

Project PLATEAU is an open data initiative for urban digital twin led by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan.

Empowering Digital Transformation of Urban Planning by Building an Ecosystem for the Development, Utilization, and Open Data of 3D City Models.

3D City Model as Infrastructure for a Digital Society

Publishing Standard Data Product Specification for 3D city model which is compliant with CityGML 2.0 and ISO/TC211 Standards. Promoting to maintain nationwide homogeneous data of 3D city model by conforming the standard.

Major Works

- Development of data specification for 3D city model
 - Extension of features and attributes
 - Covers most of features which consist of city

2 Data Coverage

- FY2022 127 Cities
- FY2023 196 Cities
- FY2027(projected) 500+ Cities



Use Case Development and Social Implementation

Develop use cases utilizing advanced technologies in diverse fields such as disaster management, environment, urban planning, mobility and etc. Promote social implementation of use cases in various fields of public and private sectors by creating and horizontally deploying best practices.

Major Works

- **1** Various Demonstration Projects
 - More than 100 projects
 - Wide range of fields including urban planning, mobility, robotics, etc.

2 Establishment of the Consortium

 PLATEAU consortium consists of more than 350 institutions from private/ public sector



3

Open Data and Solution for Open Innovation

Openly available 3D city model data. Releasing a wide range of knowledge including guidebooks, technical material and source code from web site.

Major Works

Open Data

- More than 200 datasets are available in various format

Open Source Software on GitHub

- PLATEAU VIEW 3.0 source code
- PLATEAU SDK for Unity/Unreal Engine
- PLATEAU SDK Toolkits for Unity





PLATEAU's Activities for Society5.0

Efficient Data Maintenance to Promote Expansion of Data Coverage Action1

Utilizing 2D Data for Efficient 3D City Model Maintenance in Wide Areas

"Reuse" GIS data and statistics regularly value as "3D city models."

Data Creation Procedure

• 3D city models are generated from 2D maps and height information extracted from aerial photos, along with additional attributes information from statistical data · Efficiently expanding data coverage by utilizing preexisting data maintenance scheme.





Efficient generation of 3D city model which is optimized various use cases by refining and subdividing the LOD.

Localization of LOD

• Refined and subdivided the definition of LOD (Levels Of Detail) to utilize 3D urban models in various use cases and ensures the homogeneity of 3D city models maintained nationwide.

Overview of LOD definitions

 Basic definition of LOD: LOD1 as assigning uniform height to 2D shapes, LOD2 as refining the top (roof surface), LOD3 as refining the sides, and LOD4 as describing the inside.

· LOD subdivision is based on the types and sizes of feature to be acquired.















Bridge LOD3

Integrating BIM Models

to Generate More Detailed 3D City Models Promote the generation of detailed 3D city models

with indoor descriptions by converting BIM models to 3D city models.

Conversion from IFC to CityGML

· Developed a conversion specification from IFC, a BIM standard, to CityGML, to be integrated into a 3D city model. Developed a converter from IFC to CityGML based on the conversion specification.



LOD4.2



Handbooks

How to convert from BIM model to building model (LOD4)

Geo-BIM Integrated Model in CityGML

MVD Concept Group



Use Cases Development Action2



Driving Open Innovation through Open Data and Open Source Action3







PLATEAU

YouTube



