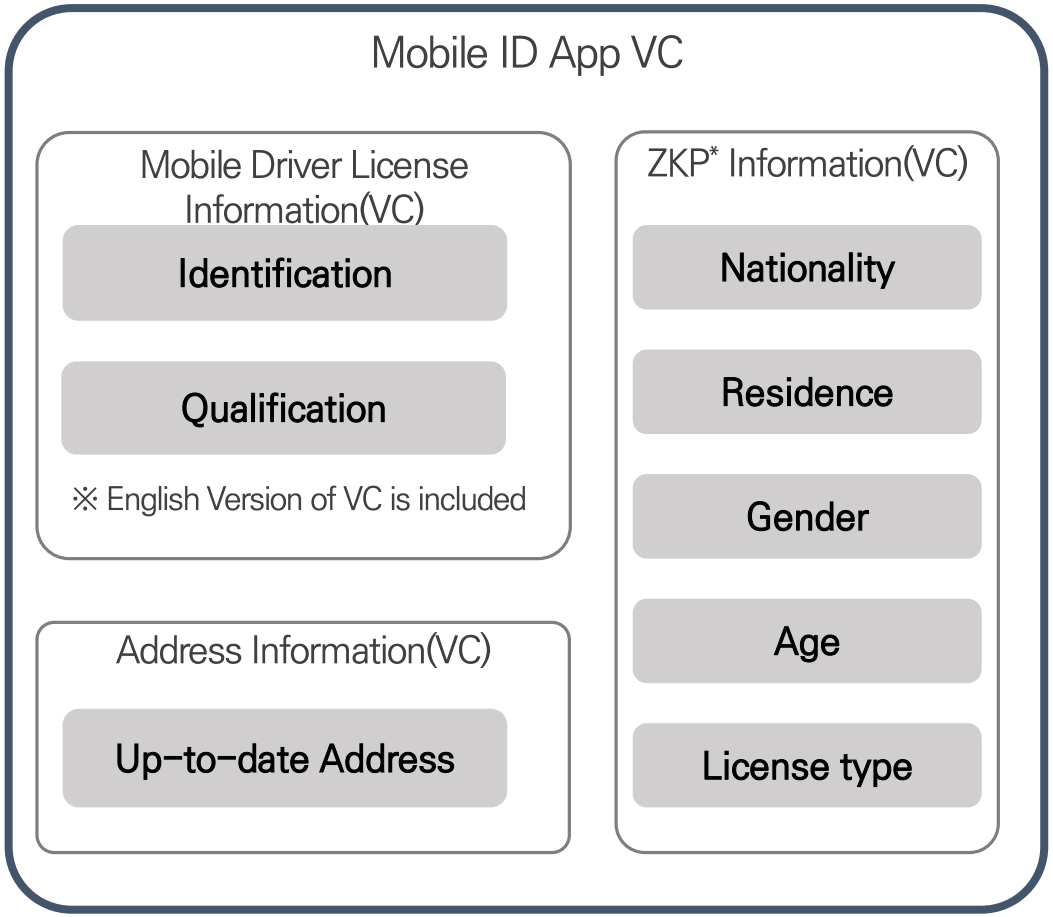
[Back-up] VC of MDL



*ZKP: Zero-Knowledge Proof

Implementation Direction

- Driver's License Information((VC)
  - Issued by the National Police Agency by integrating identity VC and qualification VC into one driver's license VC
    (Identification, Qualification, Korean and English version)
- ZKP Information VC)
  - Submission of use by nationality, residence, gender, age, and license type
- Up-to-date Address (VC)
  - Address VC is issued separately in the name of the National Police Agency in the same way digitally when changing an address
  - Issuance in Korean/English

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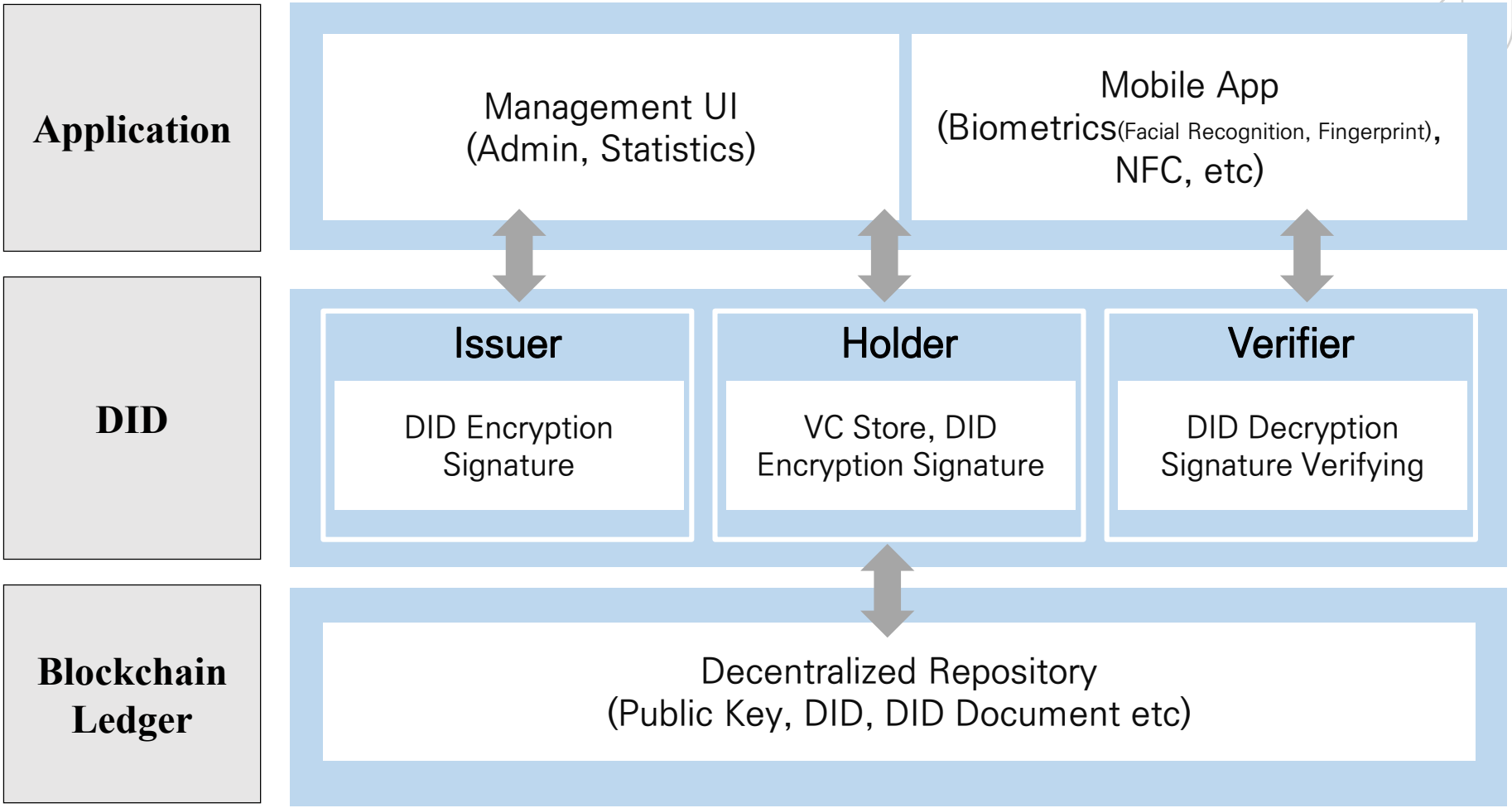
[Back-up] Blockchain/DID Platform of MDL



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Major Considerations

Issuer

- How to secure public credibility of a national ID?
- How to safely store an ID on a personal device?
- How to handle various ID and credentials??

Verifier

- ‘How do I prove ‘I am me’?
- How to secure the legal status of mobile ID?
- How will it spread nationwide?

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Introduction to Korean Law Information center

Korean Law Information Service

Jeong-hoon Kim, Law Data Innovation Team, Ministry of Government Legislation

법제처

Contents

01 Overview of the Korean Law Information Service

02 Introduction to the Korean Law Information Center

03 Implementation Results and Overseas Support Cases

01

Overview of the Korean Law Information Service

1-1. Implementation Goal

1-2. Implementation Progress

1-1. Implementation Goal

Resolving inconvenience caused by laws and regulations as well as responding quickly to changes in the living environment
Guaranteeing the public's right to know about law information by supporting an easy search

Realizing a fair and just **rule of law society**

Supporting **the general public** with no specialized knowledge on laws and regulations to **easily, quickly, and accurately search and utilize law information** without assistance from experts

The service is planned to switch to **an intelligent service centered on real life** in order to overcome the limitations of text-based law information service and to actively respond to changes in the living environment

1-2. Implementation Progress

The law information service centered on current laws and precedents has been expanded to administrative rules, local regulations, and public institution regulations. The service that started as PC communications network has changed and developed into Internet and smartphone apps.

Period	Type	Service Contents
1954 ~ 1998	Paper statute book PC communications network	○ Publication and dissemination of the current statute book (1 postscript per month, 78 books in 1 set)
		○ **Text-based current law service** through PC communications (1992)
1999 ~ 2007	The Internet	○ **Establishing an Internet-based integrated law information center** jointly with the Supreme Court ○ Service of providing **current laws, historical laws, precedents, etc.**
2008 ~ 2011	The Internet	○ **Establishing Korean Law Information Center** which allows a integrated law information search ○ Service expansion of providing **unconstitutional decision cases, legal interpretation cases, administrative adjudication cases**, etc. ○ Service of providing links to **quotation articles related to law information and other related information**
2012 ~ Present	The Internet Smartphone apps	○ **Smartphone app service** on Korea, law information (IOS and Android) ○ Service expansion of providing **administrative rules, self-governing laws and regulations of public institutions**
		○ **Developing various services,** such as: a table of comparison between the upper and lower laws and old and new laws, a dictionary of legal terms, an electronic law book, printing service of laws, and a system of laws/jurisprudence

02

Introduction to the Korean Law Information Center

- 2-1. Major Services
- 2-2. Integrated Search Service
- 2-3. Law Information Link Service
- 2-4. Law-related Information Service
- 2-5. Mobile App Service

2-1. Major Services

All law information of Korea can be searched and utilized in one place. It supports searches by field and department as well as supports searches with various keywords such as law name, content and article title.

1 Integrated Search Service

All law information such as laws, precedents and interpretations can be searched in one place

2 Law Information Link Service

Links to quoated articles, three-tier comparison table, past articles and precedents, etc. described in the contents of the statute

3 Related Information Service

Case, comparison table, law system diagram, law glossary, printing by article, electronic law book

4 Mobile Service

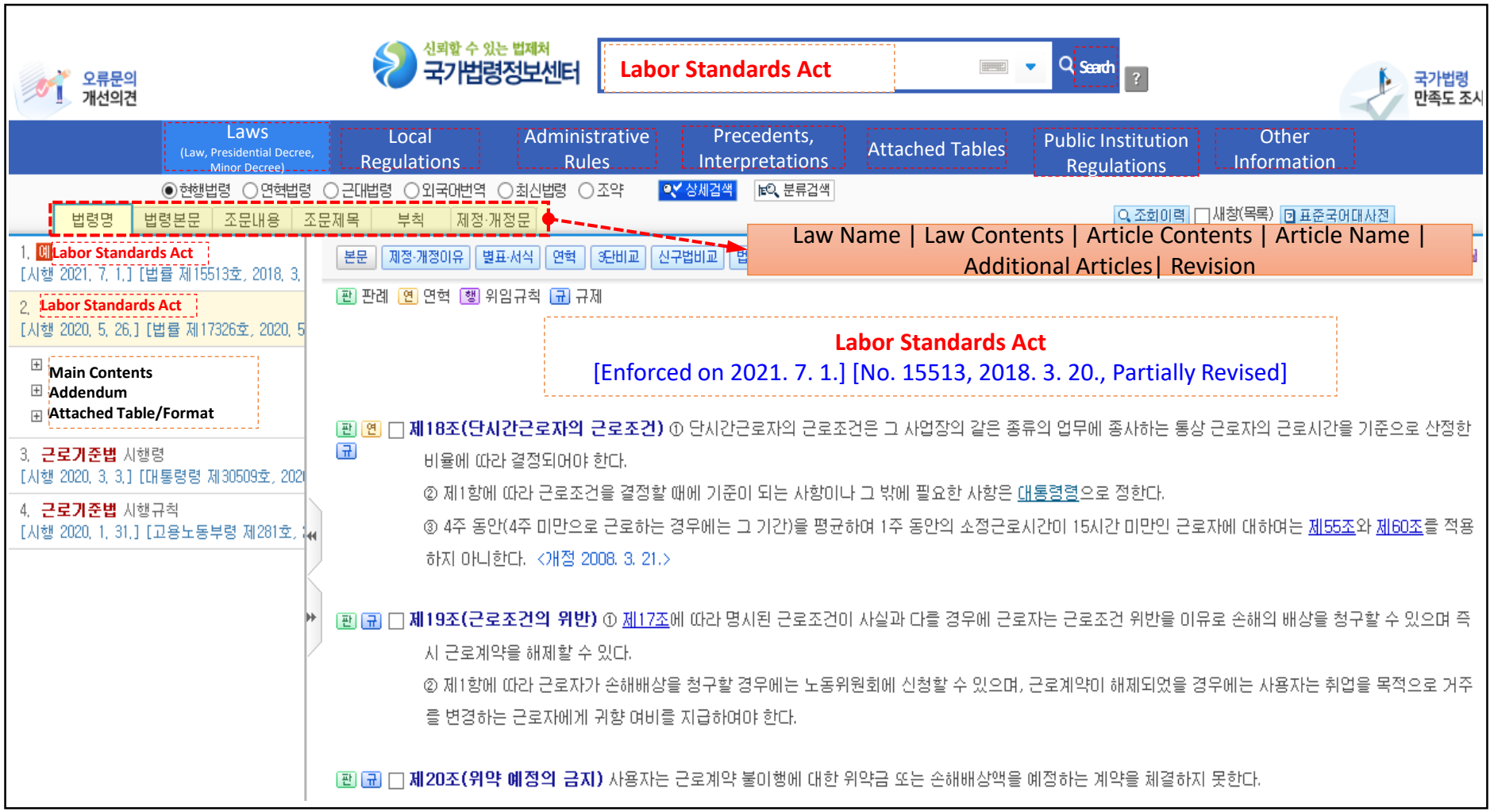
Enable law information search anytime and anywhere using a smartphone

2-2. Integrated Search Service

All law information of Korea can be searched and utilized in one place. It supports searches by field and department as well as supports searches with various keywords such as law name, content and article title.

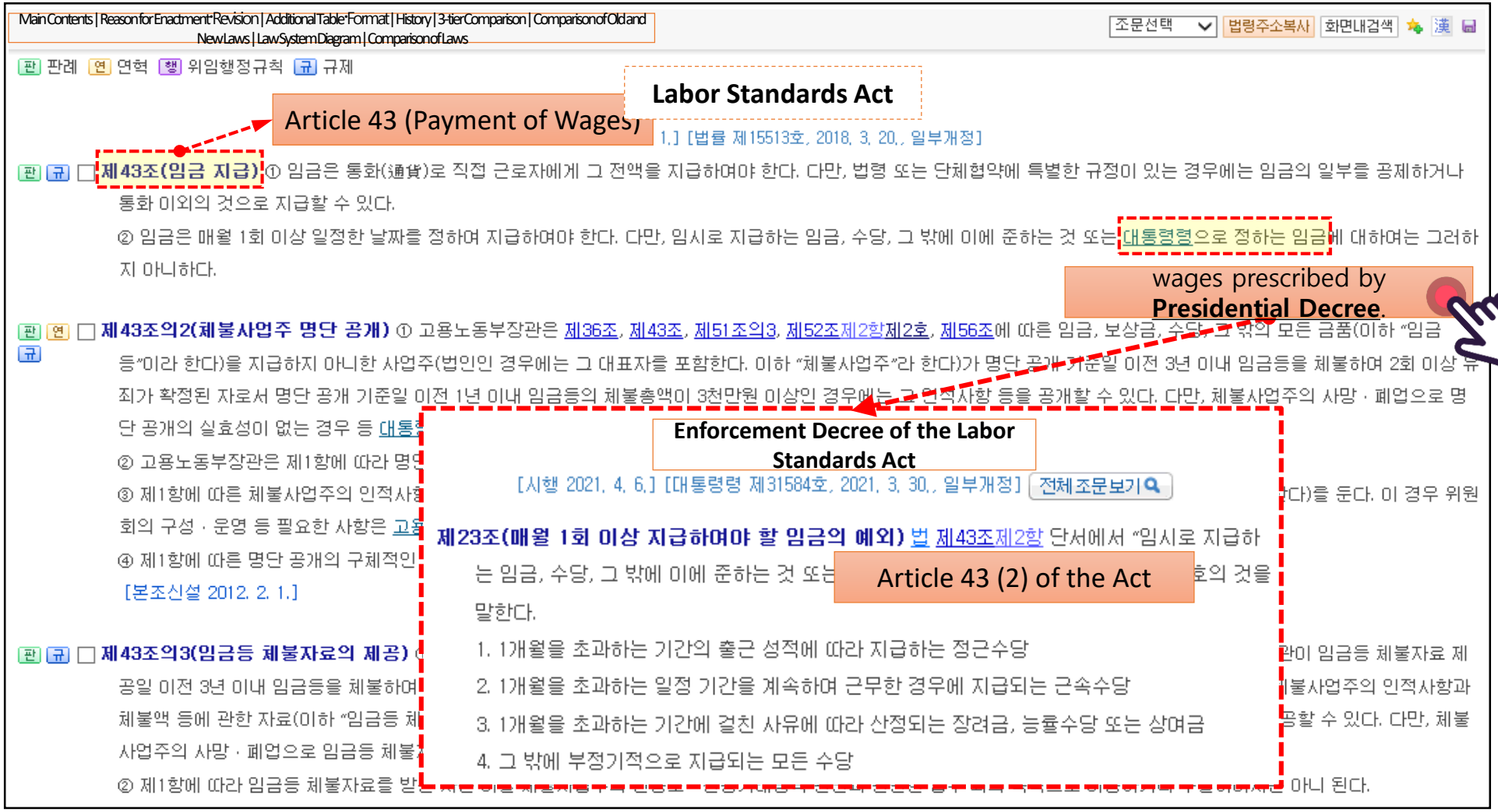
2-2. Integrated Search Service

All law information of Korea can be searched and utilized in one place. It supports searches by field and department as well as supports searches with various keywords such as law name, content and article title.



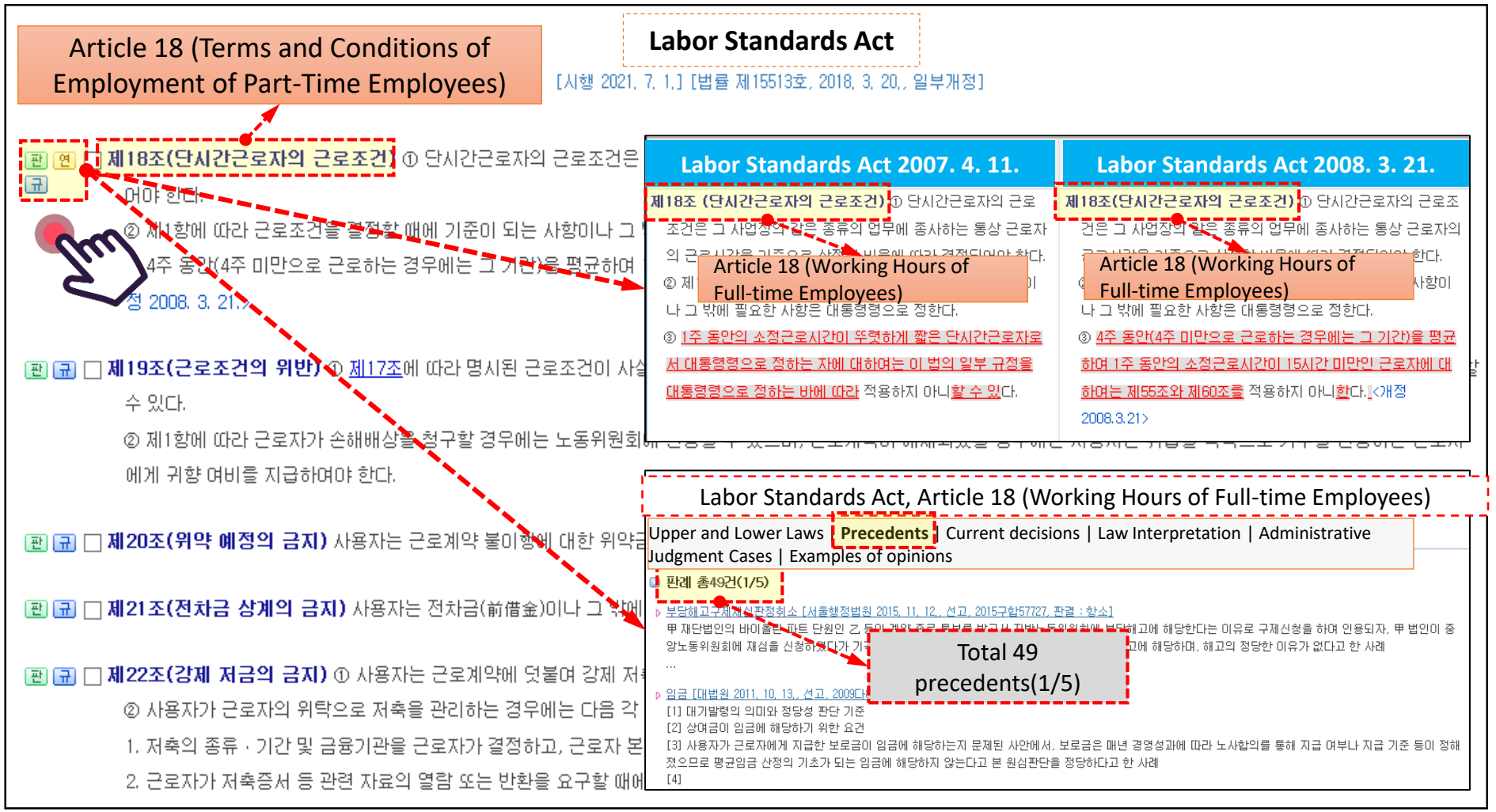
2-3. Law Information Link Service – Quoted articles

To find or understand law easily, the system provides a quoted article described in the contents of the law, a link service to the history of articles and precedents, and a three-tier comparison table (Law-Enforcement Decree-Enforcement Rules), etc.



