GWF
GEOSPATIAL WORLD FORUM
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PLATEAU
by MLIT

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About me

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Deputy Director of Urban Policy Division

City Bureau, Ministry of Land, Infrastructure, Transport and Tourism (**MLIT**), Japan

Director of Project PLATEAU

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What is “PLATEAU”?

PLATEAU is a project by MLIT

that focuses on developing, utilizing, and

sharing

3D city models,

The Urban Digital Twin Data.

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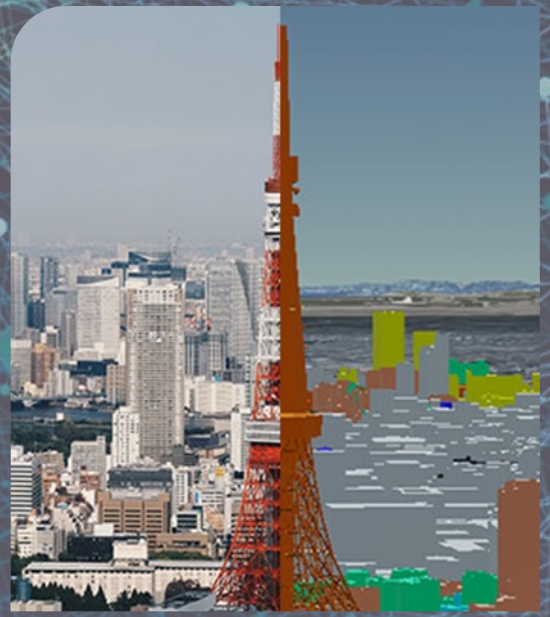
Project Mission

We create a new value in a society

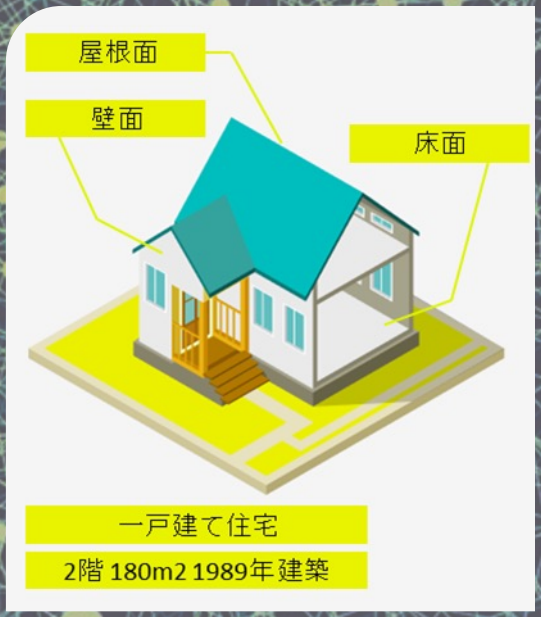
and solve local issues through the digital twin.

The value PLATEAU offer is



High quality

Open data



Data structuring

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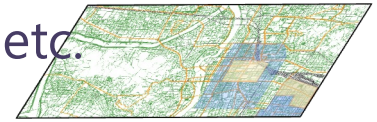
Establishment of scalable data development scheme

Urban Planning Base Map

2D map data of buildings, roads, blocks, etc.



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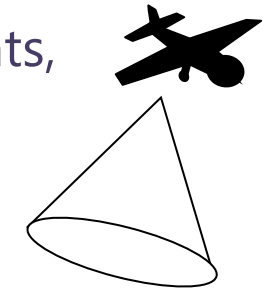
Aerial survey result

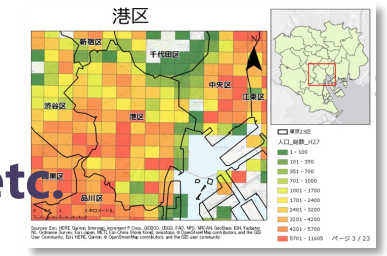
3D data of building heights, shapes, etc.



Geometry(shape)

3D City Models

Semantics(attribute)



Urban Planning Basic Survey data, etc.

Current status of buildings and land, etc.

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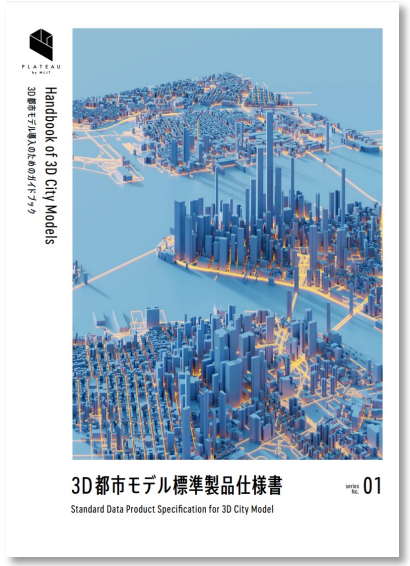
Development of Standard Data Product Specification for 3D city models

Standardization of 3D city model data products in Japan

- We developed The Standard Data Product Specification for 3D City Model.
- It has resulted in the unification of the specifications, standards, and quality of 3D city models in Japan.



Compatible with international standards

- The PLATEAU standard data specification is based on CityGML 2.0, an open format developed by an international standards organization OGC.
- The PLATEAU standard is a localized standard unique to Japan that adds attribute information and detailed LOD definitions.

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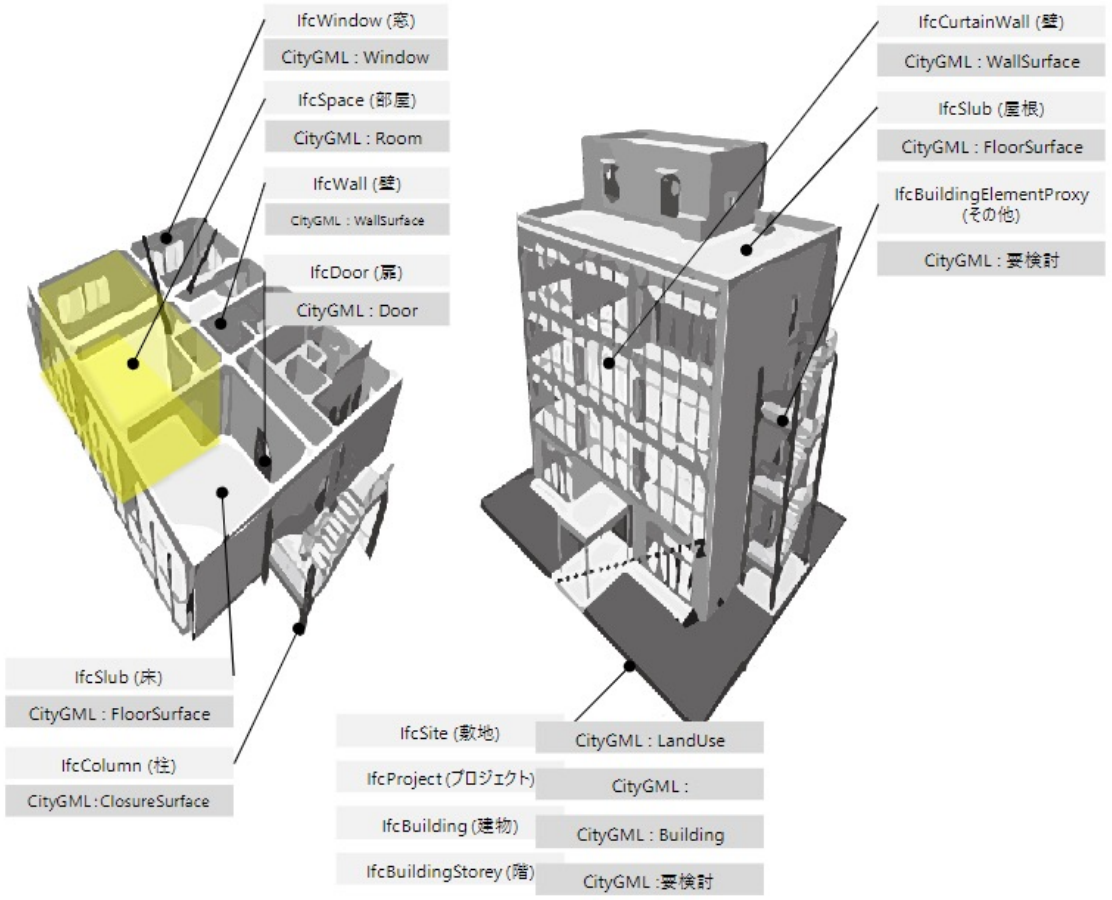
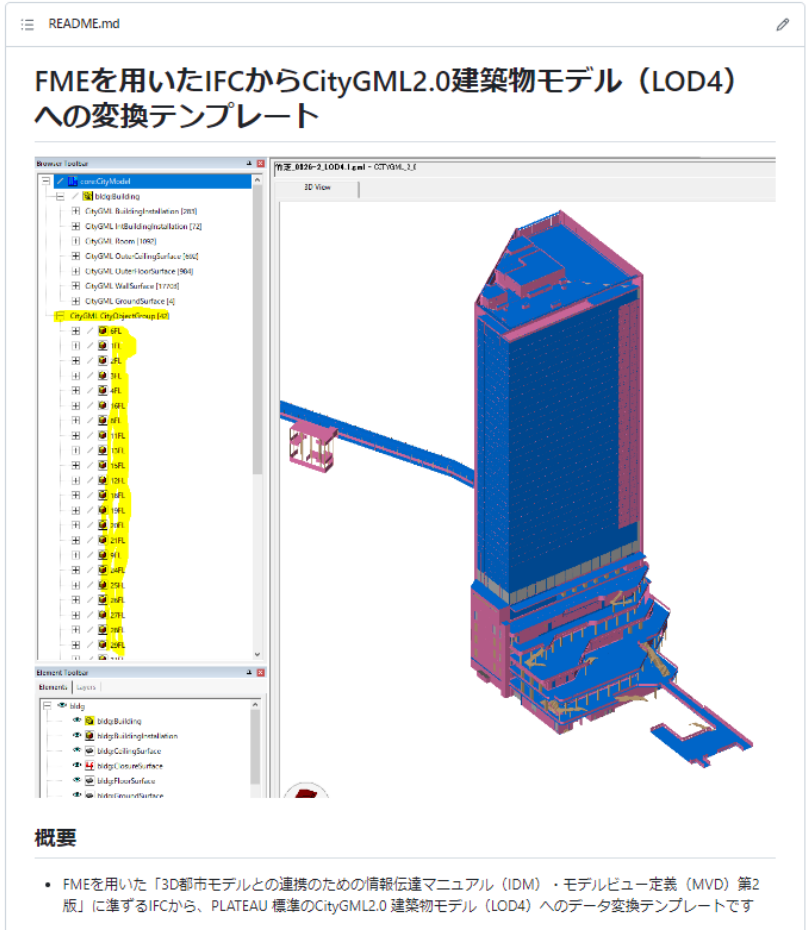
Expanding the coverage of data

