

SEKIMOTO LAB.

[Urban Computing– Science for Human and Urban System–]

Department of Human and Social Systems

Human Centered Urban Informatics

Center for Spatial Information Science
Department of Civil Engineering
Department of Advanced Interdisciplinary Studies

<http://sekilab.iis.u-tokyo.ac.jp>



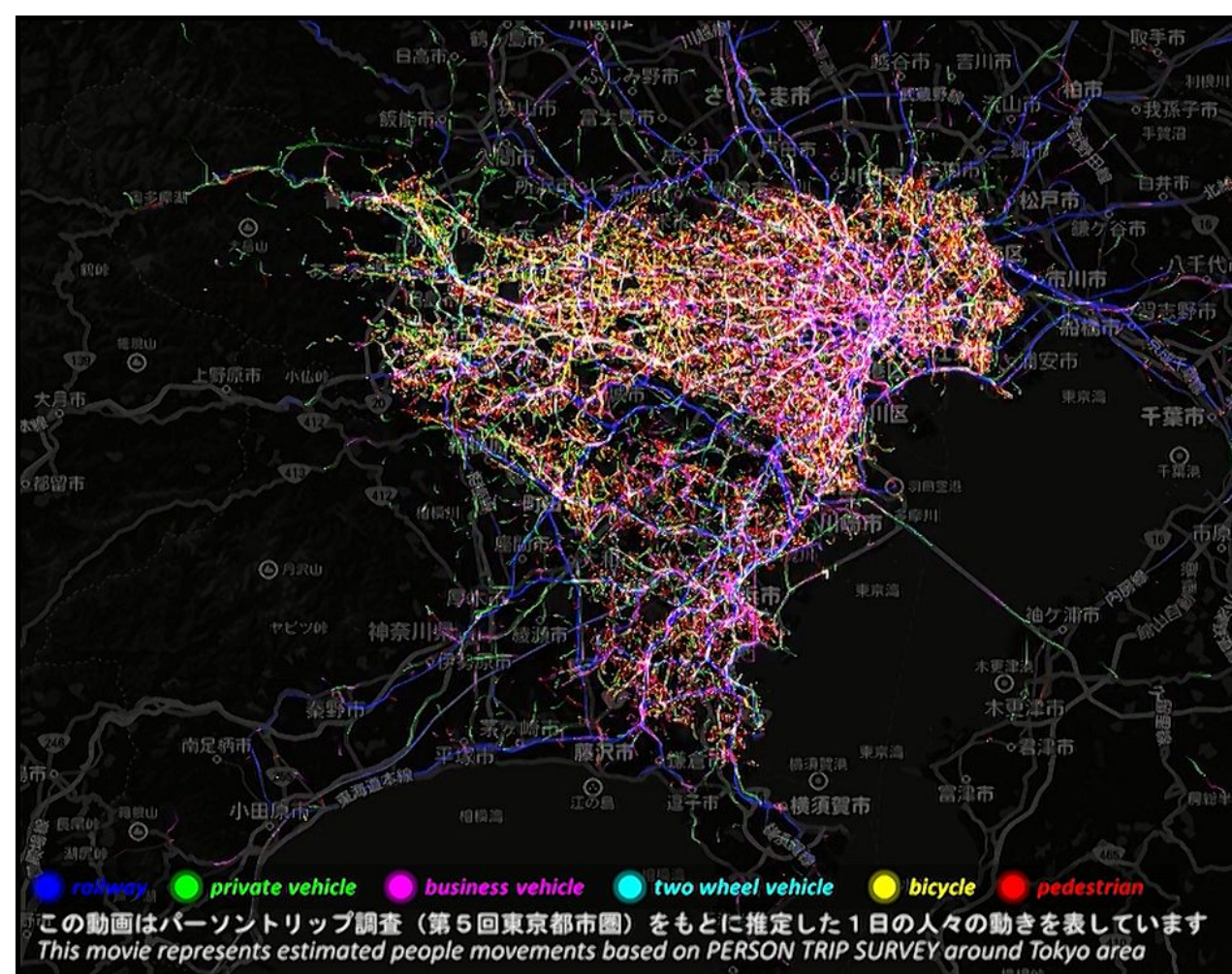
Urban Data Analysis and Understanding Human Behavior

In recent years, the challenges faced by dynamically changing cities have become complex and diverse, and cannot be easily solved by specific powers or money alone. In such a context, the power of information is needed to bring together and connect the diverse strengths and aspirations of various people. In other words, with the effective use of information technology, anyone can gradually move society forward. I would like to explore the information technology of cities, which focuses on people and forms the foundation of society.

