☐ Nowdays, geographic information is more important than ever before. It has already became the key and fundamental elements for social and economic digital development.

☐ Especially, geographic information data plays a crucial role in optimizing spatial allocation of natural resources and promoting digital government construction.

UN GEONOW 2025
第二届联合国地信周
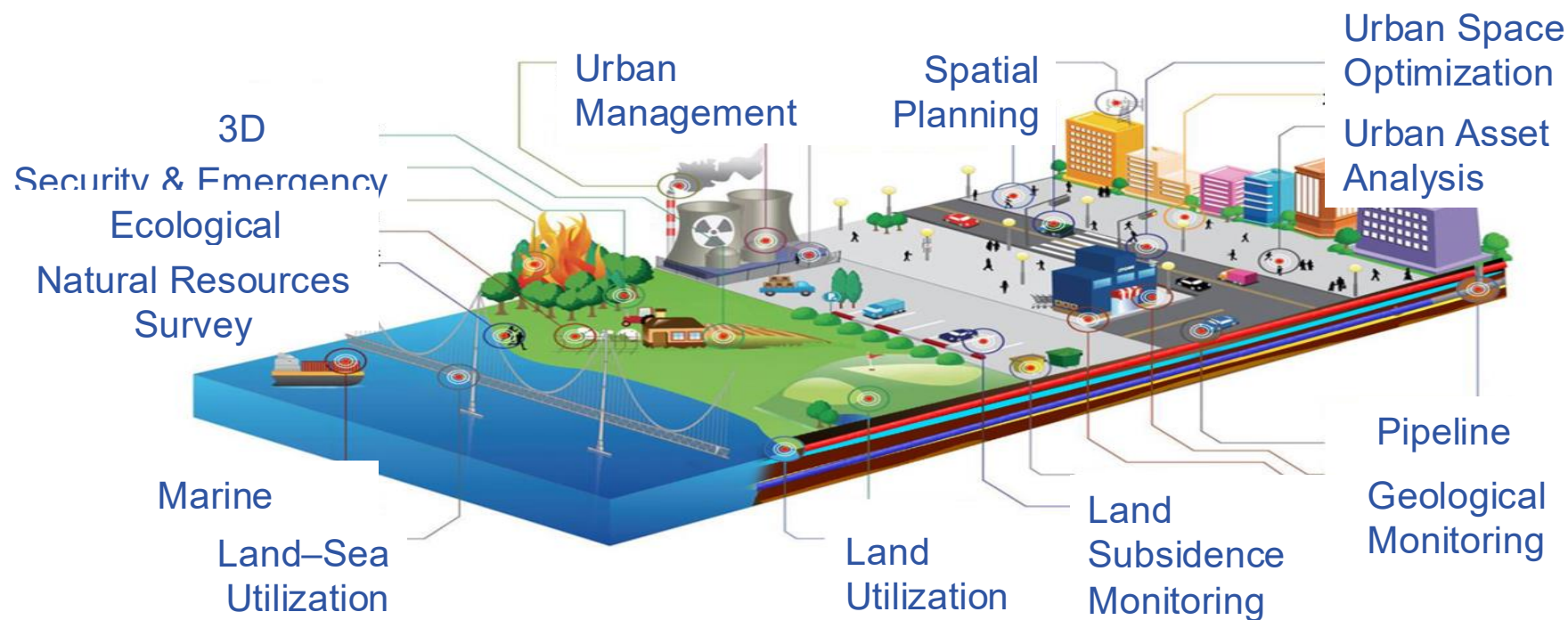
☐ In order to maximize the value of geographic information data, it is the most important and priority task to promote data sharing and openness .

Digital Culture

Digital Government Affairs

Digital Society

Digital Economy

Digital Ecology

Spatial Foundation
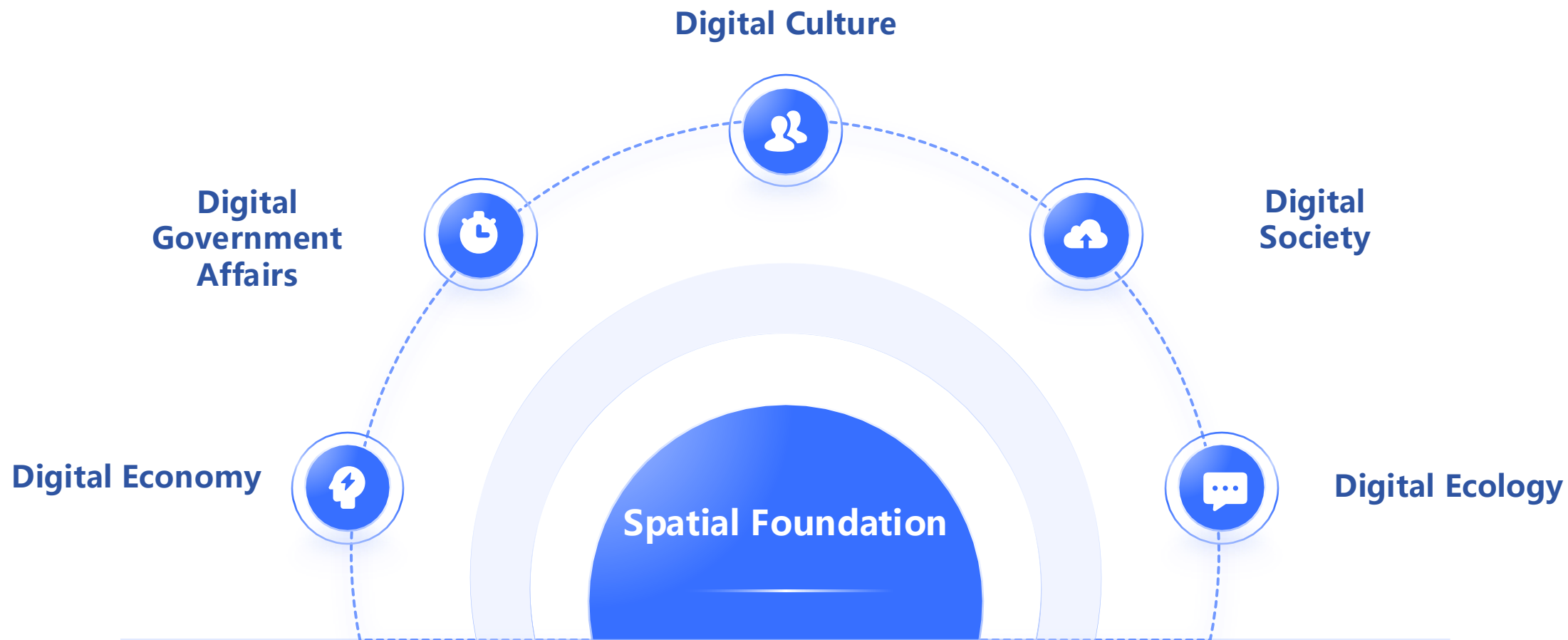
However, there are many obstacles that need to be overcome.

