



Efforts to Promote the Development and Utilization of Geospatial Information in Japan

Feb 18th, 2025

[Disclaimer]

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By developing user-friendly geospatial information, coordinating multiple geospatial information, and increasing the number of people who can use geospatial information, and promoting the utilization of geospatial information, we achieve social implementation of geospatial information.

Promotion of DX in the whole government (related to open data)

2016

Basic Act on the Advancement of Public and Private Sector Data Utilization

May. 2017

Open Data Basic Guidelines

May. 2021

Basic Act on the Formation of a Digital Society

Sep. 2021

Inauguration of the Digital Agency

Oct. 2021

The Vision for a Digital Garden City Nation

Definition of open data

- (1) Those to which the rules for secondary use are applied
- (2) Suitable for machine reading
- (3) Available free of charge

Based on the recognition that public data is the common property of the people, all data held by government agencies shall be made public as open data in principle.

Standardization of data, development of base registry,
establishment of the Digital Agency

Resolving regional issues through digital implementation and creating a rich and fulfilling lifestyle where all people can enjoy the benefits of digitalization.

Basic Policy on Economic and Fiscal Management and Reform 2024 (June 21, 2024)

Chapter 3 Realizing a sustainable Economy and Society over the Medium and Long Term : the Economic and Fiscal Plan for New Stage

3. Basic courses of action and priority issues for major policy sections

(4) Strategically developing social capital

(Improving efficiency and sophistication of town development and infrastructure maintenance)

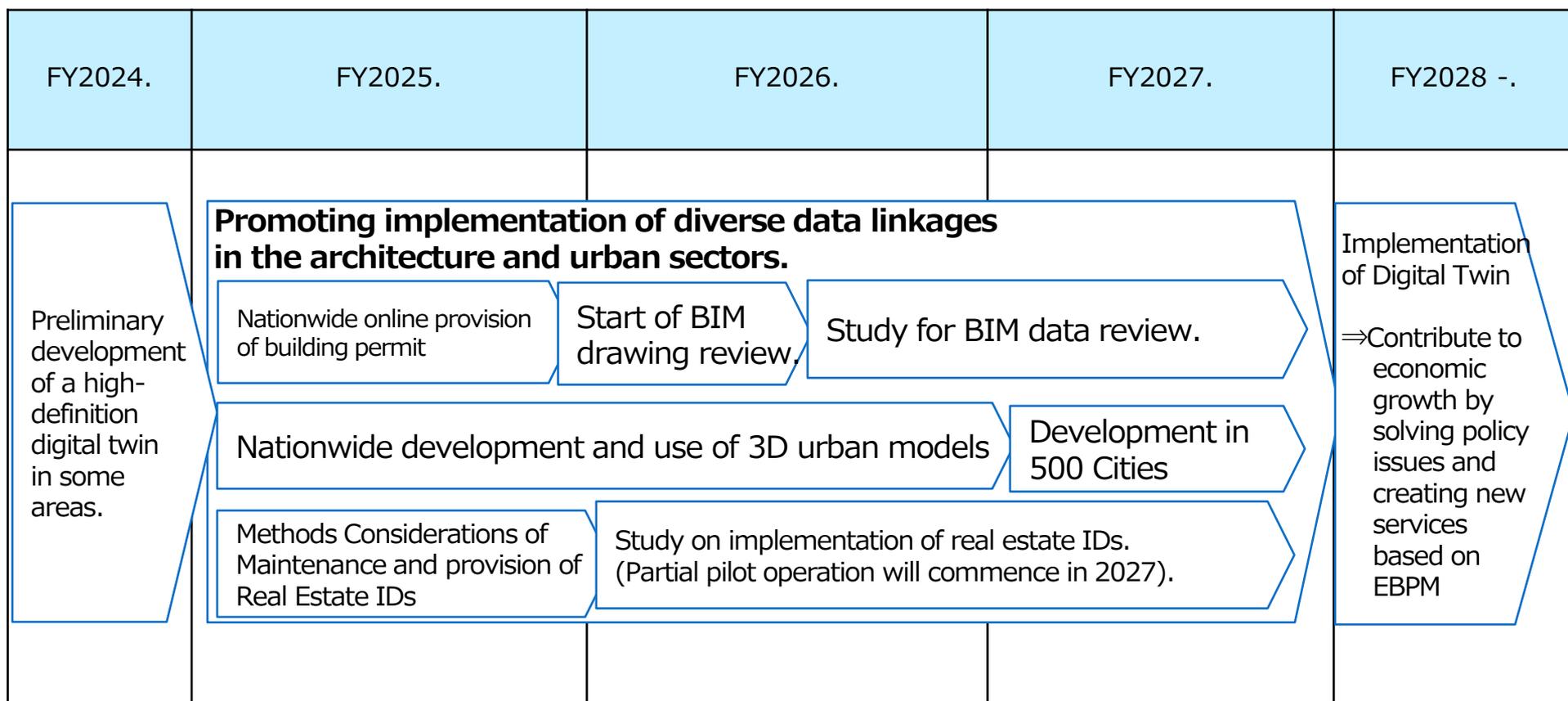
We will promote **Architectural and Urban Digital Transformation**, such as Base Registry, including **real estate IDs** and **3D models** (architectural **BIM**, **PLATEAU**), and promote the creation of new services through the sophistication of town development and public-private data collaboration.