□ Estimating People Flow by Sensing and Modeling Human Behavior

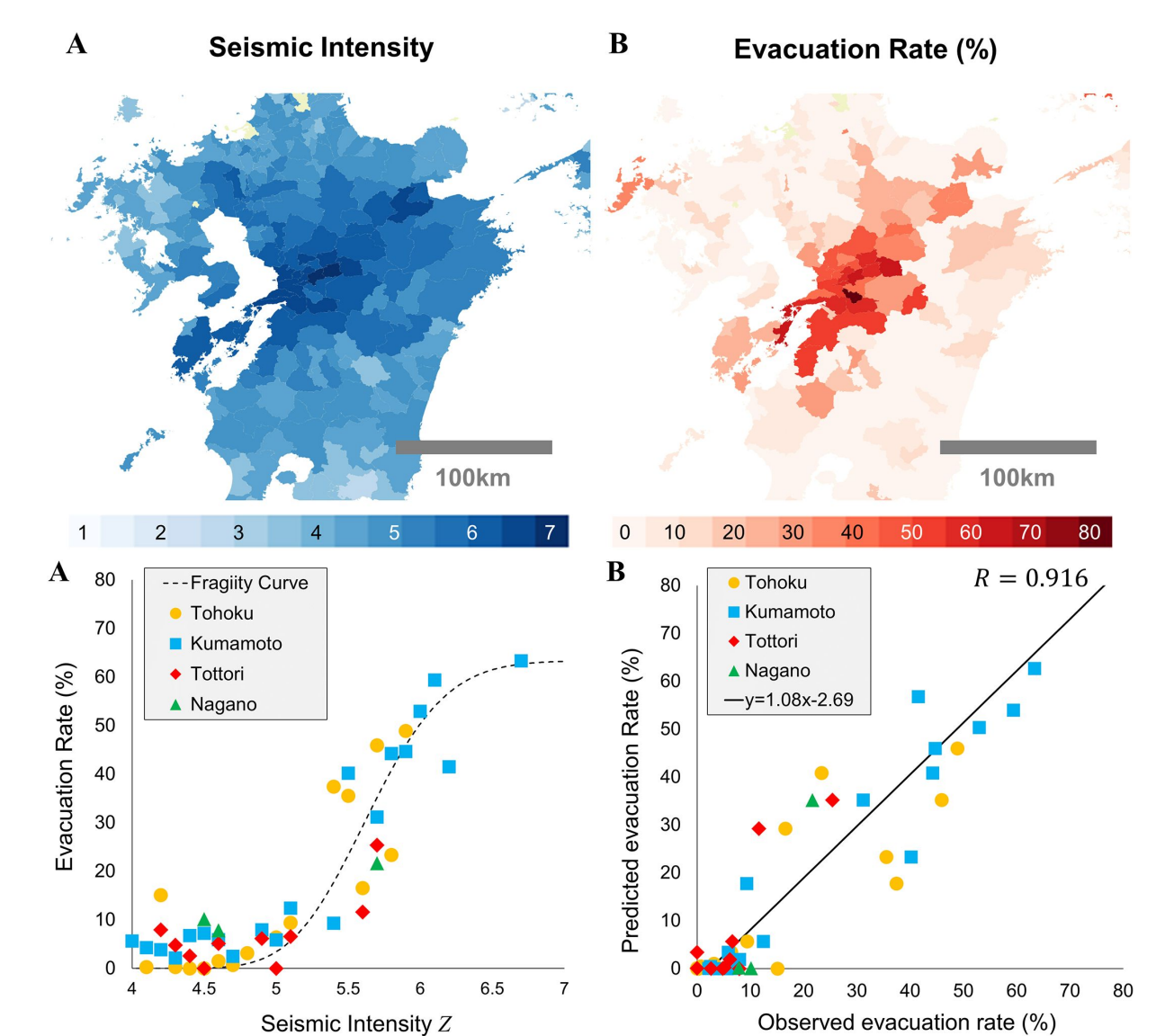
People Flow Dataset Reconstruction

Develop minute-to-minute people mass movement location data and provide the public datasets to society.