In general, geospatital datasets are organized by different map scales or resolutions.

It is hard for users to gain the required data with different details.

We have to integrate geospatial data resources maintained by the different levels of surveying and mapping agencies in china.
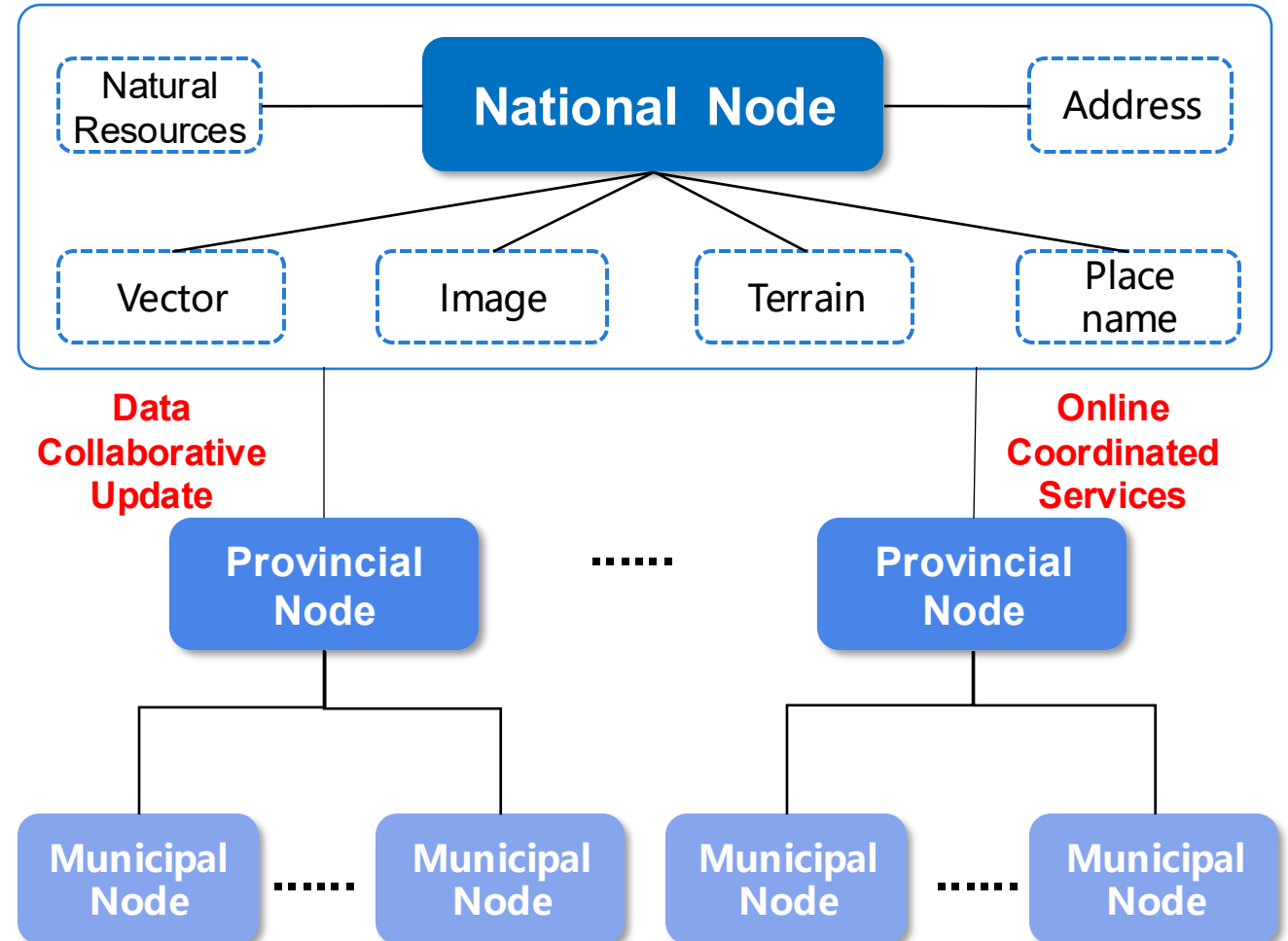
It is necessary to develop a geo-portal for data sharing and openess on the internet.

