
Strategy on Data Integration, Technology Development, and Capacity Building

2024.11.26

CONTENTS

Chapter

- Data Integration Strategy

Chapter

- Geospatial Information Technology Development Strategy

Chapter

- Spatial Information Capacity Building

Chapter

I

Data Integration Strategy

A Digital Korea where all data is connected.

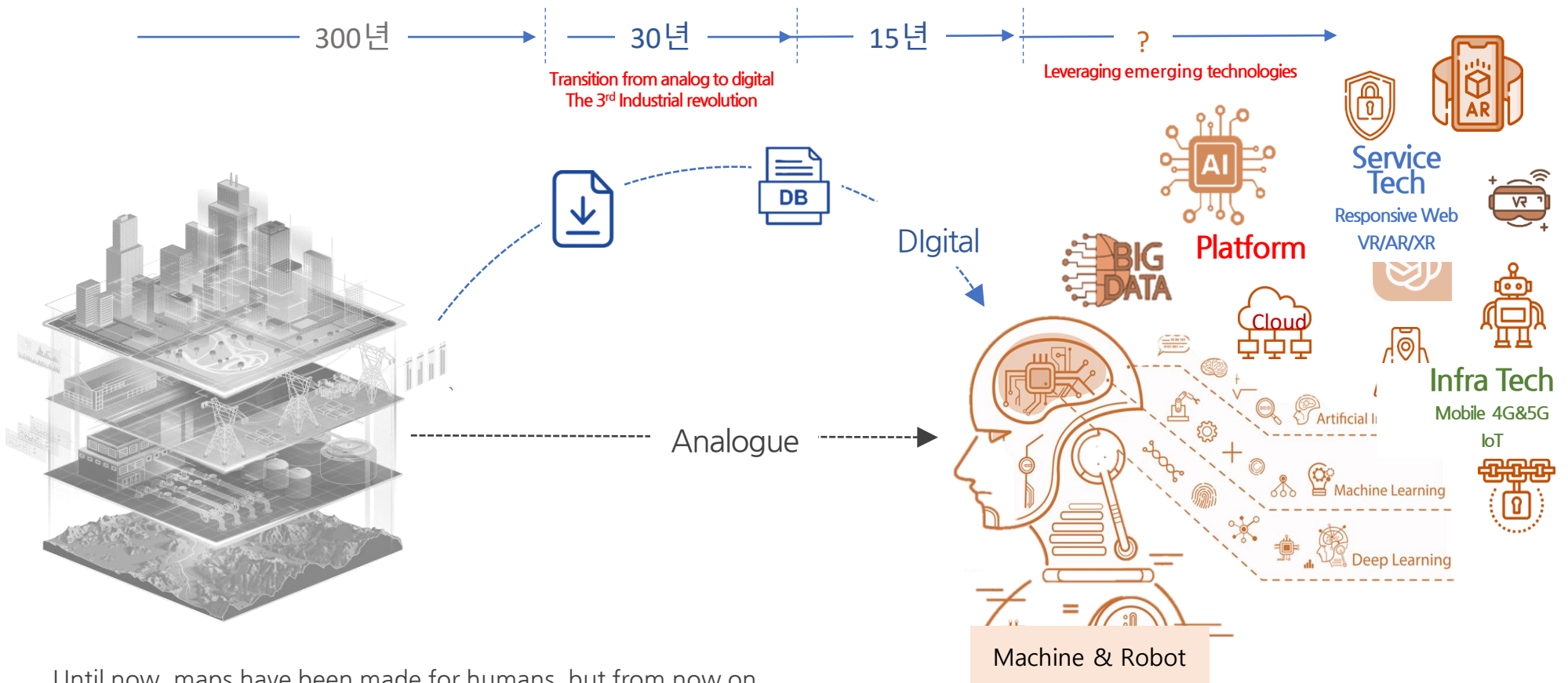
In 1986, 99.2% of global data capacity was analog.

By 2007, 94.0% had changed to digital

industrial barriers a legacy of the past.