Human Mobility Analysis in Disasters

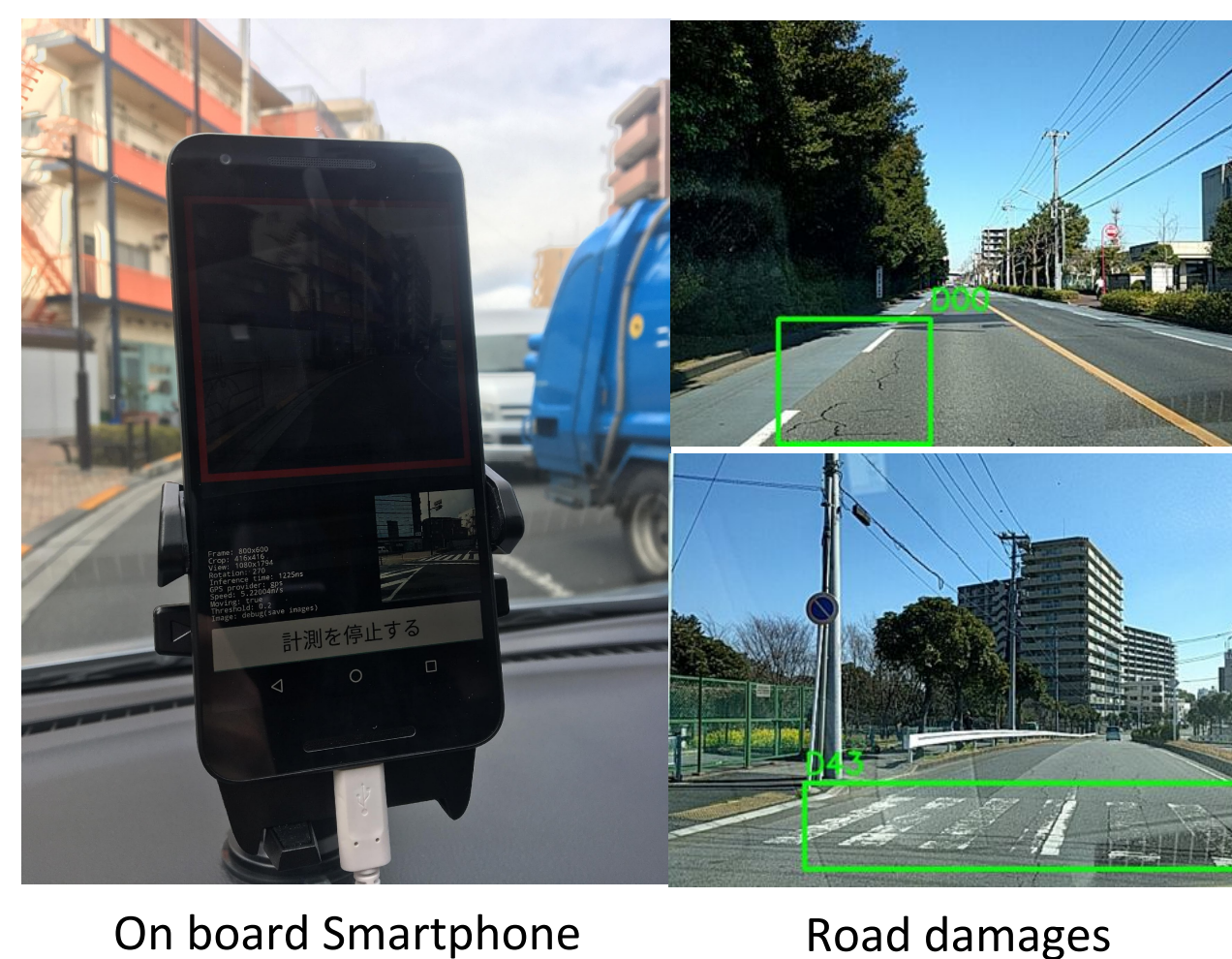
Measure the anomaly of people flow in cities to disasters using GPS Data collected from smartphones.



