

GEO RĪGA:

Gateway to Riga's Spatial Data

SATSDIFACTION 6TH LEARNING DEEP DIVE





Dace Andersone

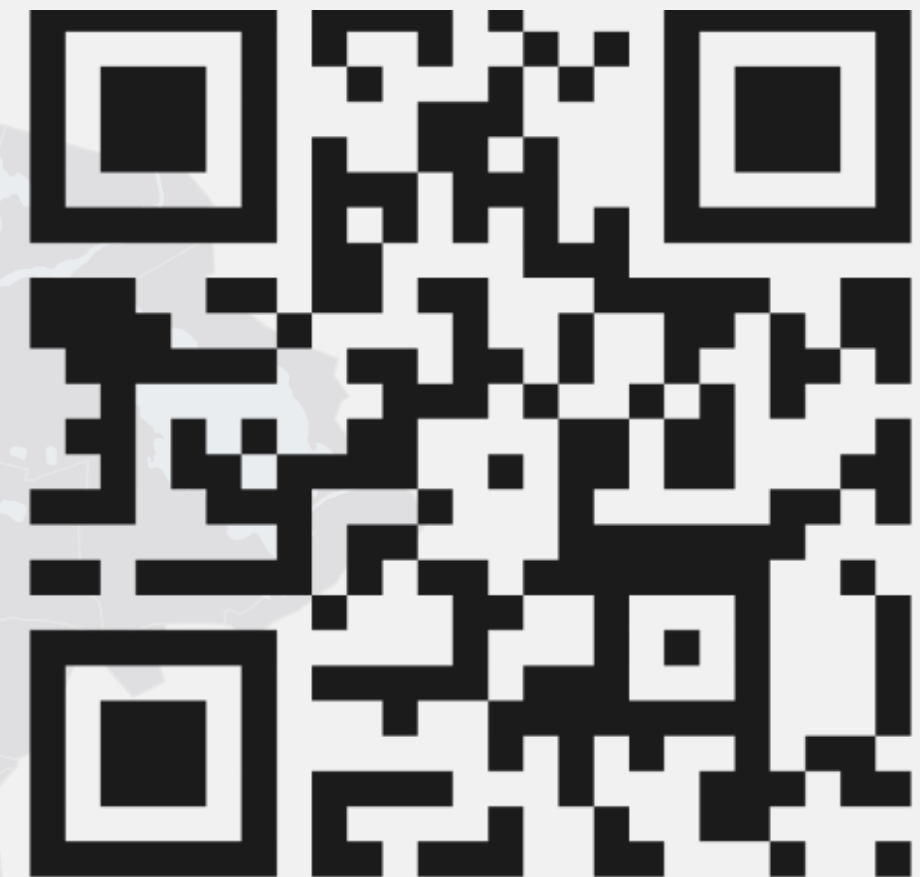
GIS Specialist

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What is GEO RĪGA?

- GEO RIGA is the **GIS of Riga Municipality**, which provides easy access to **geospatial data about the administrative territory of Riga**
- Primarily designed for municipal staff, decision-makers, and educators.
- Also valuable for businesses, students, NGOs, investors, and residents.



SAG Award

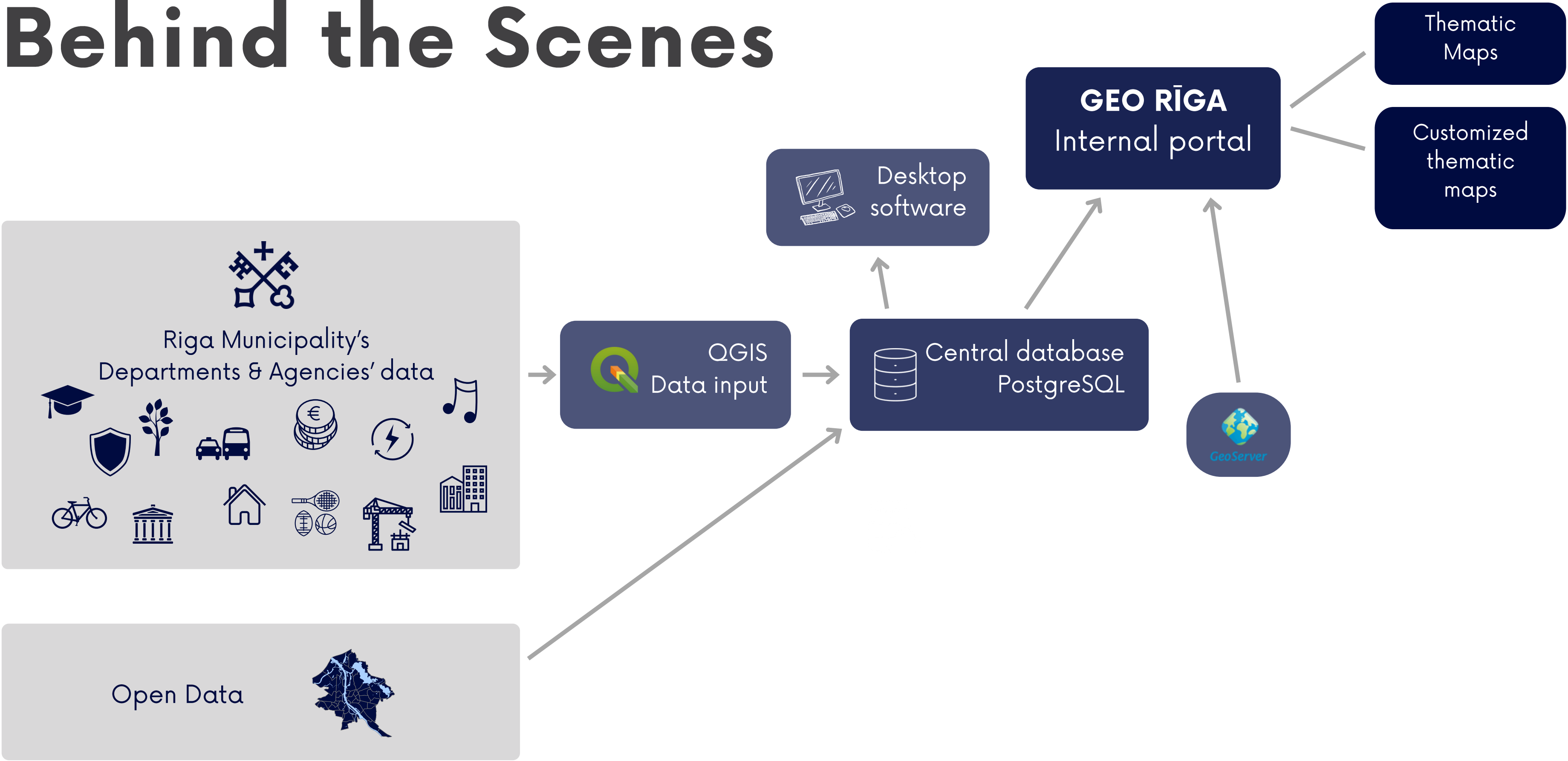
GEO RĪGA has been honored with the prestigious **Special Achievement in GIS Award** by Esri in 2025