(pipeline economy → platform economy)

Industrialization > Analogue > Digitization > Digitalization > Digital Transformation



Until now, maps have been made for humans, but from now on, they must be made for machines as well as humans.

Recognizing digitally and forming new creative relationships between things in a digital way

01 · Data Integration Strategy

Establishment of the Presidential “Committee on the Digital Platform Government” (‘22.9)

The citizens, businesses, and the government collaborate to solve social problems and create new values through “Digital Platform” where all data are connected and the latest digital technologies utilized.

Via Digital Platform

Connect systems, data across agencies, and full public opening



From government-driven to Public & Private Sector Collaboration

Create the environment to integrate and support the innovative capacities of the private sector



Based on advanced infrastructure such as AI and big data

- Proactive, customized service
- Data, evidence and science-based policy decision making
- Creating innovative business

01 · Data Integration Strategy

The necessity for transformation towards the digital platform government

The transformation enables the integration of citizen-centric service, expanded services, and sustainable innovation into existing government services

1 Citizen-centric service

- Provide personalized public services to citizens using government-owned public data and various data gathered and generated by each public platform.
- A digital platform equipped with AI and big data will be able to deliver personalized, “tailored to individuals” services to the level of private platform companies.

2 Expanded service offerings

- As a platform provider, the government establishes and supplies essential digital infrastructure, encouraging citizen participation to build a transparent platform ecosystem
- It also enables citizens to freely access and utilize the services offered by the government on the digital platform

3 Sustainable Innovation

- A data-driven digital platform government can continuously evolve through interactions between various consumers and providers
- It will enable a decision-making approach based on data and AI

01 · Data Integration Strategy

Key Strategies for implementing Digital platform government

“World’s leading Digital Platform Government” Powered by AI & Data

Strategy

01

• • One-Team Government

- ① Innovation of the overall administrative system based on digital technology
- ② AI & Data-Driven Administration
- ③ Innovation of digital platform government Infrastructure

Strategy

02

• • Smart Government

- ① Integration service: At one place, By one click
- ② Providing hyper-personalized services
- ③ Creating an environment where all citizens benefit
- ④ Scientific administration powered by AI & Data
- ⑤ Implementing transparent digital democracy
- ⑥ Innovating local governments through digital platforms

Strategy

03

• • Public-Private Collaborative Government

- ① Establishing a collaborative platform that identifies and solves social issues
- ② Promoting the integration and utilization of public data and services by citizens
- ③ Achieving a quantum leap in the AI and data industry through digital twins
- ④ Strengthening support for the growth of GovTech companies
- ⑤ Proactively utilizing advanced AI technologies from private companies in the public sector

Strategy

04

• • Trustworthy Government

- ① Strengthening citizens’ rights regarding personal data
- ② Establishing a new security systems for the safety of digital platform government