□ Prompt and Low Cost Urban Infrastructure Monitoring System

Road Monitoring

Monitor road damage by image processing using smartphone and deep learning at low cost.

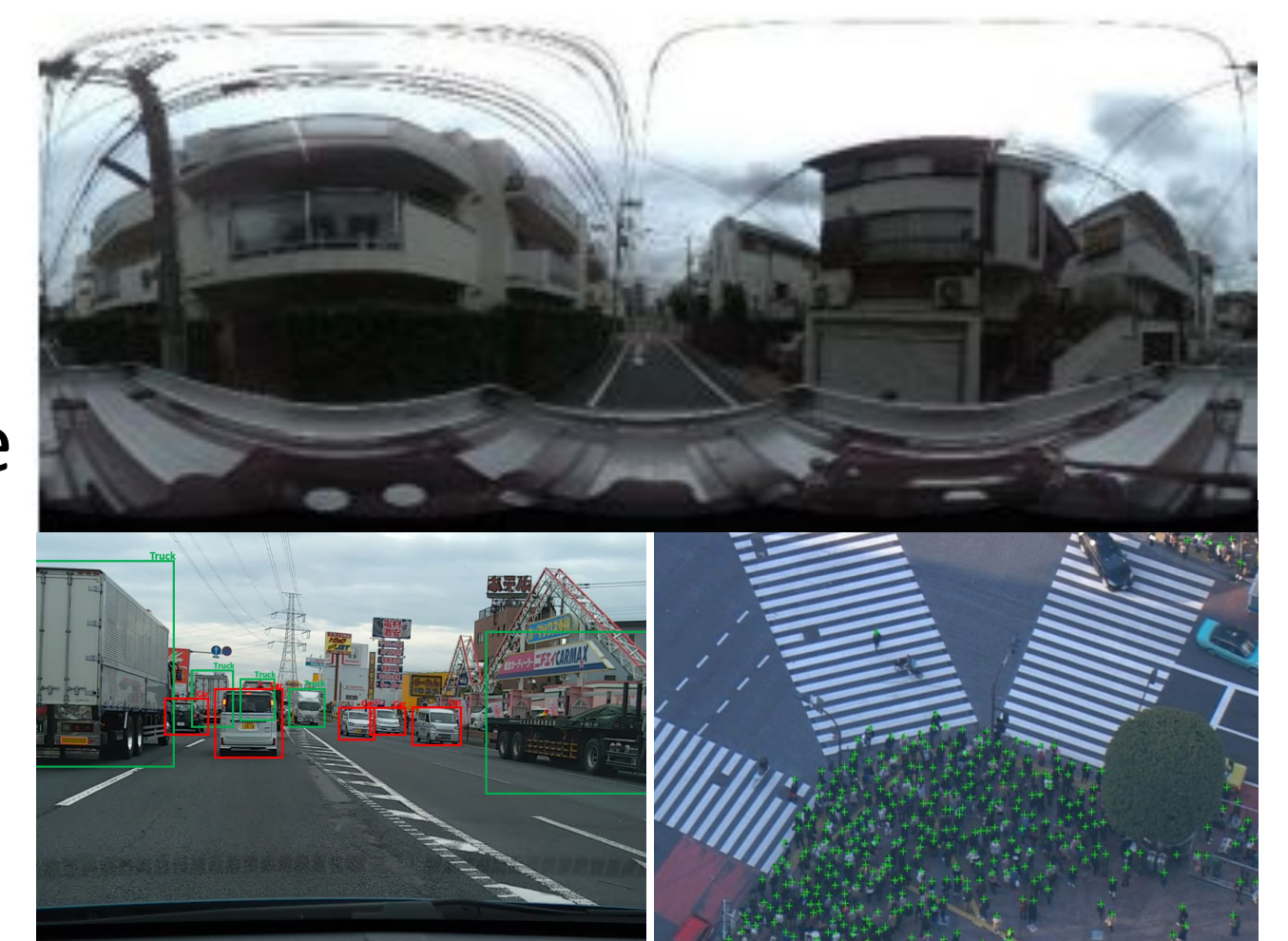


