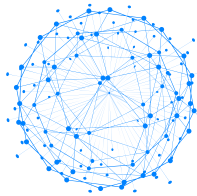


Going Digital

# 3 National Agenda Items for Digital Transformation

September 16 (Monday), 2019



National Information Society Agency  
President MOON, Yong-sik

**NIA** NATIONAL  
INFORMATION SOCIETY  
AGENCY



# CONTENTS

**01** Korea at the Crossroads

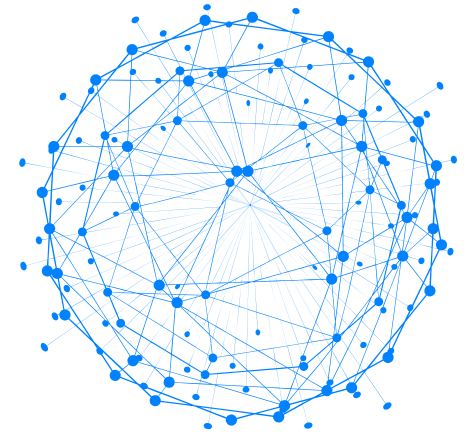
**02** 3 National Agenda Items

**2.1.** Korea Data Expressway(KDX)

**2.2.** Digital Government

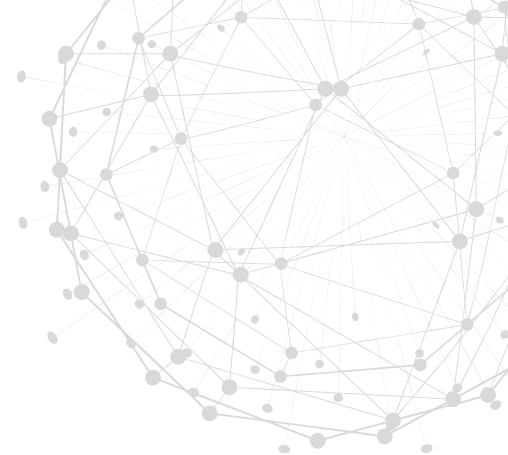
**2.3.** Digital Inclusion

**03** Korea as a Digital Platform Country



# 01

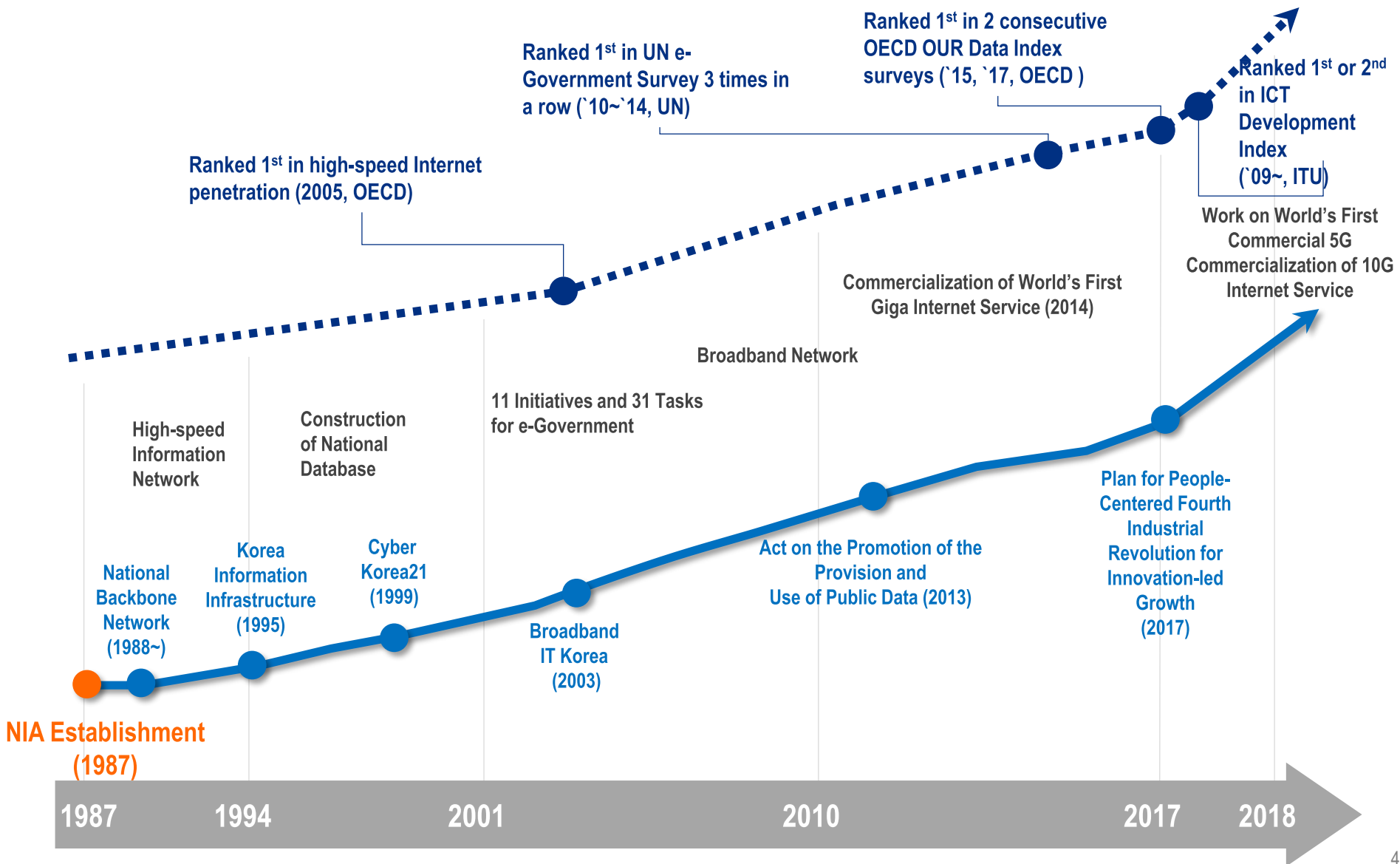
3 National Agenda Items for Digital Transformation