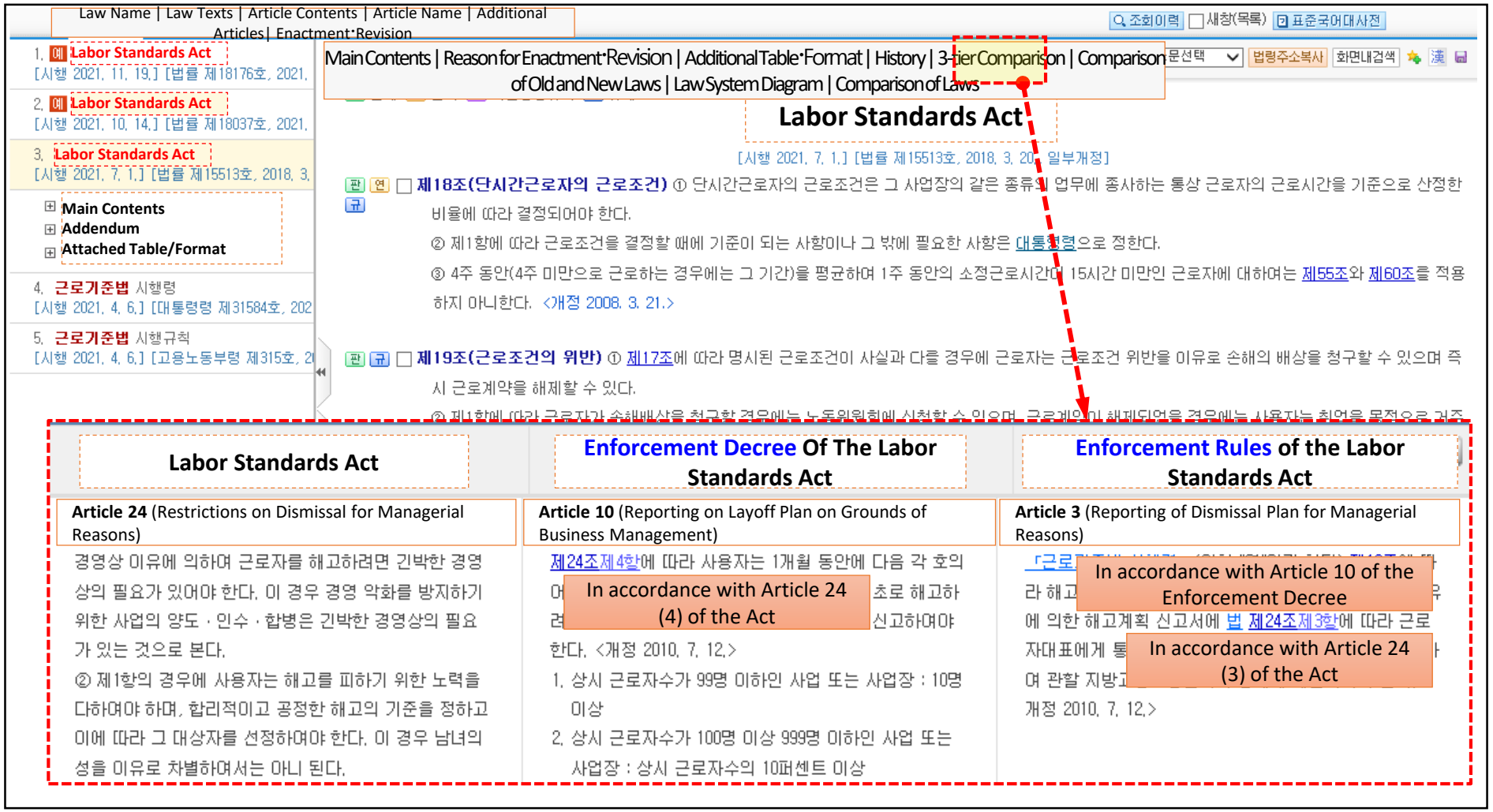
2-3. Law Information Link Service – Comparison with past articles, precedents, etc.

To find or understand law easily, the system provides a quoted article described in the contents, a link service to the history of articles and precedents, and a three-tier comparison table (Law-Enforcement Decree-Enforcement Rules), etc.



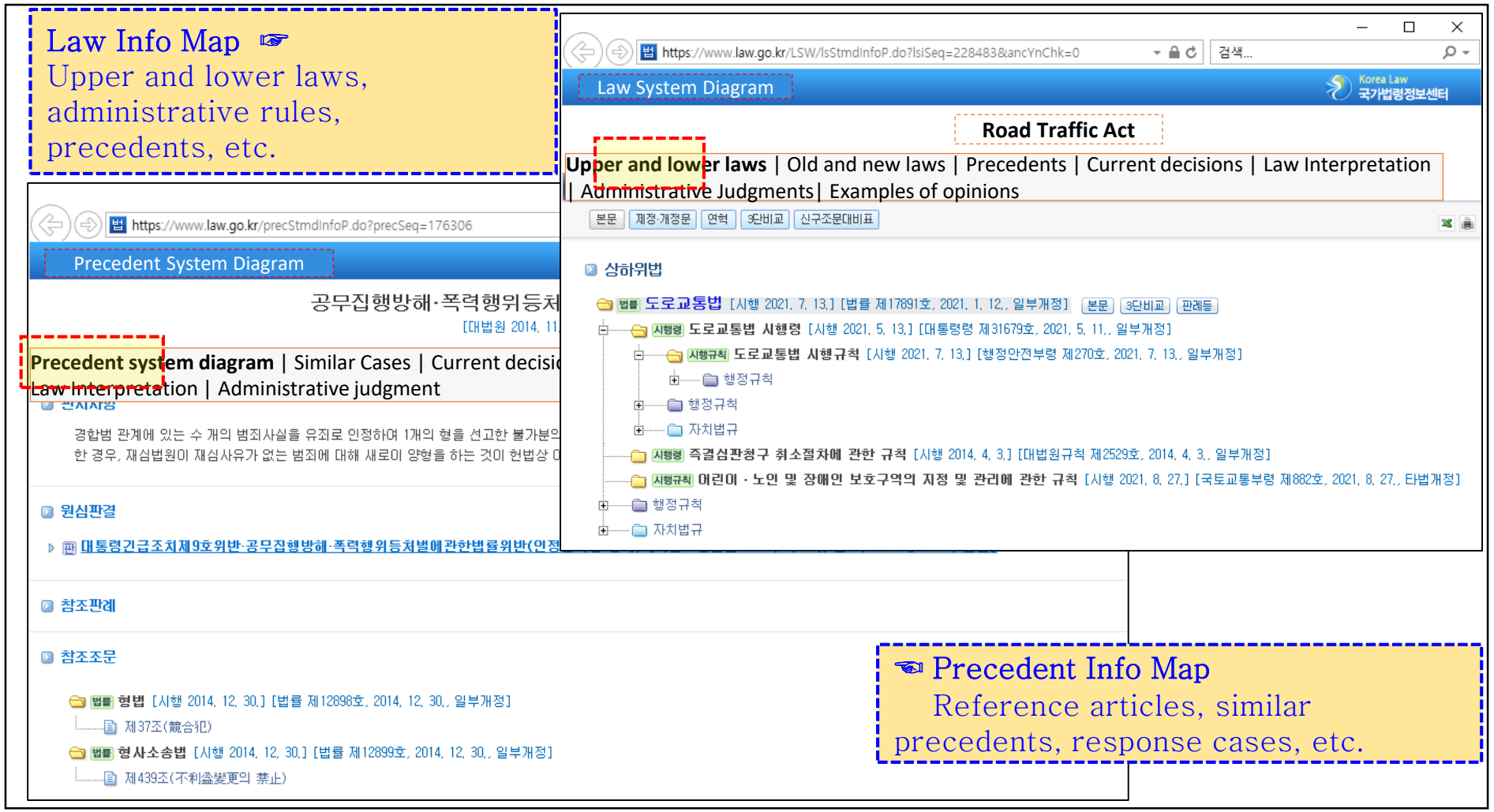
2-3. Law Information Link Service – Comparison of articles of upper and lower laws

To find or understand law easily, the system provides a quoted article described in the contents of the law, a link service to the history of articles and precedents, and a three-tier comparison table (Law-Enforcement Decree-Enforcement Rules), etc.



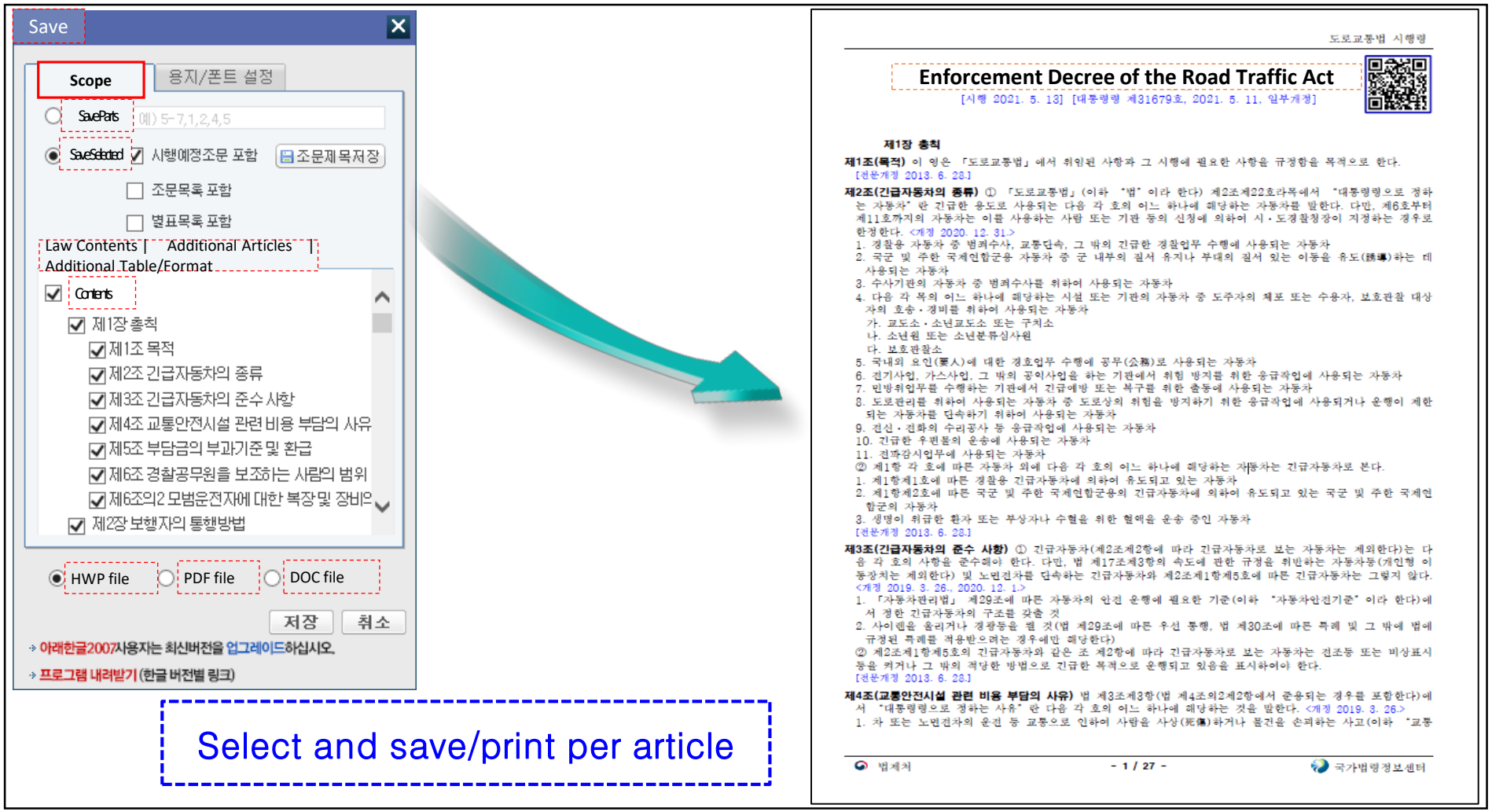
2-4. Law-related Information Service – Information map for law/precedents

In order for you to easily search and understand the entire contents of law, the system provides a tree form of a complete list of related laws, presidential ordinances, ministerial ordinances, administrative rules, local regulations and precedents



2-4. Law-related Information Service – Selective article printing

Supporting for saving or printing the entire contents of laws or selected articles in various formats (*.pdf, *.doc, *,hwp) without additional editing

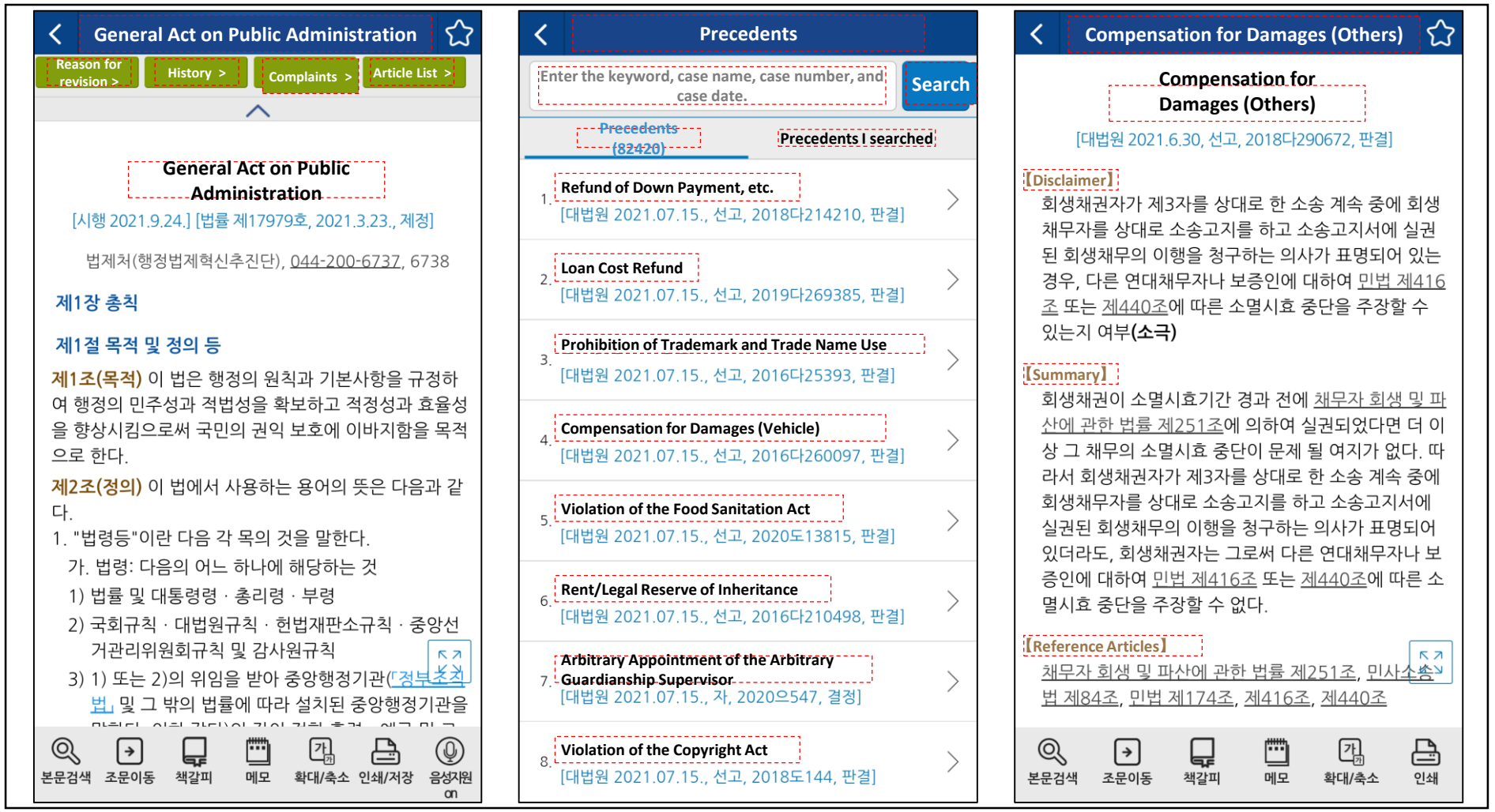


2-5. Law Information Mobile App Service

Supporting for saving or printing the entire contents of laws or selected articles in various formats (*.pdf, *.doc, *,hwp) without additional editing

2-5. Law Information Mobile App Service

All law information such as laws, local regulations, administrative rules, and precedents provided by the Korean Law Information Center can be searched in the same way as one would on a smartphone



03

Implementation Results and Overseas Support Cases

3-1. Law Information Status

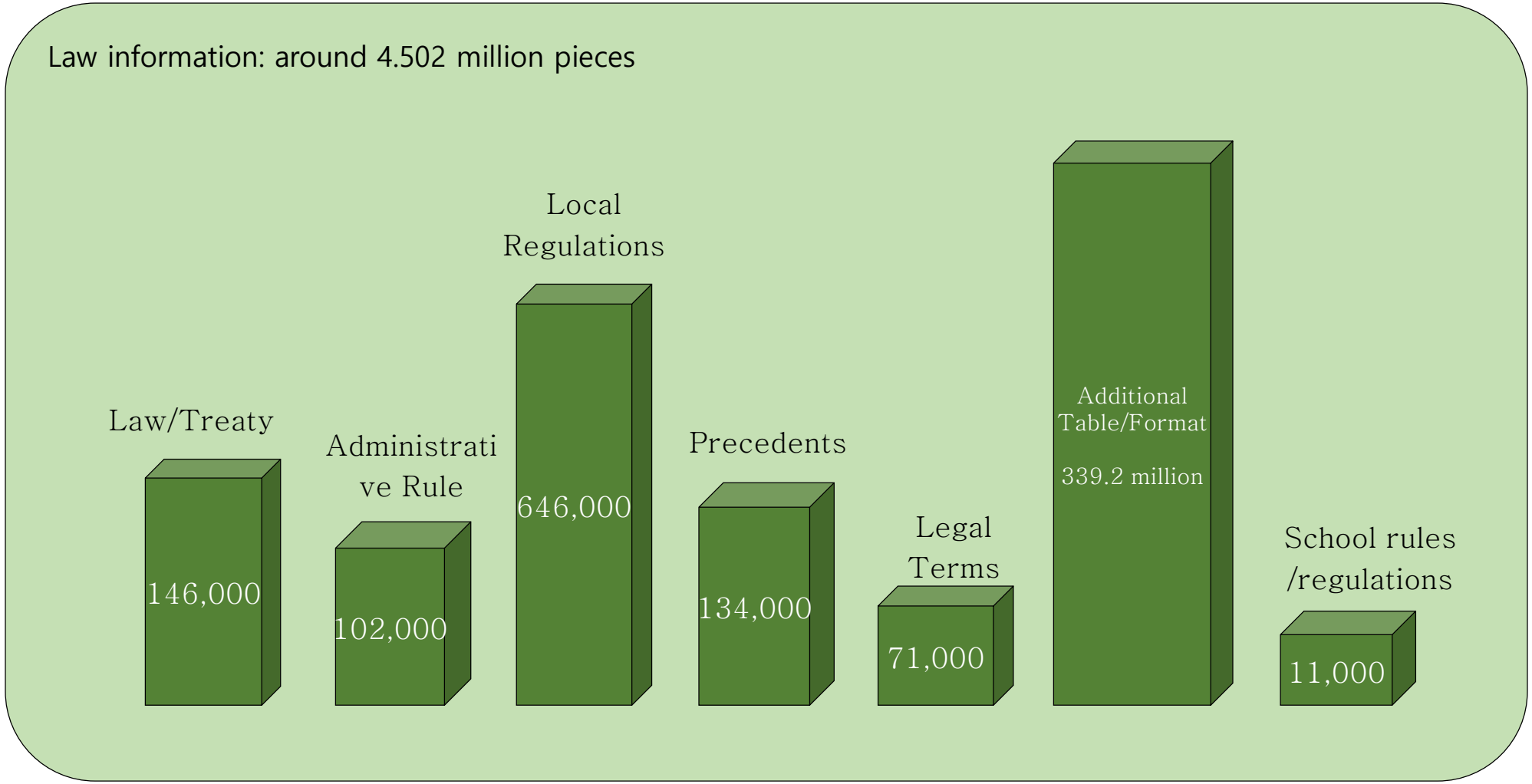
3-2. Implementation Results

3-3. Future Implementation

3-4. Overseas Support Cases

3-1. Law Information Status

Systematically constructing and using law information such as current laws and regulations that were enacted and revised since the establishment of the Korean government, including its historical laws, precedents, etc.