Development timeline



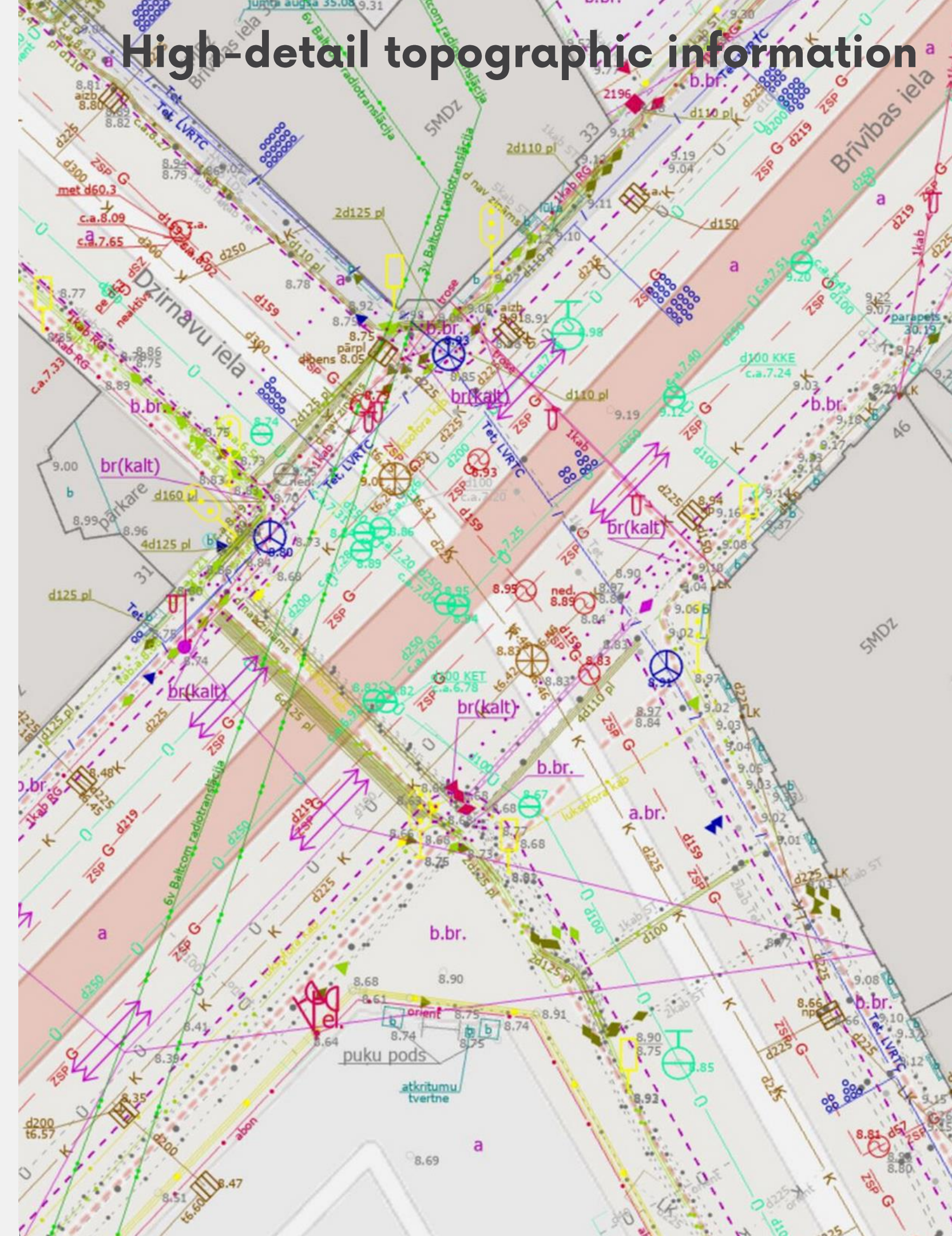
Behind the Scenes



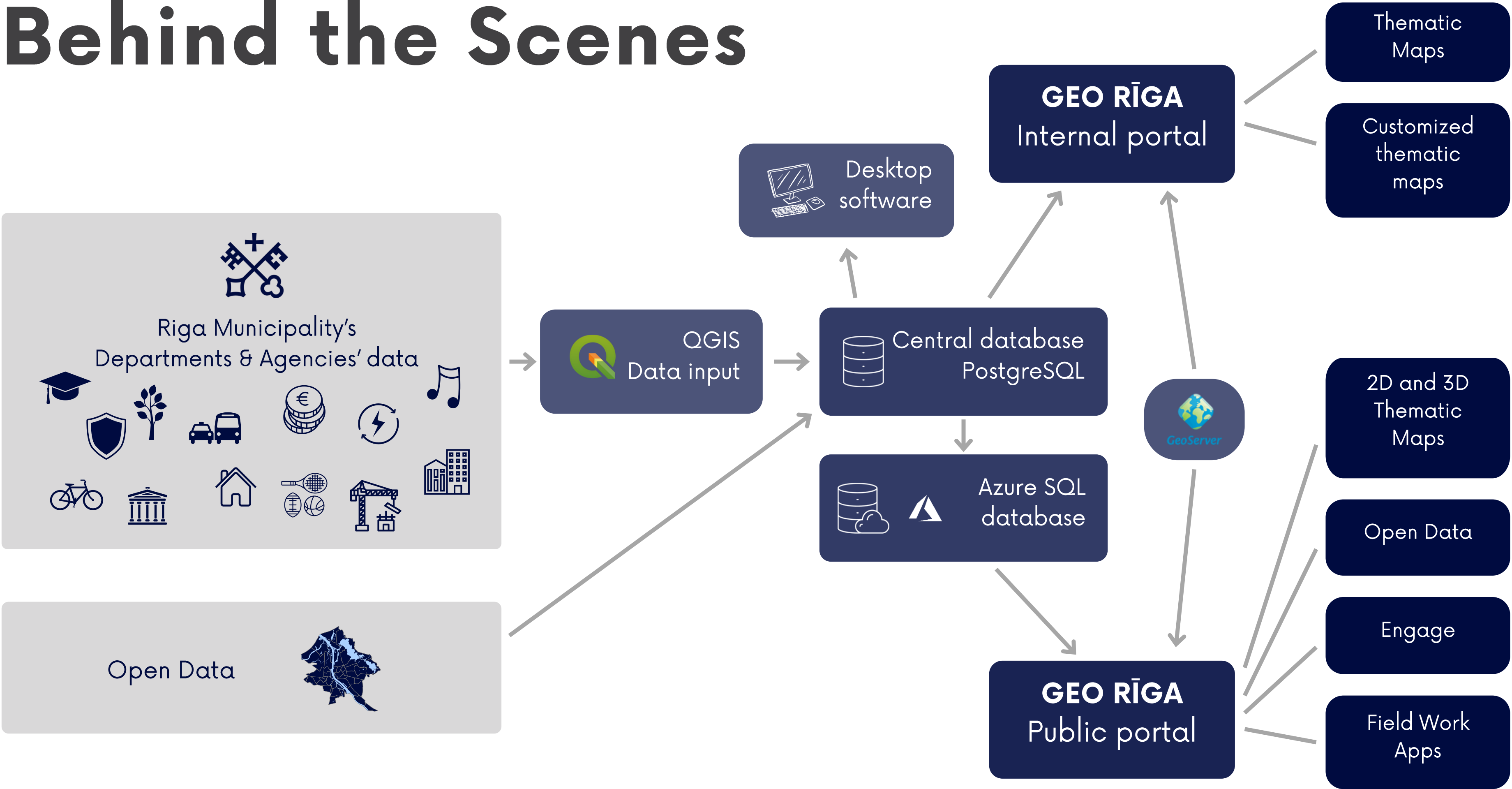
GEO RĪGA

Internal portal

- Available only to Riga Local Government employees;
- 15 thematic maps;
- Customized thematic maps;
- Contains data that is not and will not be in the GEO RĪGA public portal – high-resolution orthophoto maps, high-detail topographic information, spatial data with detailed attribute tables;
- Is used in daily work – in planning, decision-making, analysis and evaluation of various situations;
- Data go first IN, only then OUT