PLATEAU-IFC-to-CityGML2.0-LOD4



参考イメージ



https://github.com/Project-PLATEAU/PLATEAU-IFC-to-CityGML2.0-LOD4

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Why PLATEAU is

High quality

Open data

Data structuring

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Open Data

Promotion of Open Data

- By adopting open licenses such as CC BY 4.0, we enable secondary use, modification, and commercial utilization.

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Fostering Open Innovation

PLATEAU's Community

Building Tech Community

- We organize various tech events, workshops, industry-academia collaborations, and other initiatives to promote the growth of the PLATEAU community.

- There has been active presentation of various products utilizing PLATEAU's data on tech communities such as X, GitHub, Qiita, and local tech events.

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Creating the eco system of PLATEAU

PLATEAU Consortium

	sector	
private	**Private User Sector** Private organizations interested in utilizing PLATEAU solutions for business creation, business improvement, and DX	**Startup Sector** Startups interested in utilizing PLATEAU for new business creation
private	**Solution Sector** Organizations interested in utilizing PLATEAU's data for developing new solutions and creating business models	**Developer Sector** Organizations interested in technical development, quality improvement, and other aspects related to PLATEAU's data maintenance
private	**Global Sector** Organizations interested in overseas expansion of PLATEAU's data and solutions	**Investor Sector** Individuals or organizations interested in investment opportunities related to PLATEAU's business models
public	**Public User Sector** Public entities interested in utilizing PLATEAU solutions	
academic	**Academic Sector** Scholars or organizations interested in utilizing PLATEAU for education, research, student activities, and related endeavors	

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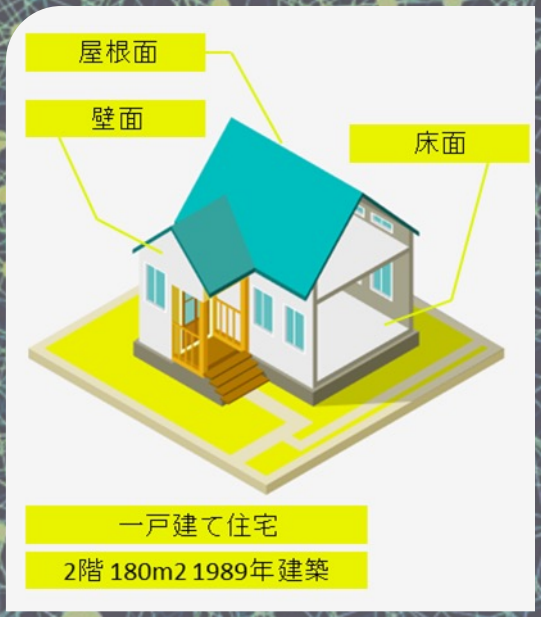
What is the unique feature of PLATEAU about

High quality

Open data



Data structuring

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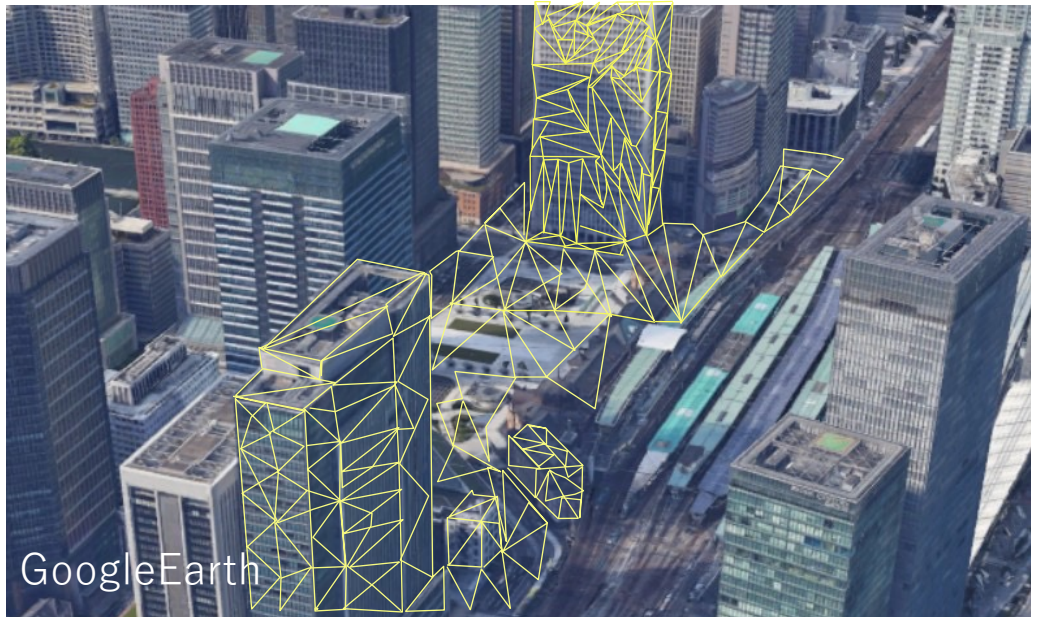
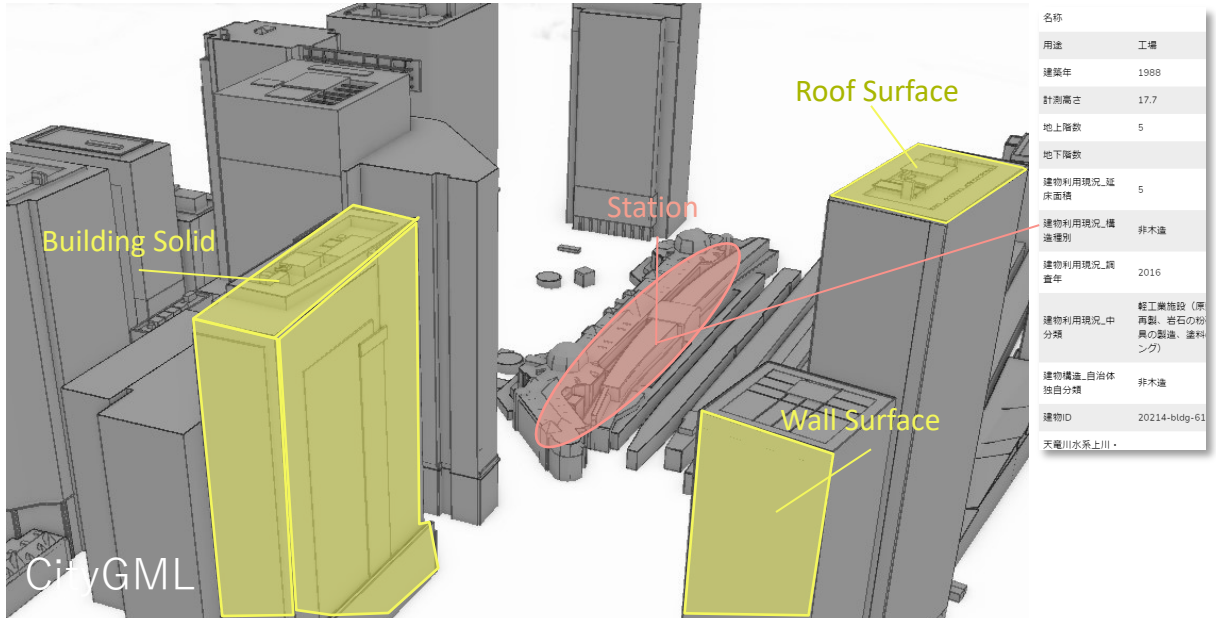
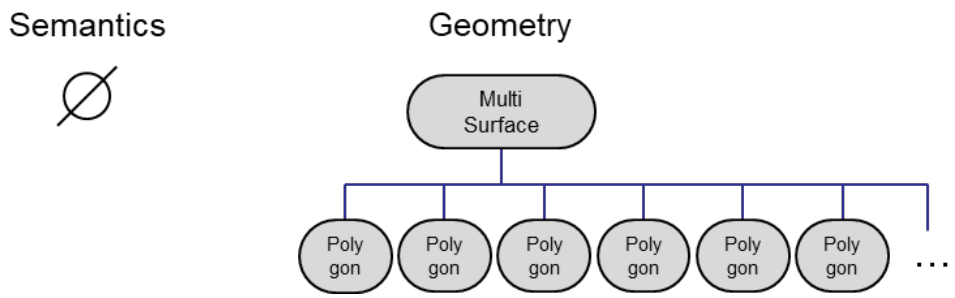
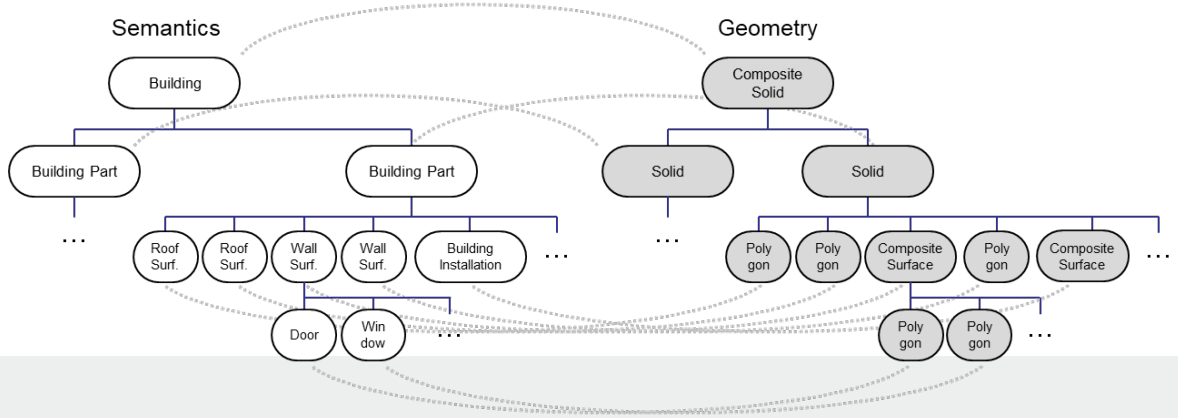
Difference between semantics and geometry