3-2. Implementation Results

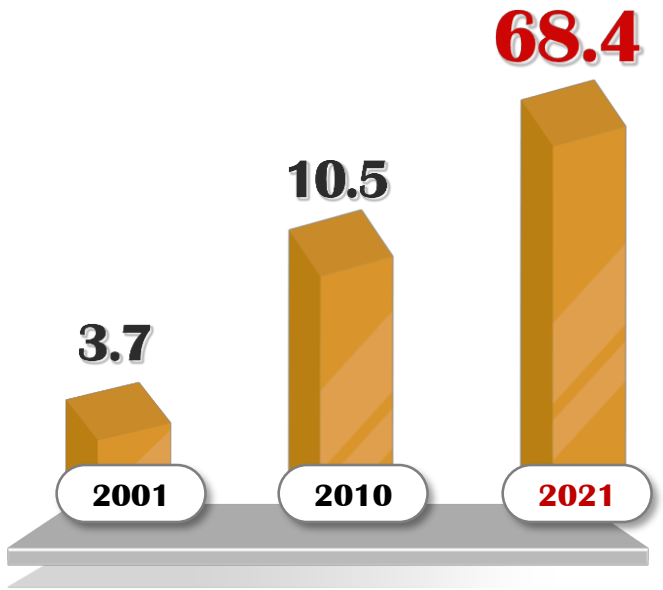
The Law Information system updates and shares law information since the day of law declaration. As the service level for law information such as the law information link service increases, the daily average number of law information users also increases rapidly

Law information update on the day of declaration

Rapidly share the latest law information

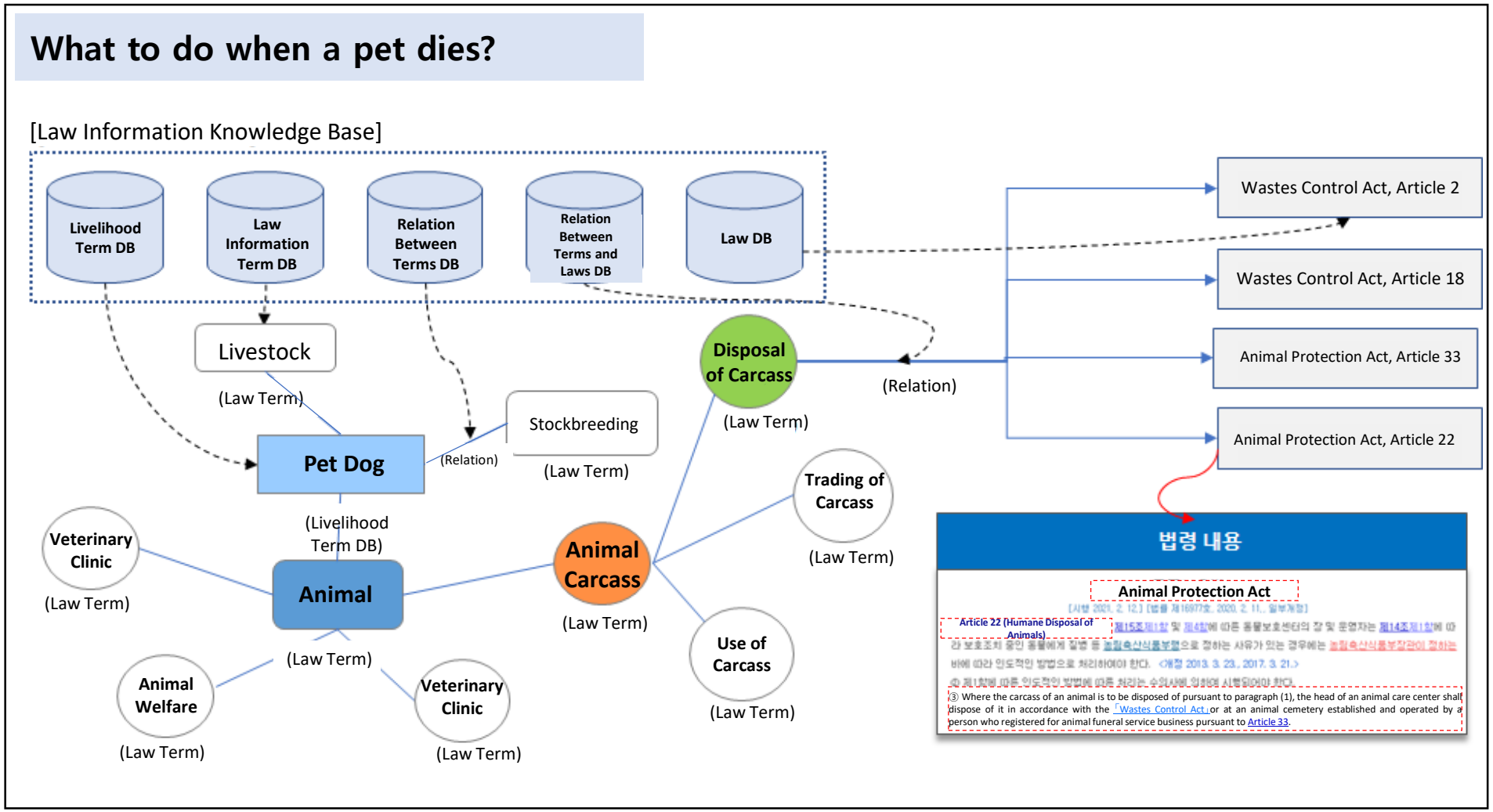
Status of Korean Law Information Center users

Number of daily visitors (unit: 10,000)



3-3. Future Implementation

Planning to establish a law information search service, which allows not only legal experts but also the general public to easily search for law information through sentences, questions, and everyday terms (2022~2025)



3-3. Overseas Support Cases

Continuous exchange, cooperation and support with Myanmar, Indonesia, Mongolia, and Uzbekistan
Promotion of law information and legislative system for countries in Southeast Asia and Latin America

☐ **Myanmar** (Naypyidaw, Ministry of Justice)

- Mid to long-term ISP establishment project for establishing a law information system (2016. 6.~11.)
- Invitation training: policy process executing operator course, user course (2016. 8.)
- Dispatch experts in different fields from Korea and train (3 times in the development phase, 3 times in the operation phase) (2017. 6~2018. 5.)
- Develop and establish the database for the Myanmar law information website, law information management system and app (2017. 6~2018. 5.)

☐ **Mongolia** (Ulaanbaatar)

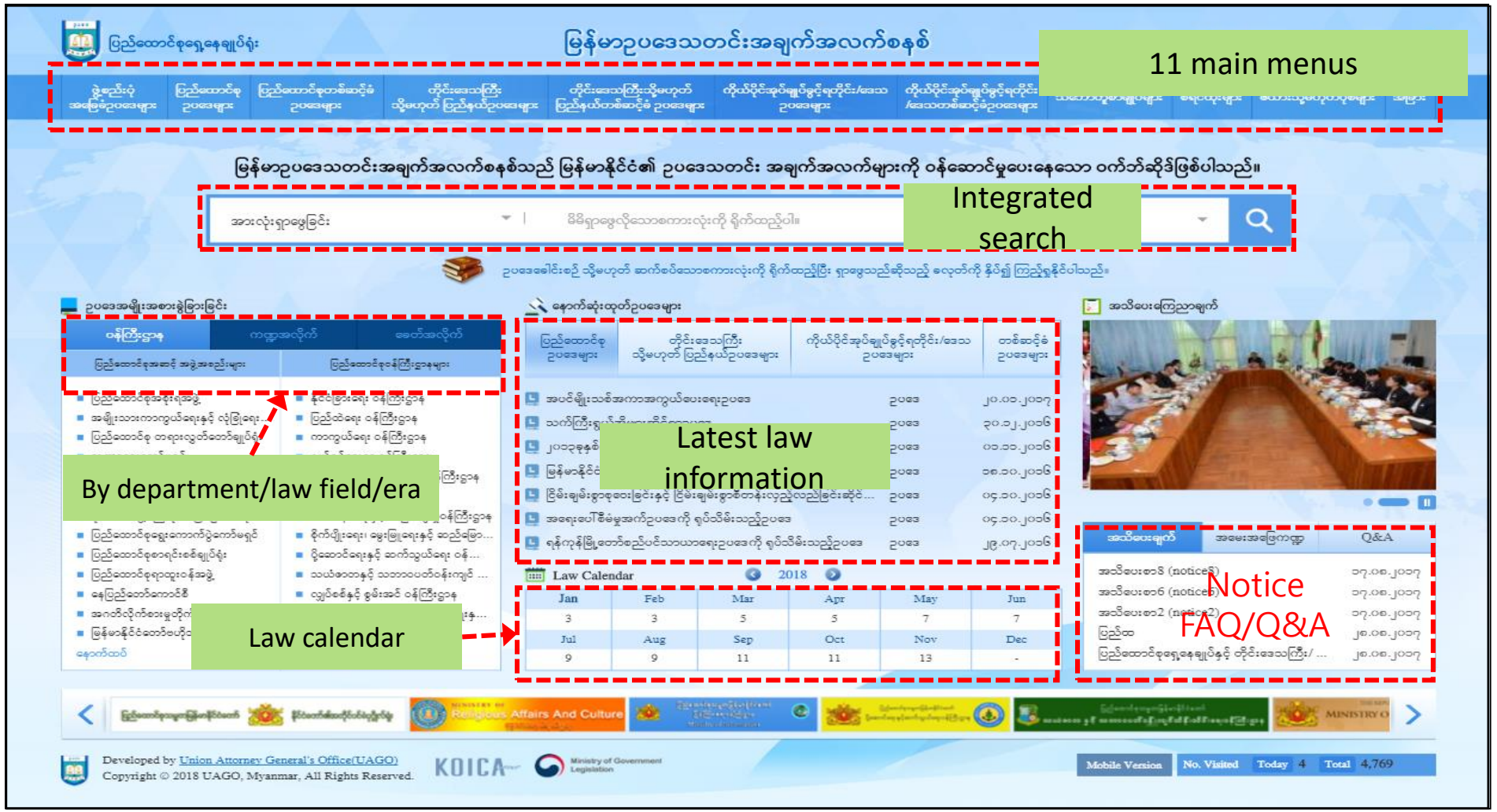
- Training on National Law Information Center, Government Legislative Support Center, and Bill Editor
  (In 2018, participated by dispatched staff from the Ministry of Government Legislation, members of the Mongolian National Assembly, staff from the Ministry of Justice, etc.)
- Establishment of mid to long-term ISP for establishment of a legal information system (supported by the Ministry of the Interior and Safety)

☐ **Indonesia** (Jakarta, Ministry of Law and Human Rights)

- KOICA ODA selected a project of establishing the Indonesian law information system (proposed by the Ministry of Government Legislation)
- Proceed with Indonesian law information system establishment project (2021~2025)

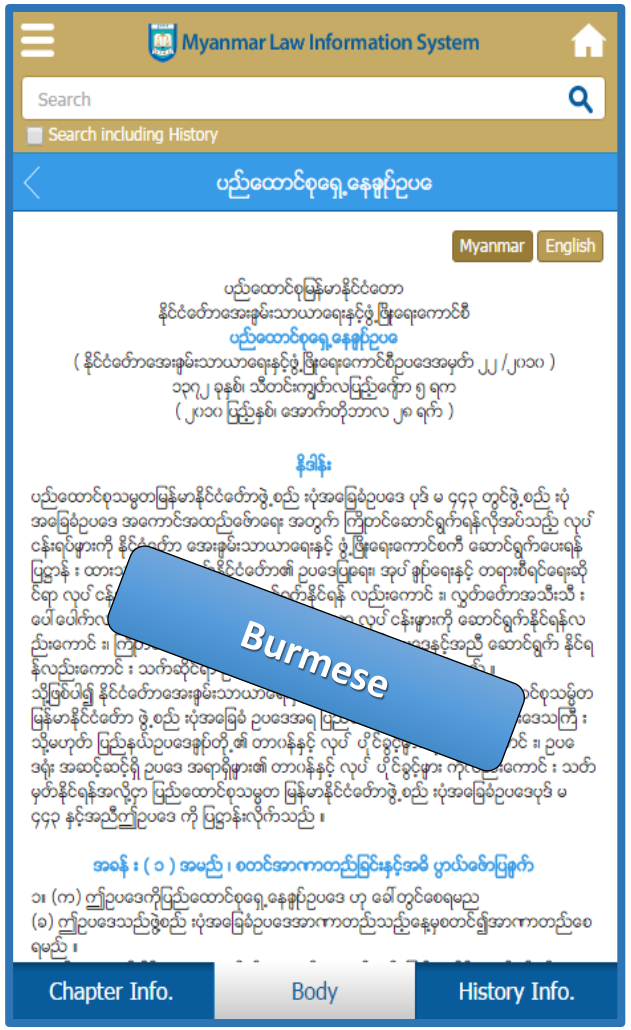
3-3. Overseas Support Cases – Establishing the Myanmar law information system

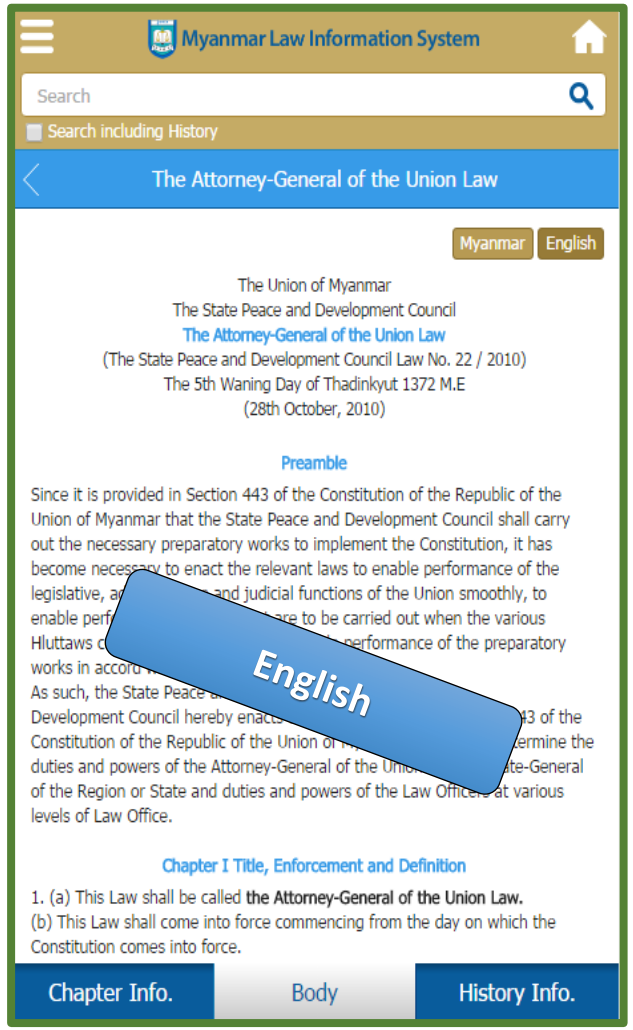
Creating the Myanmar law information service website and supporting the search for current laws and historical laws by department, law field and era in consultation with the Myanmar Ministry of Justice.



3-3. Overseas Support Cases - Establishing the Myanmar law information system

Developing and supporting a smartphone app for searching law information anytime and anywhere while moving. Providing the service in Burmese or English depending on the type of Myanmar law information contents





Thank You

법제처

National Information Resources Service

FIRST MOVER OF KOREAN ICT

2022

National Information Resources Service

CONTENTS LIST

I. OVERVIEW

1-1. History

1-2. Organization

1-3. Strategies

1-4. Operational Status

1-5. Future of NIRS

II. MAJOR PROJECTS

2-1. G-cloud Migration

2-2. SDDC

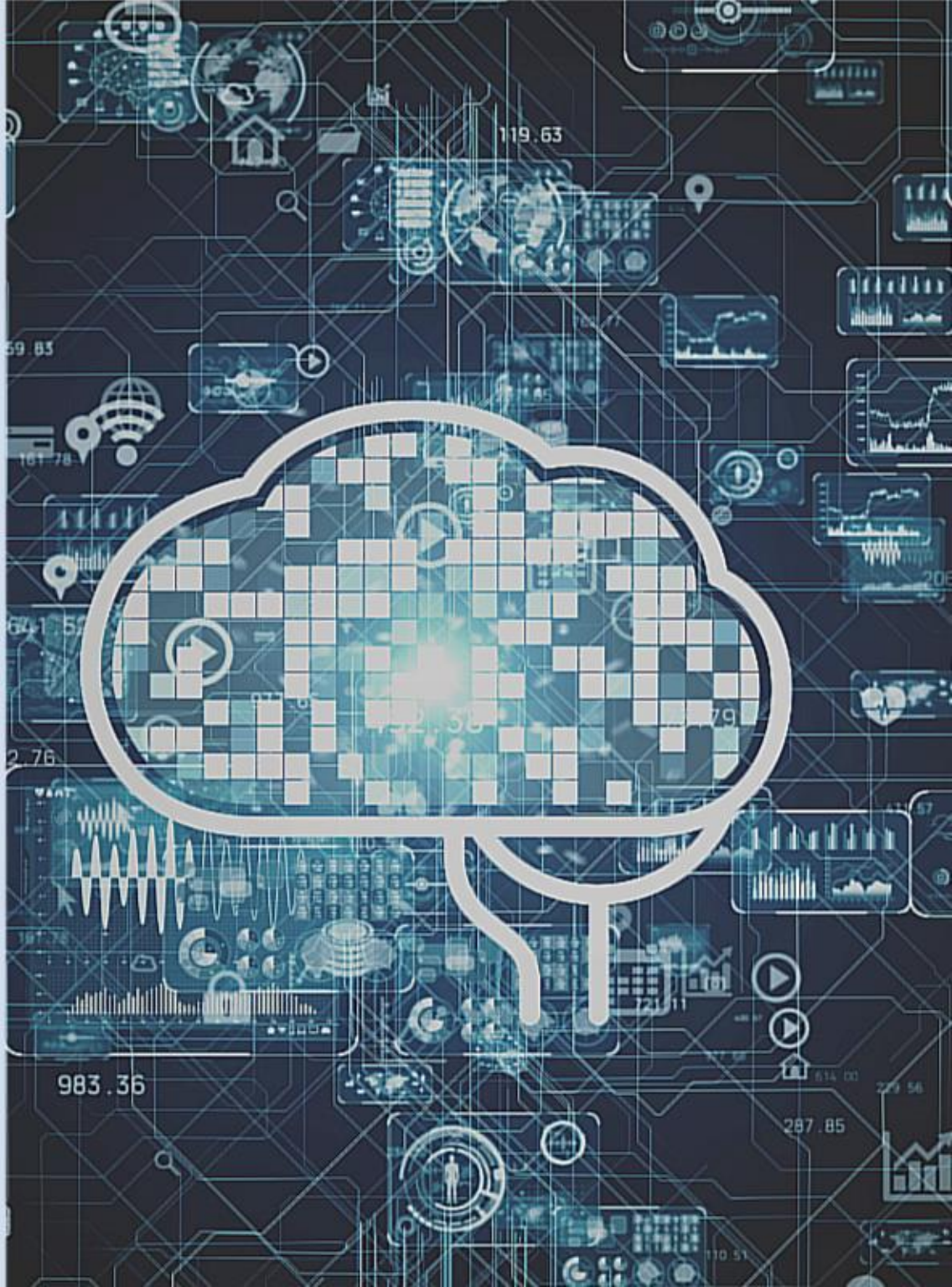
2-3. A.I. based Security Management

2-4. Reinforced Cloud Security

2-5. National Integrated Network

III. ROADMAP

3-1. Roadmap



I. OVERVIEW

1-1. History

1-2. Organization

1-3. Strategies

1-4. Operational Status

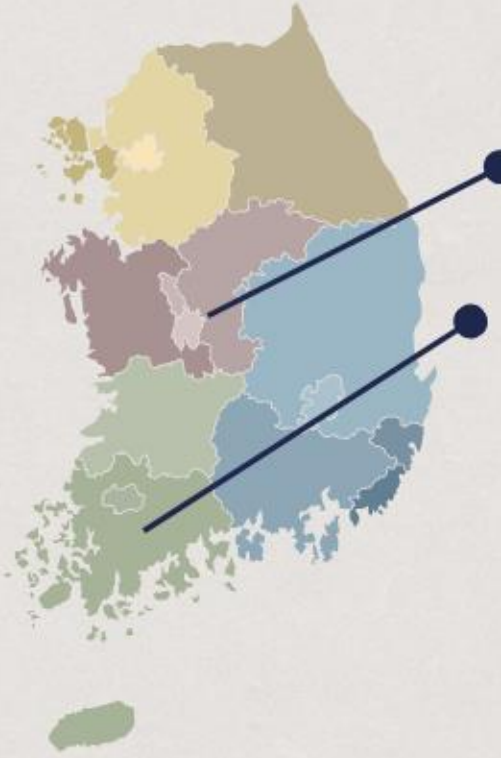
1-5. Future of NIRS

1-1. History

Side effects from quantitative growth of e-gov. in early 2000

- Redunadant Investment
- Insufficient HR
- Poor Computing Environment
- Vulnerable Security

Exclusive Gov't. Data Center with optimal IT infra. & professional expertise



2005. NIRS Daejeon

2007. NIRS Gwangju

2008. MoICT -> MoIS

2017. Changed the title to 'NIRS'

1-2. Organization

A leading gov. institution guiding the intelligent digital government

Comprehensive Resource Management

Comprehensively operate & manage about 47,000 information systems of 50 government agencies

Cyber Security Management

Implement the next generation cyber security management system using A.I. technology

Resource Integration & G-cloud

Provide cloud-based digital government services with intelligent resource consolidation

National Integrated Network

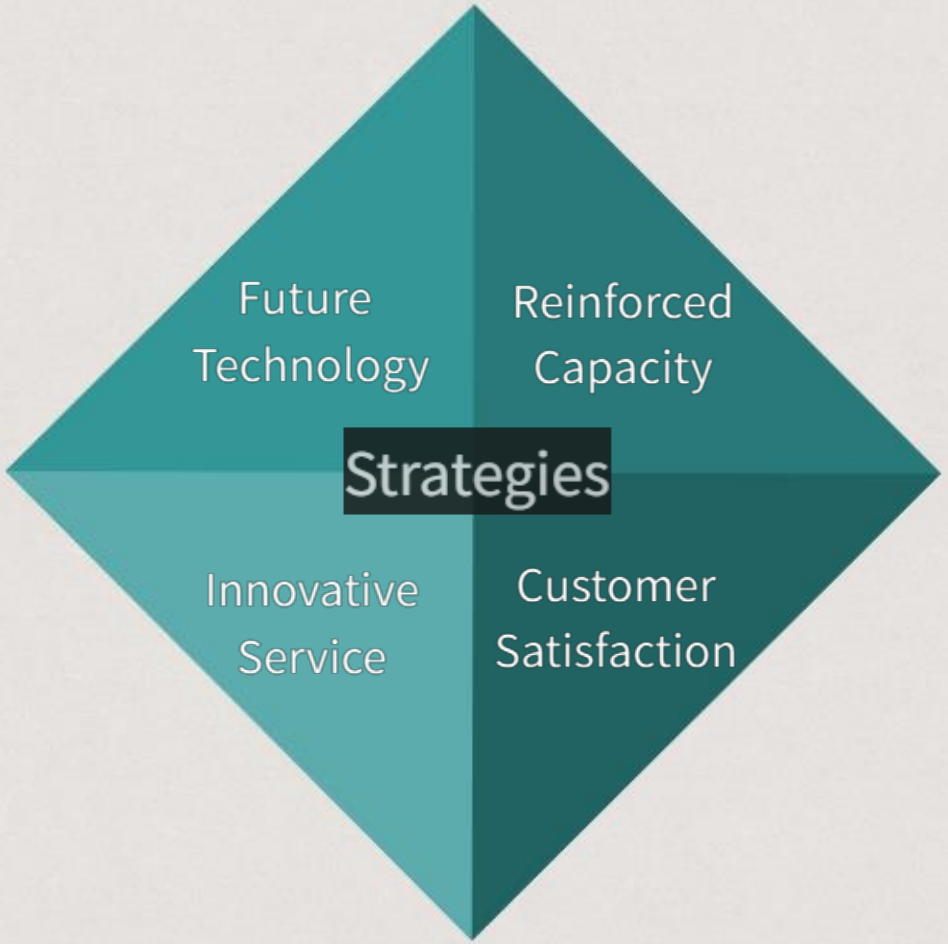
Extensively integrate individually run legacy networks into a single network