☐ The geo-portal serves as the national platform for public geospatial information service. It is named Tianditu.

☐ Tianditu is a web-based geospatial service system that is a public gateway for improving access to geospatial information and data, and designed to facilitate communication and sharing of geographic data and resources to enhance government efficiency and simplify the course of geospatial data services by making it easier, faster and less expensive for all levels of government and the public to access and use geospatial information.

☐ The main objective is to share and open the geospatial data resources governed by different levels of government departments.
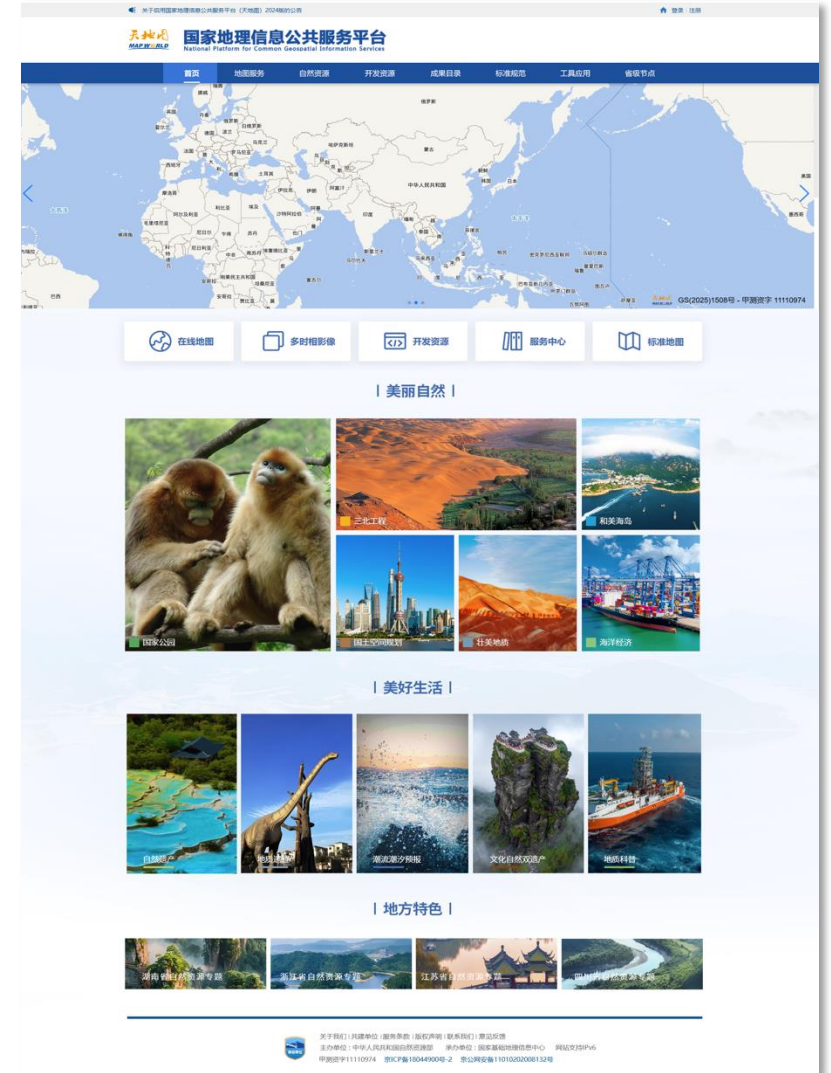
☐ The architecture of Tianditu platform consists of national, provincial and municipal nodes and the construction and operation have been fully integrated

☐ The most crucial function is integrating geospatial information resources at the national, provincial, municipal, and even county levels

☐ And a networked collaborative service mechanism has been established

Natural Resources

National Node

Address

Vector

Image

Terrain

Place name

Data Collaborative Update

Online Coordinated Services

Provincial Node

......

Provincial Node

Municipal Node

......

Municipal Node

Municipal Node

......

Municipal Node

□ There are two main tasks for us to build the platform for public Geo-servies.

➢ First, upgrading the digital maps in multi-level into a seamless common framework that is suitable for on-line geospatial services.

➢ Second, establishing a one-stop portal that connects national, provincial and municipal data sources and provide on-line geospatial services.

Crowdsourced Updating
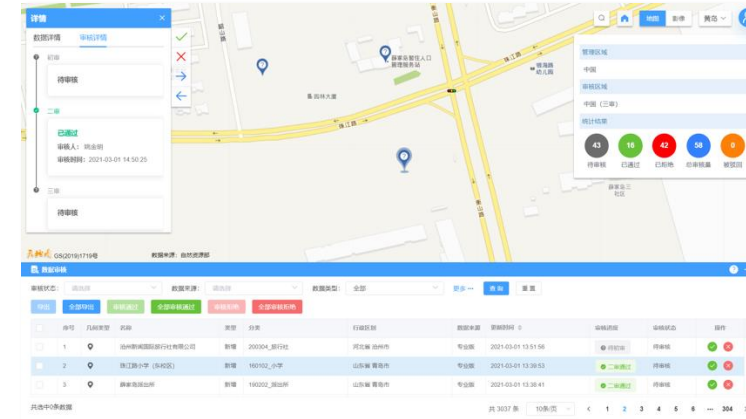
Online quality inspection

**Established an online update technology system to enable dynamic data updating**

The services provided by Tianditu

☐ Multi-type and multi-scale geographic data is accessible at the platform, including vector, image, land cover, placename and so on.

☐ The platform provides users with web map service, web feature service, web processing service and geographic metadata service.