Grand Design and Action Plan for a New Form of Capitalism 2024 Revised Version(June 21, 2024)

V. Investment Promotion -2. DX-(3) Developing the environment for promoting the investment in DX-5) **Architectural and urban DX**

We will promote building verification using **BIM** (Building Information Modeling: 3D data on the shape, materials, and construction methods of buildings) and disaster prevention and urban planning using **PLATEAU** (3D models of the arrangement of buildings and roads in urban space). By linking this information with national land numerical information and cadastral development results using **real estate IDs**, we will promote **the digital transformation (DX)** of buildings and cities, enabling the utilization of public and private data in the building and urban sectors, and strengthen their international dissemination.

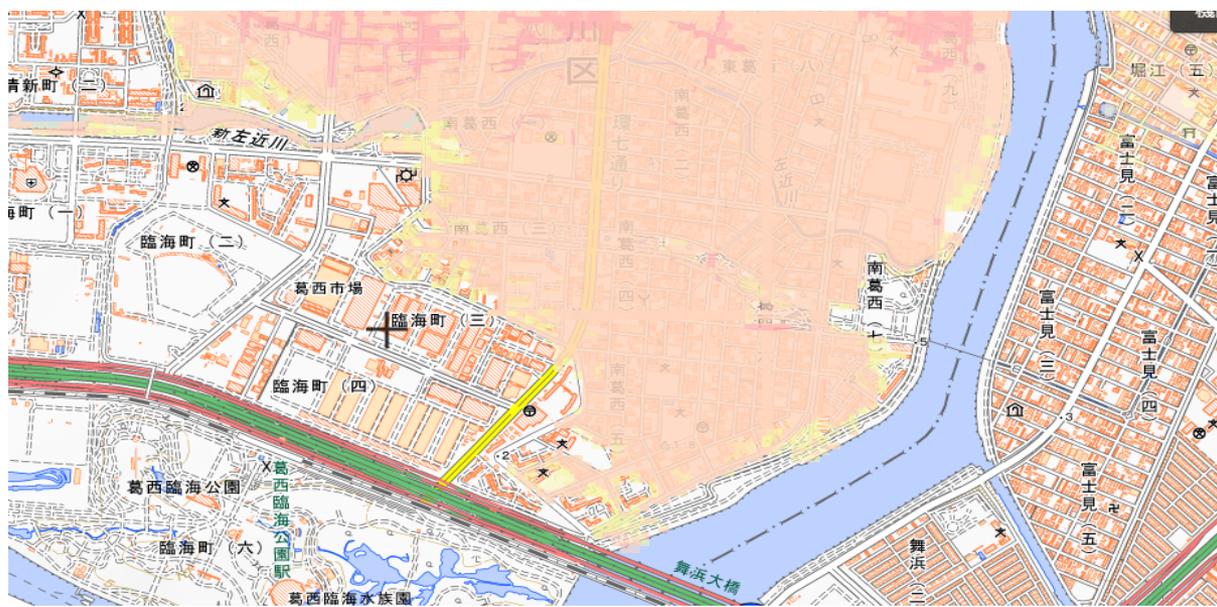
- Integrated promotion of DX measures in the building, urban and real estate sectors towards the social implementation of the Digital Twin in 2028.



Source: "Concretisation of the Reform Process", prepared by the Council on Economic and Fiscal Policy (decided on 26 December 2024), with some modifications.

Examples of published data (as of September 2024)

Basic Information	Administrative areas, roads, rivers, railways, ports, airports, bus stops, etc.
Land Use	Land use, land price announcement, prefectural land price survey, etc.
City Planning	Urban areas, densely populated areas, use districts, depopulated areas, etc.
Disaster prevention	Estimated flood inundation areas, tsunami inundation areas, landslide warning areas, evacuation facilities, etc.
Public Facilities	Municipal offices, public meeting facilities, schools, medical institutions, etc.
Others	Population estimation, location reference information, etc.