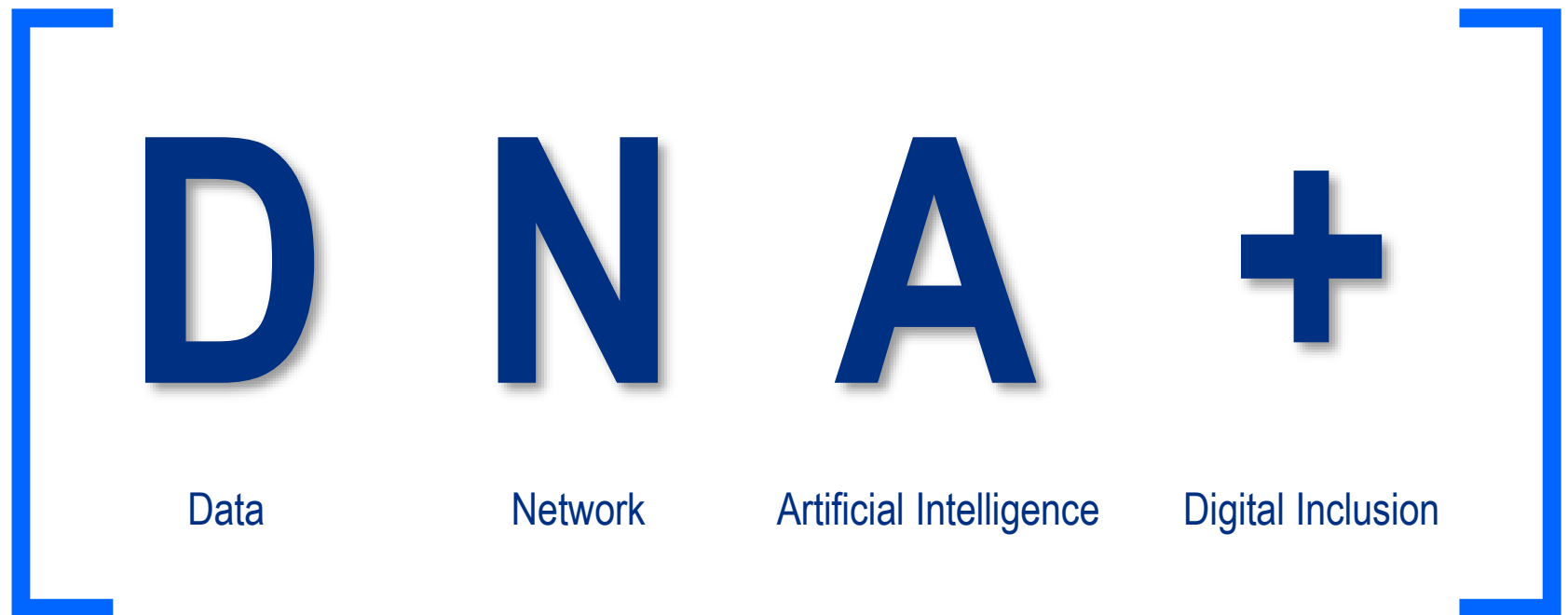
# Korea at the Crossroads



# NIA's Journey Toward Korea's ICT Development



# Data-driven Society



## 2017 Digital Evolution Index Scores (Tuffs University, '17.7.)

### Digital Evolution Index

Current State of digitalization