☐ There are various types of APIs that help users solve the problems they encounter when developing GIS System.

| Vector | PlaceName&Addres | Boundary | Land cover |
| Image | Terrain | Real-Scene 3D | Thematic Data |
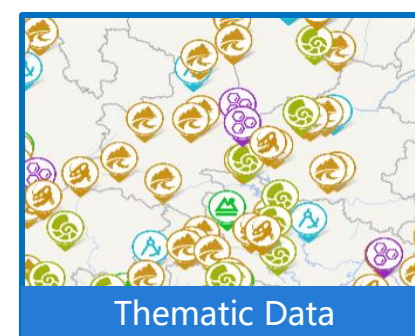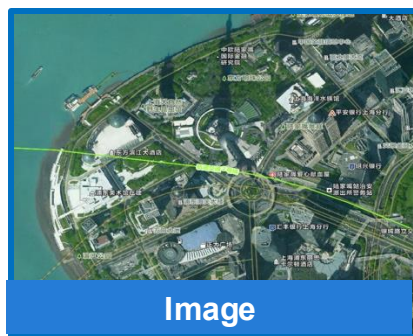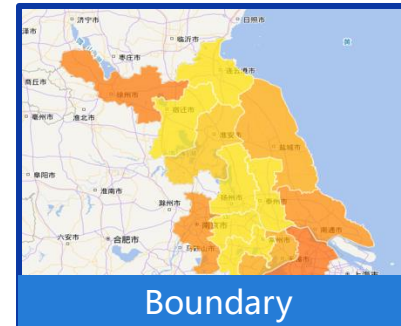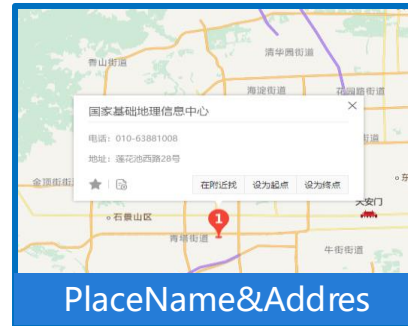
Multi-Type and Multi-Scale High-Quality Geospatial Data Services

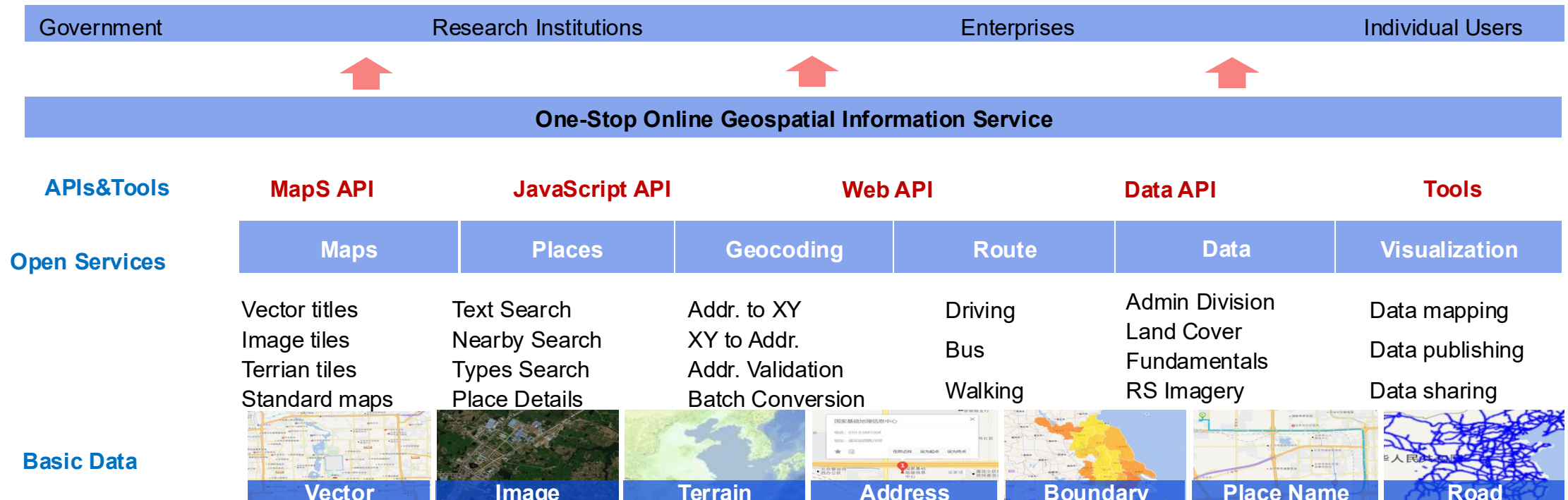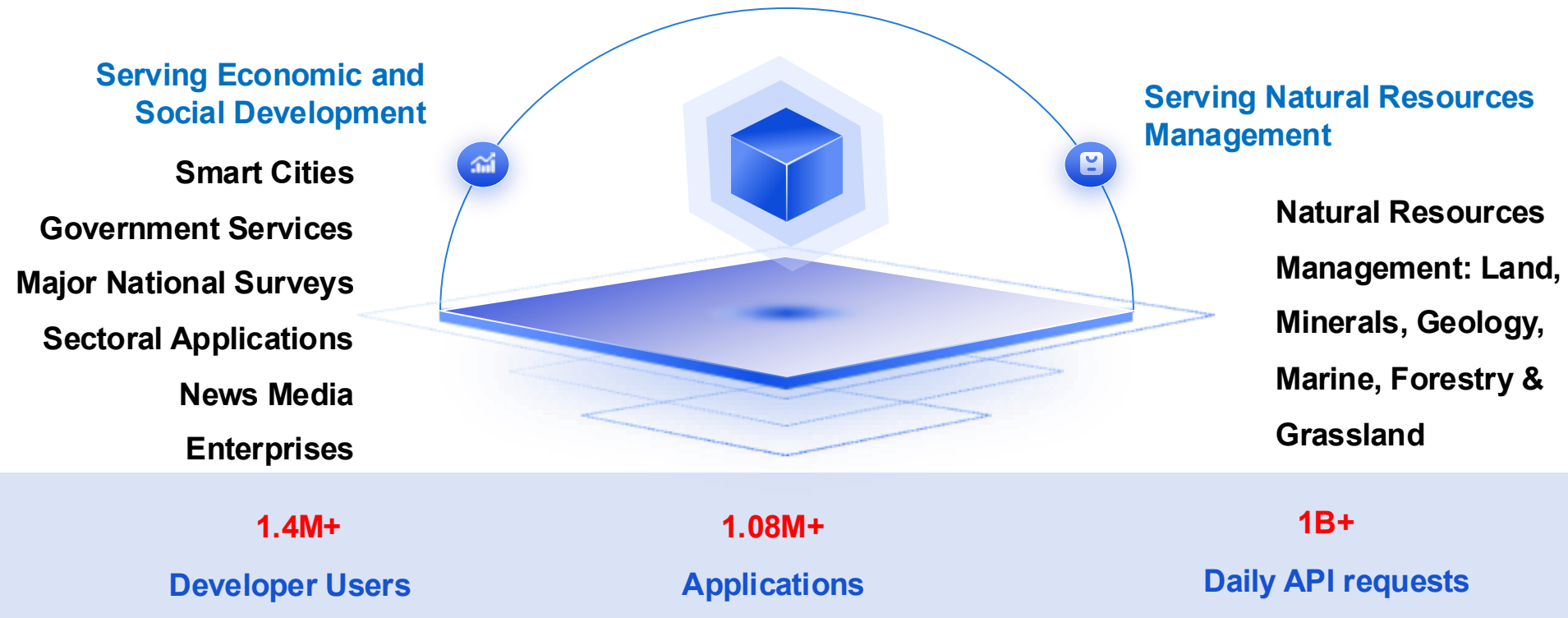# Application of Tianditu