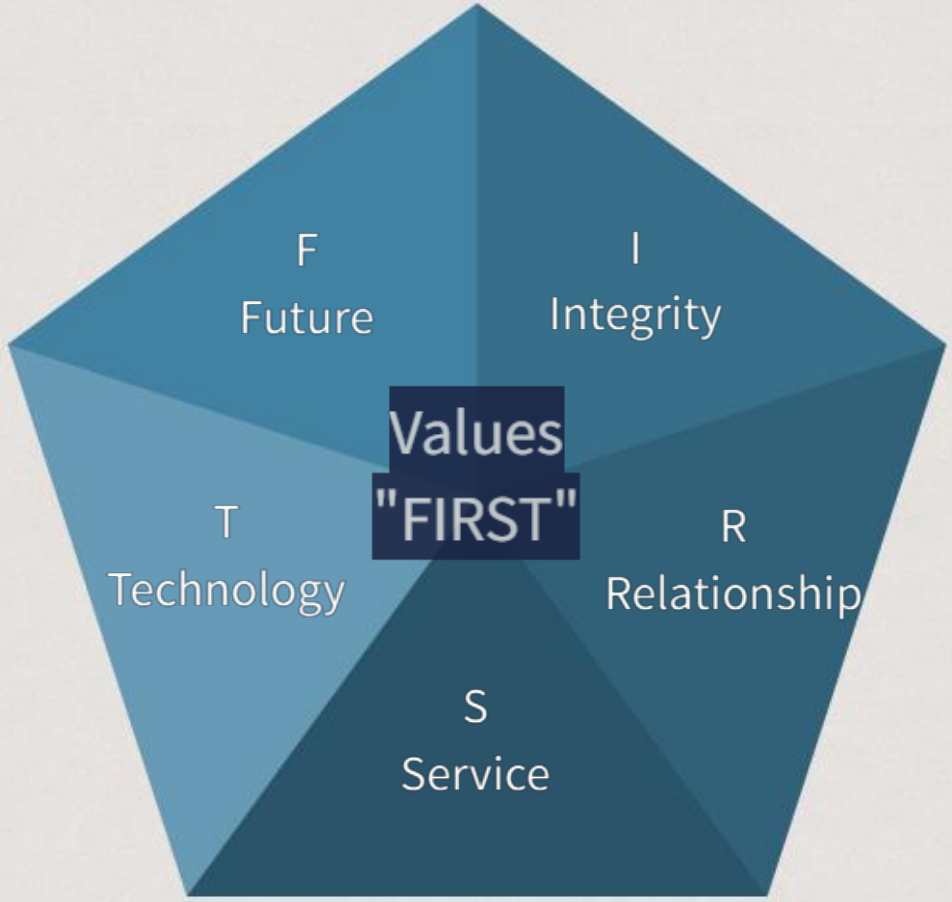
Status	HR	Annual Budget
2 centers 2 offices 13 divisions 1 team	about 300 Public Officials & about 800 Private Experts	USD 540 mil. * as of. Feb.'22

1-3. Strategies

Mission To provide quality ICT services leading the Digital Gov't.

Vision Professional agency providing i-cloud services





1-4. Operational Status

Operates info. systems of 50 central gov. institutions

Supports 1,321 digital services

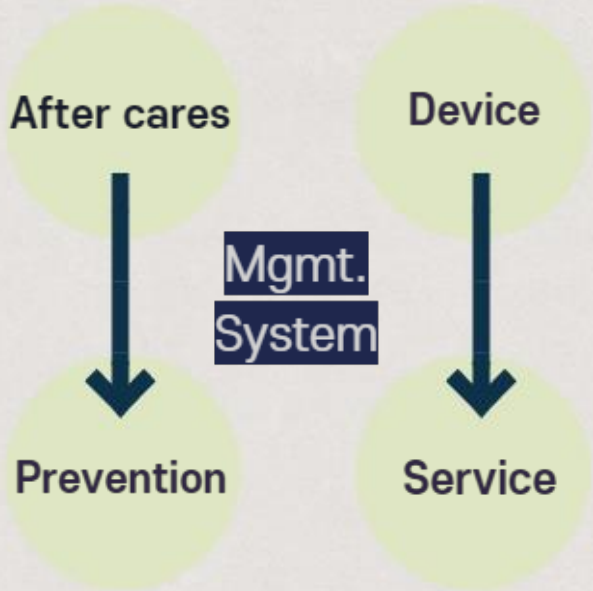
NIRS DJ
26 institutions
MoIS, MOHW,
Public Procurement Service

HW 32,000
SW 15,000

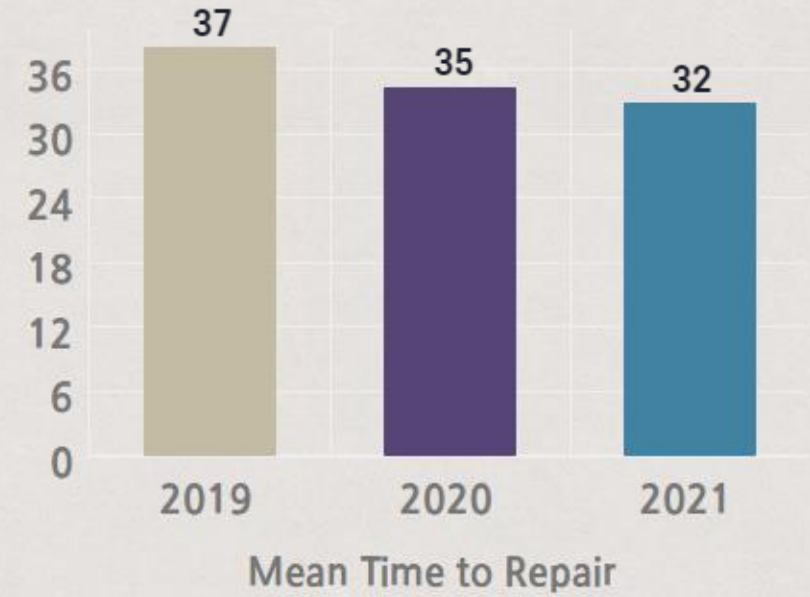
NIRS GJ
24 institutions
MOJ, MSS,
NTS, KIPO

Conduct prevention checks, performance optimization

Apply auto management systems in overall operation



Visualize service flows by conducting relation analysis over intertwined systems



1-5. Future of NIRS

National Integrated N/W

N/W Mgmt.

about 700 institutions
central & local gov't.

Reinforce cloud security
A.I. based security mgmt.

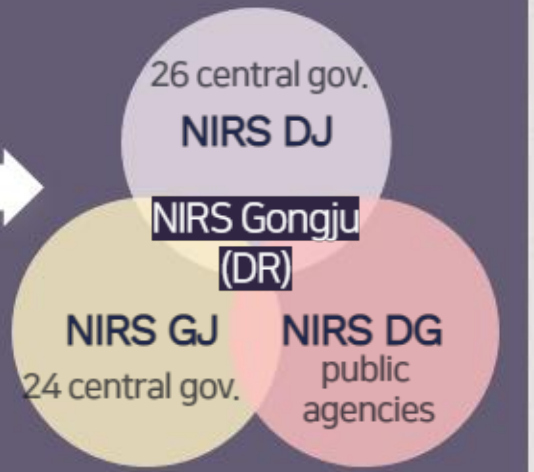
Next Gen. Security Mgmt.

Learn, judge, Respond

A.I.

SDDC
G-cloud

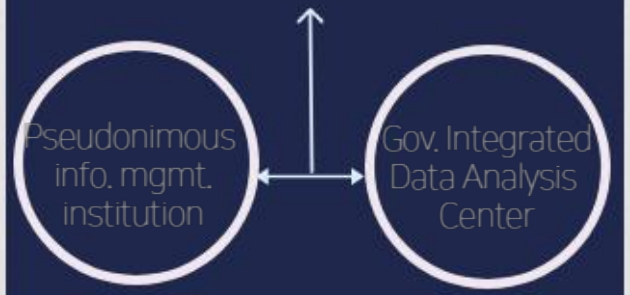
Info. System Mgmt.



Pseudonimous Information Management Center

National Data Mgmt.

Health Welfare	Disaster Safety	Public Admin.	Land Mgmt.	Law Mgmt.
Medical	Response	Stats.	Logistics	Crime
Vulnerable	Rescue	Local	Marine	Congress
Basic	Analysis	General	Air	Immigration
Youth	Mgmt.	Resource	Traffic	Investigation
Family	Prevention	Civil	Roads	Police



II. MAJOR PROJECTS

2-1. G-cloud Migration

2-2. SDDC

2-3. A.I. based Security Management

2-4. Reinforced Cloud Security

2-5. National Integrated Network

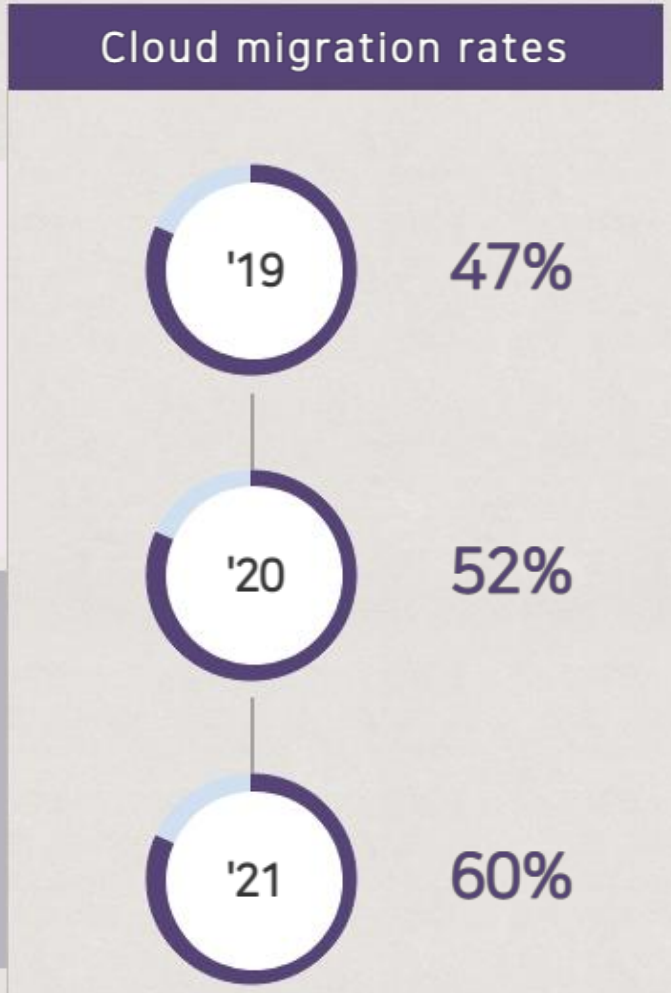
2-1. G-cloud Migration

Exercising the resources in need on time through the smart pool system

The migration started from 2013 using cloud computing technologies

Promptly respond to urgent request for resources by implementing the cloud platform (G-cloud) of NIRS

Consistently keep the 'Cloud-first' policy for occasions like replacing old device or implementing new systems



What is Software Defined Data Center (SDDC)?

NIRS Daejeon

NIRS Gwangju

NIRS Daegu

NIRS Gongju

A software-ruled data center which auto controls/manages
all the resources of a data center with minimal human intervention

(Ref.) NIRS Daegu / NIRS Gongju

exclusive Cloud
NIRS Daegu

- For : efficient/stable operation of info. systems of new client agencies of NIRS
- Scale : site 81,367, total area 35,396 (㎡)
- Construction period : '16~'22 (services are expected to be opened in '22)
- To serve : central gov. & public institutions

exclusive DR
NIRS Gongju

- For : secure reliable gov. business continuity over disasters/accidents
- Scale : site 223,000, total area 16,136 (㎡)
- Construction period : '12~'22 (services are expected to be opened in '23)
- To serve : DR systems of NIRS Daejeon & Gwangju

2-3. A.I. based Security Mgmt.

from human-dependent legacy system
TO SELF ADAPTIVE A.I. BASED SECURITY MGMT.

01

Reached the limit

Require a number of security mgmt. experts for increasing amount of cyber attacks

Difficult to manage them just with the legacy device or systems

02

Known attacks

Improve the managing scopes by training the machine human-judgment criteria

able to analyze
400,000 ->17million cases per day

03

Unknown attacks

Improve analyzing/responding capabilityby training the mmachine normal patterns

able to be ready over intelligent attacks in advance

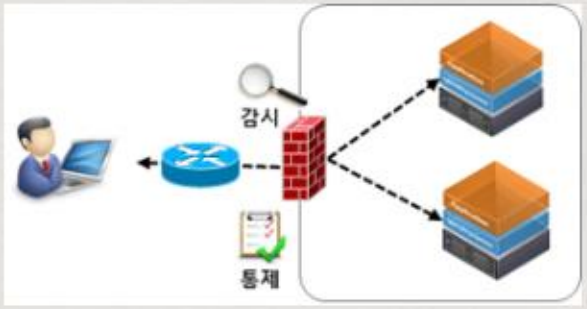
2-4. Reinforced Cloud Security

from N/W oriented defense system
to Cloud-based responding system

Cloud environment

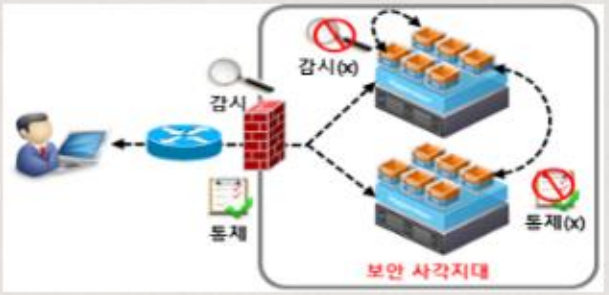
1 Complex environments for virtualization

Challenging visualization & increasing threatening factors



2 Increased internal traffic

Unable to control when passing through the legacy systems



Major tasks

1. Implement cloud workload security mgmt. platform
2. Build S/W based security infrastructure
3. Arrange solutions for total mgmt for cloud end-point
4. Set-up an R&R model over client institutions

2-5. National Integrated Network (NIN)

'19~'20 implement the NIN (with SK & LG U+)

'21 switch over 32 institutions

'22 switch over 16 institutions

(As-is)
Individual N/W
run by 48 institutes

Benefits

(To-be)
Pan-governmental
Integrated Network

- Reinforced N/W survivability
- Improved N/W flexibility
- Improved security
- Reduced costs

III. ROADMAP

3-1. Roadmap

3-1. Roadmap

2005 Established NIRS Daejeon
Relocated systems related to people's daily lives
* MoIS, National Tax Service, M. of Welfare...

2007 Established NIRS Gwangju
Relocated systems related to social order
* Police, M. of Justice, Prosecution Service...

2009 Initiated information resources consolidation
Bulk-purchase the resources
Consolidated individually owned HW/SW

2013 Started the Cloud service
Developed G-cloud services
Implemented the cloud infra. for NIRS DJ & GJ

2015 Initiated Big Data services
Launched a Big Data Analysis Division
Implemented the general Big Data platform
(* currently run directly by MoIS)

2017 Changed the title of the institution
NCIS -> NIRS

2021 Designated as
Pseudonimous Information Management Center

2022 Complete establishment of NIRS Daegu
Develop Intelligent Cloud Computing Service
Complete establishment of NIRS Gongju
Set up total mgmt. systems for DR, Backups

Thank you !

행정안전부 KLID 한국지역정보개발원 Korea Local Information Research & Development Institute

Measures to foster IT based on regional data

2022. 06.

1. Changes in circumstances

Continuing macroeconomic problems

characterized by high prices and interest rates following COVID-19

Revitalized data ecosystem

such as increased use, protection of data and enhanced rights for data subjects

Sharper decline in population

for example, continuous decline in fertility rate

Increased demand for remote, online services

like work from home and mobile services

Commercialization of AI

in all industries

Transition to the cloud

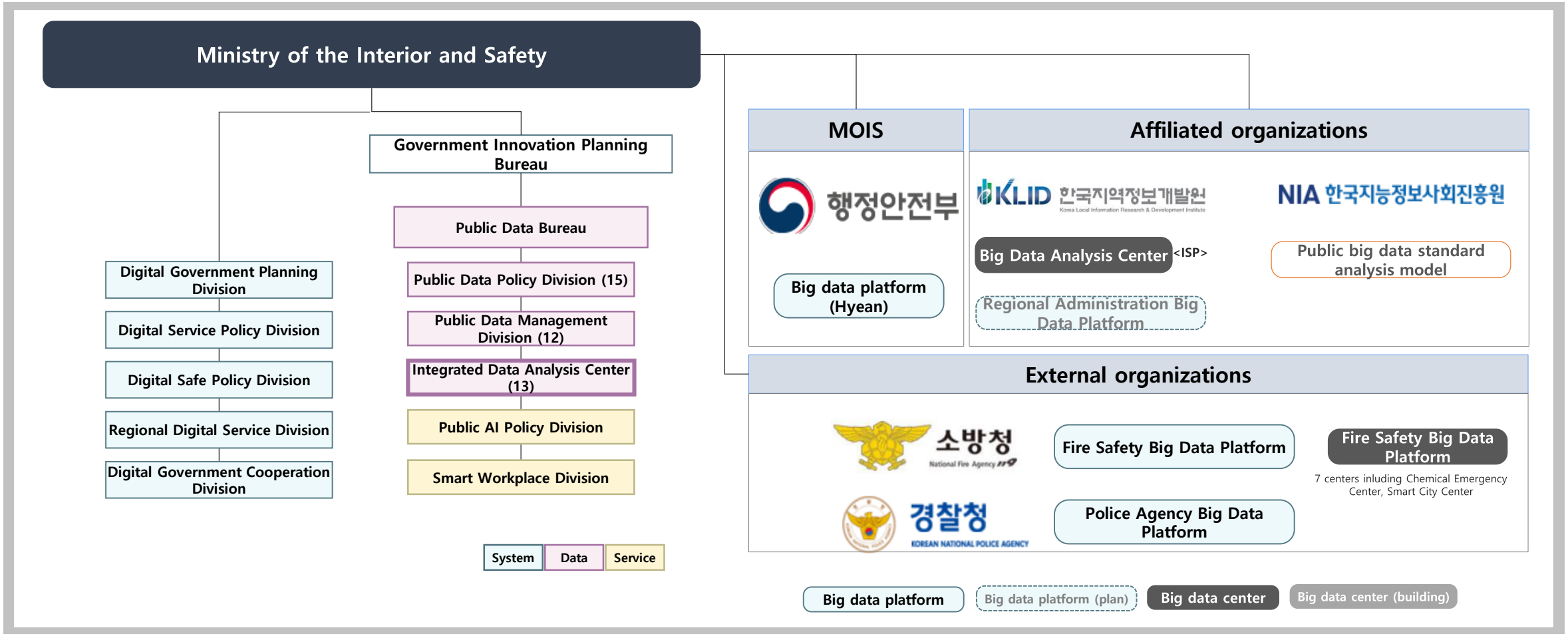
for server stability, etc.