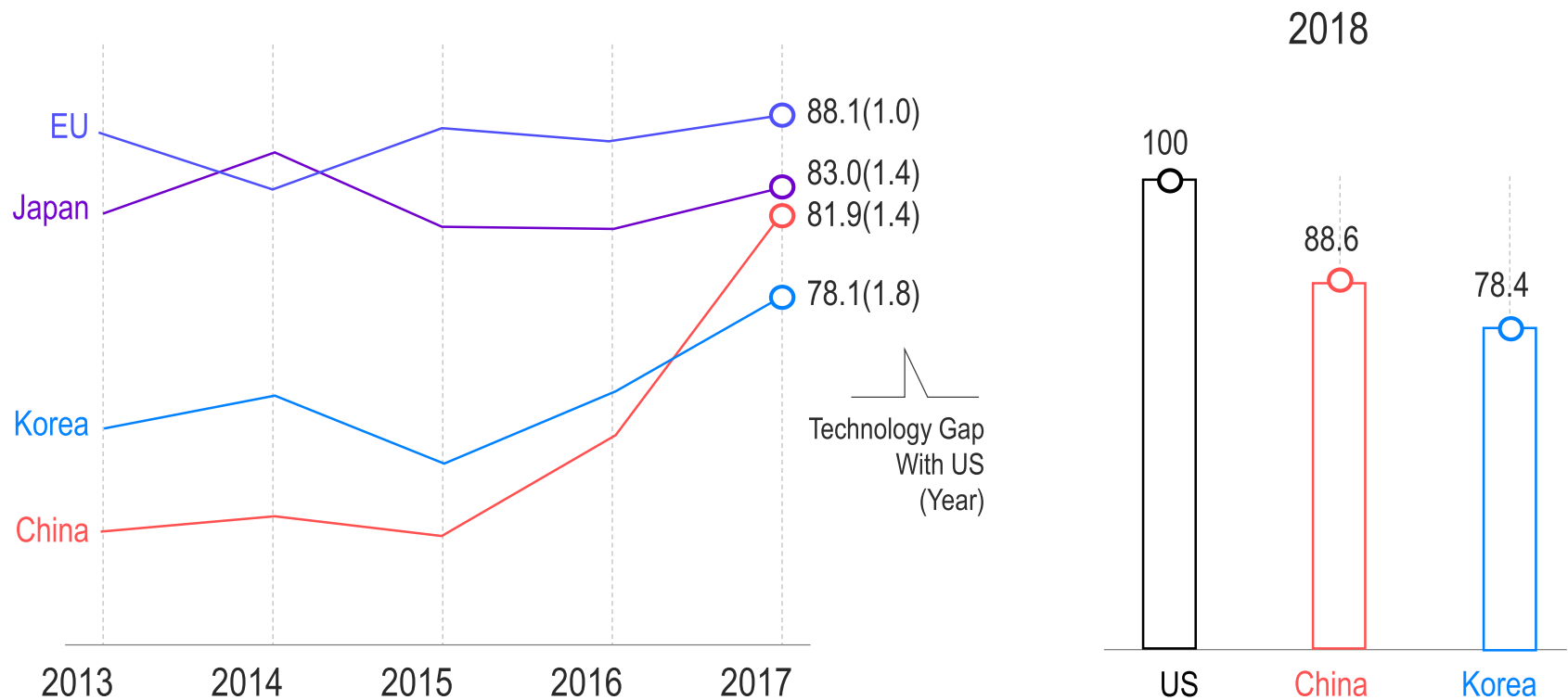
Rank	Country	Score
1	Norway	3.79
2	Sweden	3.79
3	Switzerland	3.74
7	South Korea	3.68
8	UK	3.67
10	US	3.61
15	Japan	3.52
17	Germany	3.36
36	China	2.49

### Digital Momentum

Growth Rate of Digitalization over 8 Years ('08~'15)