On board Smartphone

Road damages

Urban Sky Monitoring

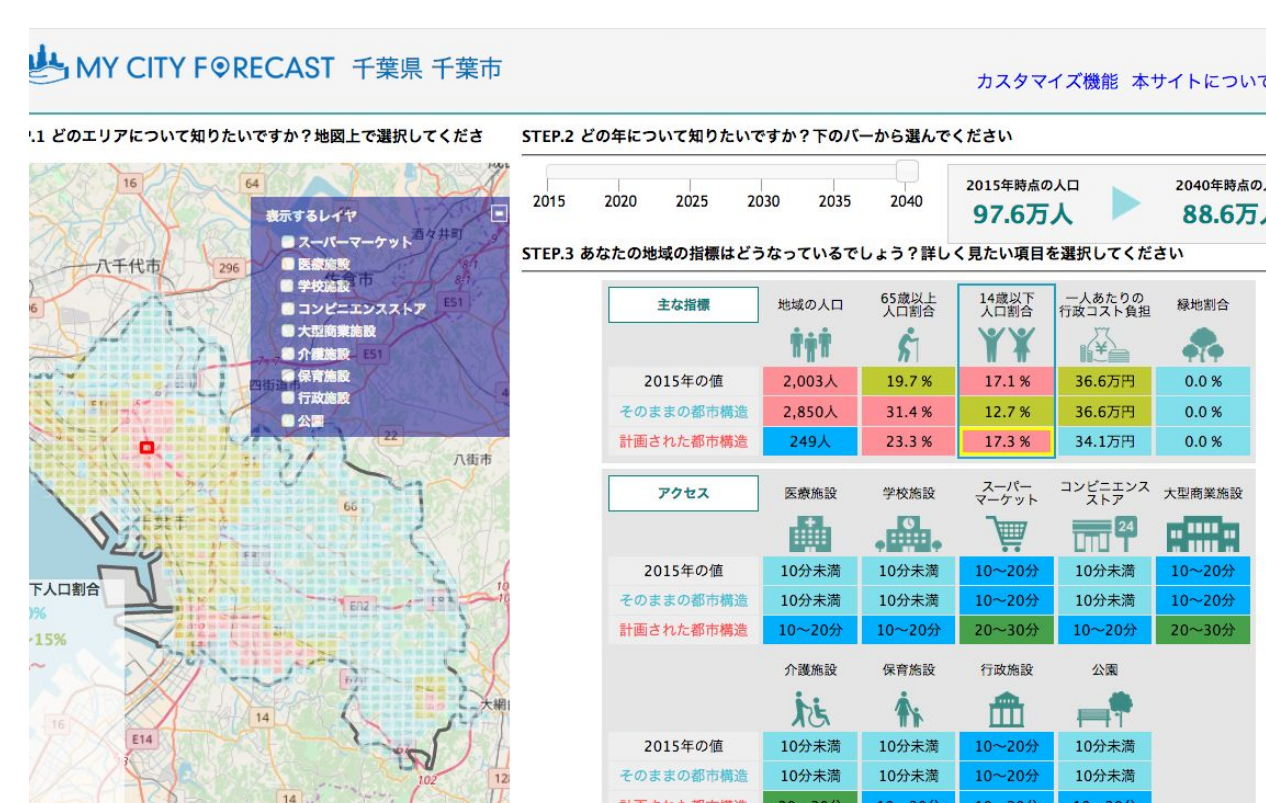
Monitoring aircraft above the city and measuring traffic volume by image processing techniques.