2. Basis for policies

E-government Act	Established the basic principles, procedures, etc. for electronic process of administrative affairs (‘01.2)
Data-driven Administrative Law	Obligated data sharing and provision of data among institutions, adjustments (‘20.12)
Framework Act on Intelligence Information	Realized an intelligence information society based on collection, analysis, processing, and implementation of electronic data (‘20.6)
Data-related municipal ordinances	Only 4 out of 17 metropolitan regional entities (none of 229 basic units of local government)

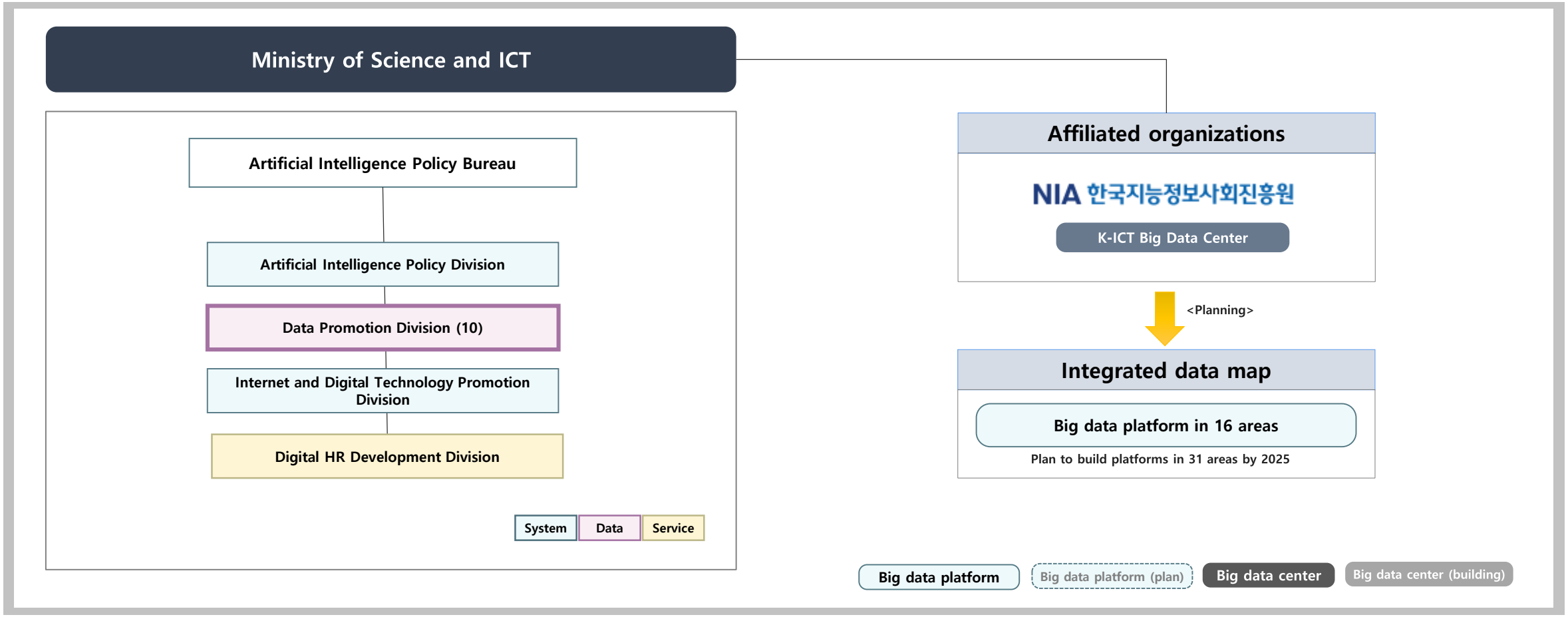
3. Current status of big data organizations and platforms in central administrative agencies (Ministry of the Interior and Safety)

Launched a government-wide big data platform where central administrative agencies and local governments can collect, process, and analyze data



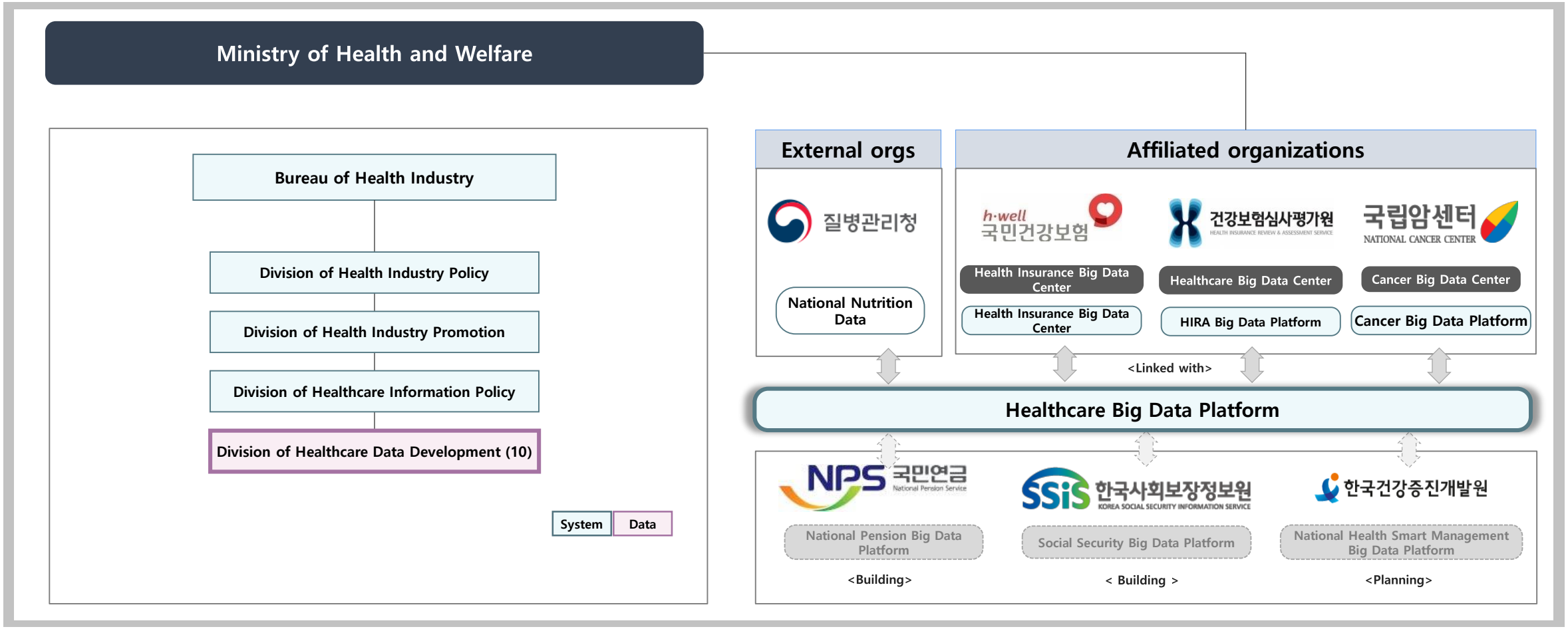
3. Current status of big data organizations and platforms in central administrative agencies (Ministry of Science and ICT)

Built big data platforms in 16 areas including finance, environment, culture, and transportation



3. Current status of big data organizations and platforms in central administrative agencies (Ministry of Health and Welfare)

Established big data platforms on health insurance, healthcare, and cancer to utilize and provide to researchers in the private sector



3. Current status of big data organizations and platforms in central administrative agencies (Metropolitan regional entities)

17 metropolitan regional entities have established and operates big data organizations or platforms

1	Seoul	Seoul Big Data Campus(‘16.7)
2	Busan	Busan Big Data Platform (‘20.12)
3	Incheon	Incheon Big Data Integrated Platform (‘19.11)
4	Daegu	D-Data Hub (‘19.8)
5	Ulsan	Ulsan Transportation Big Data Platform (‘21.12)
6	Sejong	Sejong Big Data Hub System (‘20.4)
7	Gyeonggi	Gyeonggi Big Data Analysis Platform (‘20.4)
8	Gyeongnam	Gyeongnam Big Data Hub Platform (‘21.7)
9	Jeju	Jeju Big Data Integrated Platform (‘18.12)
10	Gwangju	Gwangju Big Data Integrated Platform (‘20.12)
11	Daejeon	Daejeon Big Data Integrated Platform (‘21.5)
12	Gangwon	Precision Medicine Big Data Platform (planning)
13	Gyeongbuk	Gyeongbuk Integrated Big Data Platform (planning)
14	Jeonnam	Jeonnam Big Data Hub Platform (building)
15	Jeonbuk	Jeonbuk Big Data Hub Platform (‘19.9)
16	Chungnam	Chungnam Big Data Hub Platform (‘21.5)
17	Chungbuk	Chungbuk Big Data Hub Platform (building)

4. Regional data use cases (1)

Case 1

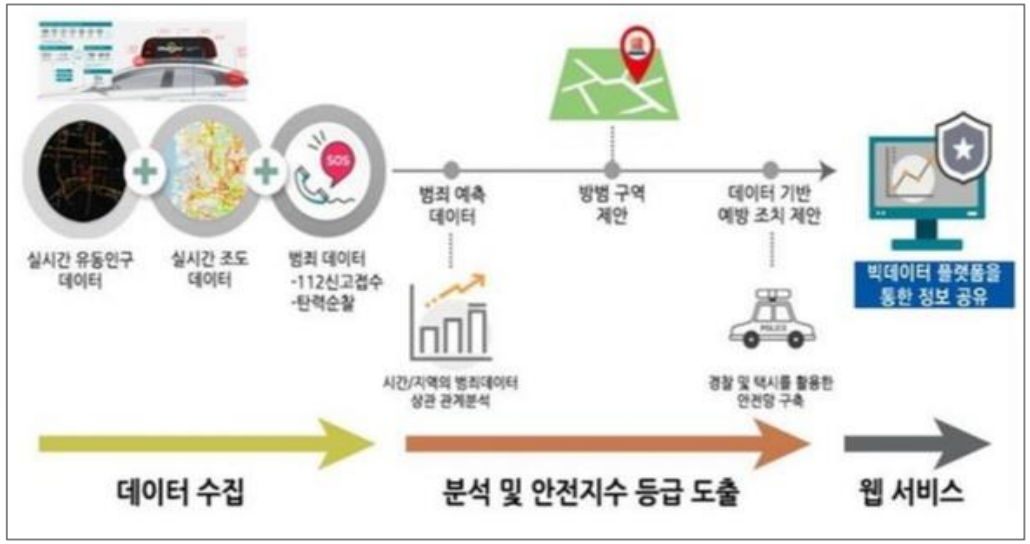
[Incheon] Established a data-based nighttime security system

Description

Established a prediction system for nighttime crime risk areas by analyzing the data of emergency police calls and floating population

Result

Prevent crime through cooperation between local governments and police (designate crime prevention areas and patrol courses, etc.)



4. Regional data use cases (2)

Case 2

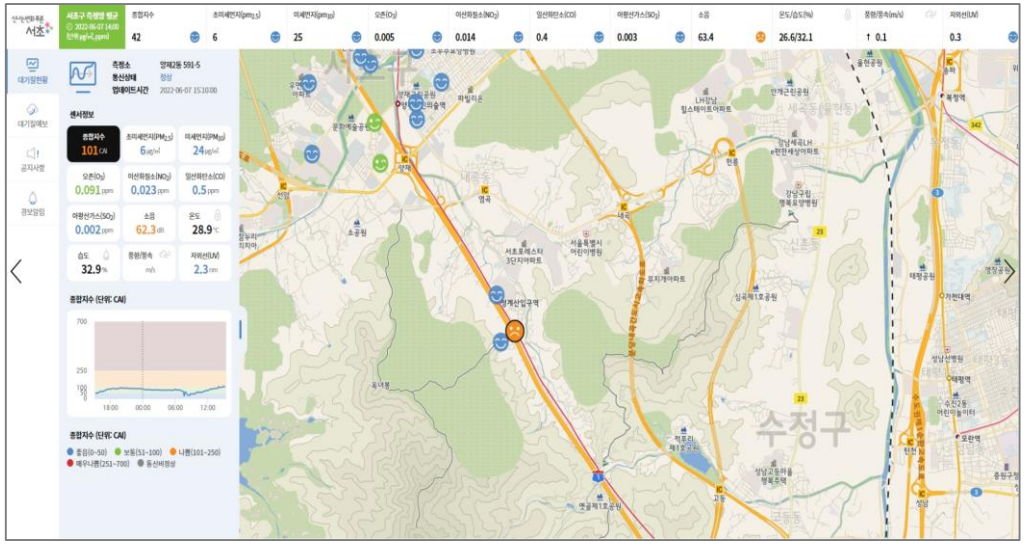
[Seocho-gu, Seoul] Established an integrated air quality management system and a fine dust forecasting system

Description

Established a fine dust forecasting system using data from 108 fine dust measuring locations within the district and domestic/foreign weather data

Result

Installed reduction devices and developed and utilized the air quality forecasting and warning system



4. Regional data use cases (3)

Case 3 **[Osan-si, Gyeonggido]** Selected the optimal location in the area using the data of other facilities where an elderly/disabled population is concentrated

Description

Selected the location and derived the demand for a welfare facility by analyzing the location-based data of medical facilities and elderly welfare centers

Result

Used the data to select the location, and expanded facilities with expertise when designating medical and welfare facilities

4. Regional data use cases (4)

Case 4

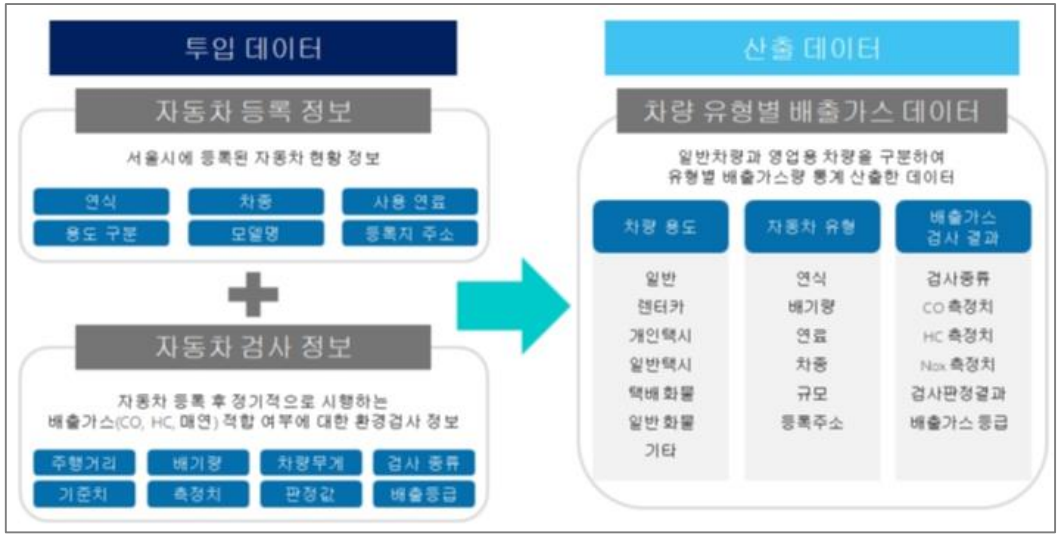
[Seoul] Analyzed and utilized data on vehicles for business

Description

Analyzed vehicle registration data and online delivery information to devise the logistics policies of Seoul and use as basic material for the electric vehicle project

Result

Used the data to estimate the target distribution number for eco-friendly vehicles and establish logistics policies



4. Regional data use cases (5)

Case 5

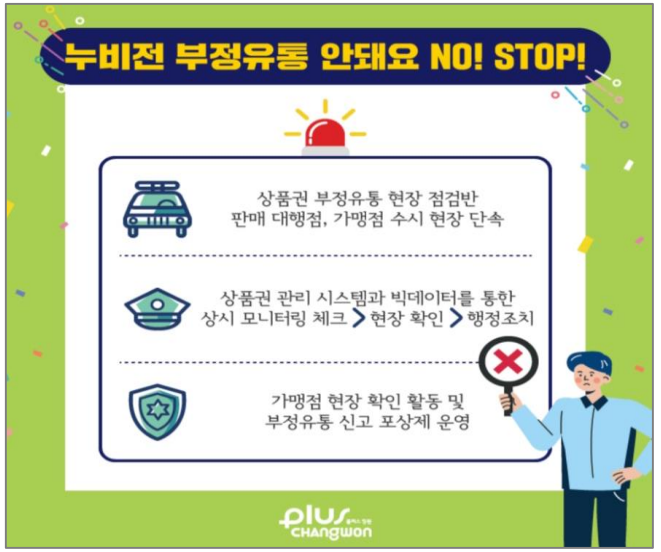
[Changwon-si, Gyeongnam] Blocked fraudulent circulation of local gift certificates using big data

Description

Prevented fraudulent circulation of local gift certificates by conducting an investigation of affiliate stores using the gift certificate management system and big data

Result

Confiscated unjust profits and imposed fines to 17 stores by conducting an investigation of suspected fraudulent circulation and illegal exchange



5. Challenges

01 Difficulty in promoting data-based regional administration due to the widened gap in the use of big data among regional entities

02 Standardization urgently needed as a result of regional entities establishing their own big data platforms

03 Gap in the big data budget between the central government (782.1 billion won) and regional entities (110.6 billion won) (1/7↓)

04 Heavy reliance on centrally conducted open call projects due to the lack of capacity and budget in regional entities

05 Regional IT industries face recession due to the concentration of IT businesses in the Seoul metropolitan area

6. Measures to foster regional IT industries (1)

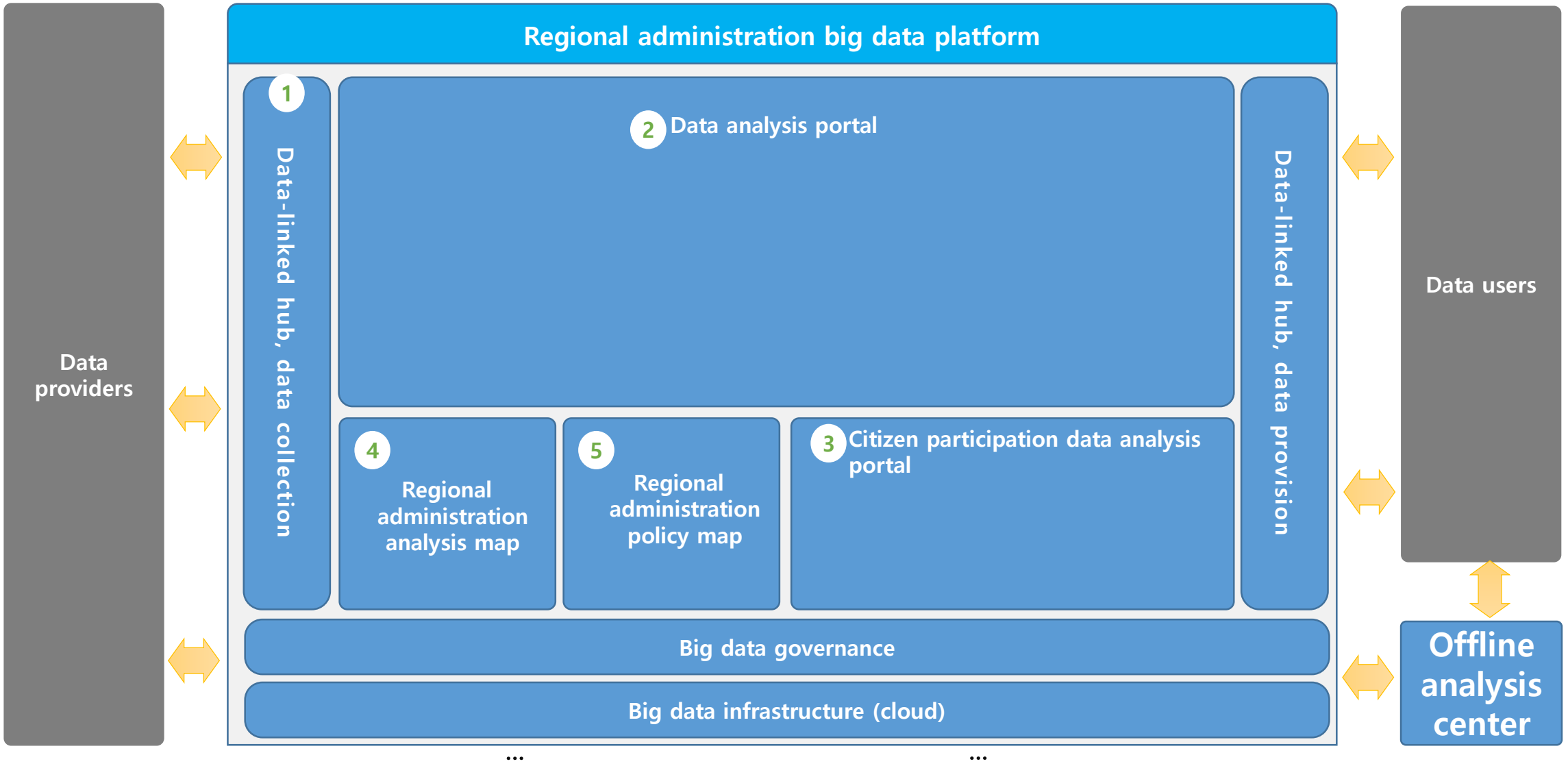
Measure 1 Establish data analysis centers in 17 metropolitan regional entities

- Standardize the administrative data held by regional entities to revitalize analysis and utilization of data
- Prepare the foundation for utilizing data owned by other organizations
- Relocate IT companies concentrated in the Seoul metropolitan area to regional cities to create local IT ecosystems
- Opportunity to resolve population extinction* problems in regional areas due to migration of younger employees

  * population extinction areas : 89 basic local governments

- Establish and operate data analysis centers in 17 metropolitan regional entities to strengthen the IT capabilities of regional government officials

6. Measures to foster regional IT industries (1)_ target system structure

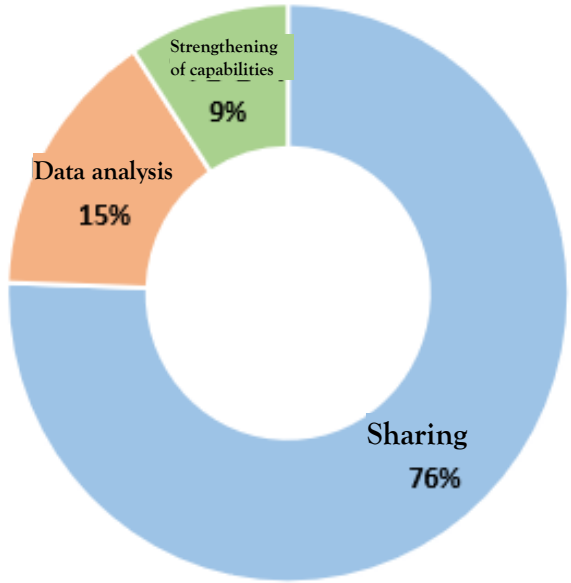


6. Measures to foster regional IT industries (2)

Measure 2 Budget support needed to promote regional data analysis

- Secure regional data budget for effective analysis of regional data

Classification	Sharing	Data analysis	Strengthening of capabilities	Total
Central	6,101	977	743	7,821
Regional	646	376	84	1,106
Total	**6,747** (76%)	**1,353** (15%)	**827** (9%)	**8,927**



7. Future plans

- Secure budget (‘22)
- Establish regional data analysis centers ISP (‘23)
- Build regional data analysis centers (‘24~‘25)
- Operate regional data analysis centers (‘26)

Thank you

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Governance

GovTech Whole-of-Government Approaches

Towards Coherent and Sustainable Implementation

International Meeting "Cooperation and Capacity Development in Digital Government"
Tbilisi, Georgia
20-21 June 2022

João Ricardo Vasconcelos
Senior Governance Specialist
GovTech - Governance Global Practice
World Bank