ex. Estimated flood inundation areas

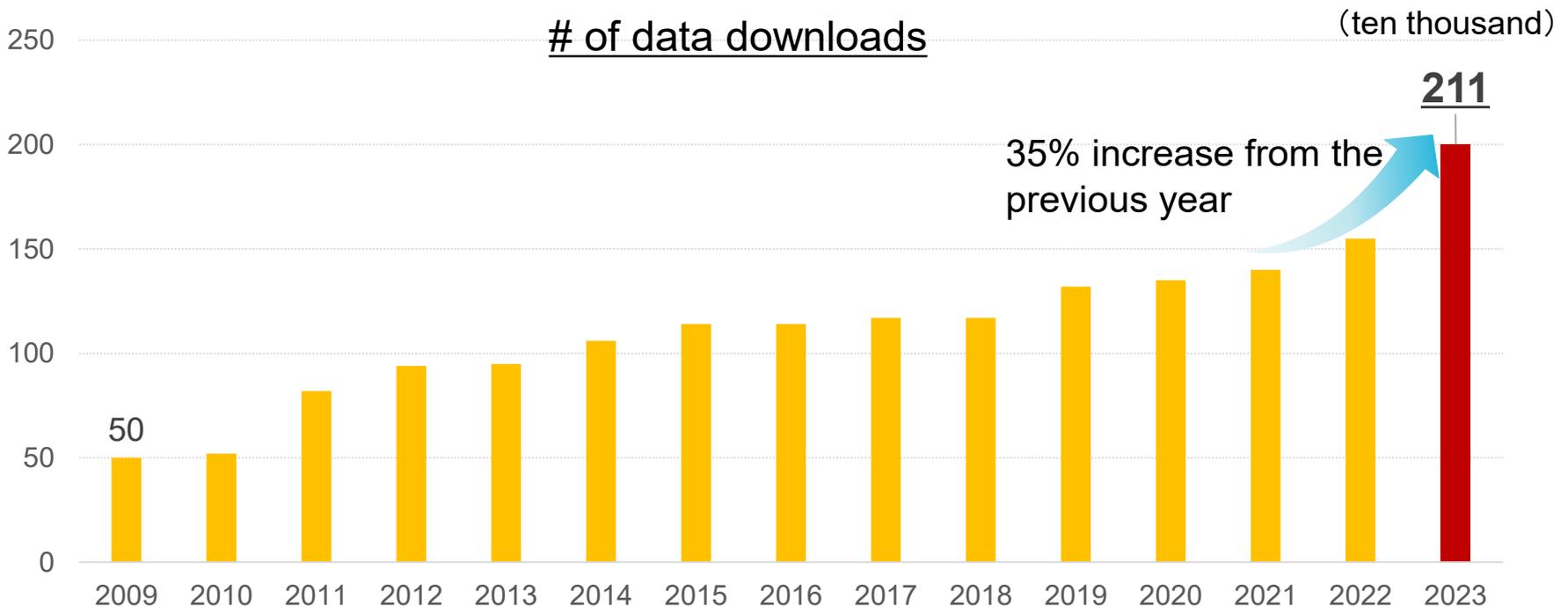
1. Digital National Land Information

1974
Started to maintain data for national land planning inside the government.

2001
Opened a download site and released the data to the public

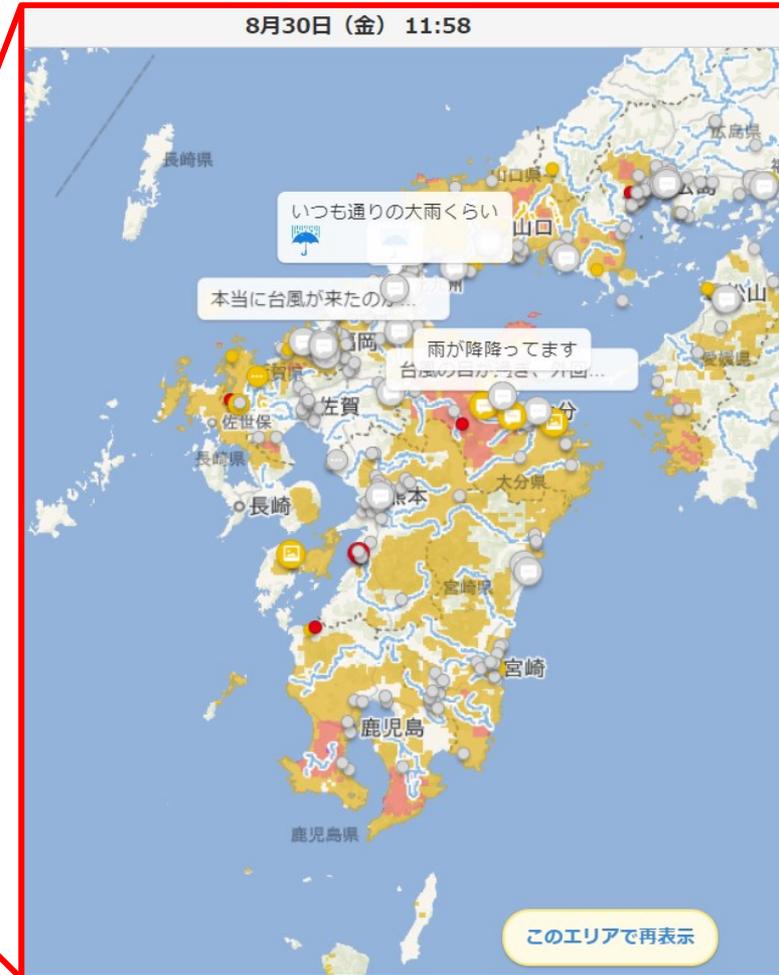
2016
Started providing data in multiple data formats