PLATEAU's data is the unique solid model combined with semantics and geometry.









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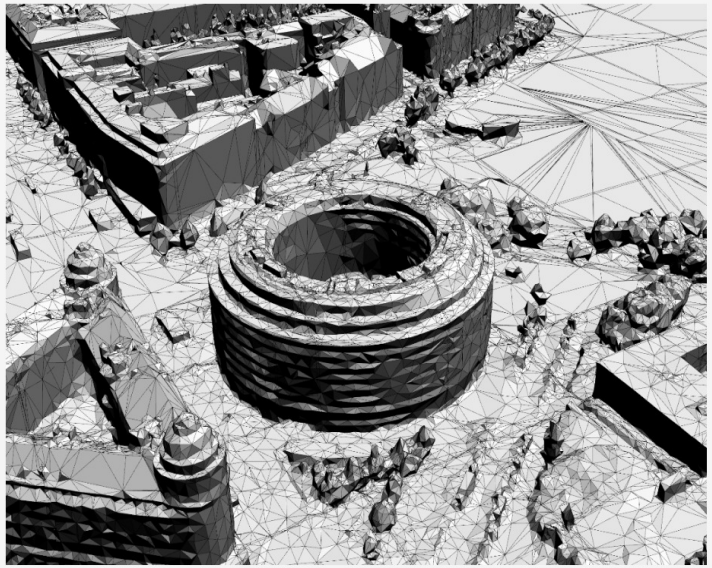
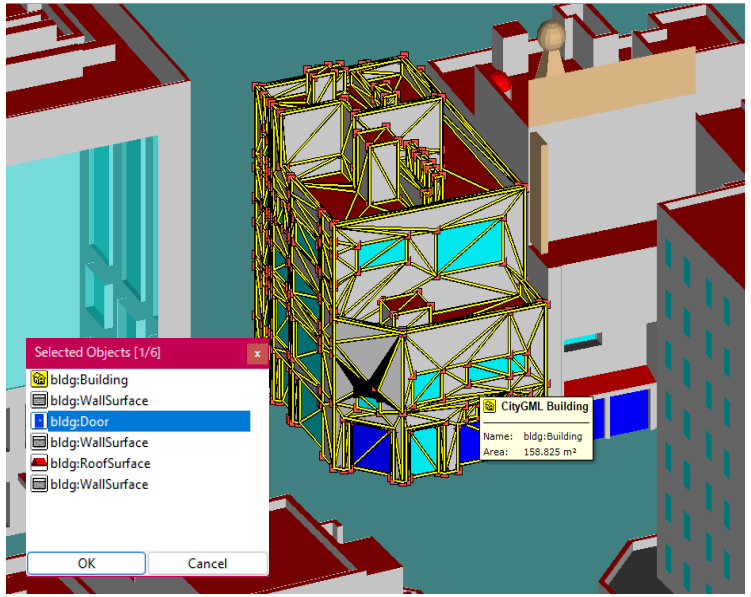
Structured Digital Twin implementation model

In addition to 3D visual, semantic information can be used for analysis at the city scale.

- 3D city models are not simply CG data made up of mesh, but structured data that expresses the 'meaning' of urban space.



Unstructured mesh data



Building LOD3 with doors and windows

Various attribute information

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FY2023 Project PLATEAU | Achievement