Supported by the GovTech Global Partnership (GTGP): www.worldbank.org/govtech

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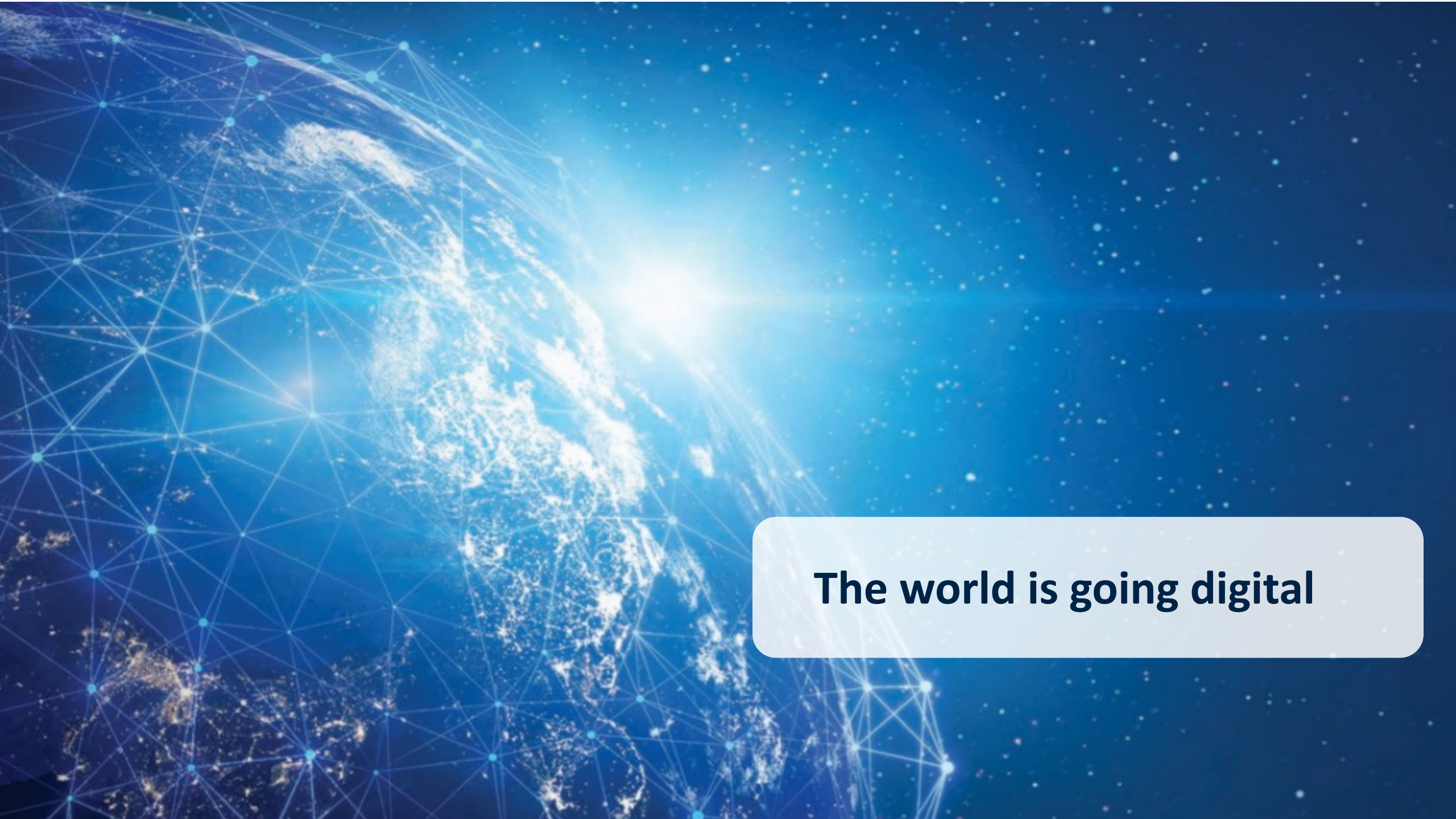
The world is going digital

Public governance has a fundamental role in the change underway

Siloed approaches for public sector digitalization are problematic

What is GovTech?

1 - **Citizen-centric public services** that are universally accessible

2 - **Whole-of-government** approach to digital transformation

3 - Simple, efficient and transparent **government systems**

Whole-of-government approaches are critical

Whole of Government matters

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Benefits

- Improving Efficiency and effectiveness
- Avoiding duplications, gaps and mismatches
- Favoring Citizen-Centric approaches
- Supporting more complex solutions
- Reinforcing accountability

Roadblocks

- Weak institutional/organizational coordination structures
- Lack of leadership
- Technical and regulatory barriers
- Insufficient budget to support integration
- Absence of a citizen-centric focus
- Stagnation and absence of innovation

Source: World Bank (2022) TechSavvy: Skills and WoG

Whole-of-Government Fundamentals

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Policy and Institutional Setting

1. Strategy
2. Leadership
3. Coordination

Policy Levers

4. Public Procurement and pre-evaluation of ICT Investments
5. Standard Business Cases and Project Management
6. Monitoring

Legal and Regulatory Frameworks

7. Legalistic vs consensus-based cultures
8. Updated regulation

Digital Skills and Talent

9. Capturing, retaining and developing talents
10. Buying and borrowing as approaches

GovTech Coherent and Sustainable Implementation

Whole-of-Government Fundamentals

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Policy and Institutional Setting

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GovTech Coherent and Sustainable Implementation

1 - Strategy

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A **GovTech or Digital Government national strategy** is a fundamental policy instrument:

- Defines the vision and goals,
- Frames the purposes and objectives
- Identifies the priorities
- Sets the necessary actions or initiatives the government will embrace during a certain period of time

Insights from the World Bank GovTech Maturity Index

- 174 of the 198 countries monitored have a strategy

2 – Strategy

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Korea

The Digital Government Master Plan 2021-2025 is a good example of a mobilizing strategy, bringing on board the different ministries.

Brazil

The Digital Government Strategy was recently updated, setting the ambition of interconnecting federal IT platforms. It’s a good example of a strategy developed by a large federal country.

2 - Leadership

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The existence of a **public sector organization responsible for leading the digital government or GovTech** policy is clearly an institutional asset for the coherent and sustainable policy implementation.

Insights from the World Bank GovTech Maturity Index

- 80 of the 198 economies analyzed have a public sector organization responsible for leading the digital government or GovTech policy

2 – Leadership

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Location of the Public Sector Institution

- Center of government (e.g. Chile, Portugal, UK)
- Coordination ministry such as Ministry of Finance or Interior (e.g. Denmark, Korea)
- Line ministry specifically dedicated to telecommunications, information and communication technologies or digital transition (e.g. Austria, Colombia, Greece)

Japan

The Digital Agency is the new public sector organization leading the digital government policy. It has significant competences to reform the culture of administration in a user-driven manner through digitalization.

Colombia

The Ministry of Information and Communication Technologies is responsible for the national digital government policy

3 - Coordination

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Inter-ministerial committees or councils for the digital transformation of the public sector are critical to secure the required cross-governmental cooperation.

With a more high-level or operational profile and mandate, they guarantee that the GovTech policy is not only the responsibility of one entity.

Insights from the OECD Digital Government Index

- 70% of the countries confirmed having a coordination body / mechanism responsible for government IT projects (e.g. Council of CIOs)

3 - Coordination

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Australia

The Digital Transformation and Public Sector Modernization Committee is composed of ministerial representatives from each state and territory responsible for the digital and data policy.

Spain

The Central Administration Coordination Commission for ICT Strategy brings together representatives of all ministries.

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Questions? Reflections?

4 – Public Procurement and Pre-Evaluation of ICT Investments

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The existence of a **pre-evaluation of ICT investments mechanism** applicable to different sectors of the administration can determine improved alignment.

Structured and coordinated **ICT procurement** is also a mechanism frequently used to secure that public investments from different sectors and levels of government are coherent.

Insights from the OECD Digital Government Index

- 67% of the countries uses formal guidelines on ICT procurement

4 – Public Procurement and Pre-Evaluation of ICT Investments

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Portugal

The entity responsible for the digital government policy – Agency for Administrative Modernization (AMA) pre-evaluates all ICT investments in central government above 10 000 euros.

United Kingdom

The Digital Marketplace is an online service managed by the Government Digital Service that allows public sector organizations to find people and technology for digital projects.

5 – Standard Business Cases and Project Management

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The use of **business cases** improves the planning, management and monitoring of ICT projects, playing also an important role in the rationalization of public financial efforts.

Standard **project management** tools for ICT projects can have an important role securing the consistency of initiatives across different sectors and levels of government

Insights from the OECD Digital Government Index

- 57% of the countries have a standardized model/method to develop and present business cases
- 66.7% of the countries declared having a standardized model for ICT project management

5 – Standard Business Cases and Project Management

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Denmark

Business case models are mandatory to be used for ICT projects above the threshold or 1.35 million euros. The business case is used to demonstrate the value of the investment to be made based on its financial and non-financial consequences

Slovenia

A standardized project management model is required for ICT projects above the threshold of 20 000 euros. The Ministry of Public Administration developed a specific methodology for ICT projects.

6 - Monitoring

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The existence of **monitoring mechanisms** for GovTech policy implementation is crucial to achieve structured digital government development.

Building on and properly aligned with the previously mentioned pre-evaluation of ICT investments and ICT procurement, as well as business cases and project management models, governments gain capacity to coherently drive the transformation underway.

6 - Monitoring

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Korea

Through the e-Government Standard Framework, the Korean government is able to have updated information on the public sector organizations that are adopting the existing digital government policy

European Union

The National Interoperability Framework Observatory (NIFO) is one of the mechanisms put in place by the European Commission to monitor interoperability implementation across the European member states and associated countries.

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Some key Takeaways

There is not a one-size-fits-all Whole-of-Government approach

But there are fundamentals to be considered

(e.g. Leadership, Strategy, coordination, procurement, business cases, monitoring, etc)

Learning from the experience of others countries is critical
Involving the ecosystem of stakeholders is fundamental

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THANK YOU

João Ricardo Vasconcelos
jvasconcelos@worldbank.org

- GovTech Website: www.worldbank.org/govtech
- GovTech/GTMI web page: https://www.worldbank.org/en/programs/govtech/gtmi
- GovTech OLC e-Learning course: https://olc.worldbank.org/content/govtech-fundamentals-and-key-concepts

GovTech: Interoperability as a Fundamental Key Enabler of Whole of Government Approaches

International Meeting "Cooperation and Capacity Development in Digital Government"
Tbilisi, Georgia
20-21 June 2022

Youngseok Kim
Senior Governance Specialist
GovTech - Governance Global Practice
World Bank

Supported by the GovTech Global Partnership (GTGP): www.worldbank.org/govtech

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Digital Technologies and data
have transformed the public sector

Governments could focus more on improving interconnectivity and interoperability in future GovTech initiatives (2021 GTMI result)

Interoperability

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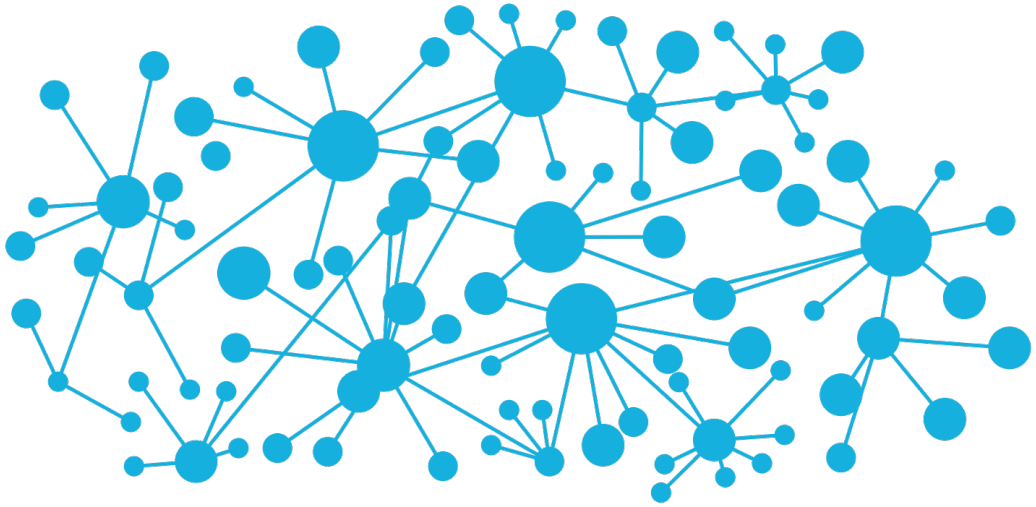
Enabling connections

Between organizations, ministries, sectors, government levels, countries and citizens



Fundamental key enabler of whole of government approaches

Core government systems
Citizen-centric service delivery

Interoperability

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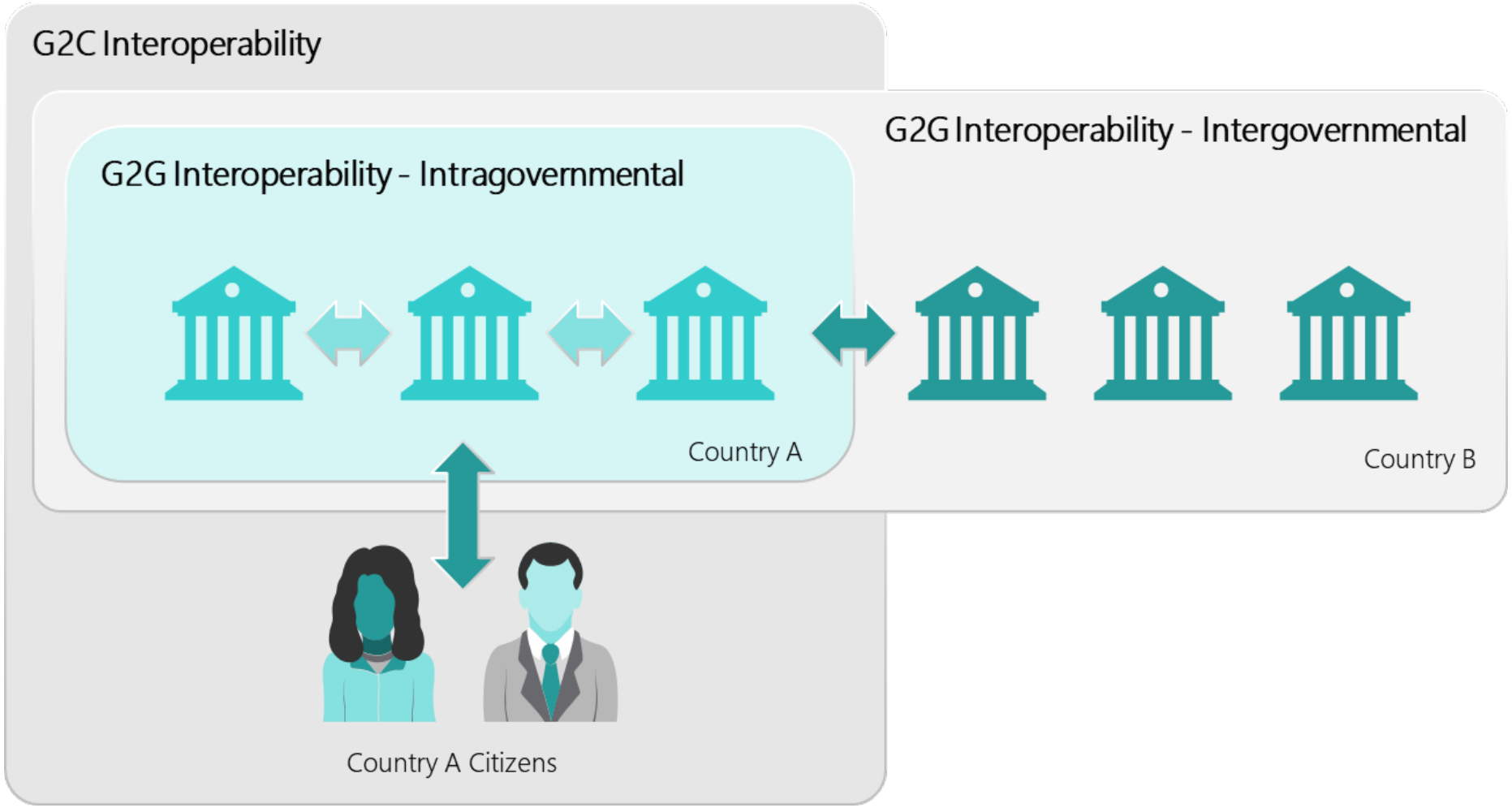

Source: World Bank (forthcoming) Interoperability How-to-note

Why Interoperability matters?

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- More efficient service delivery
- Open standard and service composability
- Life events and once-only principle
- Citizen-driven omnichannel service delivery
- Automated and proactive service delivery
- System resilience
- Open data value creation
- Data-driven policy making and planning

Why Interoperability matters?

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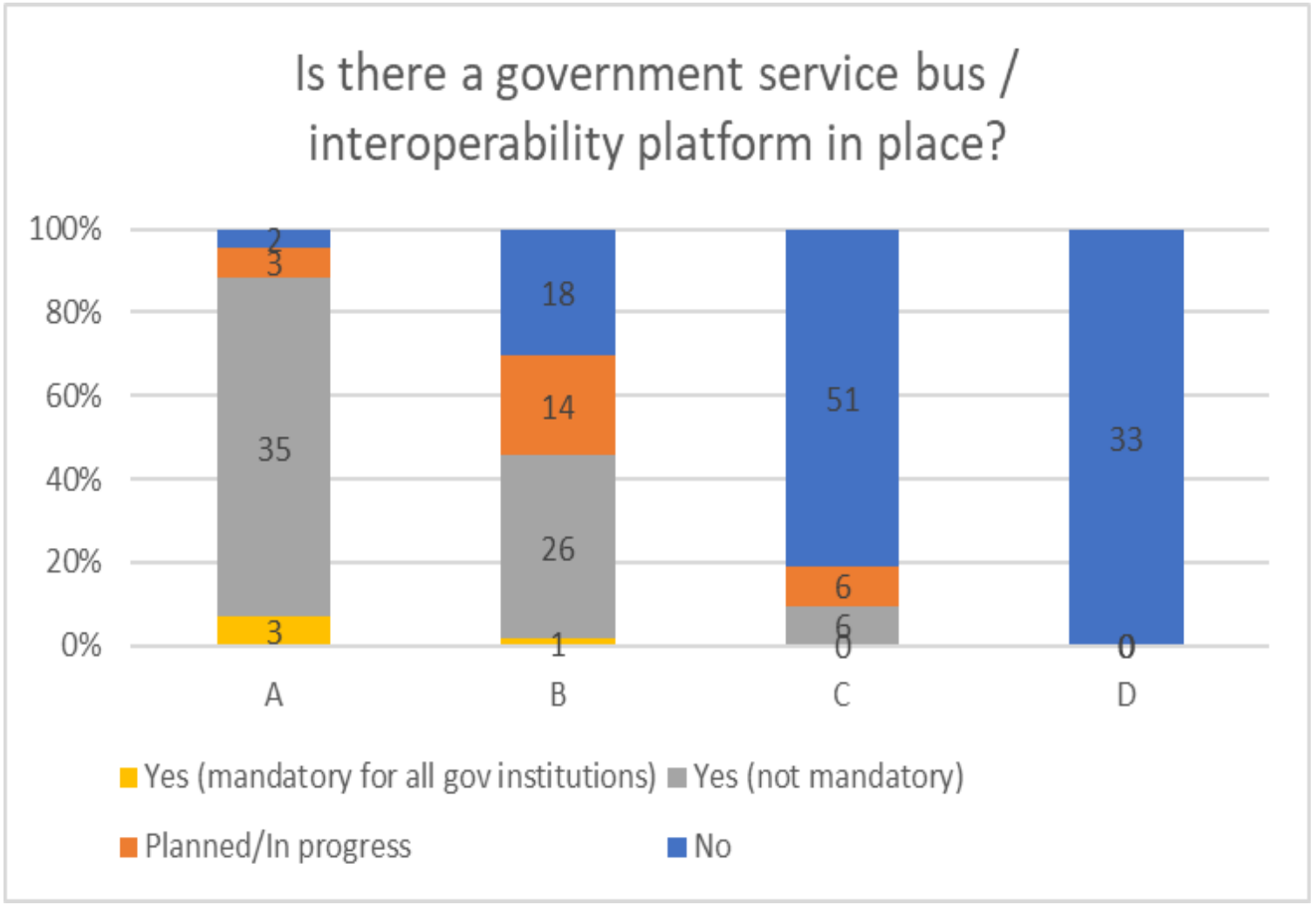

Source: World Bank (2021) Govtech Maturity Index

What is GovTech Maturity Index (GTMI)

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The GovTech Maturity Index (GTMI) measures the state of four GovTech focus areas using 48 key indicators defined to collect data from 198 economies

Core Government Systems Index (CGSI)
17 indicators

Public Service Delivery Index (PSDI)
9 indicators

Citizen Engagement Index (CEI)
6 indicators

GovTech Enablers Index (GTEI)
16 indicators

2022 GTMI Online Surveys

- Central government: 135 countries completed surveys + 63 countries remote data collection
  - ➡ Data validation by the end of June
- Sub-national government: 77 completed surveys + 68 in progress