2023-2024
Established a panel of experts to discuss future data development policy



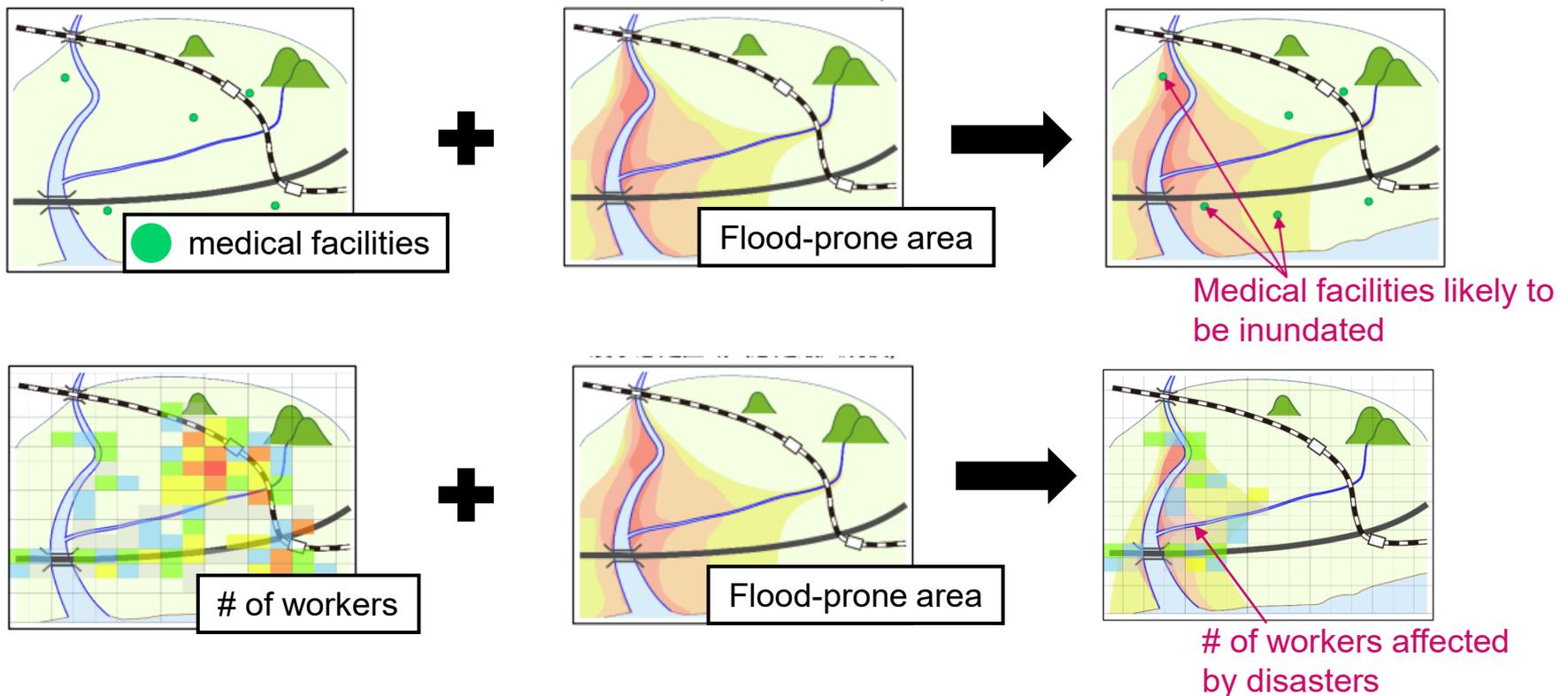
Use case: Yahoo! “Disaster Information Map”

When a typhoon arrives, Yahoo! displays an overlay of hazard areas and customer tweets about disaster damage on a map.