200 City
29,000km²

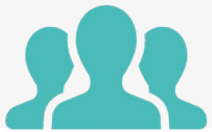
Total area

20million

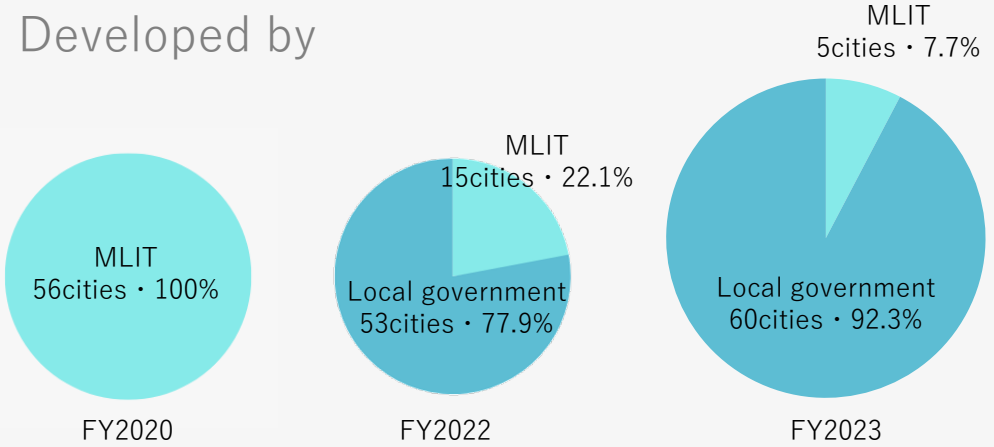
Number of buildings

46.6%

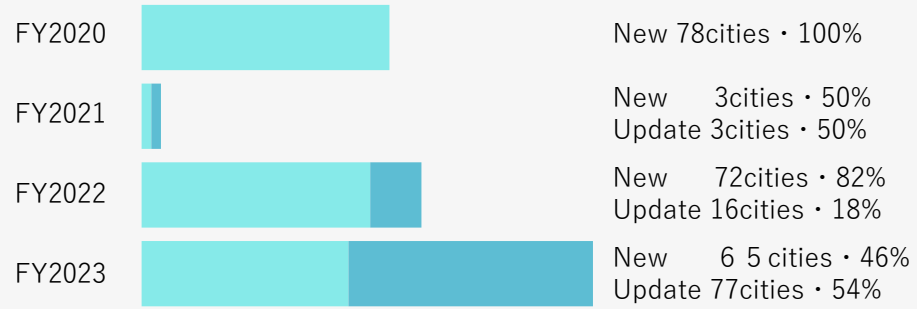
Population coverage rate



Developed by



New development/Update



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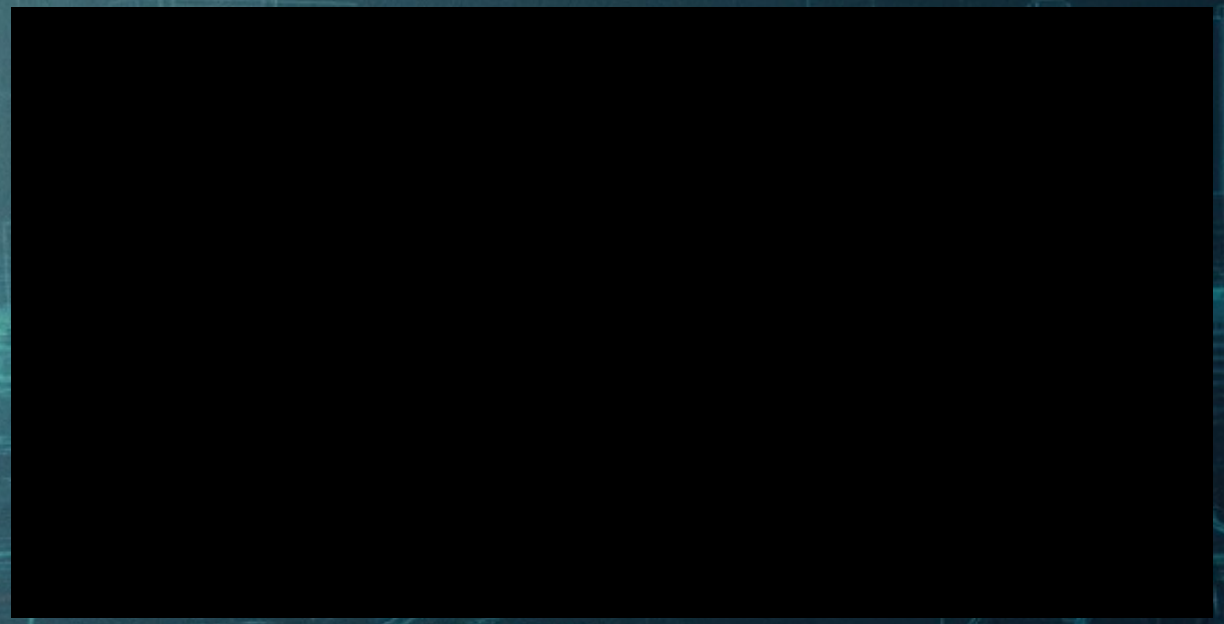
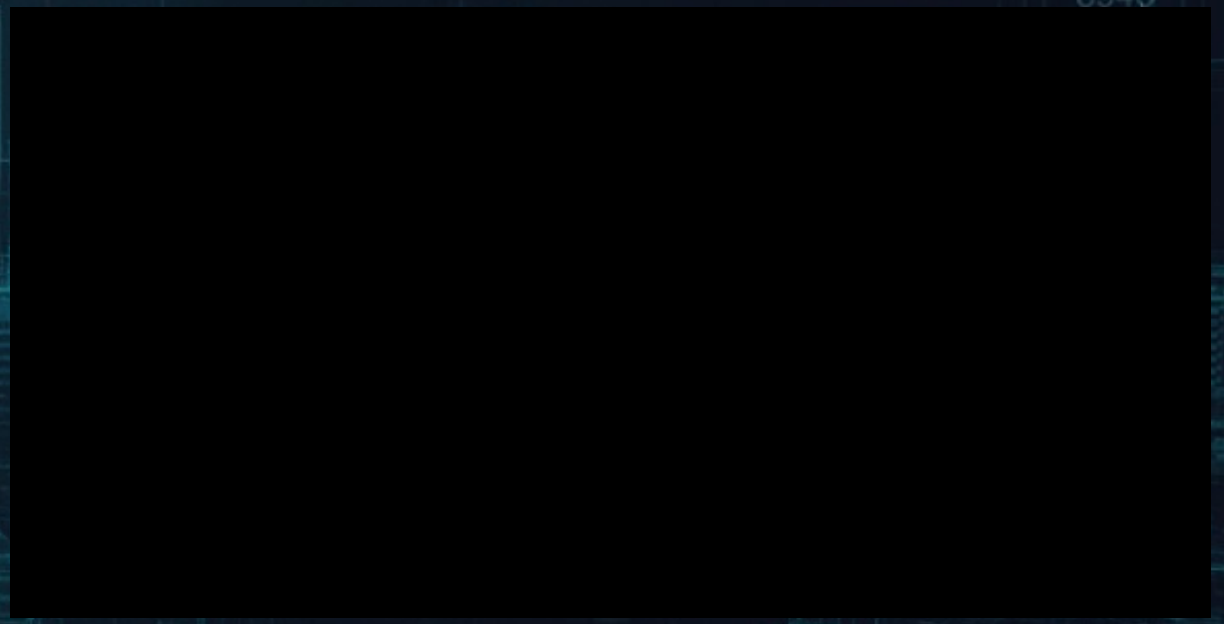
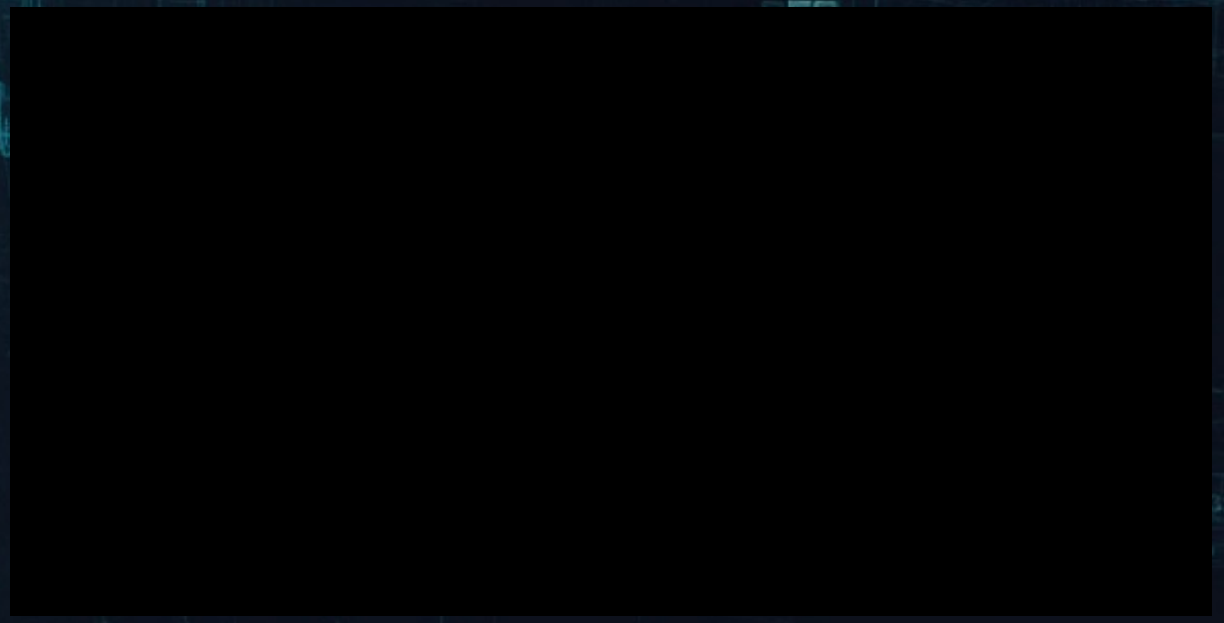
PLATEAU VIEW







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PLATEAU SDK and Toolkit for Unity/Unreal

- PLATEAU SDK for Unity/ Unreal and SDK toolkits for Unity is an open-source software.
- By utilizing the PLATEAU SDK, you can easily import the 3D city model data from PLATEAU into your game engine projects and develop real-world applications and city simulations.
- The PLATEAU SDK toolkits offer the Maps Toolkit, the AR Toolkit, the Rendering Toolkit and the Sandbox Toolkit. It helps you to create application easily.