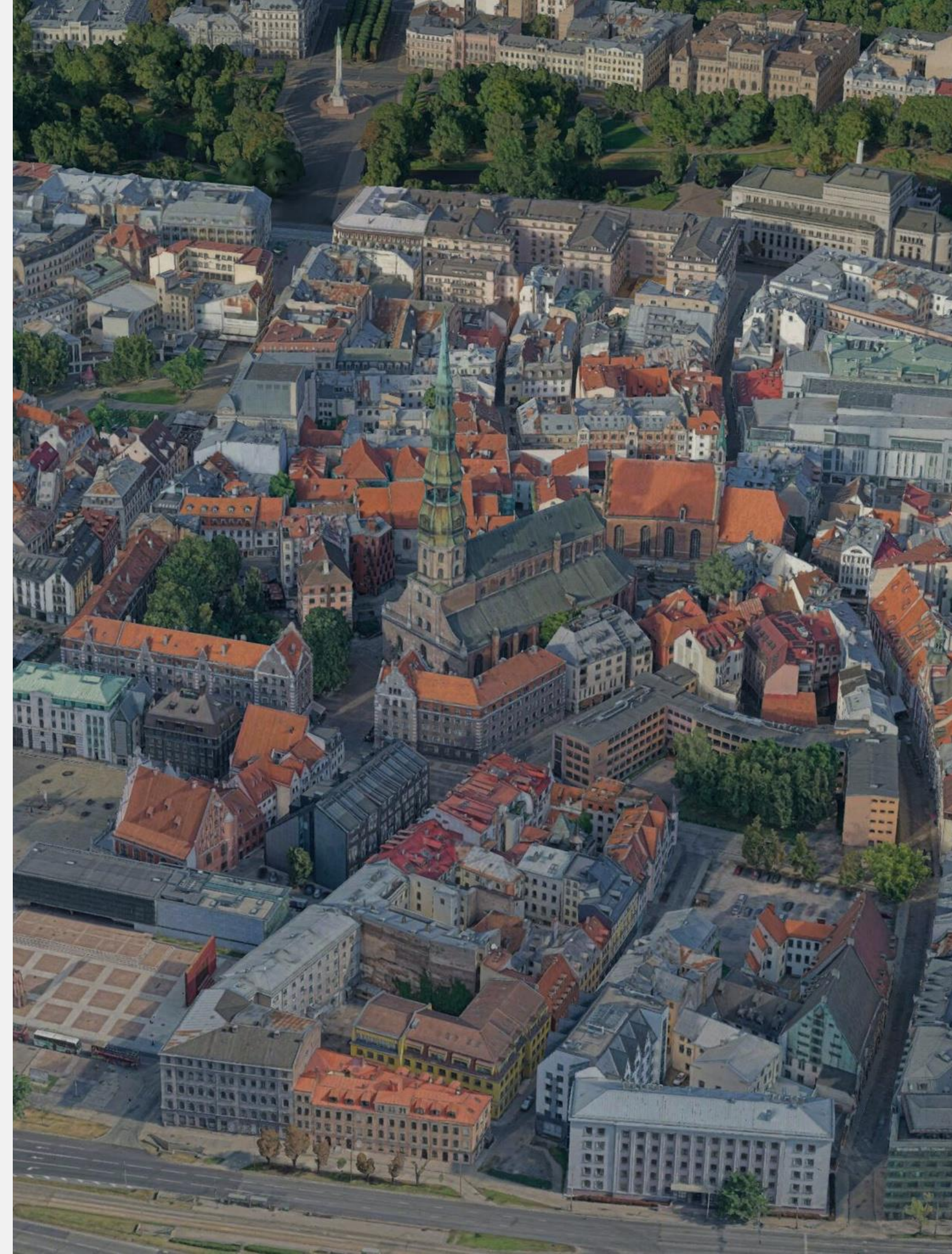
Behind the Scenes

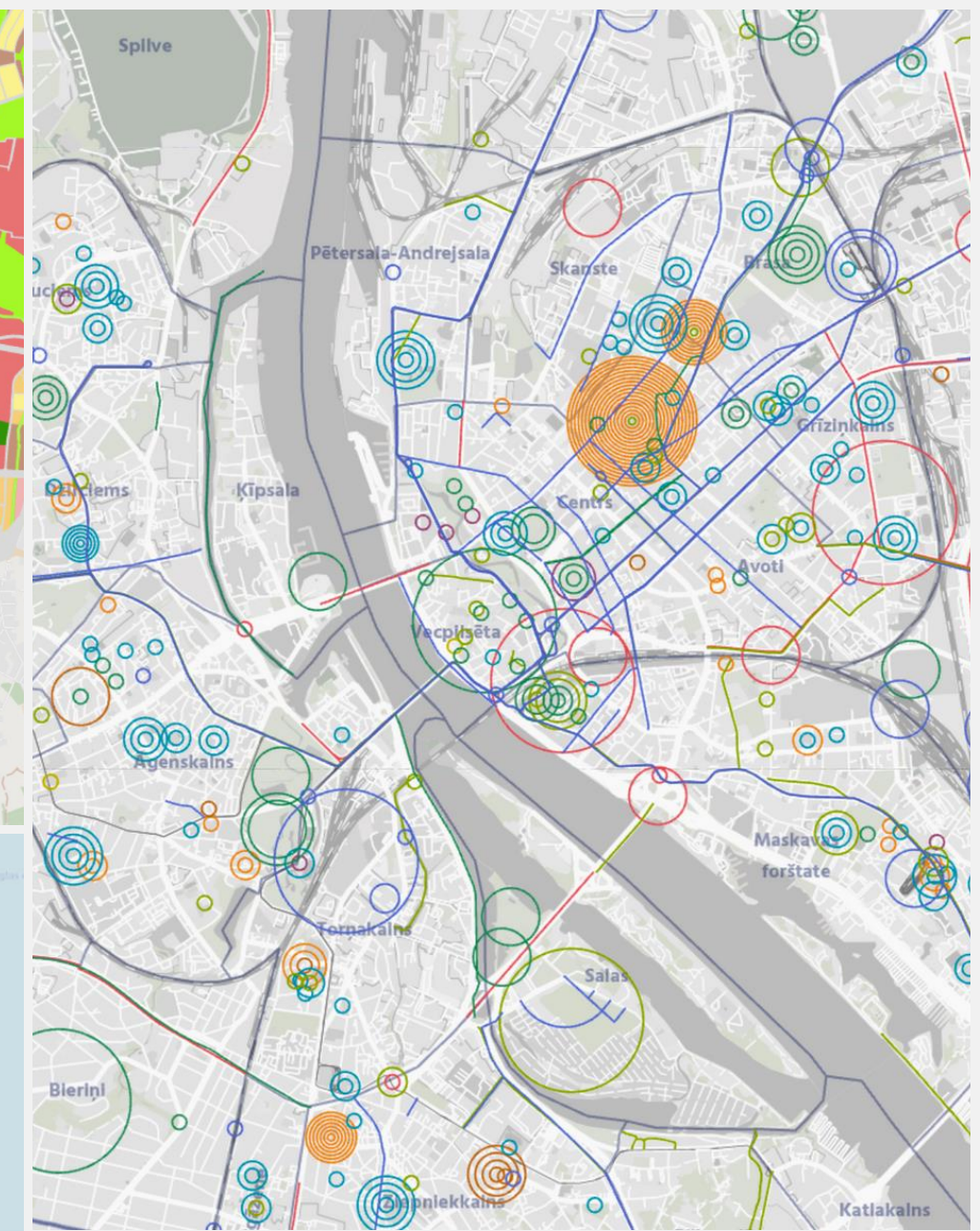