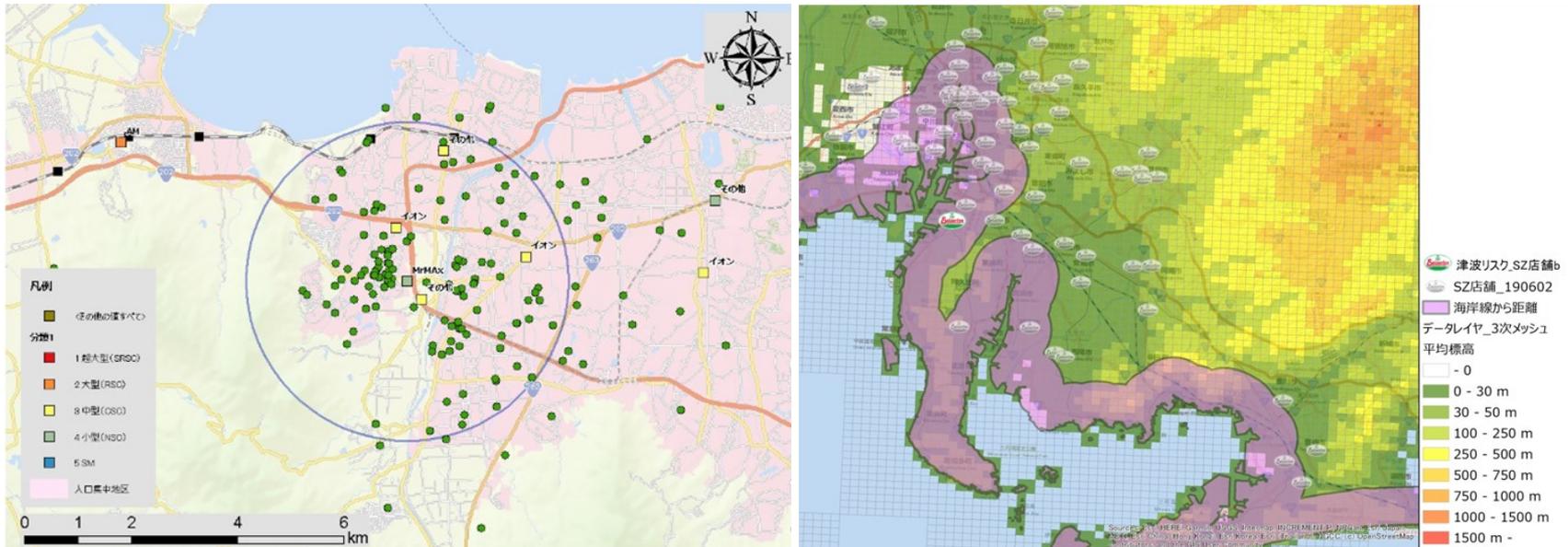
Use case: Formulation of administrative plans

The “Guide to City Planning” issued by the government recommends the use of Digital National Land Information to visualize the damage to infrastructure and the public in the event of disasters. Based on this guideline, municipalities reflect quantitative disaster risks in their plans.



Use case: Market area analysis

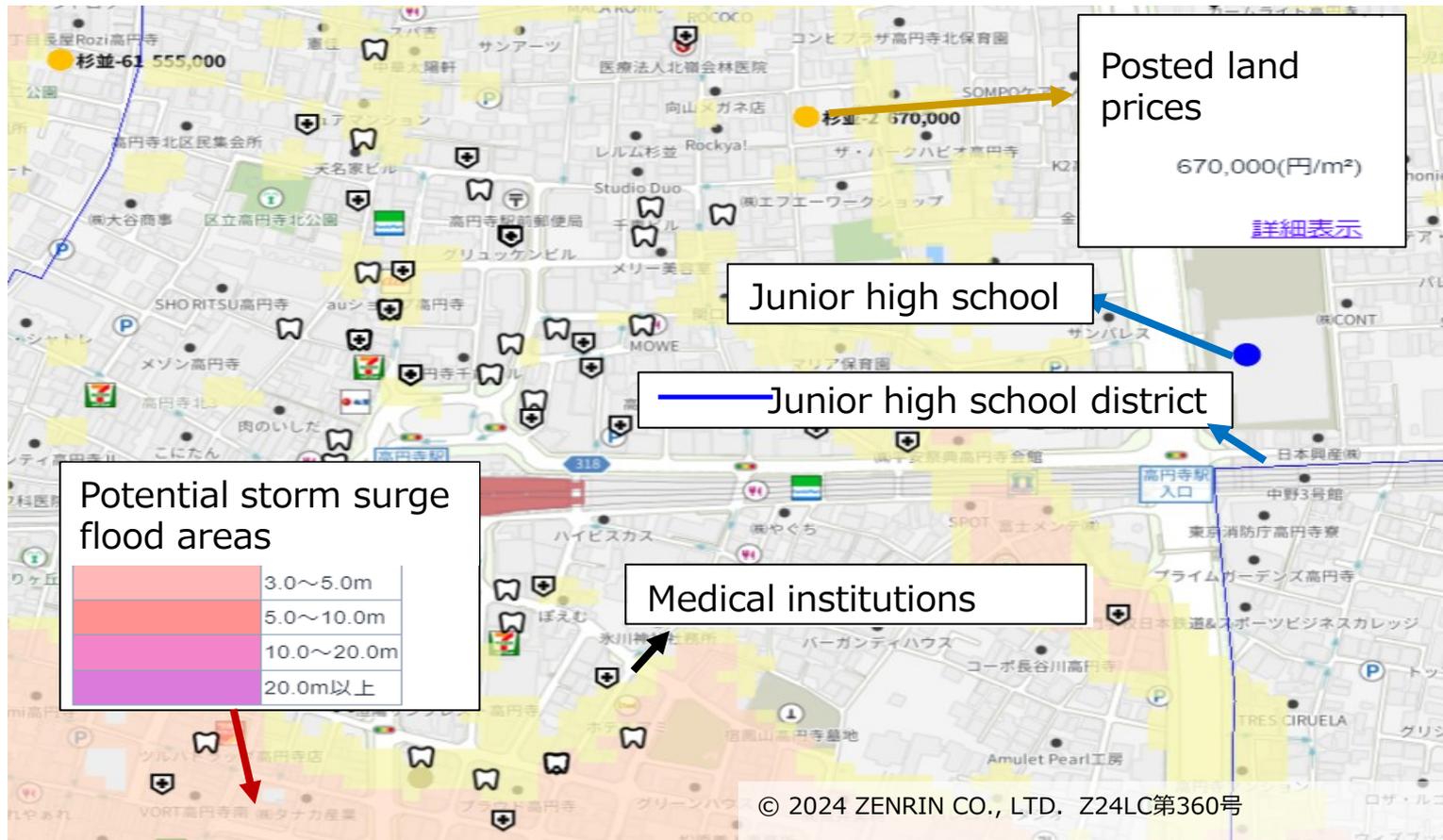
A restaurant group uses Digital National Land Information to analyze its business areas and develop strategies for opening new restaurants.