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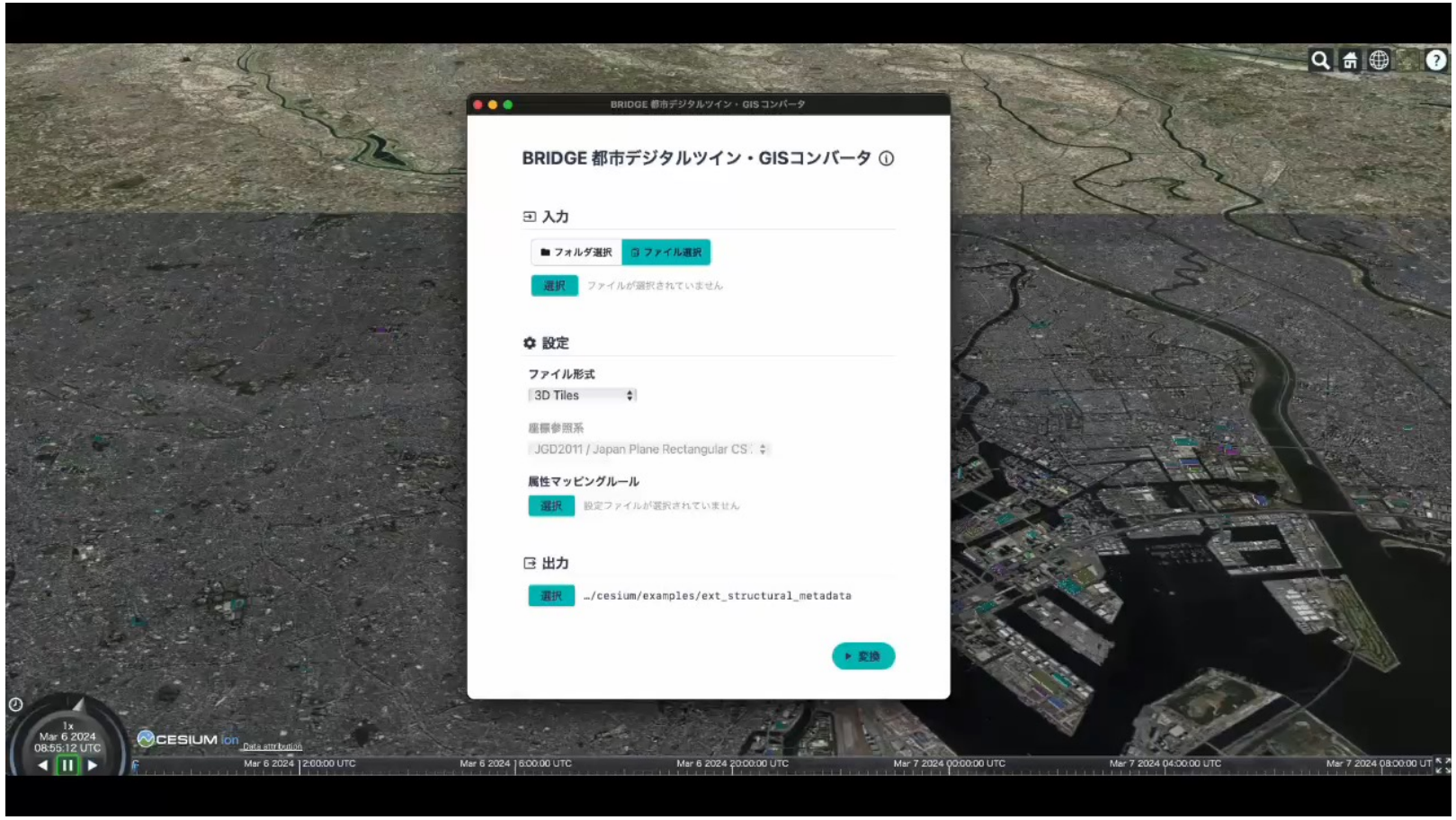
PLATEAU GIS Converter

- CityGML serves as an intermediary format for data exchange in PLATEAU's 3D city models.

- PLATEAU GIS Converter is a tool for converting CityGML to GeoJSON, Shapefile, GeoPackage, 3DTiles, KML, CZML, Mapbox Vector Tiles easily.



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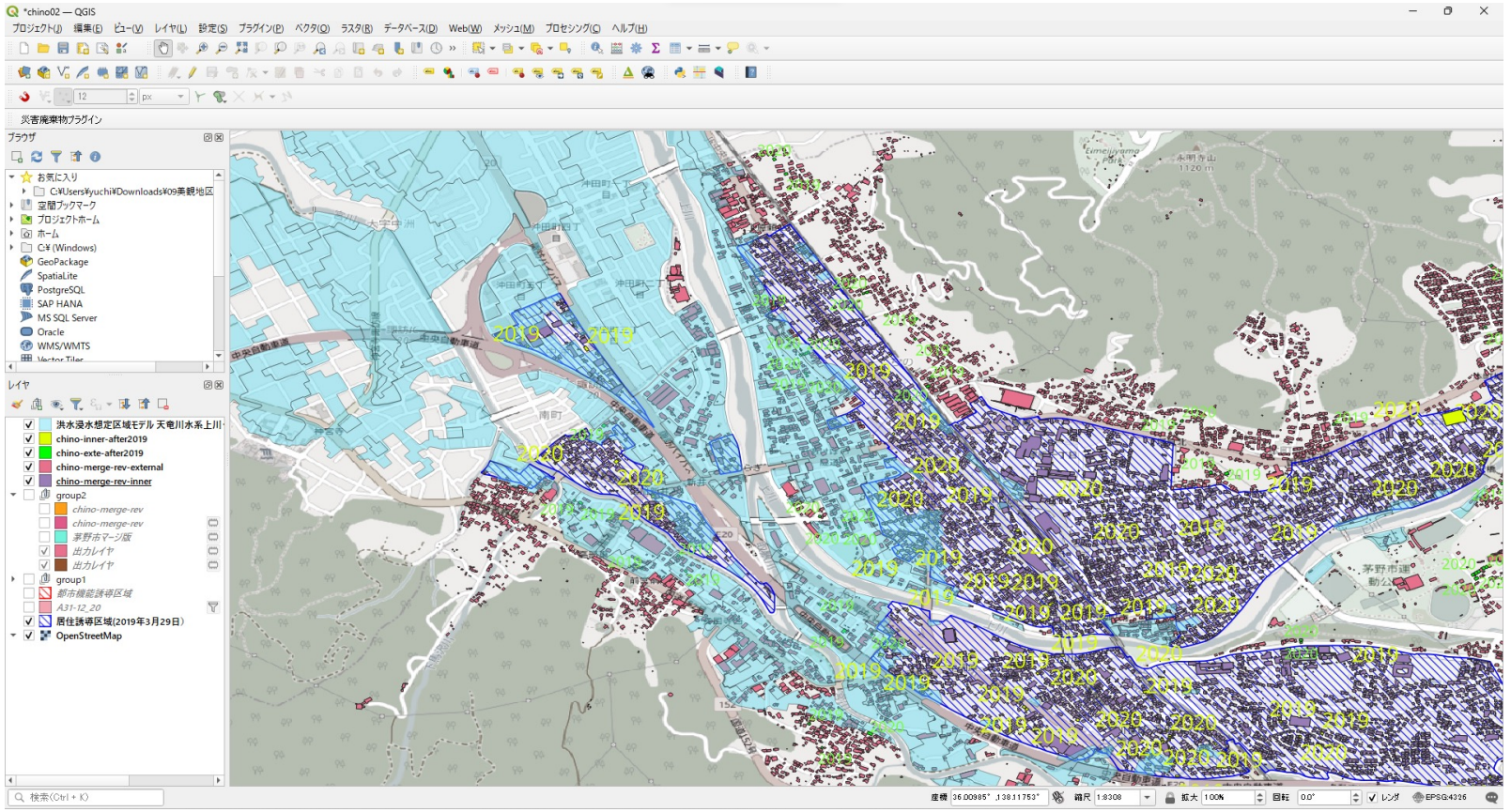
PLATEAU-QGIS-Plugin

- PLATEAU-QGIS-Plugin is a tool for importing 3D city model data (CityGML) into QGIS easily.
- The tool supports all features, attribute information, and ADE of the 3D urban model provided by PLATEAU, and allows you to handle data in its entirety.