Whole-of-Government Approach is required

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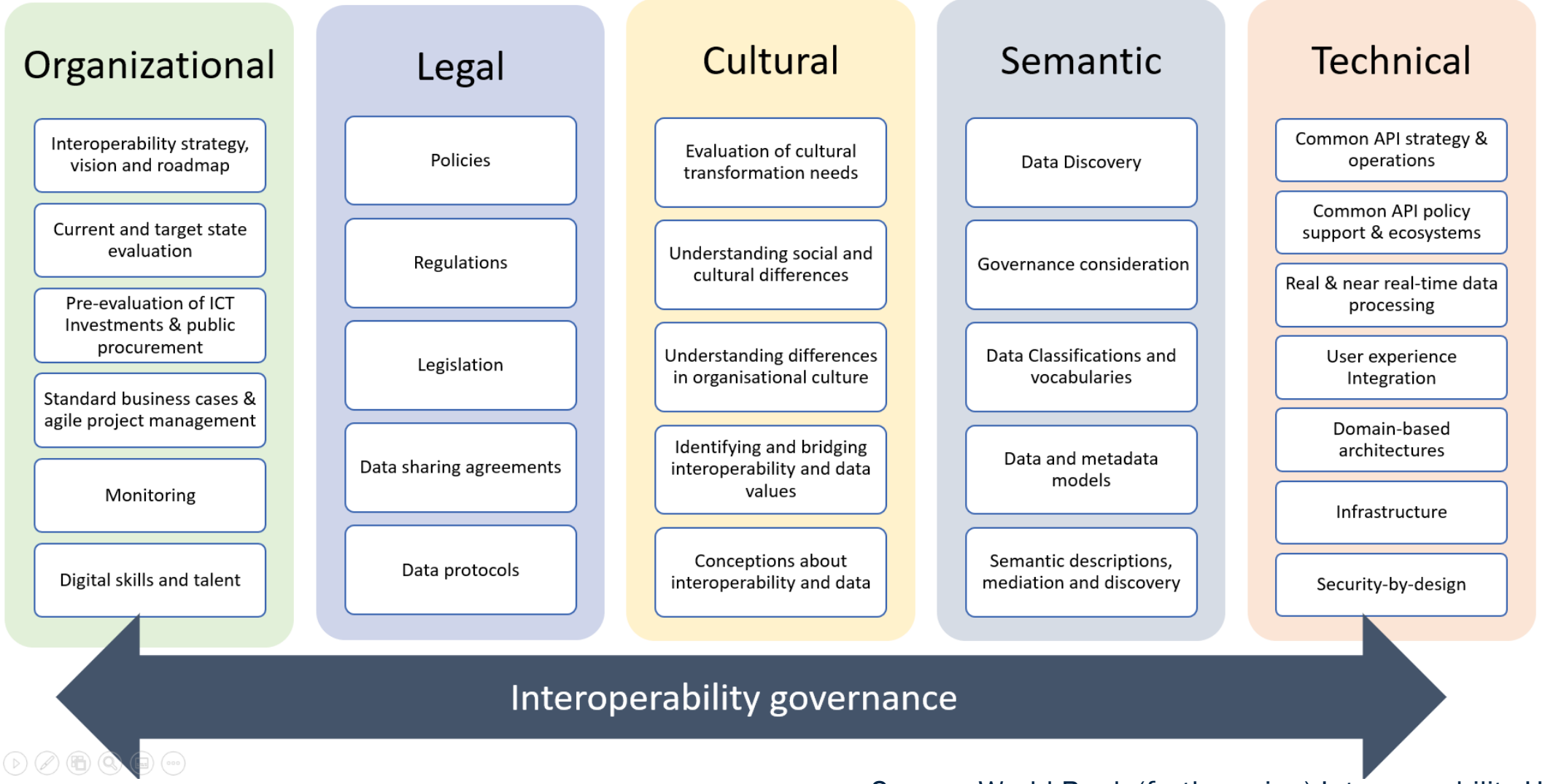

Source: World Bank (forthcoming) Interoperability How-to-note

Whole-of-Government Approach is required

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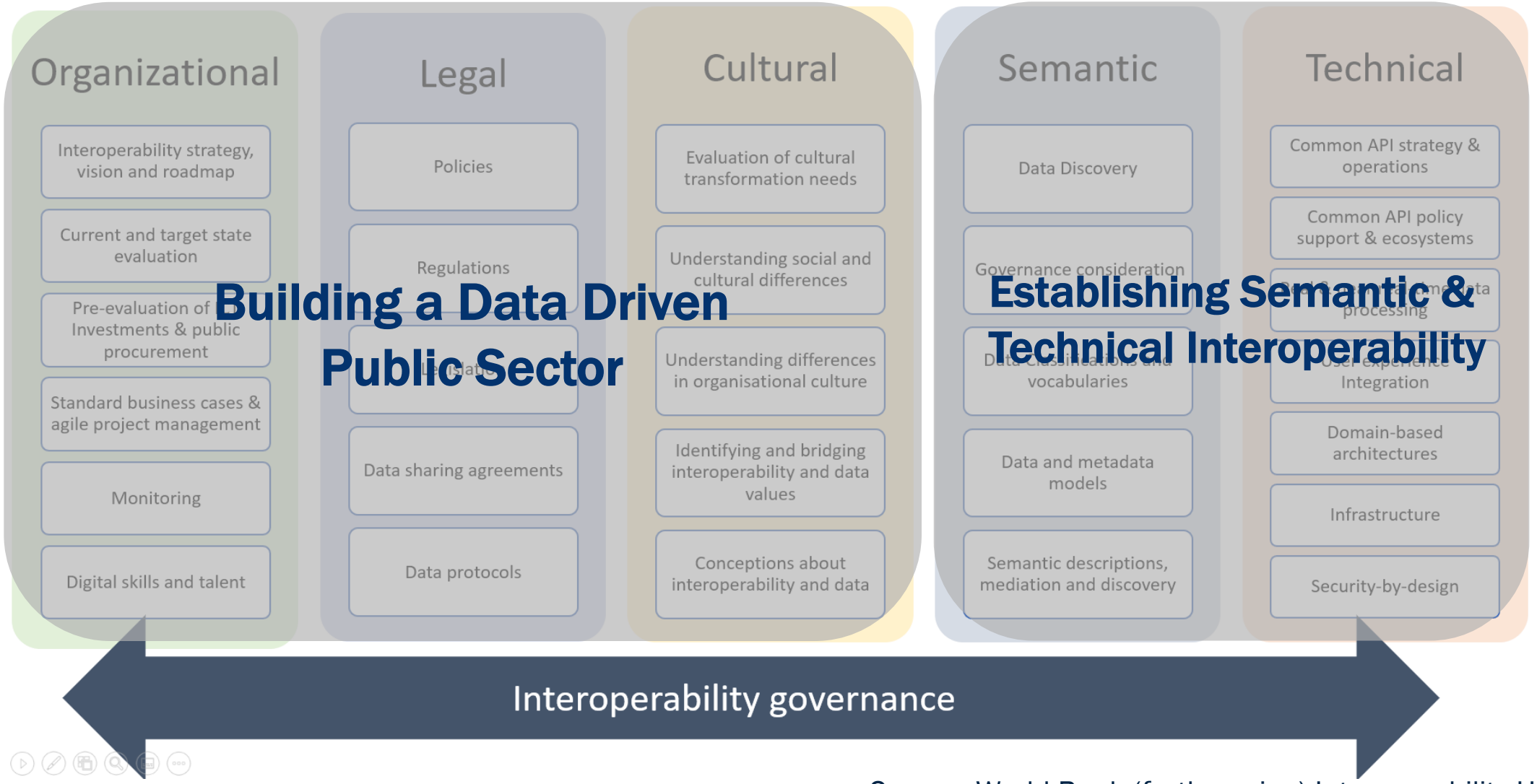

Source: World Bank (forthcoming) Interoperability How-to-note

Building a Data Driven Public Sector

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1. Creating the basis for operations: policy and Institutional setting
2. Setting up trustworthy data governance
3. Promoting data-driven culture and cultural interoperability
4. Using policy levers for coherent implementation
5. Fostering data-driven digital skills and talent

Source: World Bank (forthcoming) Interoperability How-to-note

Building a Data Driven Public Sector

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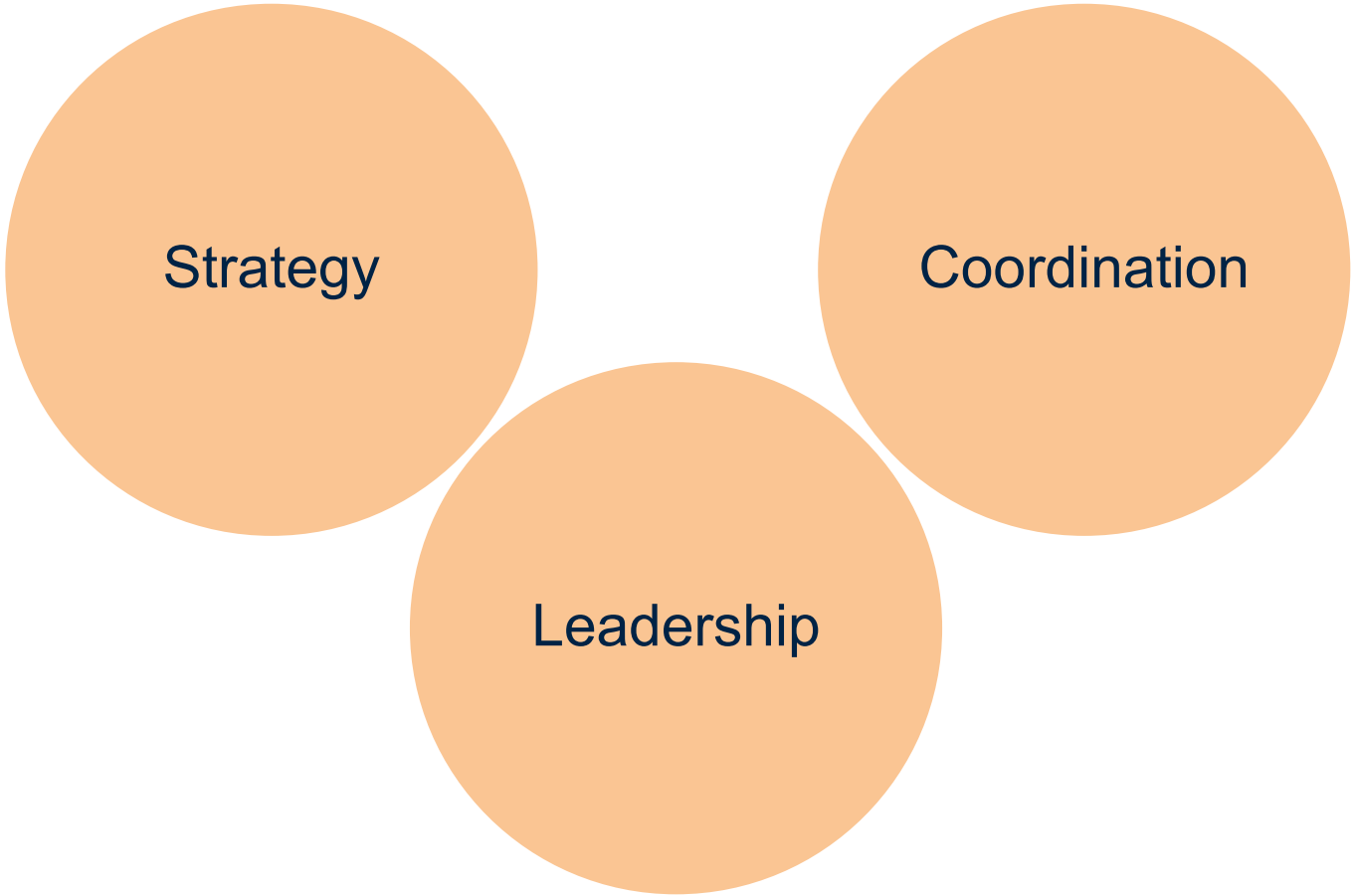
1 Creating the basis for operations: policy and Institutional setting



Building a Data Driven Public Sector

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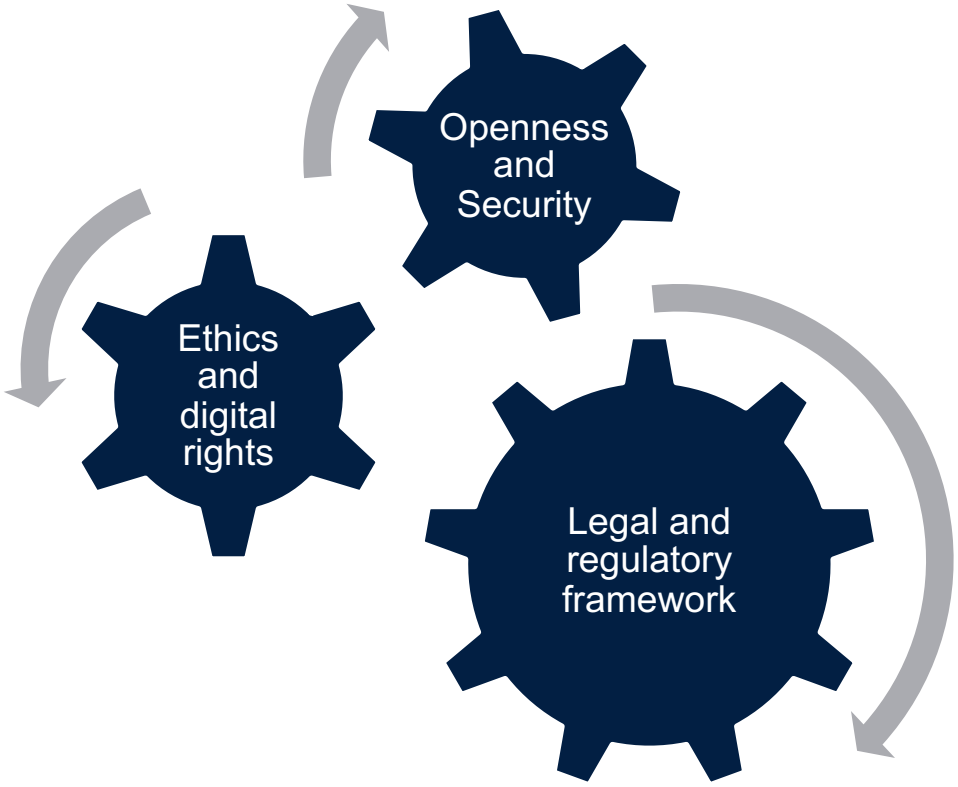
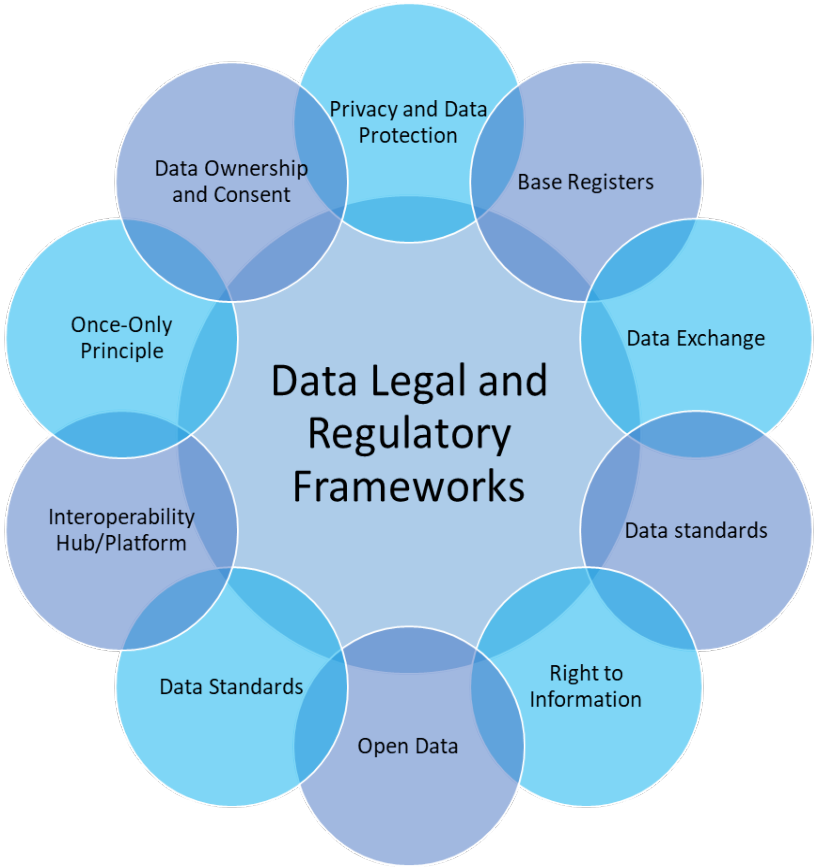
2 Setting up trustworthy data governance





Source: World Bank (forthcoming) Interoperability How-to-note

Building a Data Driven Public Sector

GovTech
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2 Setting up trustworthy data governance

Is there a whole-of-government approach to implement data Governance

- 114 of the 198 countries included in the GTMI don't have a whole-of-government approach to implement data Governance.
- In 68 countries it is being planned or in progress.
- Only 16 have it.

Source: World Bank (2021) Govtech Maturity Index

Building a Data Driven Public Sector

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2 Setting up trustworthy data governance

Is there a data protection/privacy law

- 55 of the 198 countries included in the GTMI don't have a data protection/privacy law.
- 11 have it in a draft stage or a consultation is underway.
- 132 have it.

Source: World Bank (2021) Govtech Maturity Index

Building a Data Driven Public Sector

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2 Setting up trustworthy data governance

Is there an open data website?

- 32 of the 198 countries included in the GTMI don’t have an open data website
- 60 have it but it provides information only.
- 106 have it, providing access to data

Source: World Bank (2021) Govtech Maturity Index

Building a Data Driven Public Sector

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3 Promoting data-driven culture and cultural interoperability

Drivers of cultural changes

- **Clearly demonstrated need to implement the once-only principle (UK)**

  The interoperability project launched in 2019 by the Government Digital Service is now taking a leap through the development of the new government data hub

- **Co-creation approach with stakeholders (Denmark)**

  The flagship Basic Data Program is not only successful thanks to its solid legal basis and technical infrastructure, but also because the government managed to unite stakeholders around a shared value proposition of efficiency and public sector modernization

Building a Data Driven Public Sector

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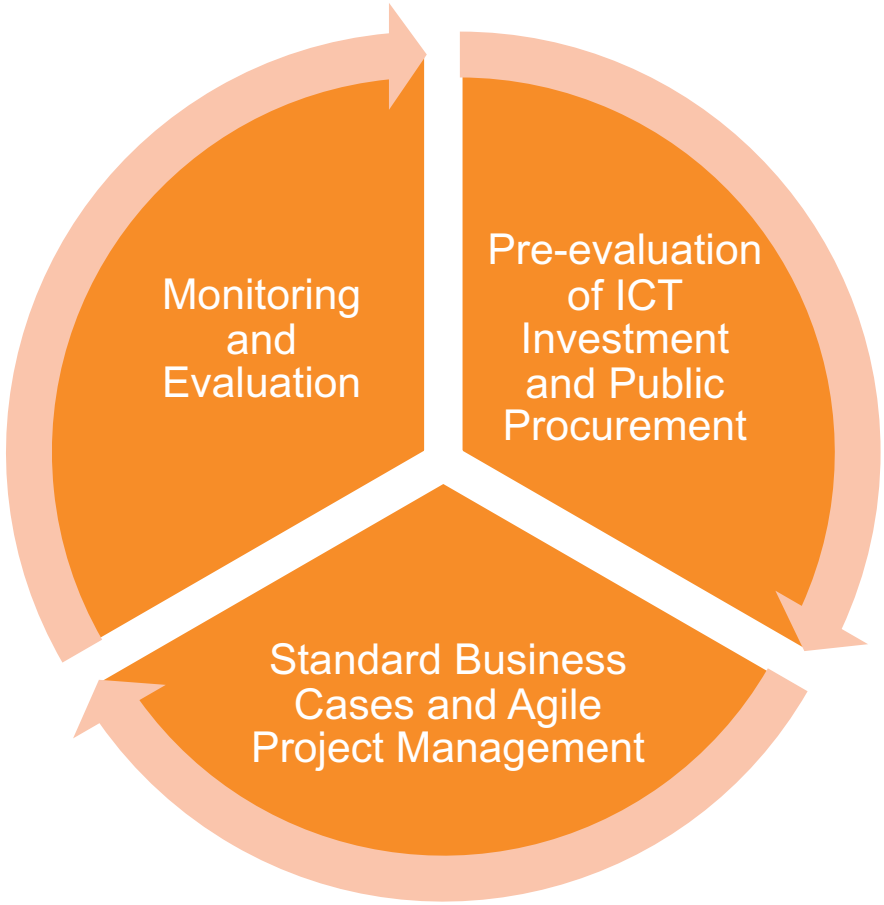
4 Using policy levers for coherent implementation



Building a Data Driven Public Sector

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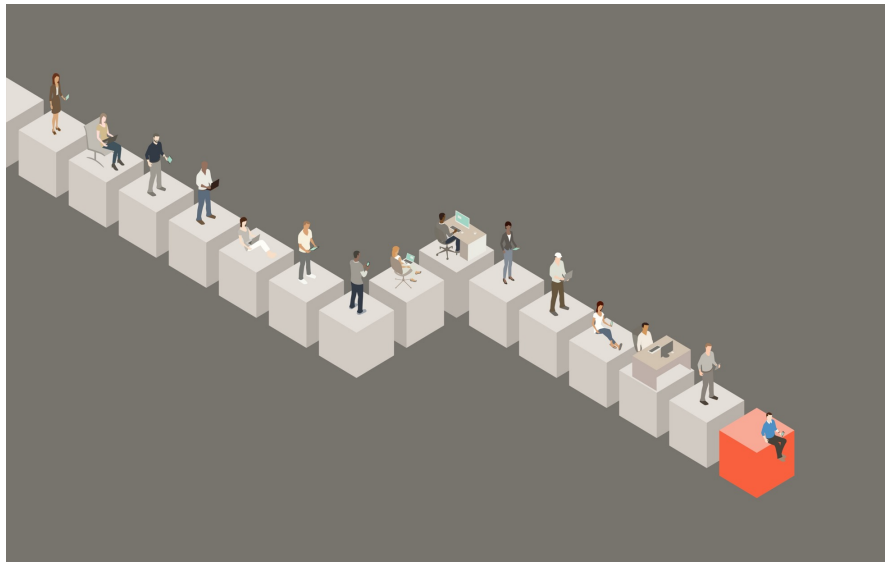
Putting people first

5 Fostering data-driven digital skills and talent

- AI and Machine Learning
- Big data analysis
- Software and applications
- Data management
- Data visualization
- Blockchain



Establishing Semantic and Technical Interoperability

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1. Ensuring data quality
2. Setting up a data architecture
3. Implementing security by design
4. Leveraging Application Programming Interfaces (APIs)
5. Working in open space
6. Anticipating key technology trends

Source: World Bank (forthcoming) Interoperability How-to-note

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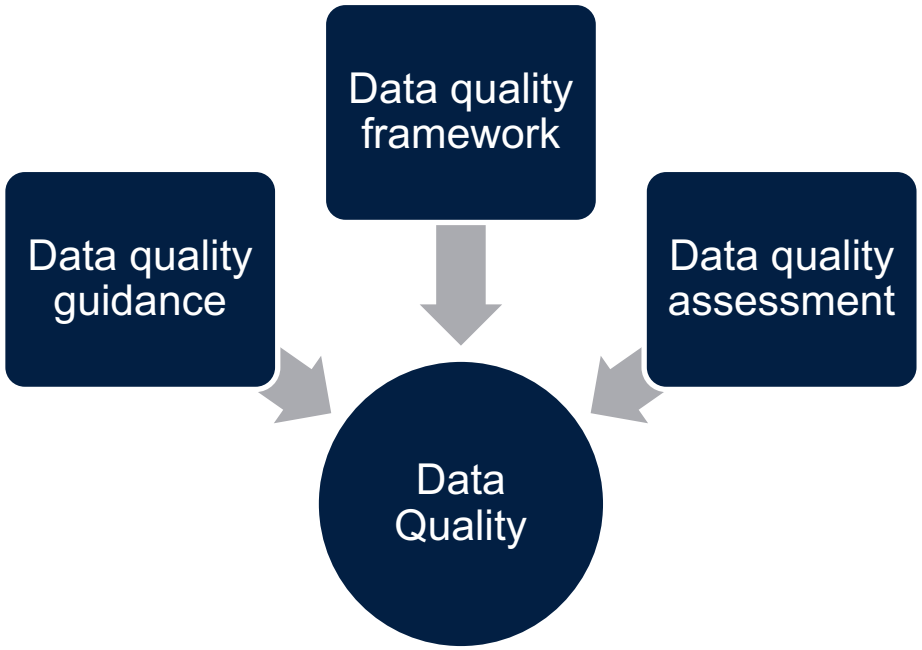

Source: World Bank (forthcoming) Interoperability How-to-note

Establishing Semantic and Technical Interoperability

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- **Government Enterprise Architecture**
- **Interoperability Platform**
- **Government Service Bus**

Estonia – The X-Road is one of the most famous interoperability platforms, being developed in Estonia and used in several other countries

Portugal – The Portuguese Interoperability Platform is also a good example on how to connect different sectors and levels of government

Source: World Bank (forthcoming) Interoperability How-to-note

Establishing Semantic and Technical Interoperability

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Is there a government enterprise architecture

- 137 of the 198 countries included in the GTMI don't have a government enterprise architecture.
- In 16 countries it is being planned or in draft.
- 39 countries have partially implemented.
- 6 countries have it.