Used data: densely inhabited districts, posted land prices, use districts, etc.

2. Real Estate Information Library

Launched WebGIS where you can view information on real estate in April last year. Also distributes posted data, enabling implementation of these data in private sector products and municipal services.



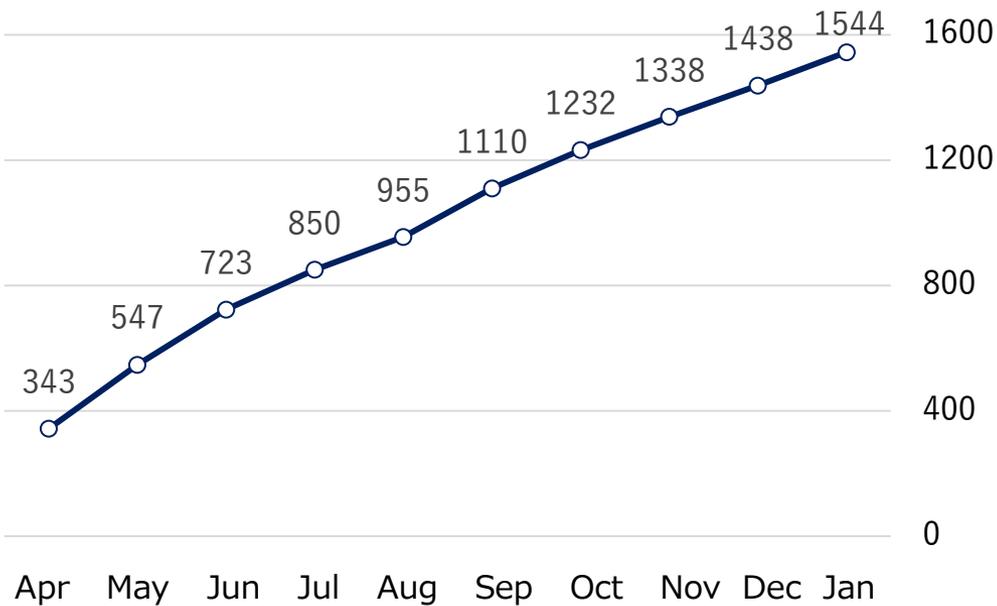
Number of page views and API users

(as of Jan. 2025)

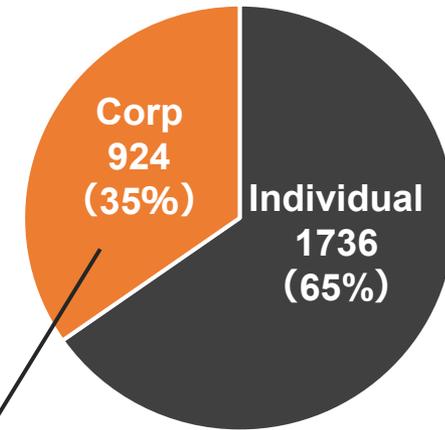
- After 10 months of operation, the total number of page views is over 15 million, about 30% of which are from smartphones.
- More than 2,600 users of the system integration service, including many in industries other than real estate.