https://github.com/Project-PLATEAU/plateau-qgis-plugin/



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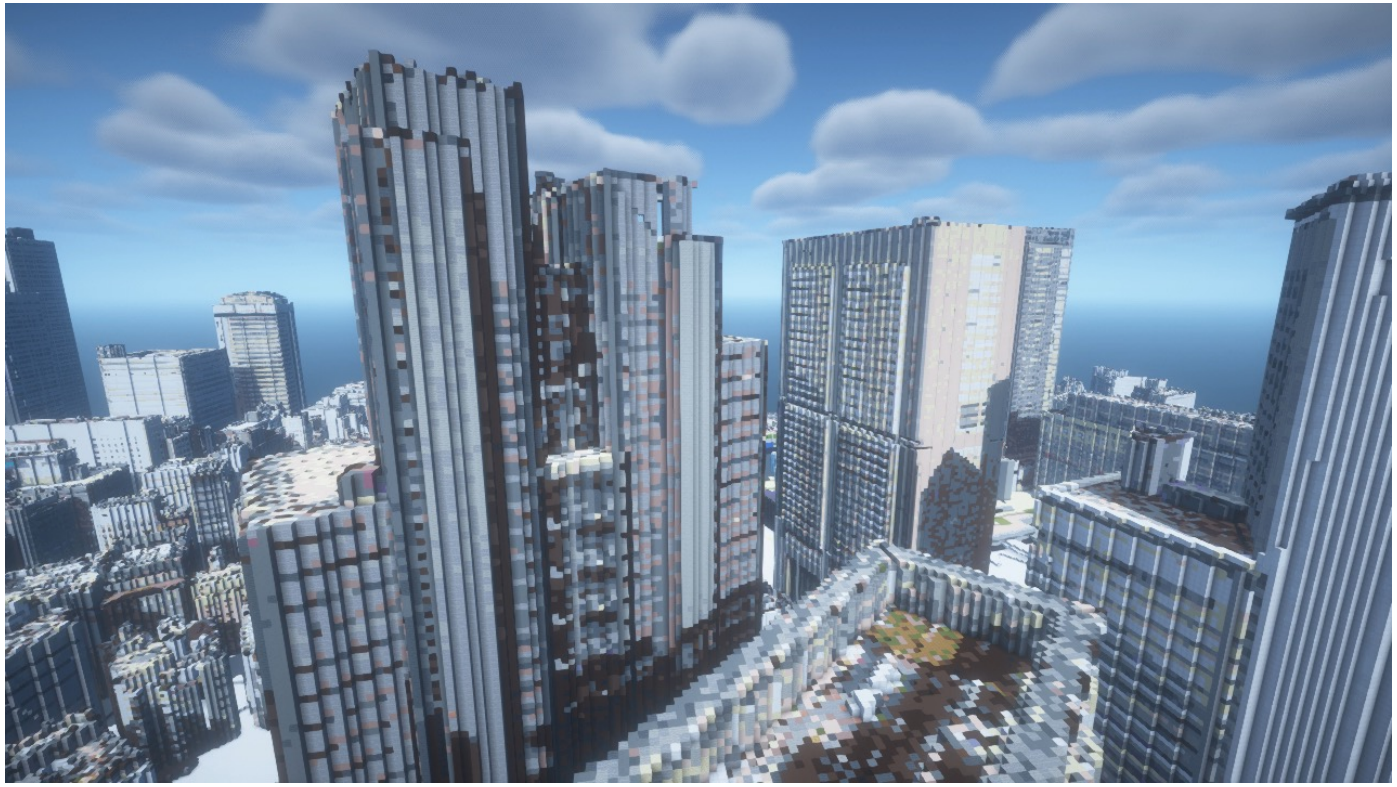
plateau2minecraft

- Develop the converter from PLATEAU's data to Minecraft's world

FY23 PLATEAU Kids Challenge



https://github.com/Project-PLATEAU/plateau2minecraft

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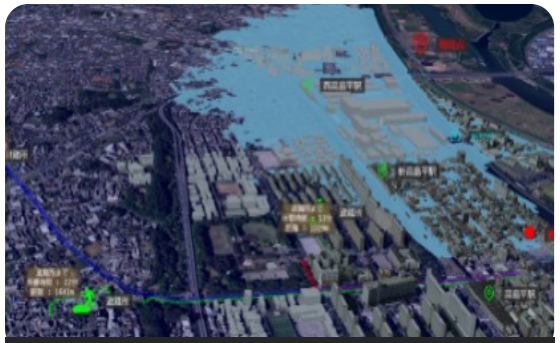
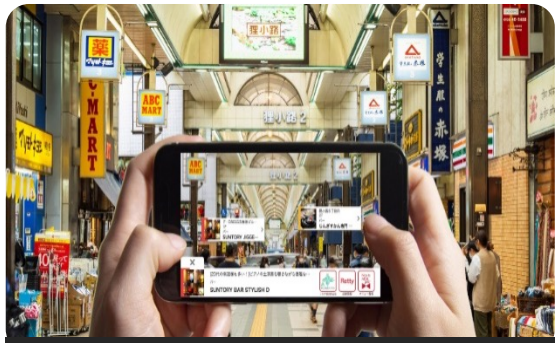
Use Cases

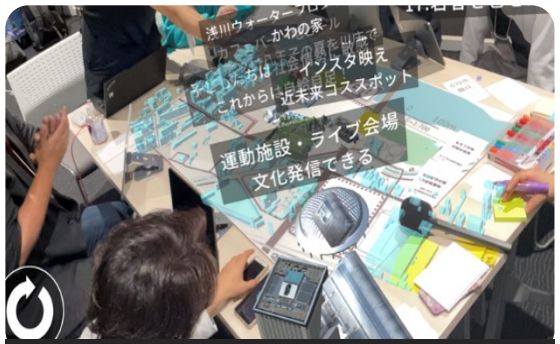
Urban Planning


Disaster Management

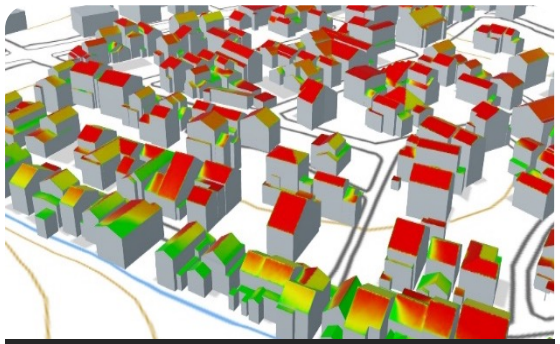


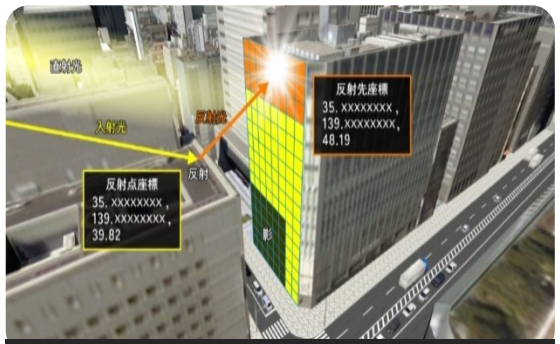
Revitalisation/Tourism

Mobility/Robots

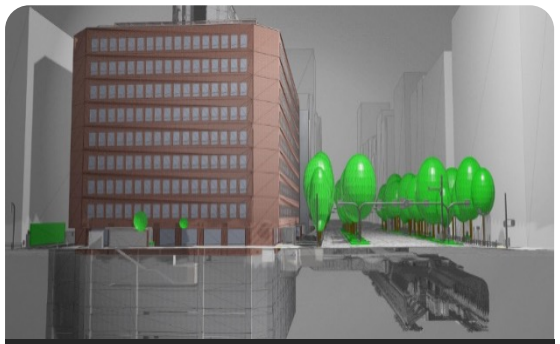


Public participation


Environment/Energy



Infrastructure


Digital twin tech

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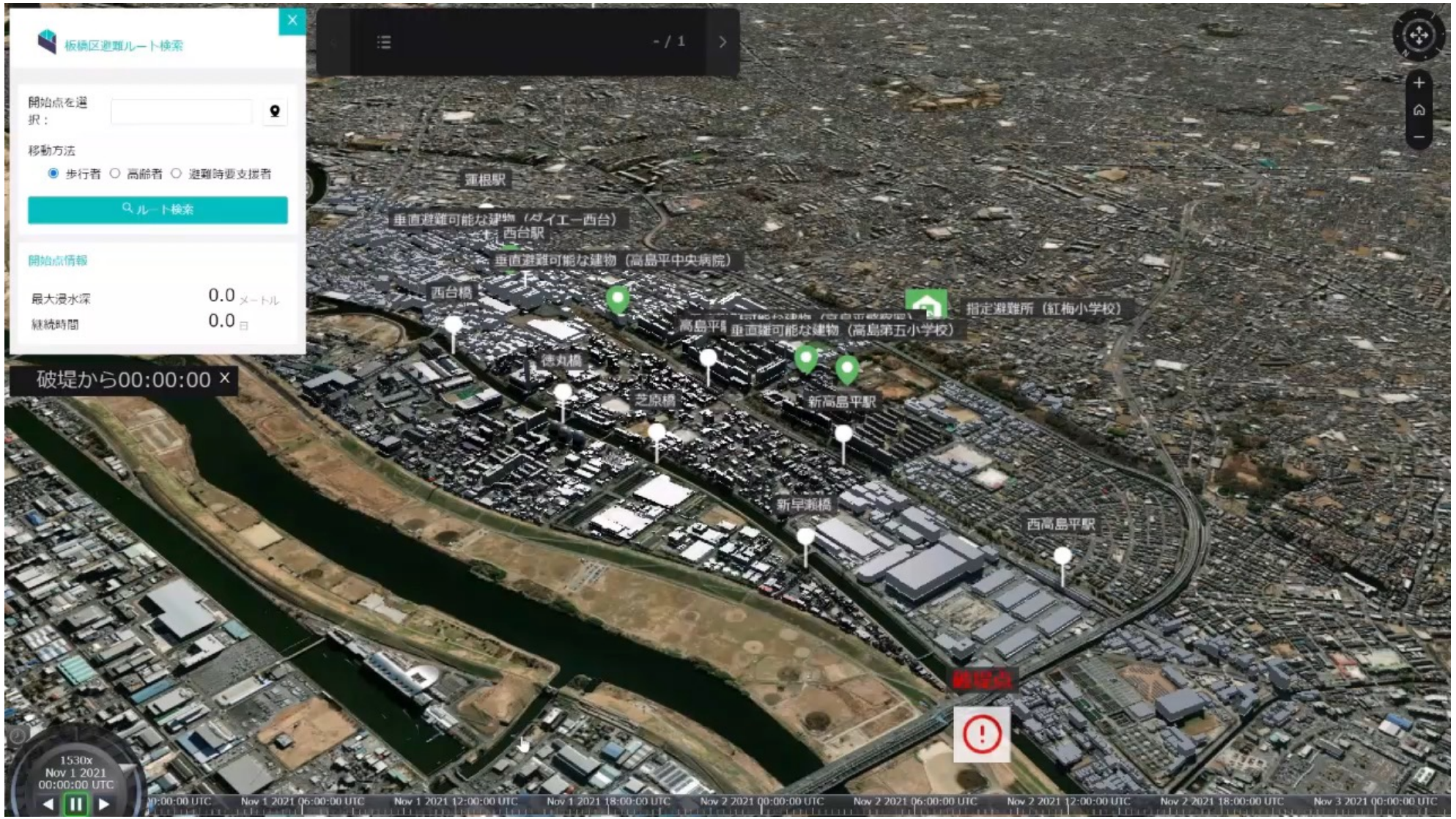
Disaster management

Point

- Overlays and AR can help to understand flood changes and evacuation routes.