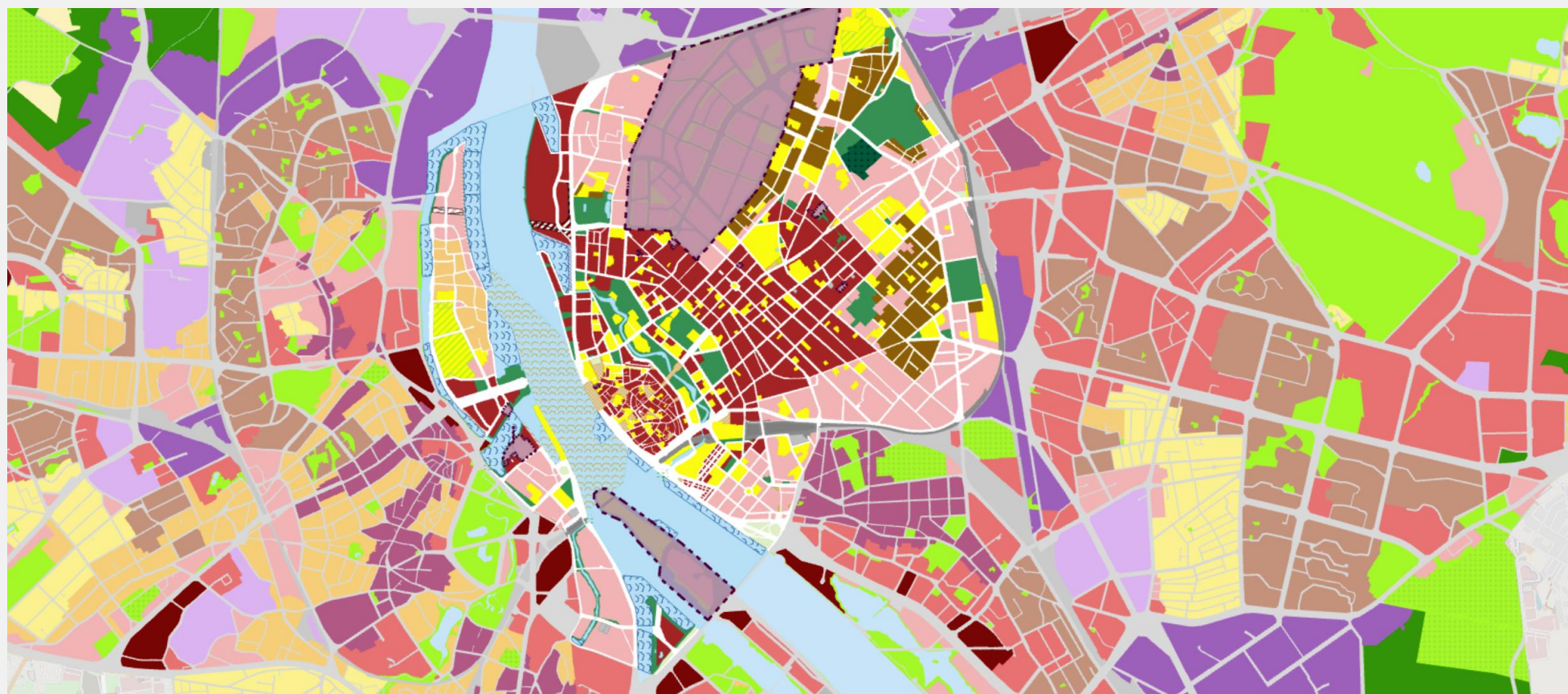
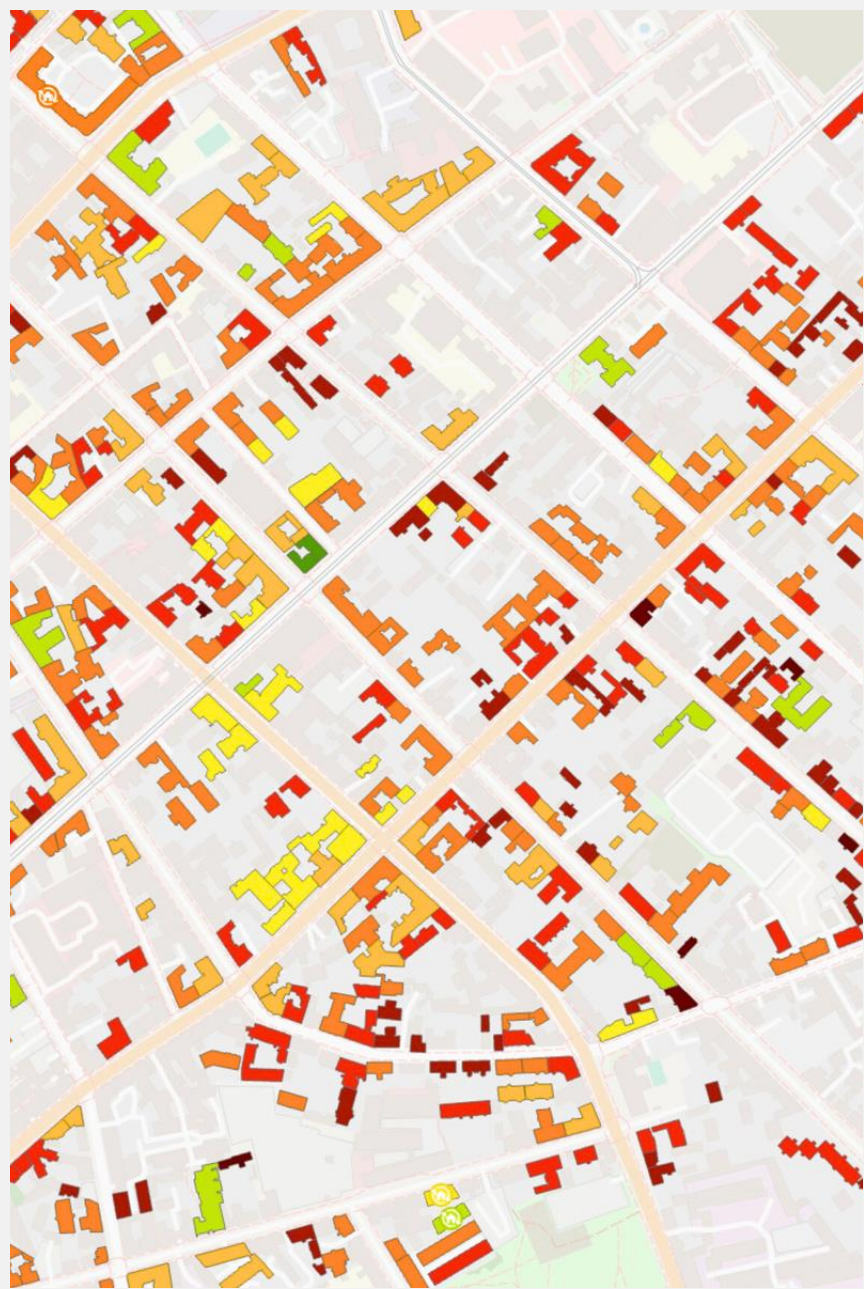