Cumulative page views

(ten thousand)



API users (2,660users)



Real estate related industries

: Real estate developer, housebuilder, proptech company, etc.

Other sectors

: insurance company, media company, transportation operator, etc.

Cumulative API requests

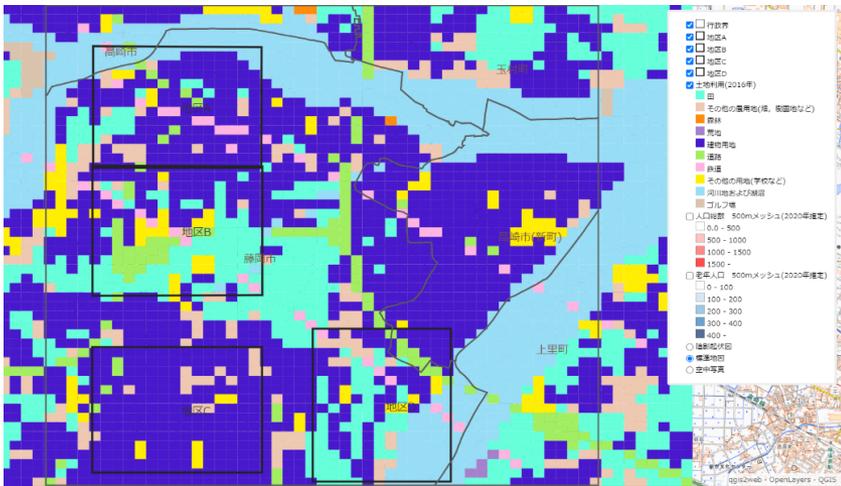
(38,955,649requests)

Demonstration of Real Estate Information Library ~Tsukuba City~

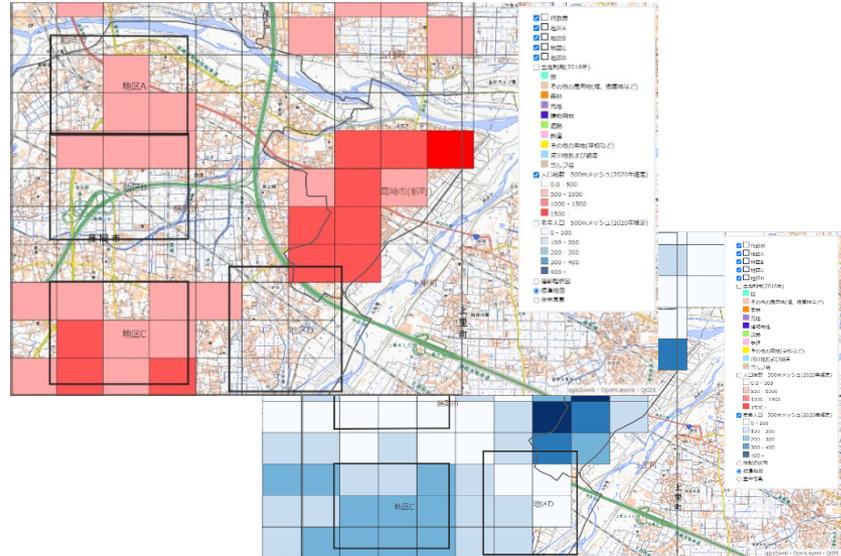
(Posted land prices / Disaster prevention / School District Information /
Urban Planning Information / Population estimation, etc.)

5. GIS Education in High School

From FY2022, geography became a compulsory subject in high school and all high school students study GIS. For example, a high school in Gunma Prefecture is conducting a class to discuss local evacuation plans by visualizing land use data and population data with GIS.



Land use data from Digital National Land Information



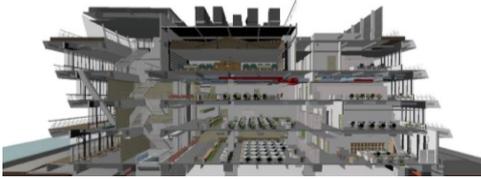
Population distribution data from Digital National Land Information

Visualize areas where a large number of disaster victims are likely to occur and areas with a large number of elderly people, and reflect the results in evacuation plans.

Link multiple data related to architecture and urban fields using Real Estate IDs.