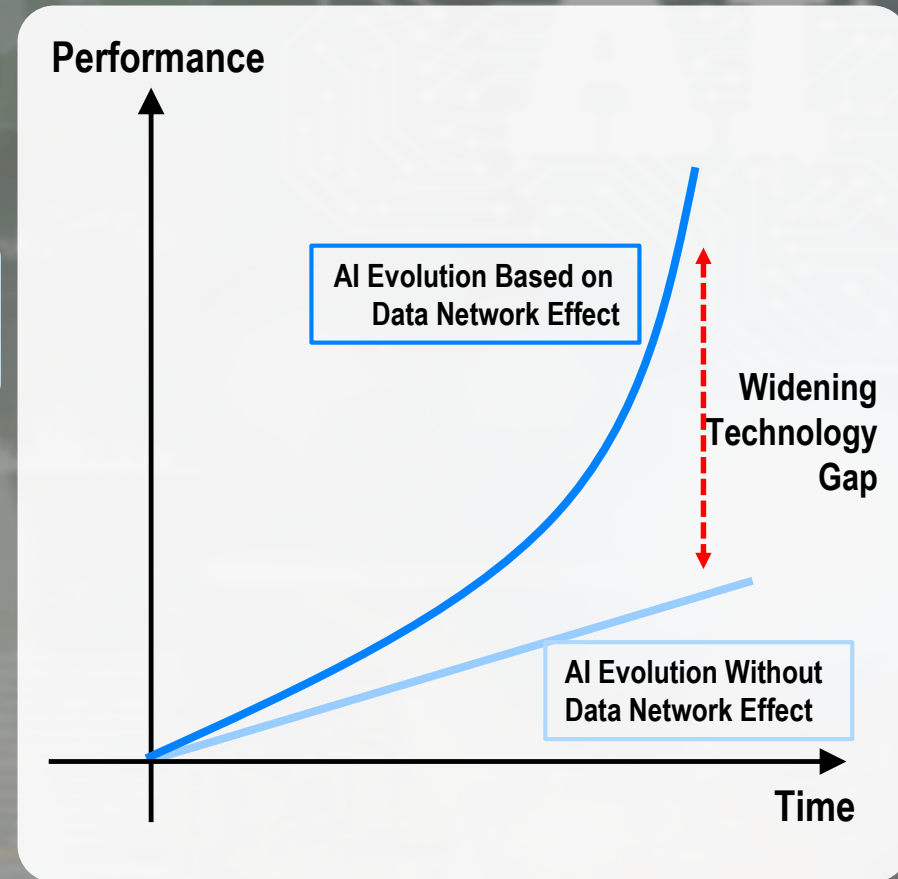
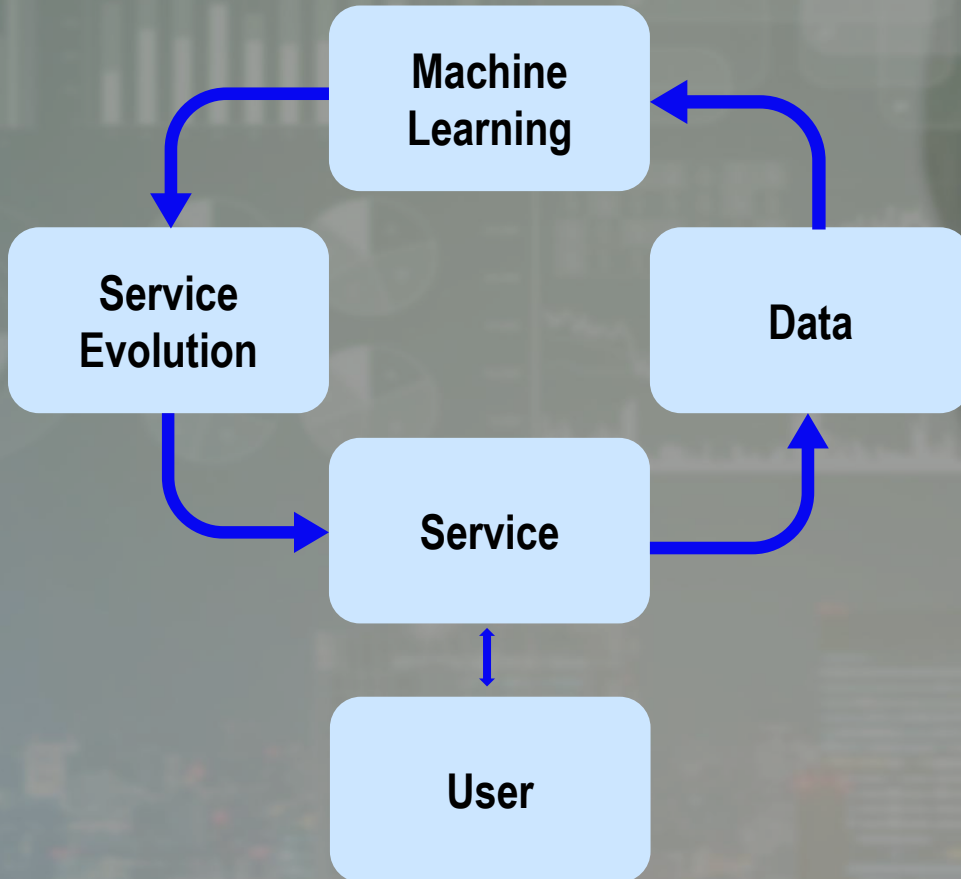
Rank	Country	Score
1	China	3.95
2	Malaysia	3.81
3	Bolivia	3.63
23	UK	2.24
34	Japan	1.96
36	Germany	1.86
37	US	1.83
43	South Korea	1.42

## AI Technology Levels of Major Countries



Source: IITP

Source: Korea Institute for Industrial Economics and Trade





## Geographical Transformation

End of cold war and confrontation  
Era of peace and cooperation



## Digital Transformation

Digital reform  
Era of hyper-connectivity, hyper-intelligence and  
hyper-convergence



**Innovative and Inclusive Country**

# 02

3 National Agenda Items for Digital Transformation



## 3 National Agenda Items



## Re-designing all areas of the nation and society to digital

- Data access and sharing
- Digital government
- Open science, open government data
- Capacity-building education for the digital world