□ Nowdays, Tianditu platform has been playing a significant role as an "information infrastructure".

□ By integrating multi-level geographic information resources from the national, provincial and municipal, it has established a networked collaborative service mechanism to provide geographic information public services to all sectors of society.

□ The platform is being widely relied upon and indispensable to all sectors of society

Government	Research Institutions	Enterprises	Individual Users

One-Stop Online Geospatial Information Service

APIs&Tools	MapS API	JavaScript API	Web API	Data API	Tools

Open Services	Maps	Places	Geocoding	Route	Data	Visualization
	Vector titles Image tiles Terrian tiles Standard maps	Text Search Nearby Search Types Search Place Details	Addr. to XY XY to Addr. Addr. Validation Batch Conversion	Driving Bus Walking	Admin Division Land Cover Fundamentals RS Imagery	Data mapping Data publishing Data sharing

Basic Data

Vector	Image	Terrain	Address	Boundary	Place Name	Road

Application of Tianditu

□ The application ecology of the platform is forming rapidly.

□ There are approximately 1.4 million registered users and widely used in fields such as economic surveys, water conservancy, agriculture, transportation and territorial spatial planning.
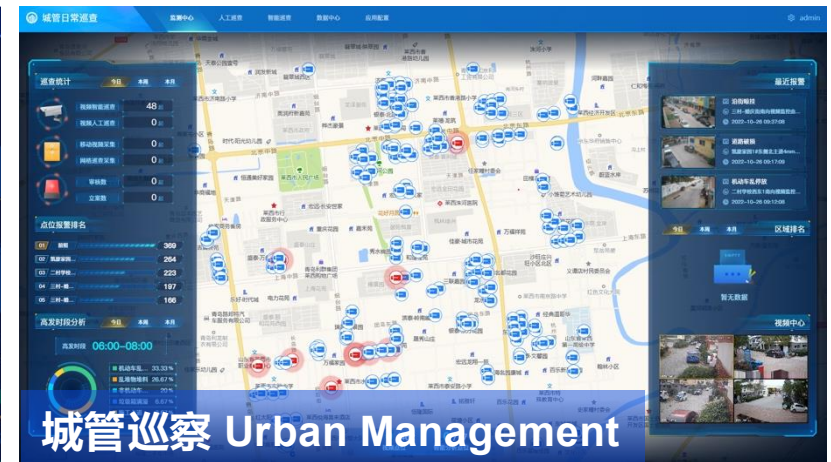
Application Ecology of Tianditu

Serving Economic and Social Development

Smart Cities

Government Services

Major National Surveys

Sectoral Applications

News Media

Enterprises

Serving Natural Resources Management

Natural Resources Management: Land, Minerals, Geology, Marine, Forestry & Grassland

1.4M+
Developer Users

1.08M+
Applications

1B+
Daily API requests

Smart City Applications

Supporting the construction of smart cities

- Applied to Urban Housing Management, Drainage Management, Urban Governance Inspections, Community Governance, Pipeline Management, and Transportation