GEO RĪGA

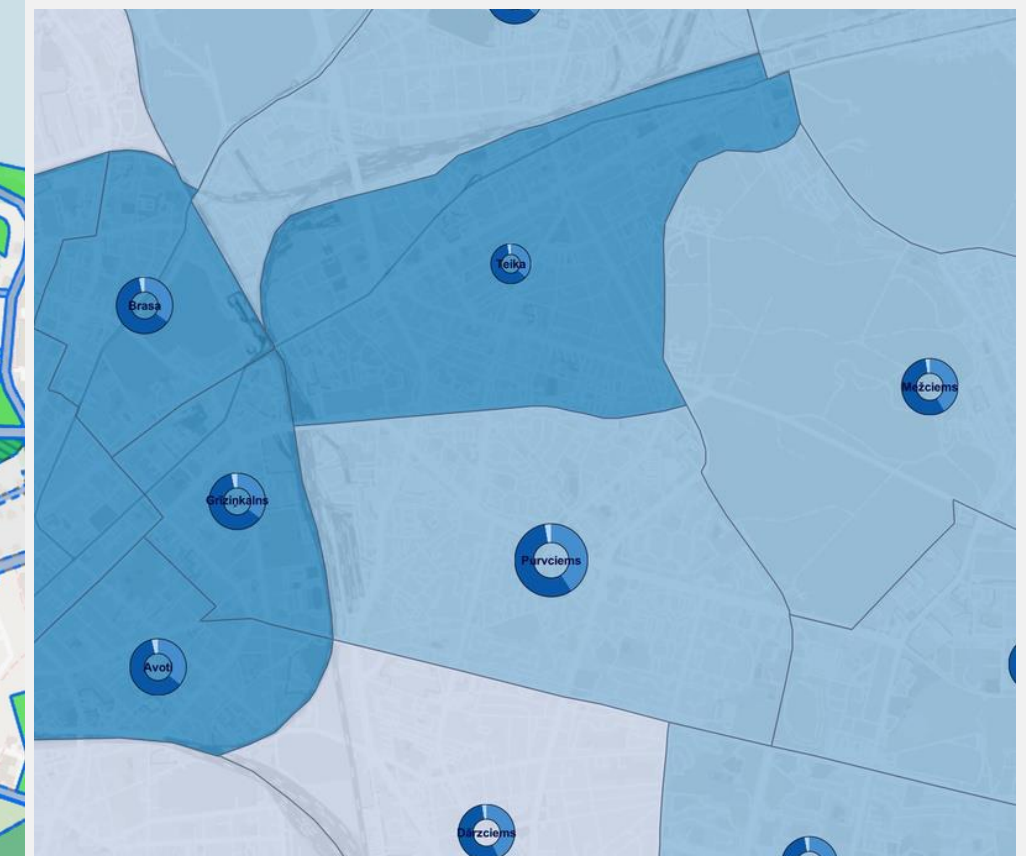
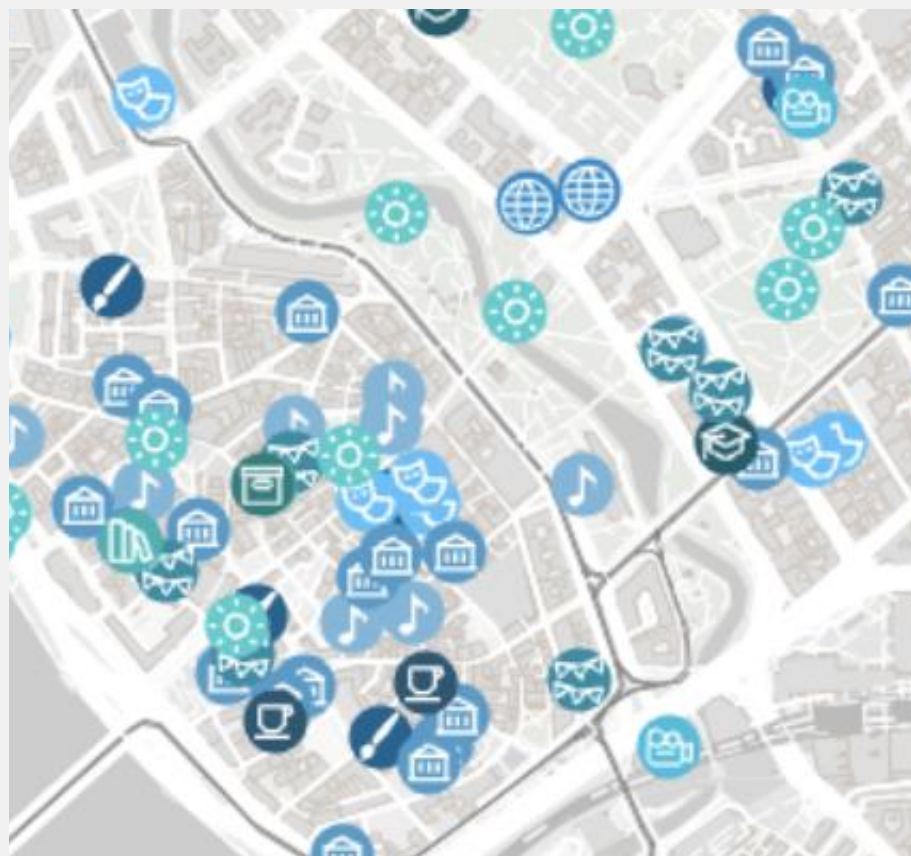
Public portal

- 2D and 3D maps with functional tools (12 thematic and 4 statistics thematic 2D and 7 3D maps);
- Open data – 30 datasets, 4,264 data downloads in 2024;
- Opportunity for residents to participate in urban planning processes, surveys;
- Handbook and webinar recordings