GOING DIGITAL

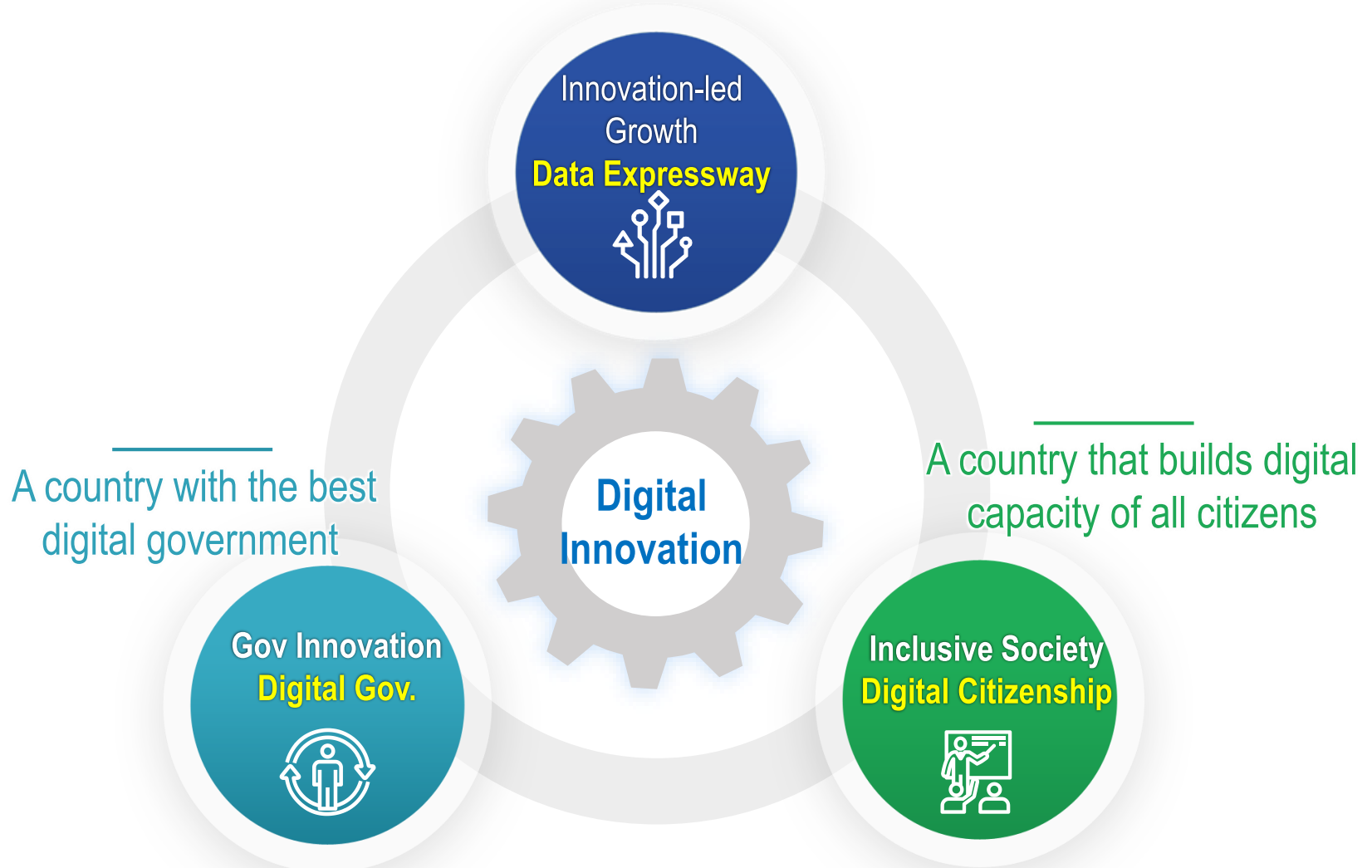


Korea needs to put an extreme focus on

**AI, AI and AI**

# 3 National Agenda Items

A country where AI - data is used in the safest way



# 2.1

3 National Agenda Items for Digital Transformation



# Korea Data Expressway (KDX)

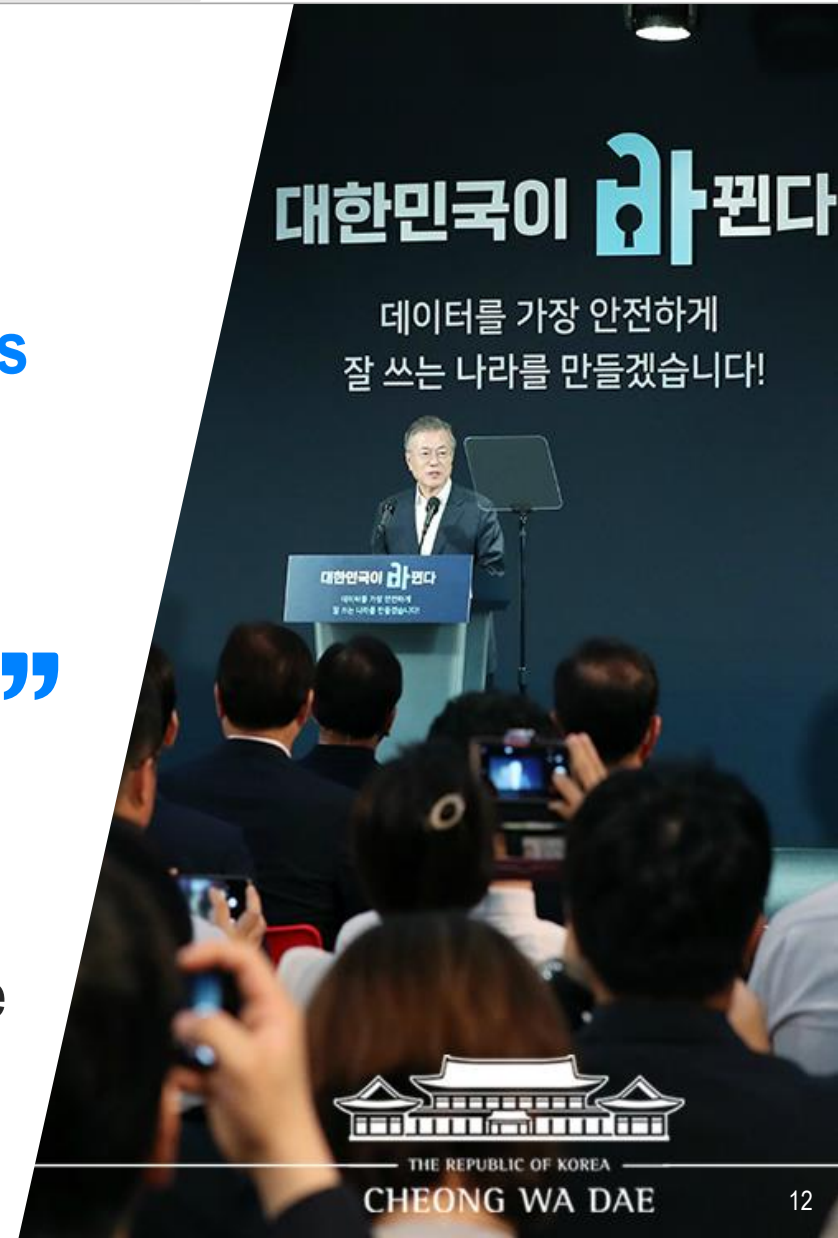


# President's Remark on Data Economy Vitalization ('18.8.31)

“  
Now, the Republic of Korea must become **a nation that best handles the Internet, a country that best processes data.**

”

We will establish **a new data expressway in the era of data** just like we built the Gyeongbu Expressway in the era of industrialization.



# Korea Data Expressway(KDX), Arteries and Veins of Innovation

Changes in the **economic backbones** over time



[1970s] Industrial Era  
Gyeongbu Expressway (SOC)



[2000s] Information Era  
Information Super-highway  
(Network)



[2020s] Intelligent Era  
Data Expressway (Data)





## Goal

To become a leading country in data and AI economy

Achieve data market volume  
of KRW 30 trillion

Nurture 10 AI Unicorn  
businesses

## Strategy

DATA



Convergence  
of  
spaces

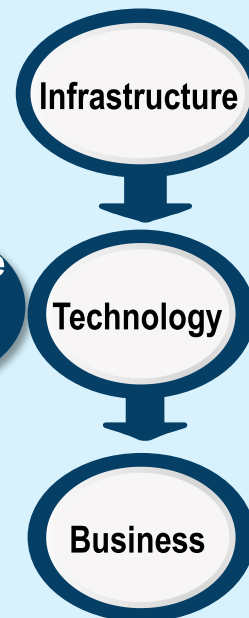
**DATA-AI  
Convergence**

Convergence  
of  
human  
resources

Convergence  
of  
systems

Convergence  
of  
businesses

AI



[Infrastructure for Innovation] **D.N.A.**

## Data·AI

- Facilitate data value chain