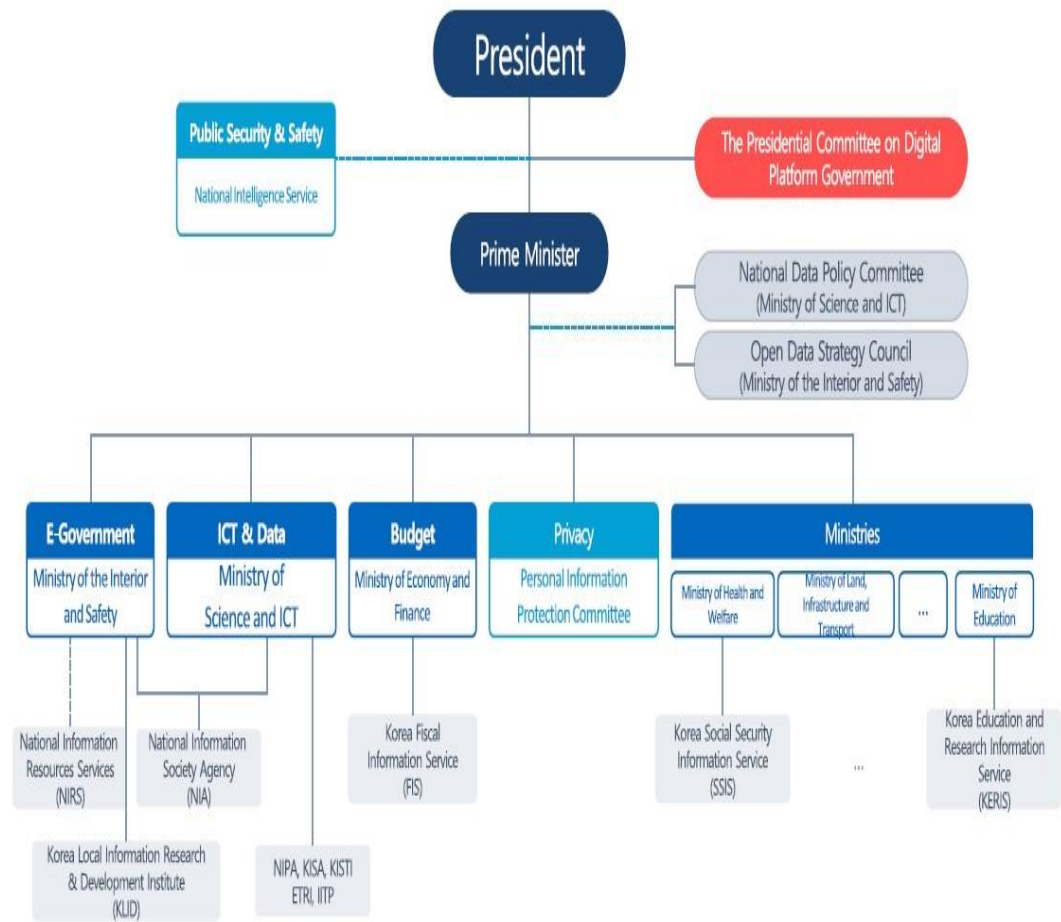
01 · Data Integration Strategy

Digital Platform Government Implementation plan ('23.4)

디지털플랫폼정부 실현계획 Implementation Plan

'23. 4. 14.

대통령직속
디지털플랫폼정부위원회



Chapter



Geospatial Information Technology Development Strategy

02 · Geospatial Information Technology Development Strategy

Future Trend Change

Geospatial information is : transforming from **paper maps** to digital maps, evolving from information to knowledge through ICT technology convergence, and **advancing into intelligent infrastructure through the integration of ICBM and other technologies**

1995

2017

2023

2027

Analogue Map

Spatial Data Infra

Spatial Information Infra

Geospatial Knowledge Infra

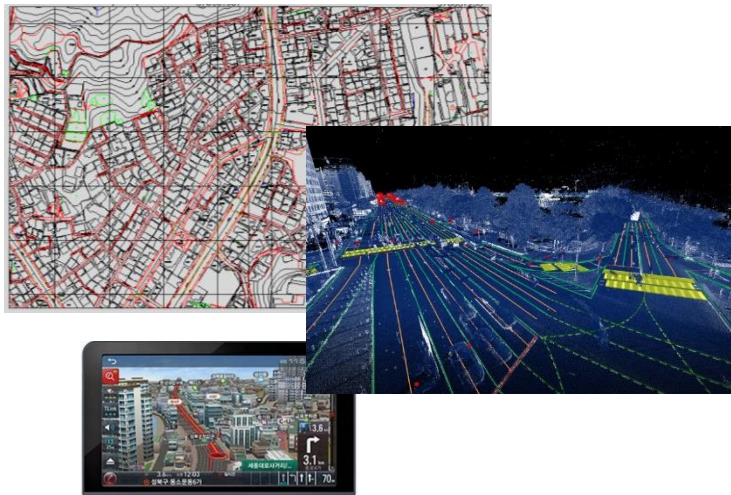
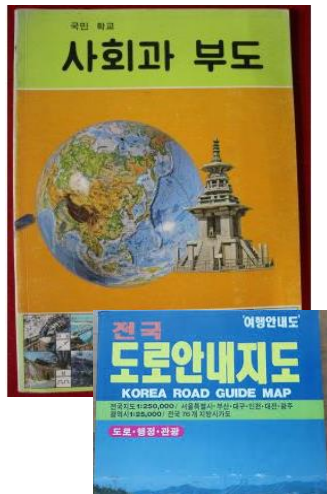
Geospatial Intelligence Infra

Computer

Internet, Moblie

Iot, Big-data, Cloud, AI, ext.