住房管理 Housing Management

排水管理 Drainage Management

城管巡察 Urban Management

社区治理 Community Governance

管线管理 Urban Pipeline Management

交通出行 Transportation & Travel

Industry Applications

To Enhance Management Efficiency Across Industries and Departments

- Water Resources, Meteorology, Environmental Protection, Civil Affairs, Agriculture, Emergency Management, Taxation, etc.
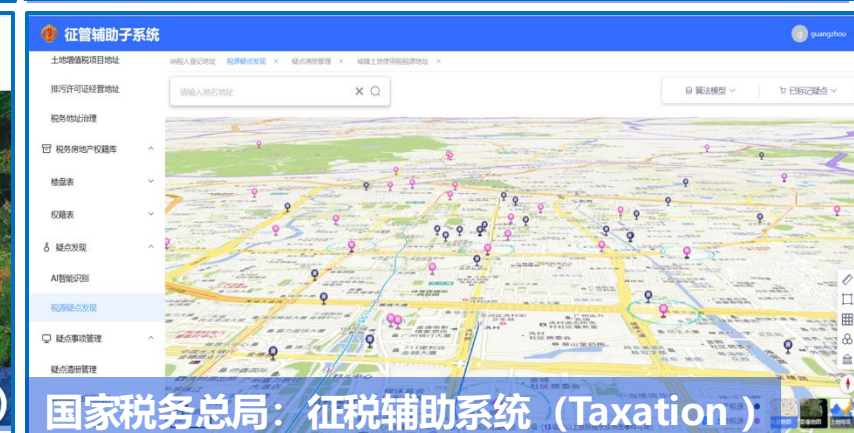

水利部：全国水情预警服务系（Water）
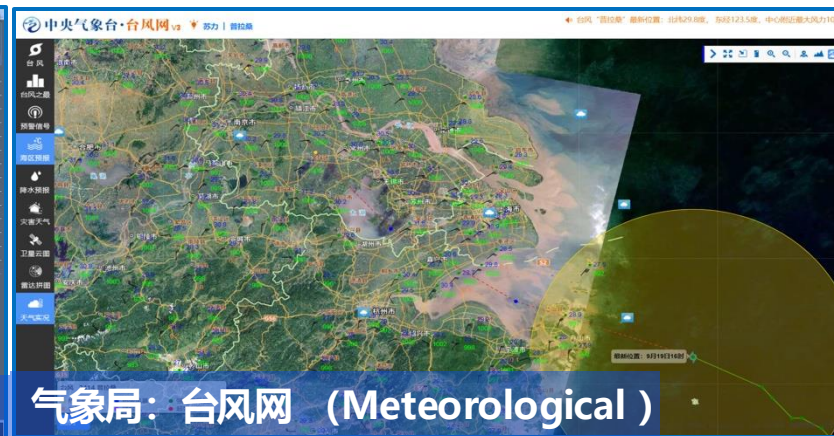
气象局：台风网（Meteorological）

应急管理部：中国应急信息网（Emergency）

民政部：国家地名库（Civil Affairs）

生态环境部：排污许可证管理（Environmental）

国家税务总局：征税辅助系统（Taxation）

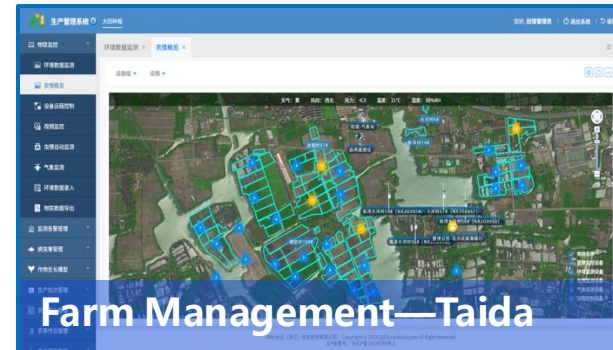## Providing Open Geographic Information Services to more than 31,900 Enterprises

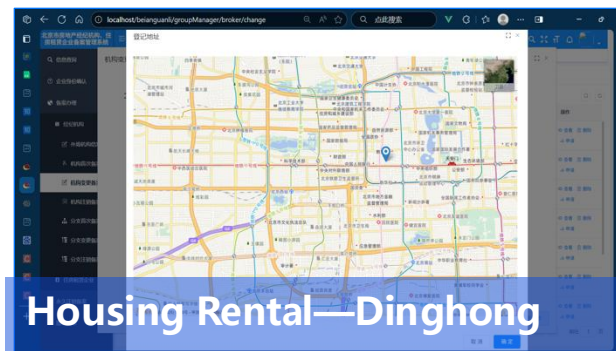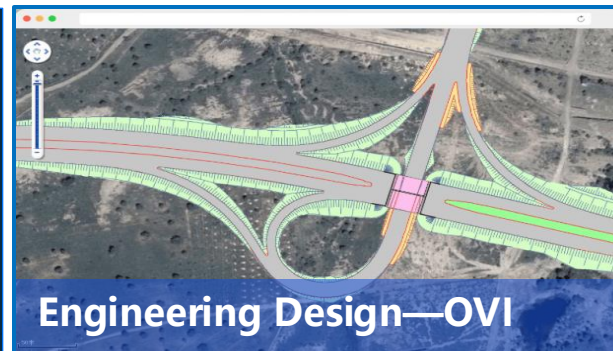**Agricultural UAV System—DJI**
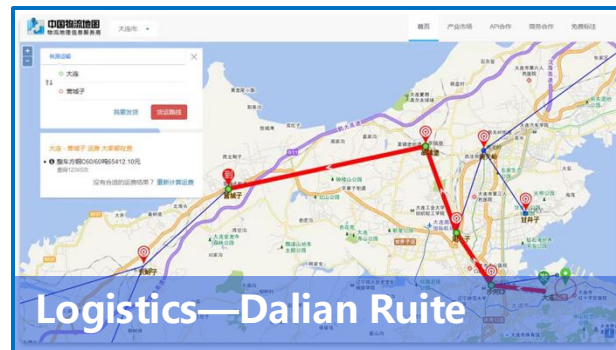
Logistics—Dalian Ruite