□ Operating Cities by Designing and Establishing Information Distribution

Urban Planning

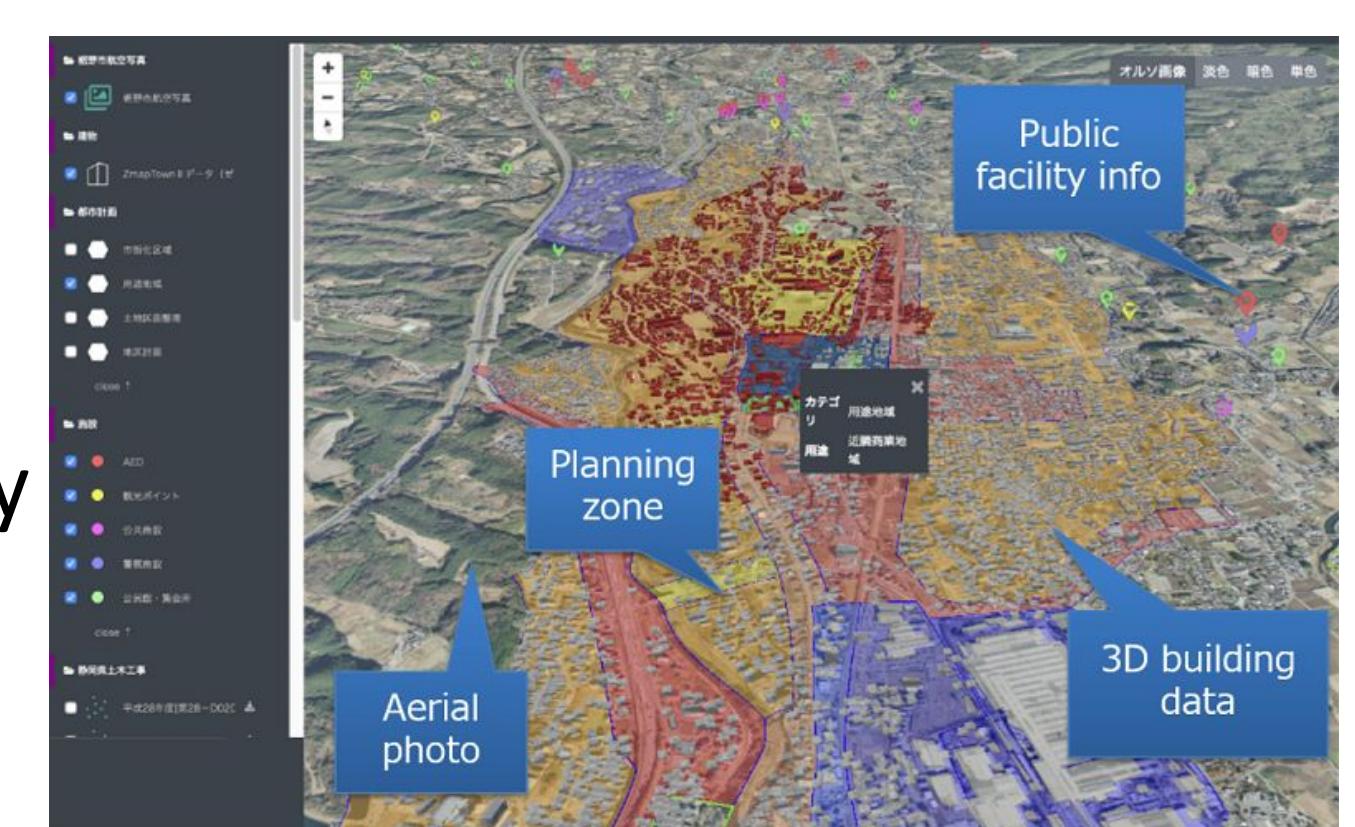
Simulate future urban structure and visualize the results with familiar indicators.



<https://mycityforecast.net>

Digital City

Build a digital twin platform by utilizing dynamic real-time geospatial big data.



<https://www.digitalsmartcity.jp/>