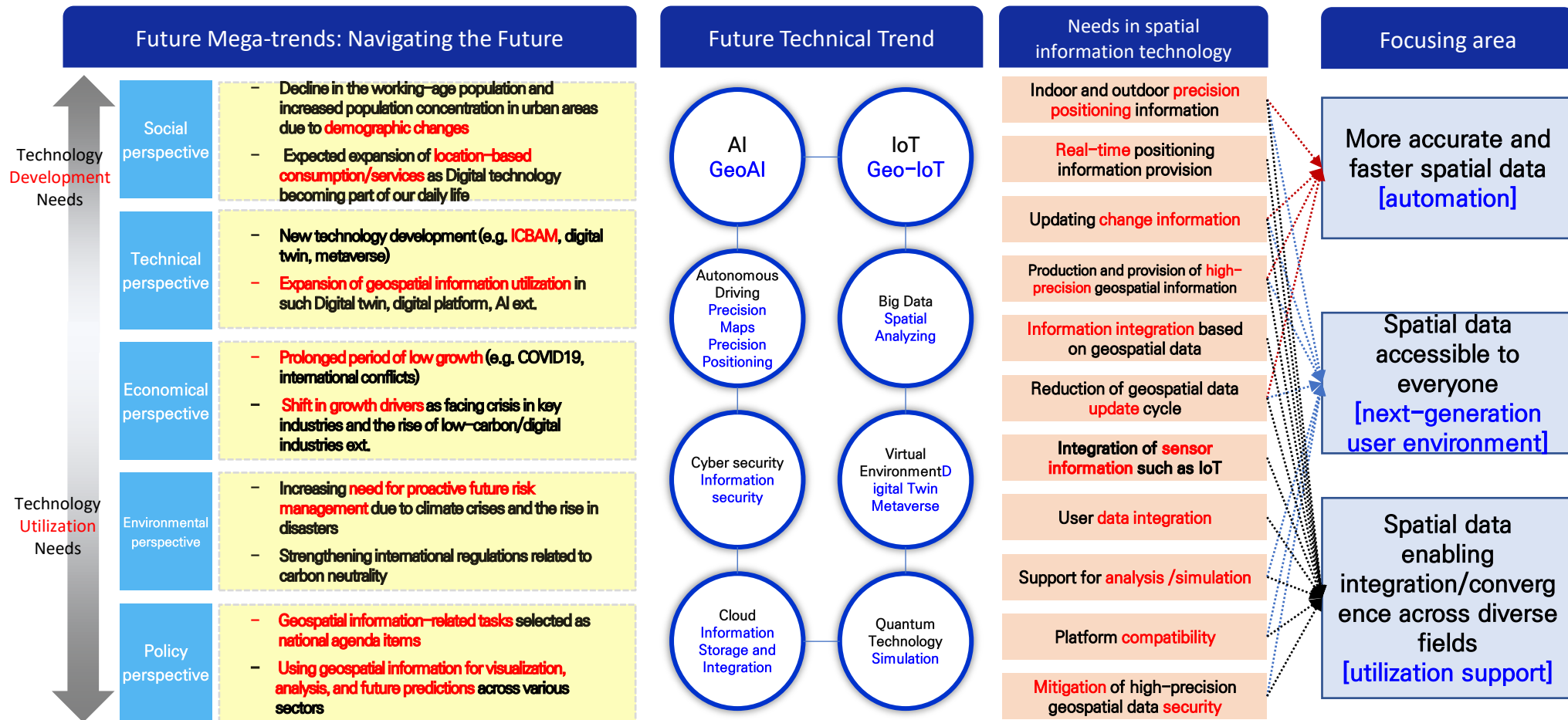
Mobility, UAM, AI, XR, Quantum Technology