- Create AI ecosystem
- Promote data-AI convergence and use

## 5G

- Promote public investment in 5G
- Encourage private sector investment in 5G
- Build foundation for the industry

[3 New Industries] **BIG3**

**System  
Semiconductor**

**Bio-health**

**Future Car**

## Data Building / Release

- Build and interconnect 10 Big Data Platforms and 100 Big Data Centers
- Conduct an exhaustive survey on public (government) data and fully open up the data
- Develop a framework for sharing national research data

## Distribution

- Provide vouchers for data purchase and processing

## Use

- Provide 'My Data' Service
- Conduct Big Data Flagship Project for solving social issues



## Hub-building

- Build AI datasets
- Support exploration and development of useful AI algorithms
- Provide cloud-based GPU resources

## Technology Development

- Secure next-generation core AI technologies, particularly in the areas of neuro-science research and quantum computing
- Expand AI R&D Challenge Competitions

## Ecosystem

- Select and operate provincial AI Convergence Research Centers

## Space

- Build AI convergence clusters
  - Universities
  - Urban complexes

## Project

- Apply intelligence in all industries  
「AI + X Flagship Project」

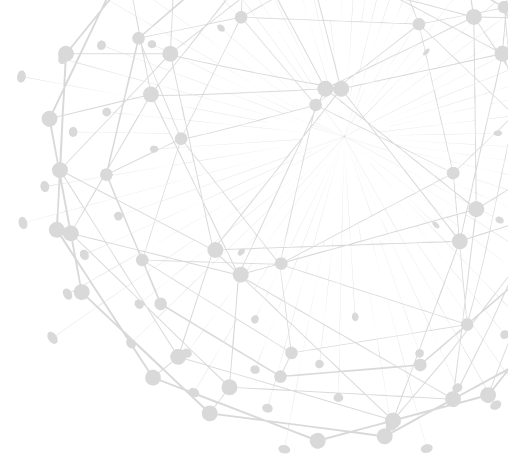
## System/ Education

- Specialized Graduate School of AI
- Innovation Academy (E'cole 42)