Farm Management—Taida

Smart Expressway—Hangqian

Housing Rental—Dinghong

Engineering Design—OVI

Agricultural Insurance —PICC

Now the platform is undergoing continuous improvement and upgrading in response to the current new demands.
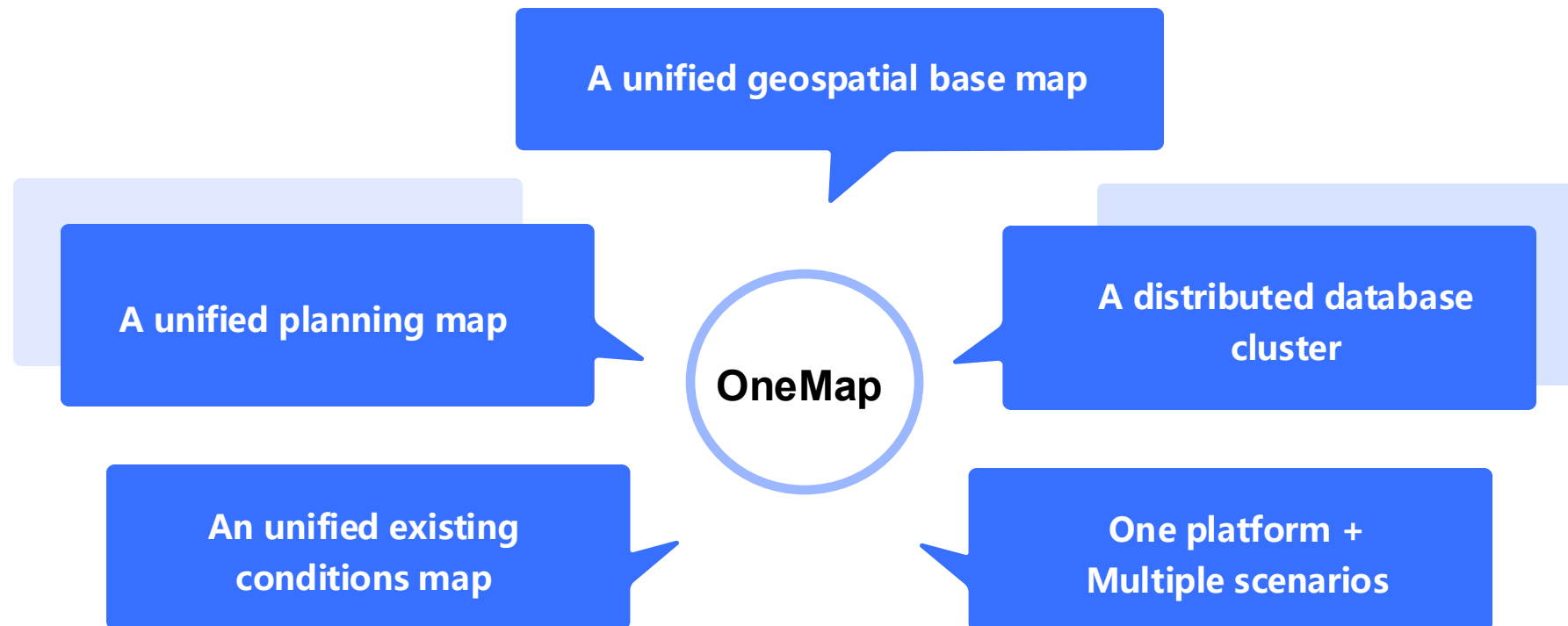
- ☐ Firstly, China has fully deployed efforts to activate the potential of data as a new production factor, strengthen and optimize the digital economy, and enhance new driving forces for economic development.
- ☐ Secondly , to develop the digital economy requires the promotion of deep integration between digital technology and the real economy.

- ☐ So the plaform must to:
  - ✓ become a unified geospatial foundation for digital China, provide rich data element guarantees.
  - ✓ and create a favorable environment for the development of the geographic information industry.

Construction of One map

□ The main approach of upgrading of the platform is to build "One map".

□ The positioning of One map is a new type of digital infrastructure for geospatial data.

□ Comprehensively utilizing digital technologies such as cloud computing, big data, and artificial intelligence, and fully mobilizing the capabilities of various geographic information data.

A unified geospatial base map

A unified planning map

OneMap

A distributed database cluster

An unified existing conditions map

One platform + Multiple scenarios

Main tasks to build One map

One map is the foundation to fulfil the digital governance of territorial space.