02 · Geospatial Information Technology Development Strategy

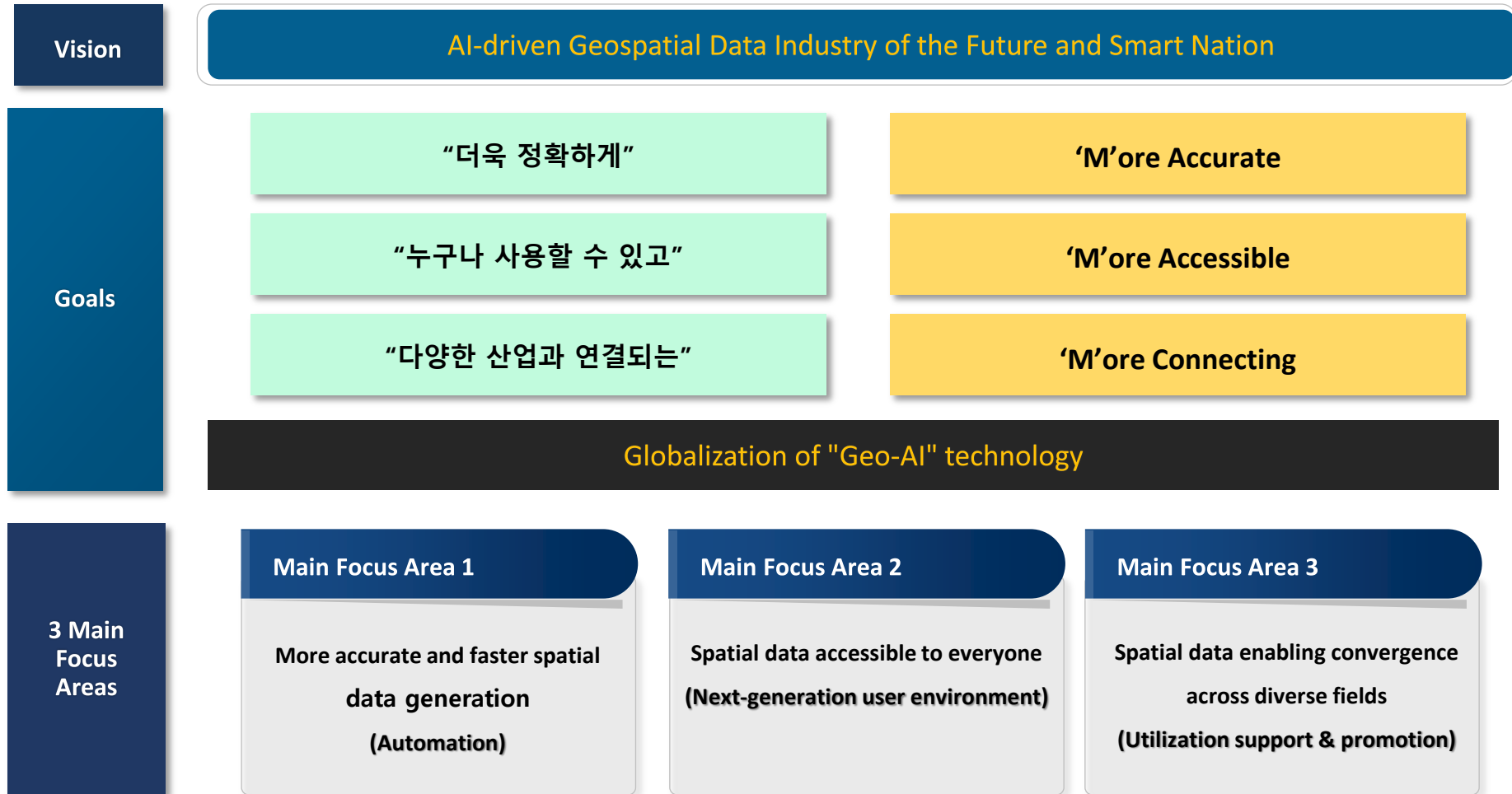
Key Technologies for the Future

Selecting **three main focus areas** by considering **social and technological transformations**, as well as the **level of demand and needs in the geospatial information sector** regarding technology and data