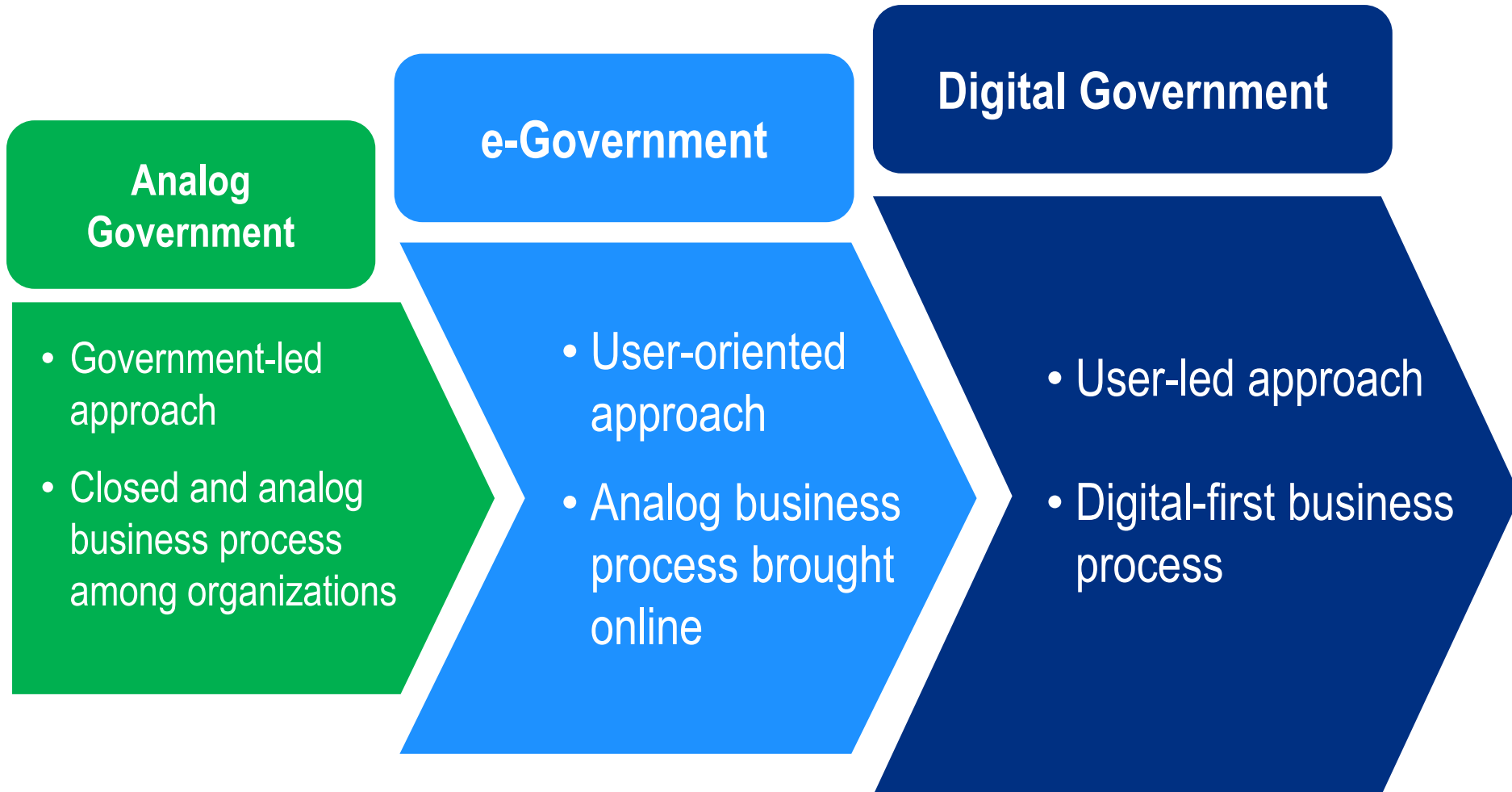
# 2.2

3 National Agenda Items for Digital Transformation

# Digital Government



# Means to Achieve Government Innovation – Digital Government



## What is a digital government?

Building government systems on digital basis from the stage of process design (**Digital by Design**)

A government that **offers integrated digital services** to citizens and **functions as a platform** where citizens take the lead in problem-solving