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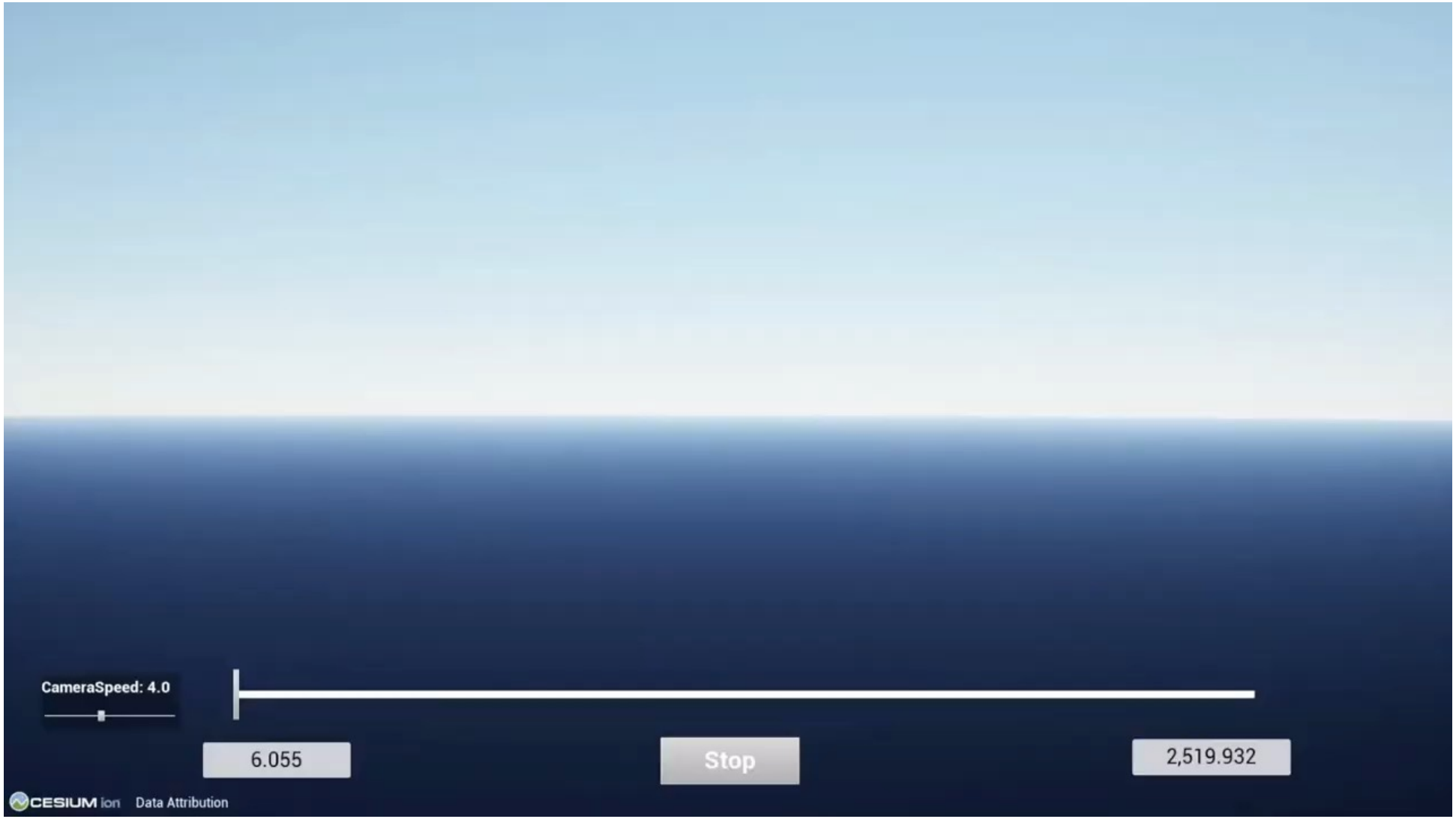
Advanced Disaster Management in Area Design

Point

- Developed large-scale Crowd simulation to achieve DX in area design with a focus on disaster management.



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Immersive urban planning with citizens using XR technology

PLATEAU by MLIT

Point

- Various ideas of participants can be visualized through the XR technology.
- The tool help citizens to join the urban development easily.

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Immersive urban planning with citizens using XR technology

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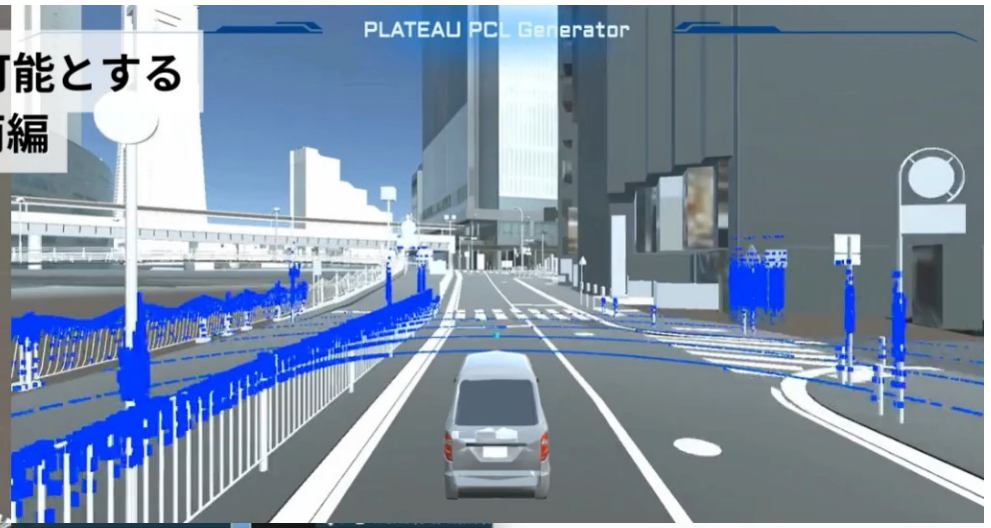
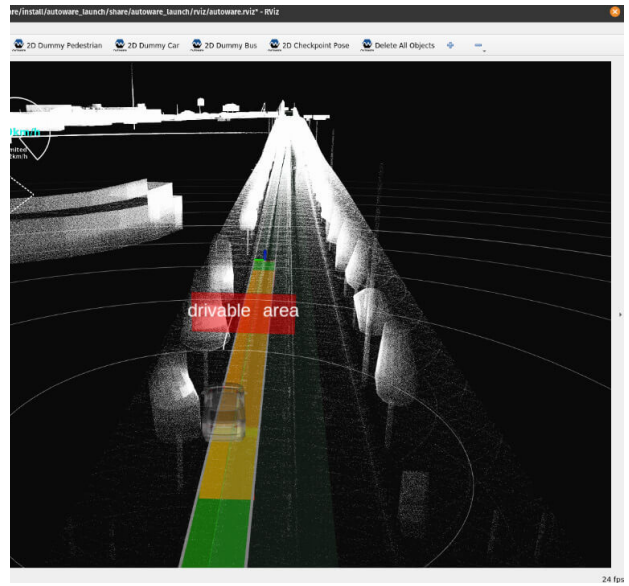
Mobility Autonomous Navigation System Utilizing 3D City Models and BIM