02 · Geospatial Information Technology Development Strategy

Geospatial Information Technology and its Development Vision



02 · Geospatial Information Technology Development Strategy

Detailed-tasks in each focus area

Focus Area	Objectives	Tasks
More accurate and faster spatial data (Automation)	Realizing an automated production & management of high precision, high quality geospatial information	<ul style="list-style-type: none"> ▪ High precision positioning technology that implements indoor navigation ▪ Automated 3D spatial data generation and its change management technology ▪ AI-based spatial data quality management and security mitigation technology
Spatial data accessible to everyone (Next-generation user environment)	Creating an environment where two-way Communication is in place for next-generation users	<ul style="list-style-type: none"> ▪ Next-generation spatial data platform technology ▪ Technology for utilizing 3D grid systems to support autonomous navigation in UAM, robotics, ext. ▪ Transformation technology for collaborative utilization between the public and private sectors
Spatial data that can be converged across fields (Utilization support)	Broaden convergence utilization through public-private cooperation	<ul style="list-style-type: none"> ▪ 4D simulation technology using real-time dynamic data ▪ Small satellite technology for efficient national land monitoring ▪ Private sector-driven technology for addressing gaps in geospatial information

Chapter



Spatial Information Capacity Building

03 · Geospatial Information Capacity Building

Background

- ✓ Increasing needs to train professionals to cope with rapid changes in the geospatial information industry and demand for advanced technology
- ✓ The need for an educational support system that allows students to systematically learn the practical competencies required in the geospatial information industry is increasing.
- ✓ As spatial information is converging and advancing with various technological fields(urban planning, metaverse, information security, etc.), the talented and trained professionals in the field of geospatial information is highly demanding.

Purpose

- ✓ Supporting technological development and growth of the spatial information industry by nurturing talent with expertise and capabilities in the spatial information field.
- ✓ Resolving the imbalance between supply and demand of talent in the spatial information industry and promoting advancement into the spatial information industry by nurturing and producing key human resources who can integrate advanced technology and spatial information

03 · Geospatial Information Capacity Building

Institutional Arrangements for professional training project

Spatial Data Industry Promotion Act

Article 15 (Training of Specialized Human Resources, etc.)

- ✓ The Minister of Land, Infrastructure and Transport may develop and implement policies necessary to train human resources specializing in spatial data and improve their techniques.
- ✓ The Minister of Land, Infrastructure and Transport may designate institutions in charge of training specialized human resources to conduct the education and training referred to in paragraph (1), and provide them with necessary budgetary assistance.

Spatial Data Industry Promotion Act

Article 23 (Spatial Information Industry Promotion Institute)

- ✓ To support the spatial data industry efficiently, the Minister of Land, Infrastructure and Transport shall establish the Spatial Information Industry Promotion Institute.
- ✓ The Institute may perform any duty entrusted by the Minister of Land, Infrastructure and Transport among those provided in the following subparagraphs
(9. Training of and support for specialized human resources for the spatial data industry under Article 15:)

Enforcement Decree Of The Spatial Data Industry Promotion Act

Article 19 (Entrustment of Duties)

- ✓ The Minister of Land, Infrastructure and Transport may entrust all or some of the following duties to the Institute, the Association, or an institution relating to the spatial data industry designated and publicly notified by the Minister of Land, Infrastructure and Transport under Article 27 (2) of the Act:

03 · Geospatial Information Capacity Building

Status of Support for Spatial Information Professional Human Training Project



Total Subsidy

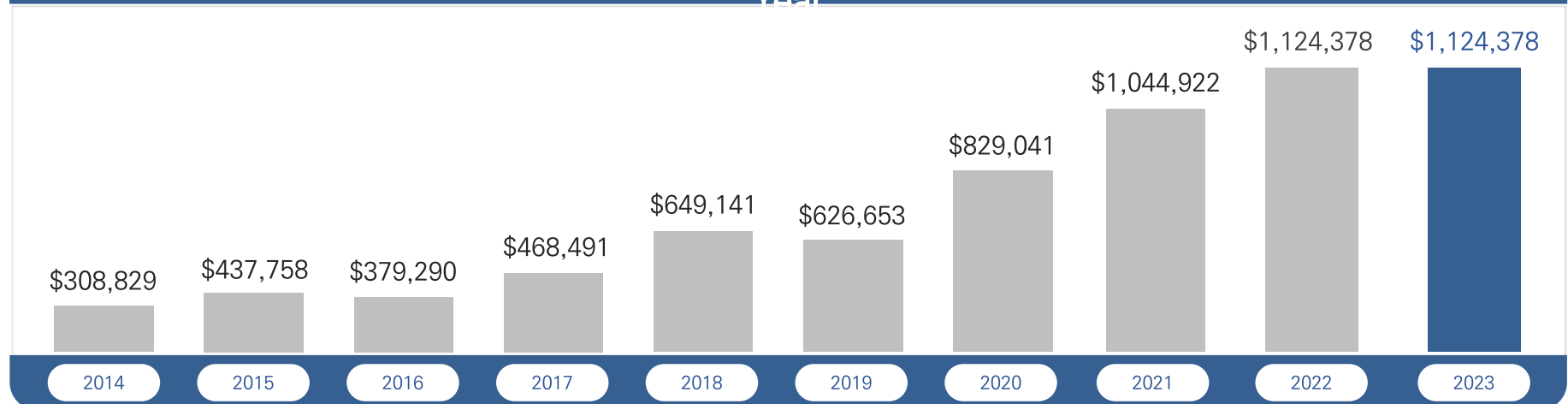
High School	Total of \$2,537,443 in Support('14~'23)
College	Total of \$2,649,885 in Support('17~'23)
Postgraduate School	Total of \$1,805,070 in Support('14~'23)



Number of Beneficiaries and Graduates

High School	Supported by 2,940 students, Graduated by 642 students
College	Supported by 3,299 students, Graduated by 939 students
Postgraduate School	Supported by 327 students, Graduated by 119 students

Total Subsidy for Spatial Information Specialized Schools by Year



03 · Geospatial Information Capacity Building

Five major programs (projects) for professional human training

Establishment of Smart City Integrated Platform

- University : Kyungpook, Anyang, Inha
- Description: Academic and technical education to build an integrated platform based on spatial information

Create a Campus Navigation App

- University : Seoul, Inha
- Description: Training on campus indoor /outdoor spatial information construction and navigation app development skills

Construction of 3D Spatial Information using Drones

- University : Namseoul, CheongJu
- Description: Training on drone operation, filming, and processing skills as the usability of 3D spatial information increases.

Implementation of Spatial Big Data Analysis and Artificial Intelligence Technology

- University : KyungHee, Seoul, JeonBuk National
- Description: Local problem solving, use of big data and AI technology, analysis technology education

S/W Development to Improve Spatial Information Quality

- University : Namseoul
- Description: Automation S/W development technology training to improve spatial information performance quality and convenience



04 · Direction of International Cooperation

Digital Platform Government's Role in the International Community



Korean DPG Consulting & Implementation Project

- Executing framework plans, consultation, and pilot projects to address & solve the current issues in partner countries



Promotion of collaborative projects between Korea and international organizations as well as Korea and partner countries

- Identification, selection, and implementation of cooperation/collaboration projects with international organizations, such as the UN and World Bank as well as partner countries



Operation of a dedicated organization named “Digital Government Overseas Expansion Center”

- Establishment of a public-private consultative body to provide overseas bidding information, facilitate business meetings, and promote the export of promising products for increased export opportunities
- Provision of information on overseas contracts with a focus on overseas cooperation hubs and support for Korean companies in winning contracts



Dissemination of the DPG philosophy

- Raising awareness and understanding of digital platforms among partner countries through policy and technical consultations, seminars, and workshops

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THANK YOU