Source: World Bank (2021) Govtech Maturity Index

Establishing Semantic and Technical Interoperability

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Is there a government service bus or interoperability platform in place

- 104 of the 198 countries included in the GTMI don't have a service bus or interoperability platform in place.
- In 23 countries it is being planned or in progress.
- 67 countries have it in place, but it's use is not mandatory.
- Only 4 countries require the mandatory use of their interoperability platform or service bus.

Source: World Bank (2021) Govtech Maturity Index

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Singapore – The single window initiative were to minimize the cost and effort to connect with trade partners and collaborate locally and overseas with new and existing partners, and permit partners to apply for trade-related services directly with Singapore Customs.

Korea – e-Government Standard Framework provides increased interoperability as government agencies build applications based on common framework. This was developed as open source-bases, and source codes were provided at no cost through eGovFrame website.

Source: World Bank (forthcoming) Interoperability How-to-note

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- Web 3.0, Could and Edge computing
- Internet of Things (IoT)
- Blockchain and distributed ledger technology
- Artificial Intelligence
- Central Bank Digital Currencies
- Metaverse

Source: World Bank (forthcoming) Interoperability How-to-note

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THANK YOU

Youngseok Kim
ykim22@worldbank.org

- GovTech Website: www.worldbank.org/govtech
- GovTech/GTMI web page: https://www.worldbank.org/en/programs/govtech/gtmi
- GovTech OLC e-Learning course: https://olc.worldbank.org/content/govtech-fundamentals-and-key-concepts

Country Experiences

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Please share the status of interoperability in your country

- *How have you designed and implemented interoperability?*
- *What were challenges and difficulties you met and how did you address them?*
- *What are successful factors for sound interoperability with the perspective of whole of government approach?*

Success Factors of Korea's Digital Government

International Meeting “Cooperation and Capacity Development in Digital Government”
(June 2022, Tbilisi)

Ministry of
the Interior and Safety

CONTENTS

1. Overview of Korea’s Digital Government

2. Success Factors

3. Best Practices

4. International Cooperation

5. More in the Future

1. Overview of Korea's Digital Government

Korean Digital Government in Numbers

17K public sector information systems

37M Koreans, **89%** of population are **Using** Digital Government

98% of users are **Satisfied** with Digital Government Services

#1 OECD **Digital Government** Index 2019

#1 OECD **OUR**(Open-Useful-Reusable) **data** Index 2019

#2 UN **e-Government** Survey 2020

Journey of Korea's Digital Government

50 years of Digital Government in Korea

STEP 1
1960s-70s

- Introduction of IBM 1401 for the completion of census statistics (1967)
- Establishment of the 1st 5-Year Masterplan for the Computerization of Administration (1978)

Computerization of Public Administration

STEP 2
1980s

- Establishment of the Masterplan for the National Basic Information System Networks (1984)
- Development of Resident Registration System (1989)

National Information and Communications Networks

STEP 3
1990s

- Enactment of the Regulations on Sharing Administrative Information (1998) and the Digital Signature Act (1999)
- Launch of digitized government services

Informatization of National Administration

STEP 4
2000s

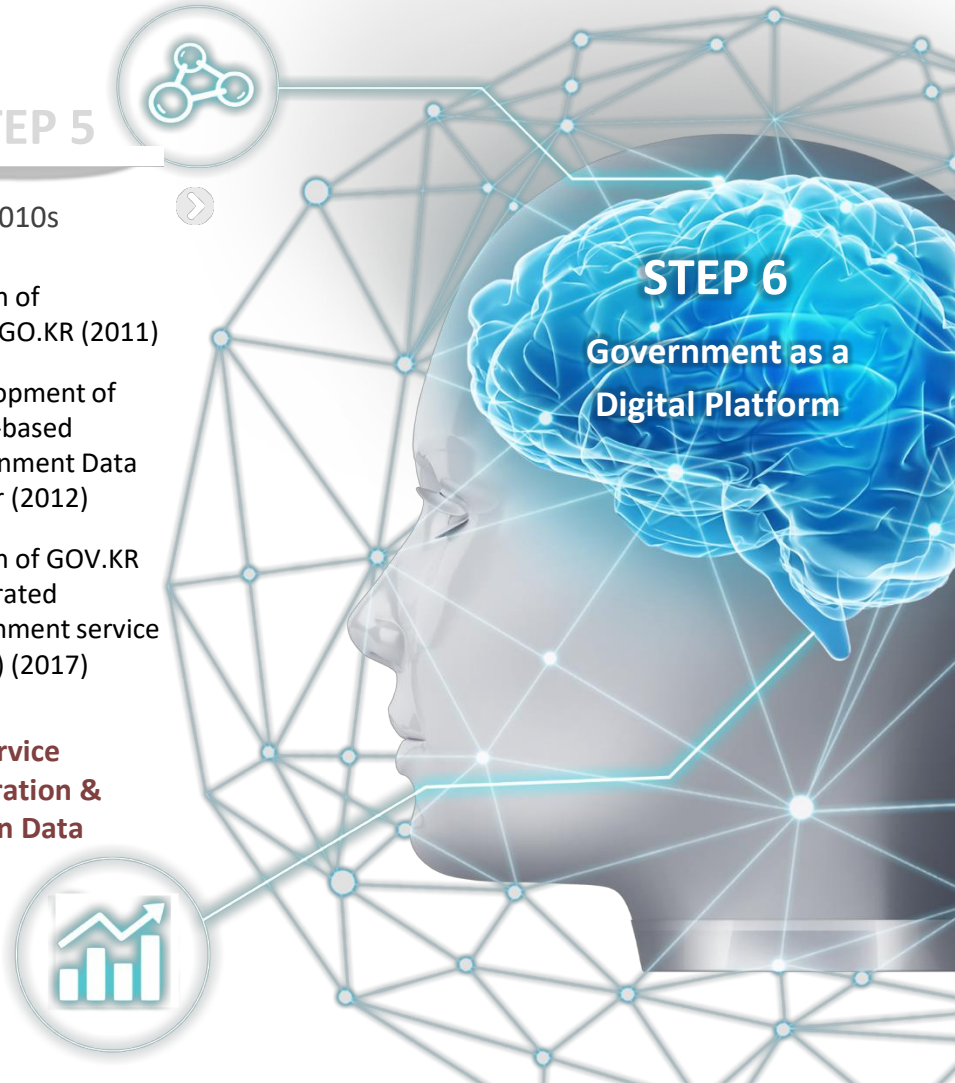
- Enactment of the e-Government Act (2001)
- Establishment of the Integrated Government Data Center (2005)

Construction & Integration of E-Government Systems

STEP 5
2010s

- Launch of DATA.GO.KR (2011)
- Development of Cloud-based Government Data Center (2012)
- Launch of GOV.KR (integrated government service portal) (2017)

Service Integration & Open Data



Digital Government Organizations

Primary ministry for digital government

Ministry of the Interior and Safety

NIA NATIONAL INFORMATION SOCIETY AGENCY

National
Information society
Agency

KISA Korea Internet & Security Agency

Korea
Internet &
Security
Agency

KLID

Korea
Local
Information research &
Development institute

Principles, standards, common components, shared services, and integrated infrastructure

- Ministry of Strategy and Finance
- Ministry of Education
- Ministry of Science and ICT
- Ministry of Foreign Affairs
- Ministry of Justice
- Ministry of National Defense
- Ministry of Culture Sports and Tourism
- Ministry of Agriculture Food and Rural Affairs
- Ministry of trade industry and Energy
- Ministry of Health and Welfare
- Ministry of Environment
- Ministry of Employment and Labor
- Ministry of Land infrastructure and Transport
- Ministry of Ocean and Fisheries

IT projects and services in respective areas

Digital Government Services

Service-oriented government | **Effective & efficient government** | **Transparent & open government**

G2C	Gov24	Open Data Portal	National Health Insurance	e-People (Participation)	Hometax (e-Tax)	Edunet (e-Education)
G2B	UNI-PASS (Customs)	KONEPS (Procurement)	Bizinfo (SMB support)	KIPO net (Intellectual properties)		
G2G G2E	Shared Mobile Service Platform	Digital Budget Accounting	Digital document & BPMS	Shared Services for Local Gov.	Personnel Management	Public Information Sharing Center

National Information Resources Service
(Government Integrated Data Center)

2. Success Factors

Success Factors

Success Factors from a Technological Perspective

Integrated Infrastructure

- Increased Efficiency by Server Consolidation and Shared Infrastructure
- Enhanced Security
- Systematic Operation and Maintenance

Unified Application

- Efficient Communication and Data Exchange among Agencies or Systems
- Rapid Service Improvement and Distribution

Standardized Data

- Reducing Exchange Overhead with Standard Codes, e-Document Format Standard, and Database Design Guidelines

Success Factors from an Administrative Perspective

Early adoption of Civil Registration

- Civil Registration started from 1968, Every citizen has an unique identification number.
- The identification number has been used as a key identifier to manage public databases.
- Databases can be joined or linked easily through the identification numbers.

Dedicated project funding & prioritizing essential services

- The Ministry of the Interior and Safety collaborates with the Ministry of Economy and Finance to allocate proper amount of budget to e-government projects
- Implement essential and high-demand services first

Reviewing and adjusting IT projects from planning phase to inspection phase

- The Ministry of the Interior and Safety is in charge of reviewing IT projects with the support from the National Information Agency
- The National Information Resources Services Institute works with other agencies to implement, operate, and maintain services which are located in the Government Data Center.

3. Best Practices

National Information Resources Service

Government Integrated Data Centers(GIDC) shared among ministries and agencies

- 2 data centers for mutual backup and disaster recovery
- Providing IT resources for 45 government ministries and agencies
- High efficiency, availability, and robustness
- Cybersecurity management based on AI
  - Automatic identification/Analysis/Response with AI
  - Response time : More than 10min → less than 30sec
  - 1,000 events per day → 10 million events per day

Public Information Sharing Center

Pan-government data hub to share data among government entities

- 5,100 types of data from 499 agencies
  are shared through machine-to-machine communication

- 162 types of administrative information from
  34 agencies for 2,789 administrative processes
  can be searched & used by authorized officials

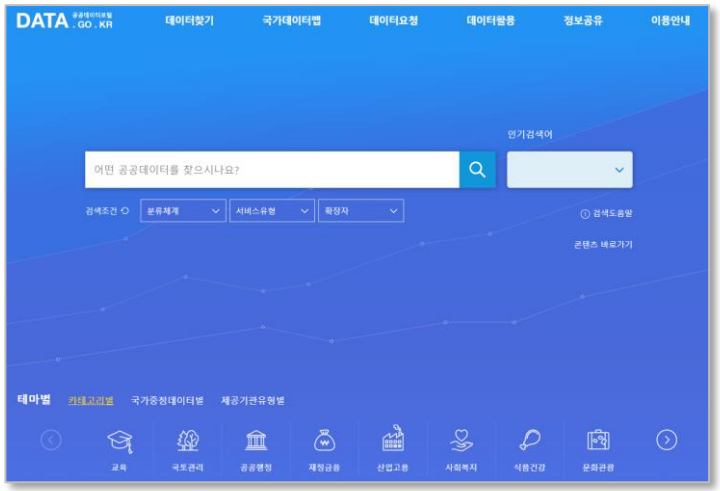
- Sharing information with financial institutions

- Reduced more than 1M tons of CO_2 (2011~2020)

Data.go.kr

Integrated public open data portal of the Korean Government

- About 50,000 datasets from 956 public institutions
- More than 7,000 open APIs
- Data catalogue, National Core Data, Standard Datasets
- Annual evaluation of open data provision & management



On-Nara BPS (Business Process System)

The standard digital-document based groupware for government ministries and agencies

- 600K users of 295 ministries and agencies
- 470K documents processed per day
- Digital signature verification and forgery prevention
- Digital document based governmental workflows
- Knowledge archive for future reference

Safety e-Report

Reporting safety risks or inconveniences of daily lives to government

Citizens may report:

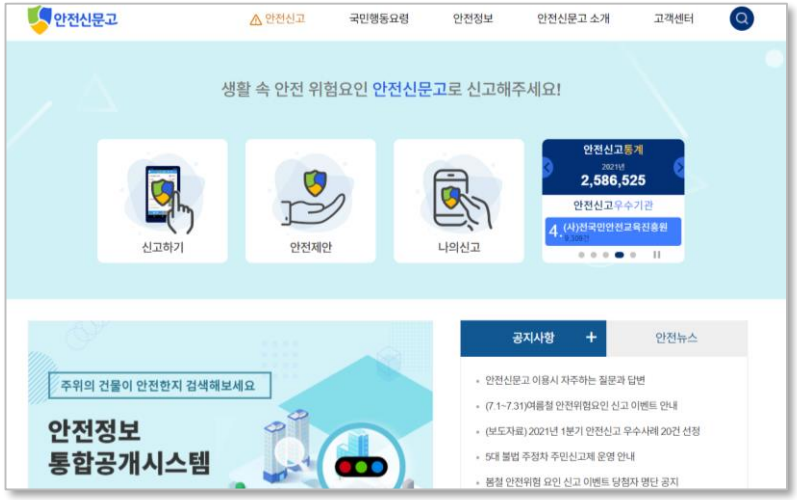
- Any possible risks regarding disaster, accident, and crime
- Damaged or malfunctioning public facilities
- Illegal parking, waste disposal, and other violation of regulations

The government should respond:

- More than 8M reports since 2014
- Solved 99% of reported problems

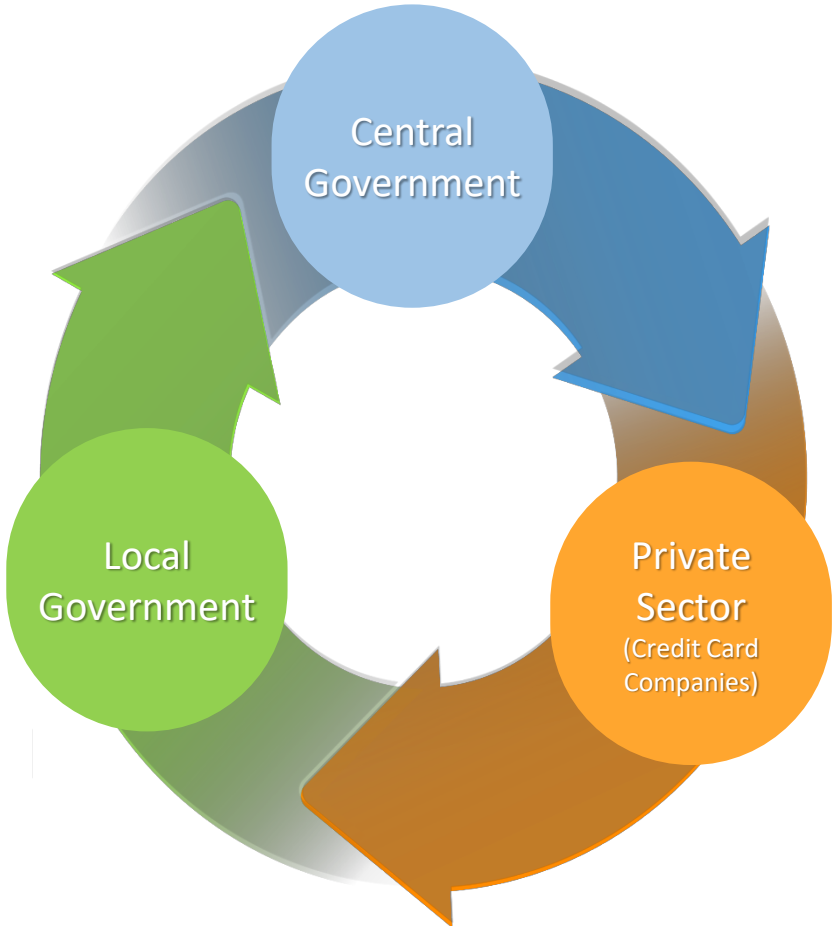
Citizen-centered service

- All central and local government organizations are connected
- Location-based quick photo report with a mobile app



COVID-19 Relief Fund Distribution

- Well-Organized Government Data
- Silo-Free Pan-Government Cooperation
- Collaboration between the Private and the public sector
- Integrated Data Platforms and Infrastructure



A new information system set up within a month

21M household received the fund within a month

4. International Cooperation

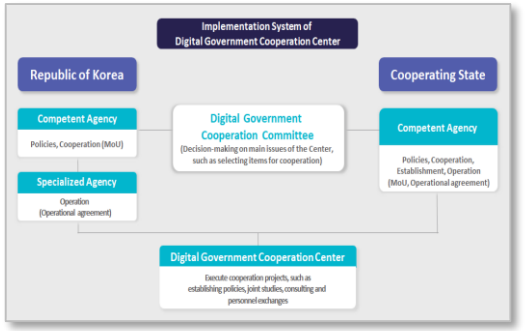
Digital Government Cooperation Center

Concept

- A joint team for digital government development of partner country
- For 3 years, a Korean digital government expert works together with officials of a partner country

Responsibility

- Korea: Fund for projects + Cost for secondment of the expert
- Partner Country: Cost for office management



Activities

- Joint projects for F/S, BPR/ISP, Proof of Concept, Pilot Service etc.
- Policy or technology consulting by Korean experts
- Workshop or seminar

Capacity Building Program

Digital government policy course for partner countries

- 1 week program on e-government policy research, case study, and experts meeting
- Recommended for senior government officials

On-demand thematic courses

- Sharing knowledge and experiences about issues demanded by a partner country

Bilateral Cooperation Events

- High-level meeting

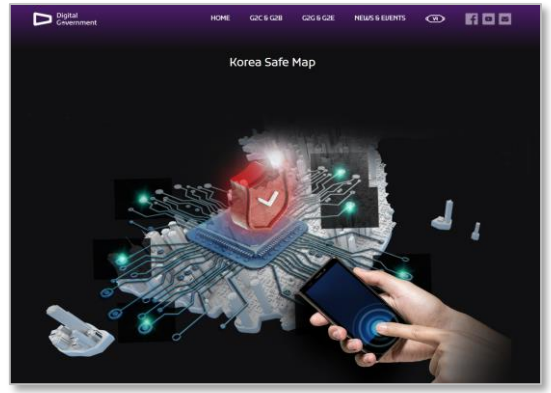
- Forum / Workshop / Seminar

- Digital Government Delegation

DgovKorea.go.kr

Introduction website of the Korean digital government

- 29 best practices of Korean digital government
- VR tour of the Digital Government Exhibit Hall
- Links and materials for further information
- News and updates



5. More in the Future

Government as a Digital Platform

Vision

World-leading governance; a digital platform connecting all data

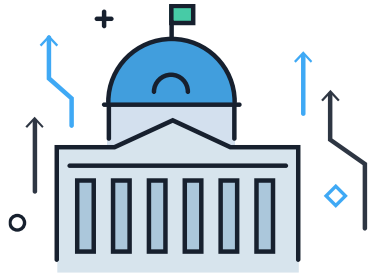
Goals

Satisfied Citizen

Proactive & Personalized Services

Innovative Business

Public-Private Collaboration Ecosystem



Rational & Scientific Government

Government workflow Optimize by Data & AI

9 Principles of Government as a Digital Platform

1. A government should actively encourage public-private collaboration to nurture innovation ecosystem and shared growth of the public and the private sector.
2. Public data should be open by default in machine-readable digital formats .
3. Public services should be user-centered, integrated, proactive, and personalized for each citizen.
4. A government should break down silos and implement the whole-of-government with digital platforms.
5. A government should redesign administrative processes, innovate organizational culture, and overhaul personnel management systems.
6. A government uses data and artificial intelligence for evidence-based scientific decision making.
7. A government should protect personal information and ensure safe and reliable access to public services.
8. A government uses and develops open standards to facilitate sharing data and services between the public and the private sector.
9. A government should comply with existing global standards and actively contribute to the creation of new global standards in the course of developing Government as a Digital Platform

Thank You

Ministry of
the Interior and Safety