Goal

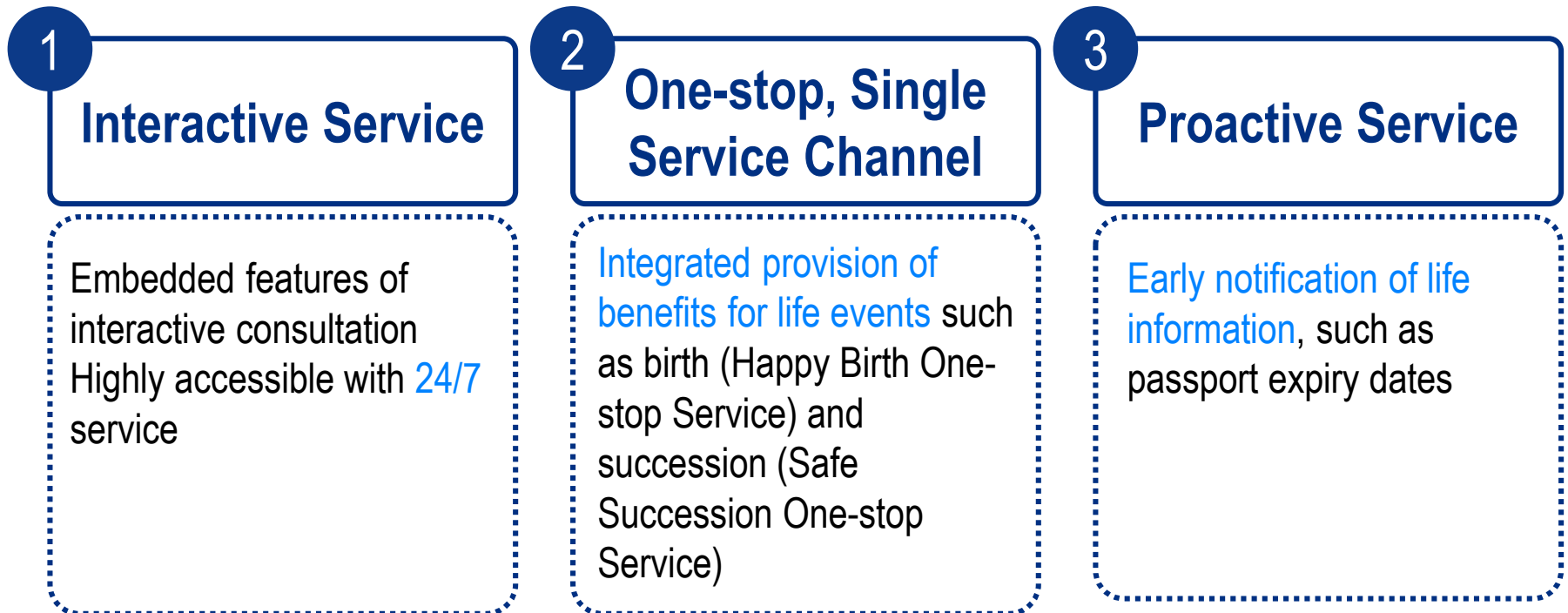
**One  
Government**

**Intelligent  
Government**

**Government as  
a Platform**



- Develop AI-driven **interactive personal assistants**
- Offer **life cycle-based customized services** that **provide in advance** the information citizens want



A phenomenon where **all major national infrastructures** use data technologies and AI to obtain **intelligence**

## Infrastructure

## Description



**Transport Infrastructure**  
**Intelligent Transport Service**



Real-time prediction of traffic accidents and congestions  
Real-time traffic information, Optimized traffic signal system



**Safety Facilities**  
**Smart City Safety**



Integrated city control solutions made smart and intelligent,  
Automatic detection of abnormal signs on facilities (through  
CCTV)



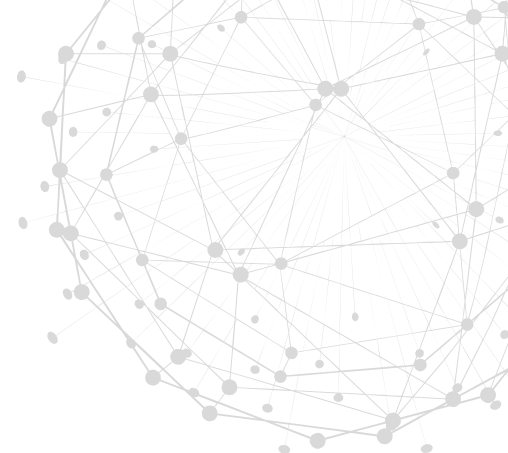
**Public facilities**  
**Intelligent Air-conditioning  
System for Subway Stations**



Prediction of indoor microdust level and automatic air-cleaning

# 2.3

3 National Agenda Items for Digital Transformation



## Digital Inclusion



“

In the digital age, **‘non-exclusive inclusion’** is all the more important.

A **digital divide** can lead to economic gaps and polarization.

**Digital education** for the vulnerable should be strengthened.

”



## Digital Citizenship

Basic knowledge and skills required of citizens living in the digital society to fully exercise their rights and obligations

- Strategy ..... Build citizens' digital capacity
- Target ..... All citizens
- Method ..... Through all ministries and public-private partnerships

## Digital Citizenship Capacity Building Education

General Education

Digital citizenship capacity building

Professional Education

Digital vocational / skills training

## AI education for all population

- AI and software education in elementary, middle and high schools
- Concentrated support for software-related departments in universities
- Quality improvement and expansion of life-long education

## Expand the **AI Speaker Service** for senior citizens living alone

- Develop and distribute AI-driven chat companions and care services

## Provide AI-driven **public healthcare service**

- Support medial diagnosis based on AI image analysis technology

## Develop and distribute **intelligent wheel chairs**

- Develop and distribute electric wheel chairs that are operated and controlled by facial expressions only



# 06

3 National Agenda Items for Digital Transformation

## Korea as a Digital Platform Country





To see the future  
of **Digital Innovation**,  
Come to **Korea!**

## The Guardian

International edition ▾

### An urbanist's tour of South Korea: a glimpse into the future of world cities

Day one: Welcome to South Korea week, as regular Guardian Cities correspondent Colin Marshall goes under the skin of this most extraordinary country for a series of daily despatches

● **Seoul by subway: 25 stations, 25 neighbourhoods - in pictures**



## Special Global Digital Zone

As a place attracting global talents, businesses, research labs and investors, **Korea** will be a model area or a special zone offering **a testbed for the future** of the world.

1

**Provide world-class technology infrastructure!**

(5G, IoT network, smart roadways, curation of outstanding parts)

2

**Attract world's best talents, technologies, businesses, labs and investors!**

(Tech talent visas, Tech Challenge Programs, Asia Startup Alliance, overseas post-doc researchers)

3

**Provide a testbed for the future and be a platform country reaching out to the world!**

# With Citizens, For Citizens

Thank you.

**NIA 한국정보화진흥원**