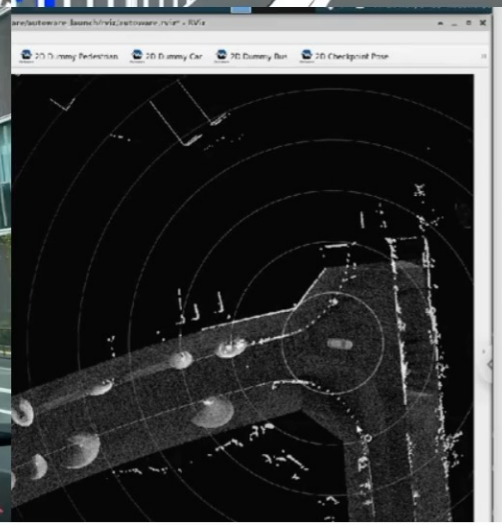
PLATEAU by MLIT

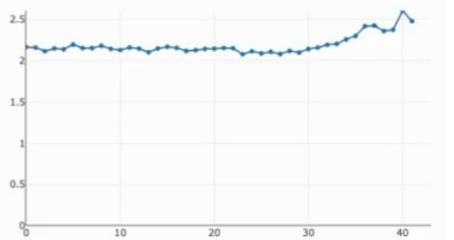
Point

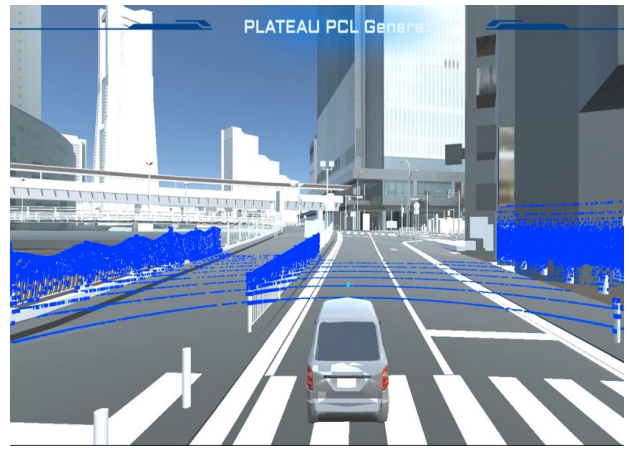
- The system allows the acquisition of LiDAR SLAM point cloud maps within a virtual space using 3D city models.
- By avoiding the costly and inflexible process of environmental map creation, it aims to promote the adoption of autonomous driving.











ADAWARP

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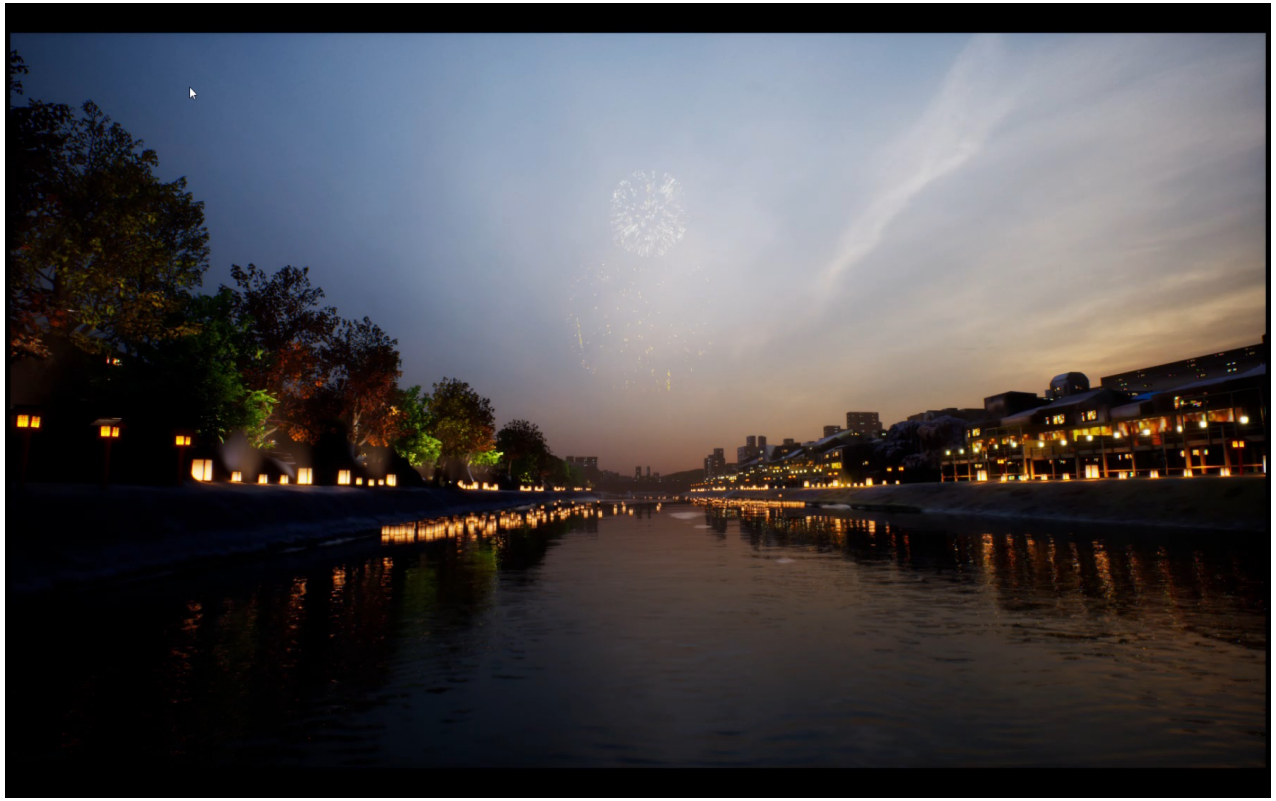
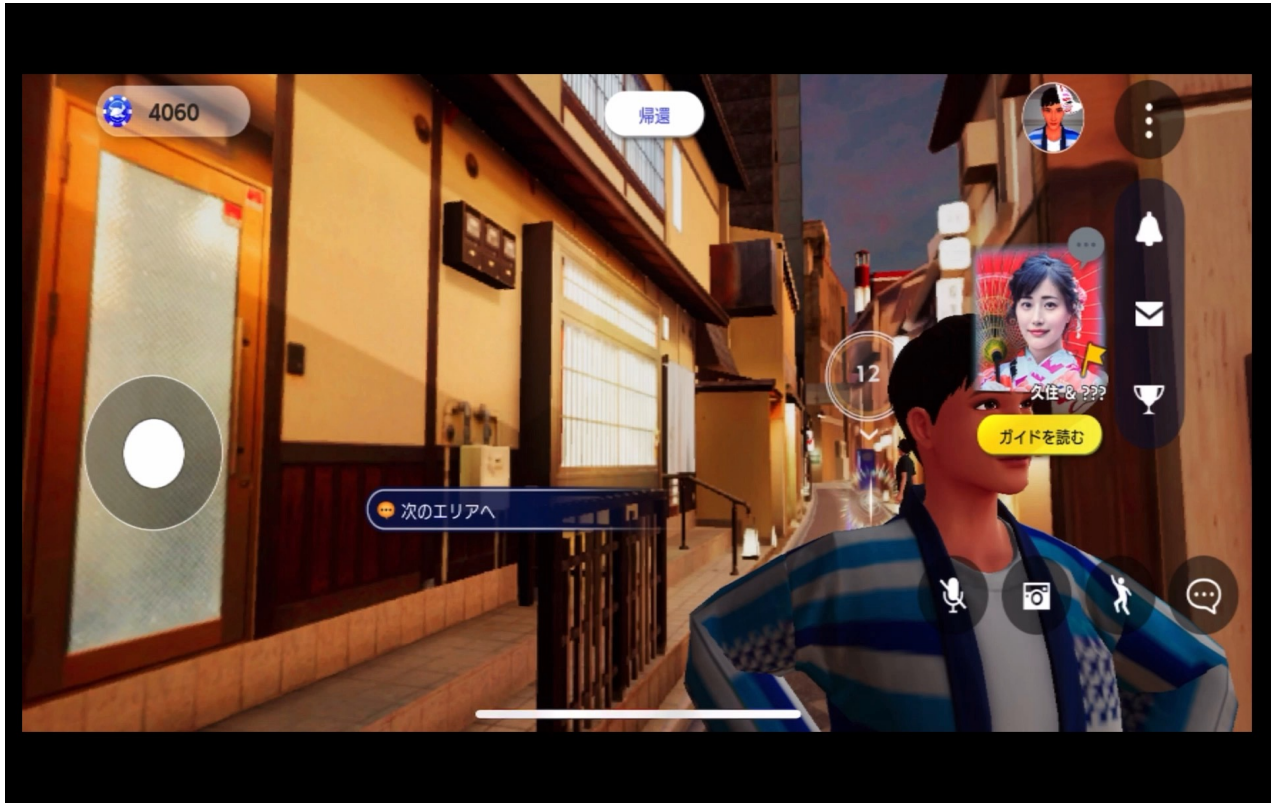
Experience virtual tourism in the metaverse

PLATEAU by MLIT

Point

- The metaverse lets us experience the culture, history, and any other attraction at home.
- Using 3D city model cut a cost of making the metaverse contents.





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PLATEAU Project Partners

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City Bureau： Project PLATEAU | The Initiative of Digital Twin in Japan - MLIT Ministry of Land, Infrastructure, Transport and Tourism

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