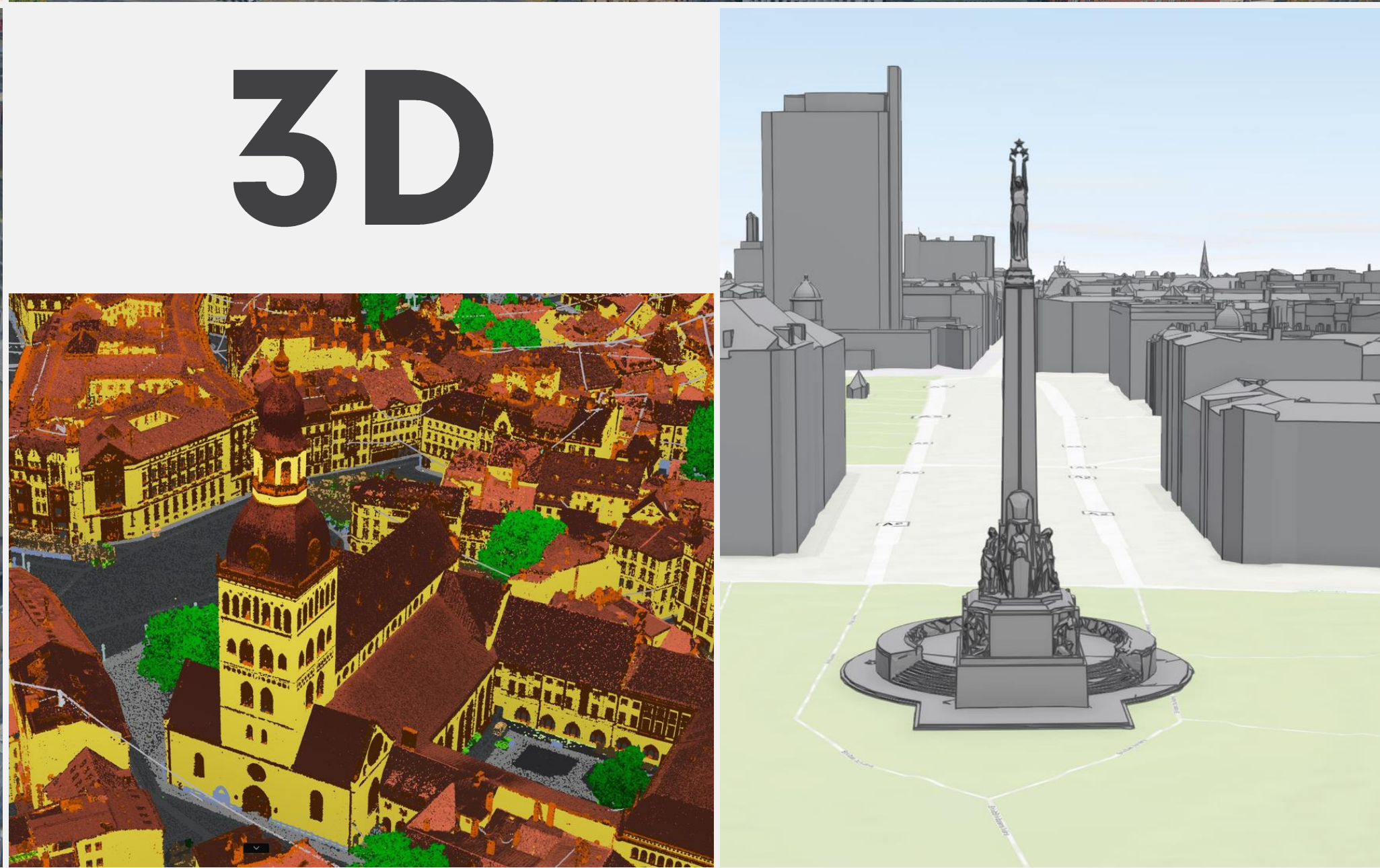
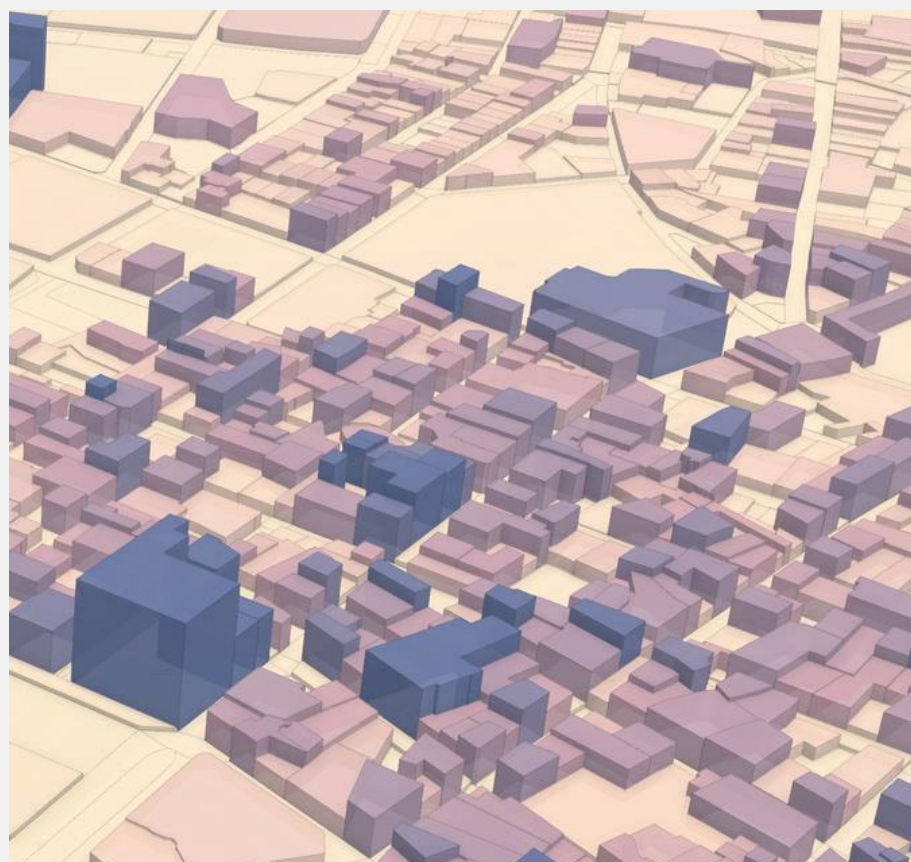
2D



SATSDIFACTION data

- First satellite data in GEO RĪGA
- Urban Environment Thematic Map





3D

Rīga LOD1

Open Data for the entire city of Rīga is available for **download**:

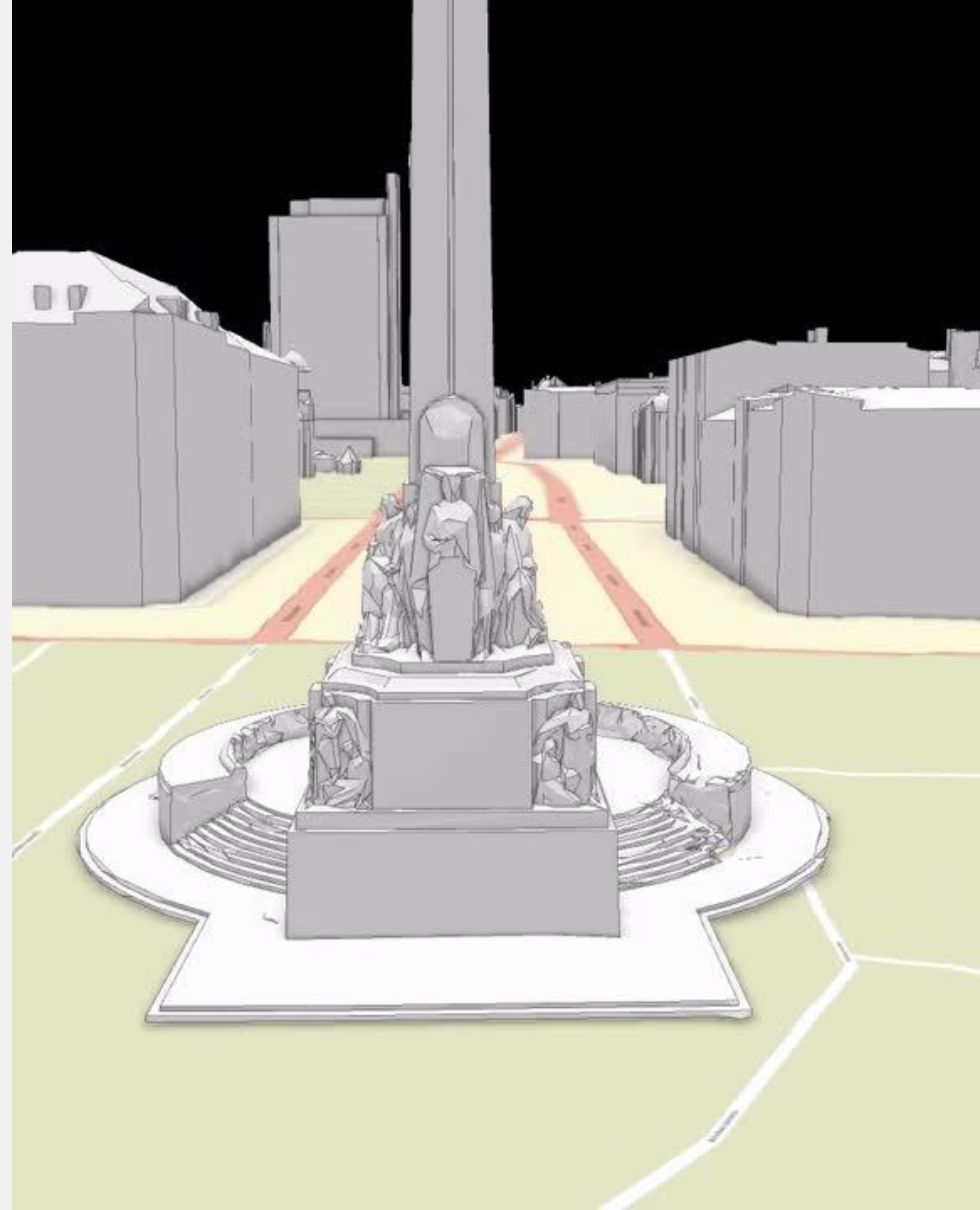
- GDB, SKP, OBJ, 3DS, GML
- Single file for the entire city
- Generated from LiDAR data collected in 2021
- Update coming this year