BIM

3D model of building



PLATEAU

City 3D model



Geospatial Information



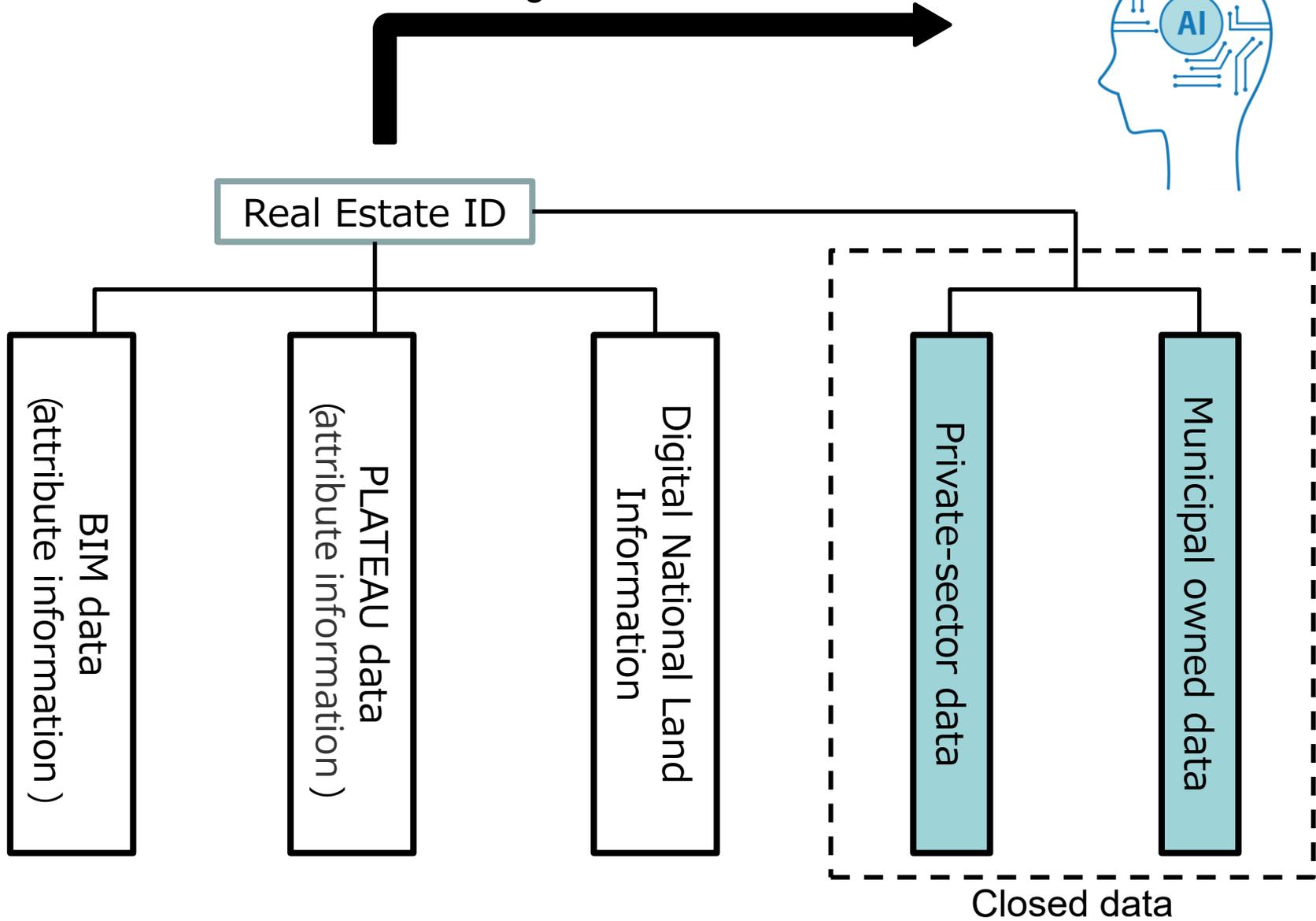
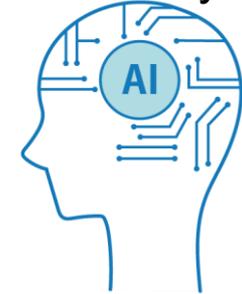
Real Estate ID

0100123456789-0203



Coordinate these data and consolidate them into a single file

Data analysis



Use case examples

1. Identification and prediction of unclaimed land and vacant houses
2. Sophistication of administrative planning
3. Refinement and speed-up of real estate value assessments
4. Indexing the livability of properties and areas
5. Management of real estate repair history and elaboration of repair plans
6. Improving the efficiency of development site selection

Grasp open data as an invaluable social asset and make it easier for many people to use, thereby making society more efficient.

- Establish an abundance of open data that is easy to use, which is a prerequisite for the data business, and create a market that can compete at a higher level.
- Abundant open data is also a primary component of EBPM in government agencies (national and municipal).

Architectural and Urban Digital Transformation



Ministry of Land, Infrastructure, Transport and Tourism

Thank you for your attention