Upgrading of Sky-Space-Ground-Network data collection and intelligent extraction

Data Collection

Upgrading from 2D and 3D to "multi-dimensional" data integrating dynamic information

Technical Standards

Upgrading from offline or online data services to on-demand, knowledge-driven, and intelligent services

Service Mode

Upgrading from traditional sequential production to integrated and collaborative operations

Organization & Implementation

Architecture of OneMap

☐ The architecture is designed as a multi-tier, service-oriented framework that enables seamless collaboration across national, provincial, municipal, and county levels while integrating diverse data resouces—geospatial base map, natural resouces data, and planning data—to support varied application needs such as land protection, planning control, and public service etc.
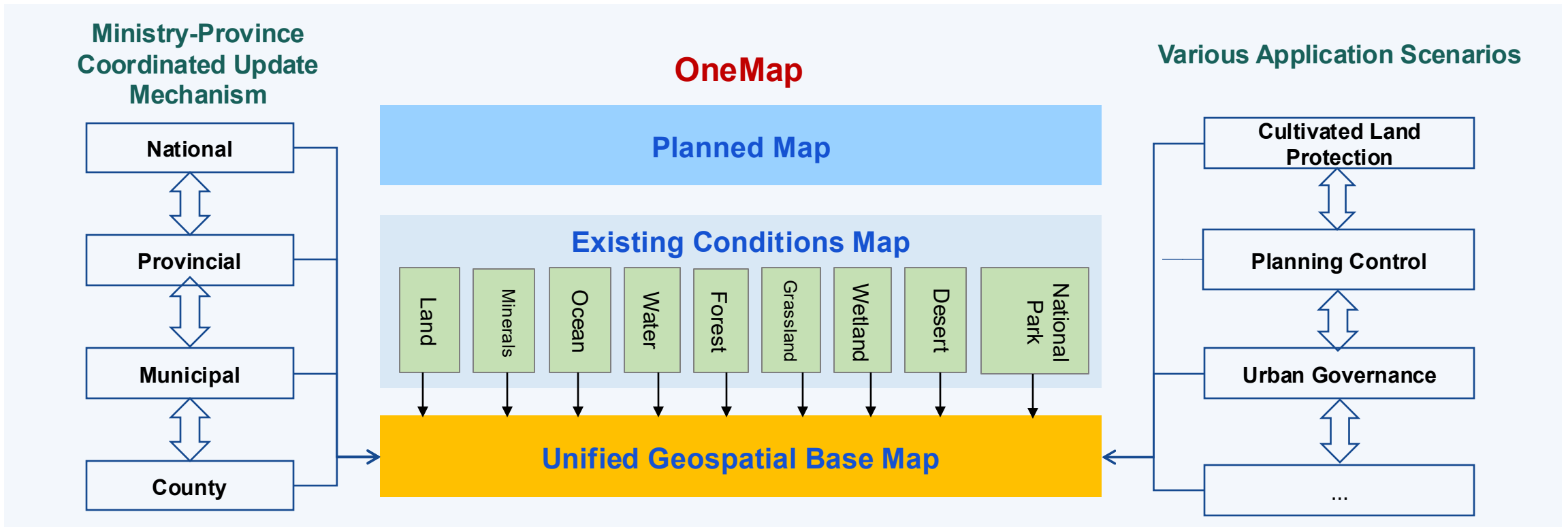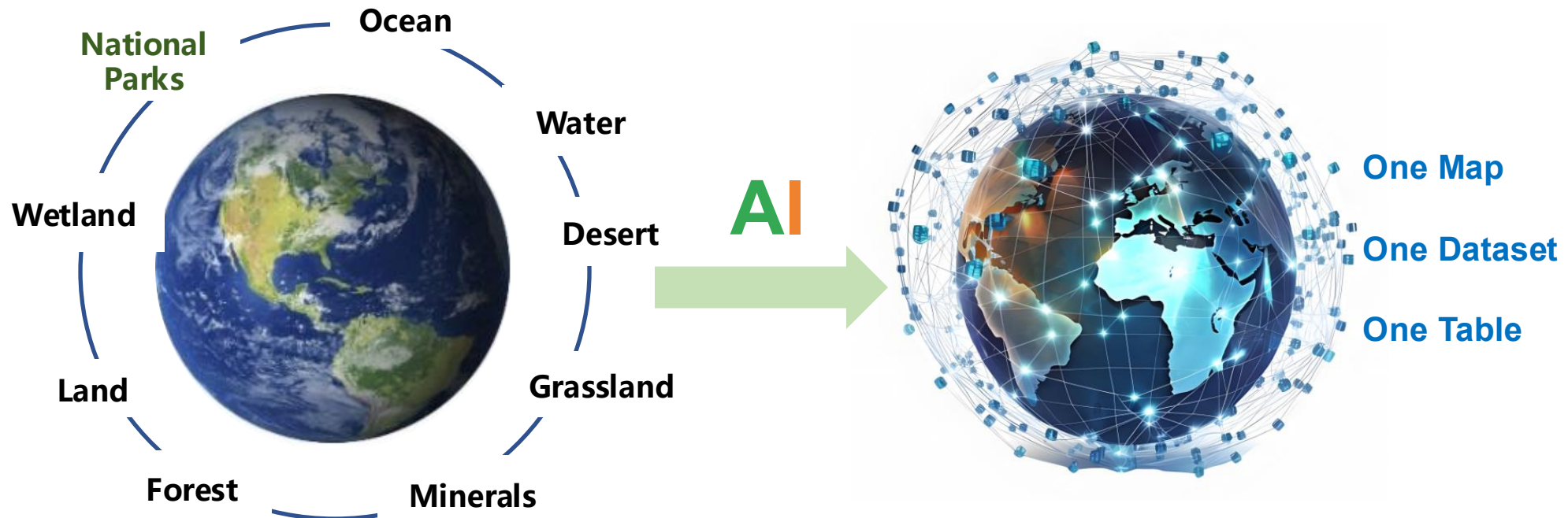
☐ Accelerate the improvement of new infrastructure for spatiotemporal information

☐ Deeply explore the value of geographic information data and activate the potential of geographic information data elements.

☐ To better utilize geographic information technology and data to promote the transformation of the natural resource management business mode, modernize the governance system and governance capabilities, and build a digital ecological civilization.