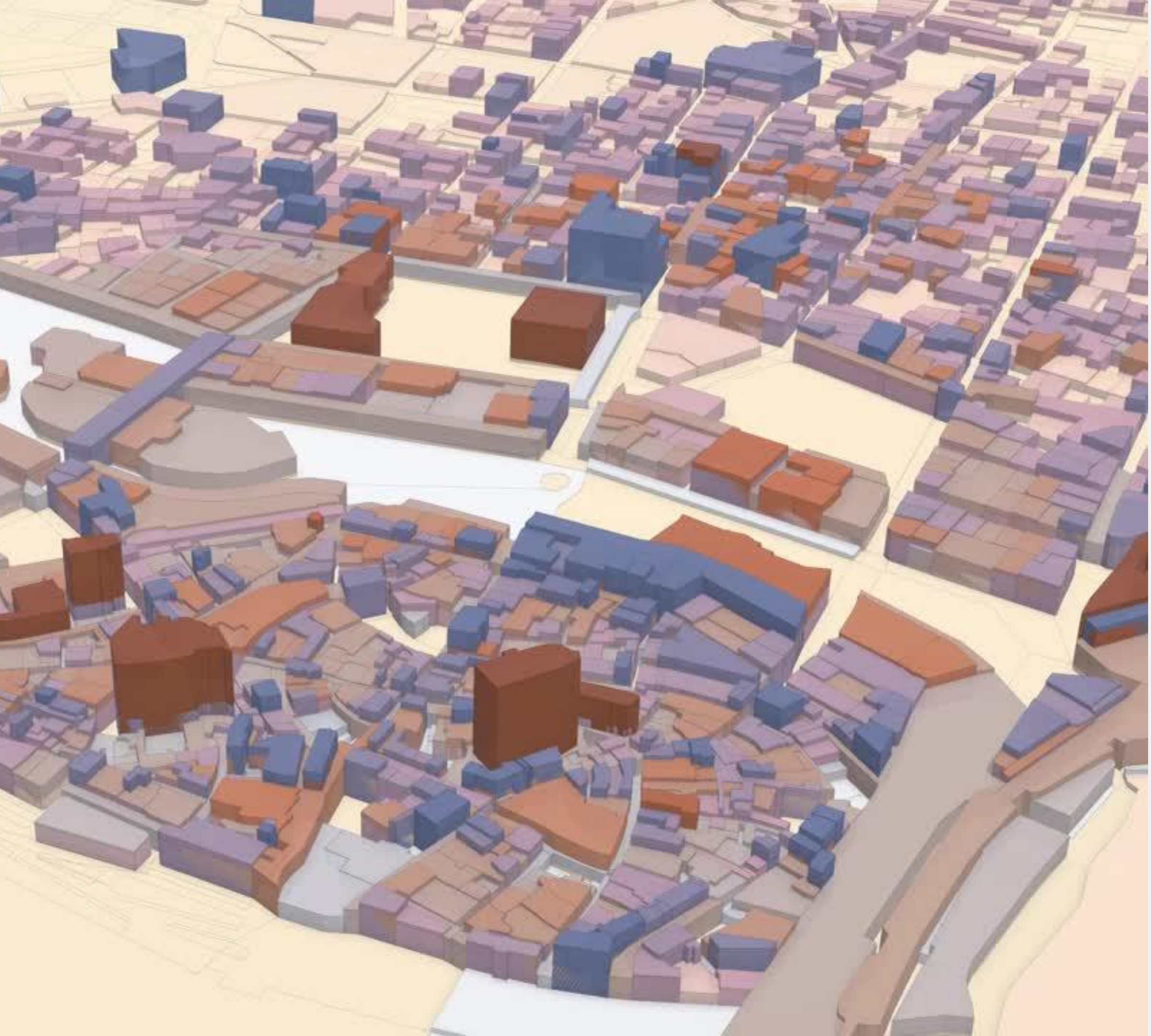


Rīga LOD2

Open Data for the entire city of Rīga is available for **download**:

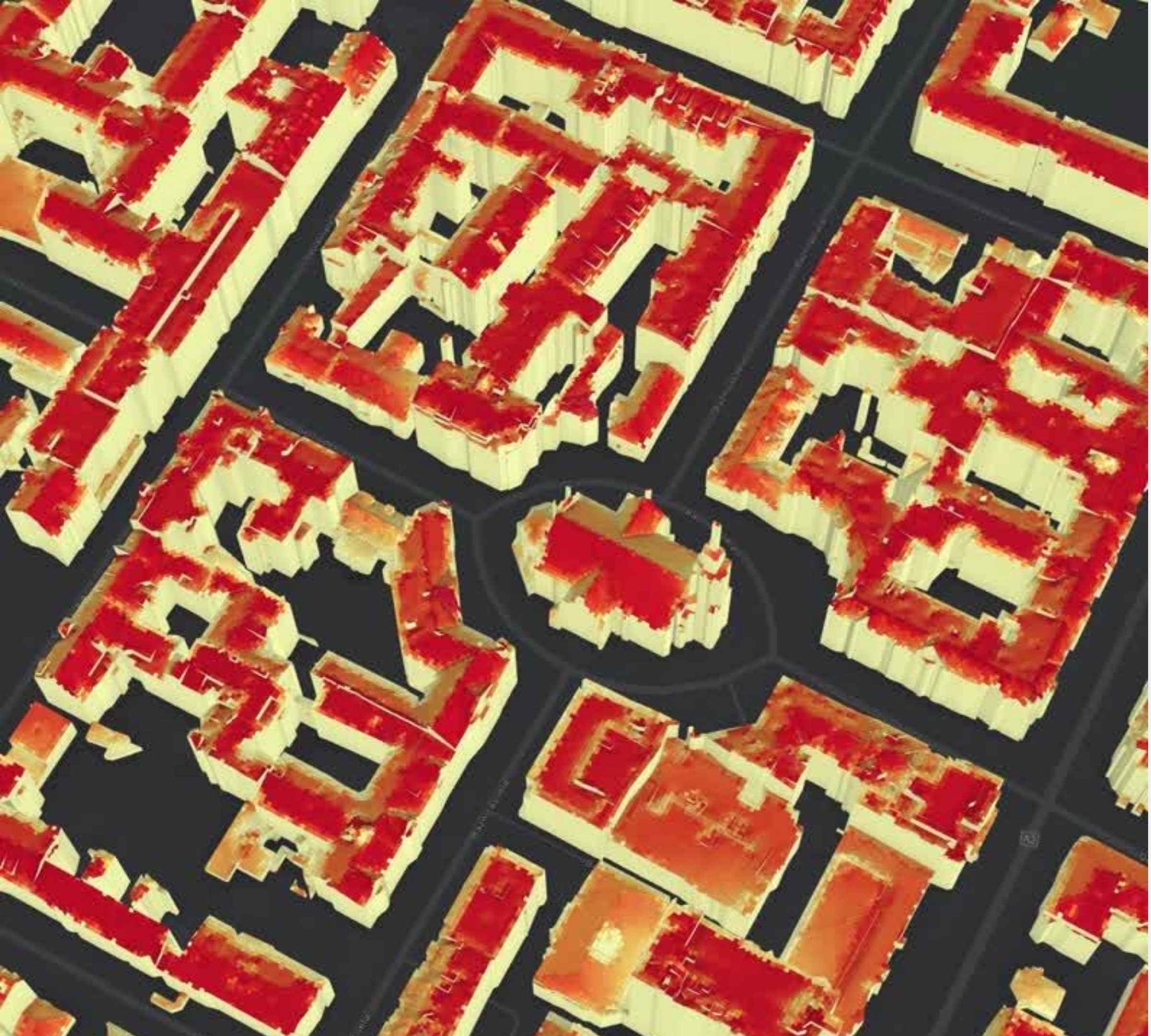
- GDB, SKP, OBJ, 3DS, GML
- Available broken down by neighborhoods
- Generated from LiDAR data collected between 2021 and 2022
- Update coming this year





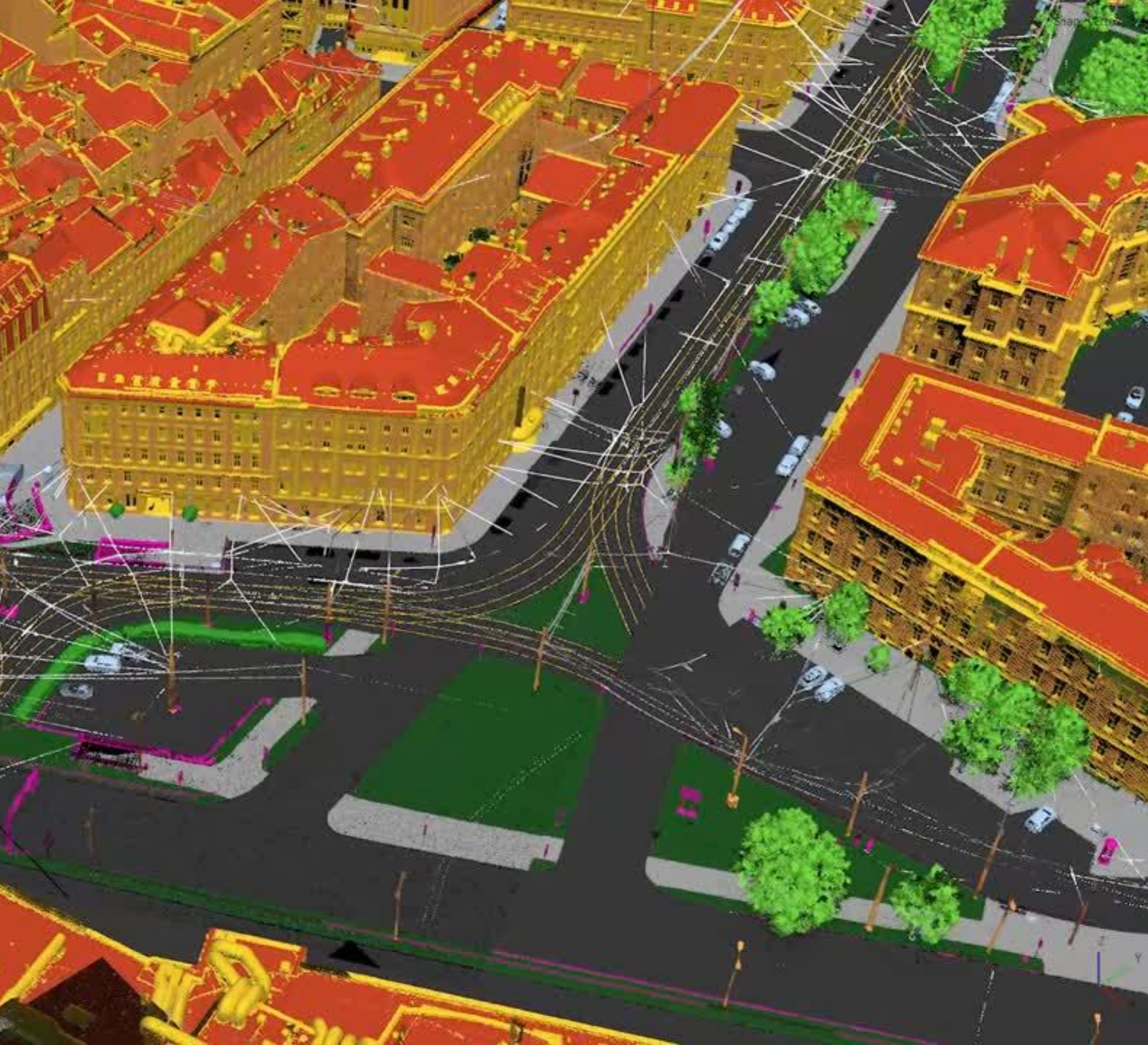
Building parameters

- Building density
- Building intensity
- Building height
- Regularly updated based on cadastral data

A 3D visualization of a city block, showing buildings and streets. The buildings are colored in shades of red and orange, indicating solar energy potential. The streets are dark grey. The visualization is generated from LiDAR data collected in 2021.

Solar energy potential

- Generated from LiDAR data collected in 2021
- Solar energy potential calculated in 1×1 m cells, showing annual potential in kWh/m²



LIDAR point cloud

- **Open Data** for selected areas of Rīga is available for **download** (LAS)
- The map allows toggling visibility across 17 data categories



Rīga reality model

- Selected areas of Rīga
- Soon will be Open Data available for download (DAE)
- Updated territories

City development projects

- BIM models are added regularly
- Combined with Reality model



WHAT'S NEXT?

- Elaboration of public portal
- 3D data updates, new products
- Field Work Apps
- Open Data
- Satellite data & services



THANK YOU!

georiga.lv

