GEOSPATIAL DATA

WE ARE EXPERTS IN GEODATA PRODUCTION

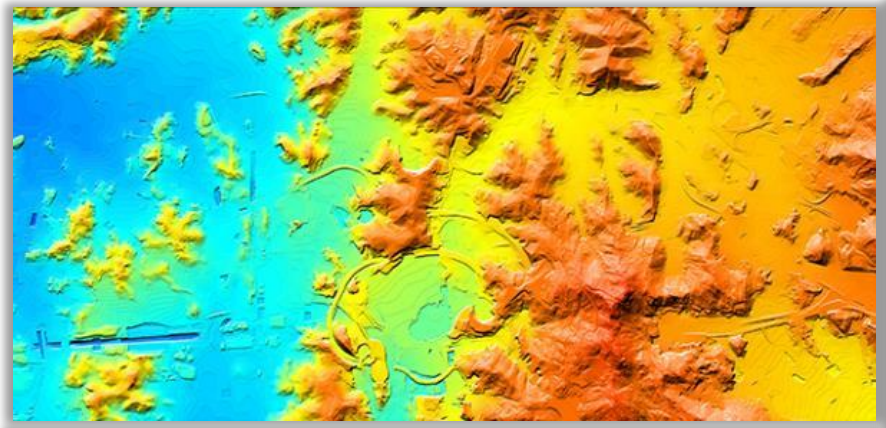
- Worldwide delivery
- High quality and accuracy
- Flexible price policy
- Long-years' experience
- Wide range of mapping products
- Huge off-the-shelf data catalogue

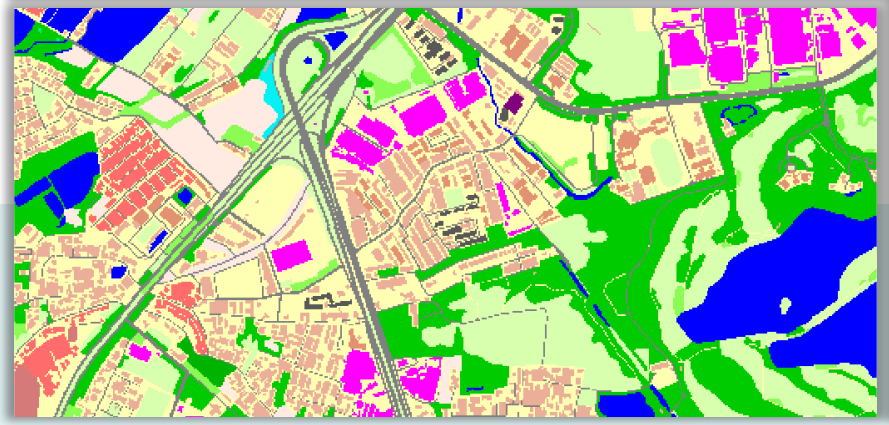
MARKETS WE SUPPORT

- Smart cities
- Telecom
- Architecture
- Transportation
- Solar energy development
- Environmental management

- We collect, process and deliver vector datasets of the most popular GIS formats
- Vector maps are customized according to customers' specific needs
- Our production capabilities are not limited to any region

VISICOM geospatial data provide a high level of detail in urban and rural areas that allows identify, visualize and analyze the changes in the natural and man-made environment

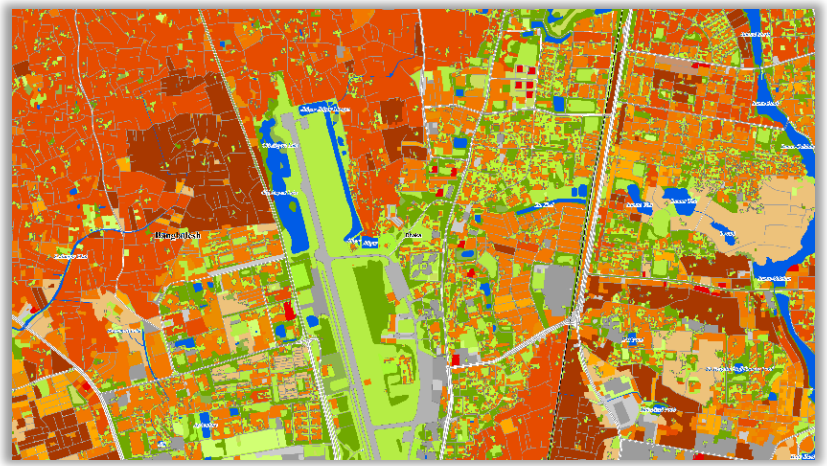


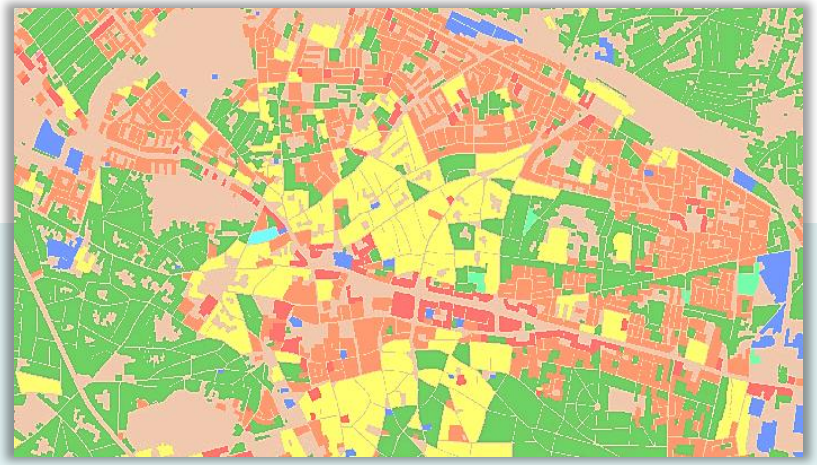


Our 2D and 3D maps grant you access to global geographic information, including terrain and landscape features, water bodies and vegetation, 3D man-made objects, detailed administrative boundaries, and population distribution information

DELIVERED GEODATA LAYERS

- ❑ Detailed Admin Boundaries
- ❑ Buildings footprints 2D&3D
- ❑ Road/street networks
- ❑ Railways
- ❑ Settlement blocks
- ❑ Terrain data
- ❑ Landmarks
- ❑ POIs
- ❑ Addresses
- ❑ Population data
- ❑ Postal codes polygons
- ❑ Hydrography
- ❑ Vegetation
- ❑ Engineering constructions





The Geodata is delivered in a format compatible with the most 3D application tools like Rhino, ArcGIS and CAD
All major GIS formats are supported

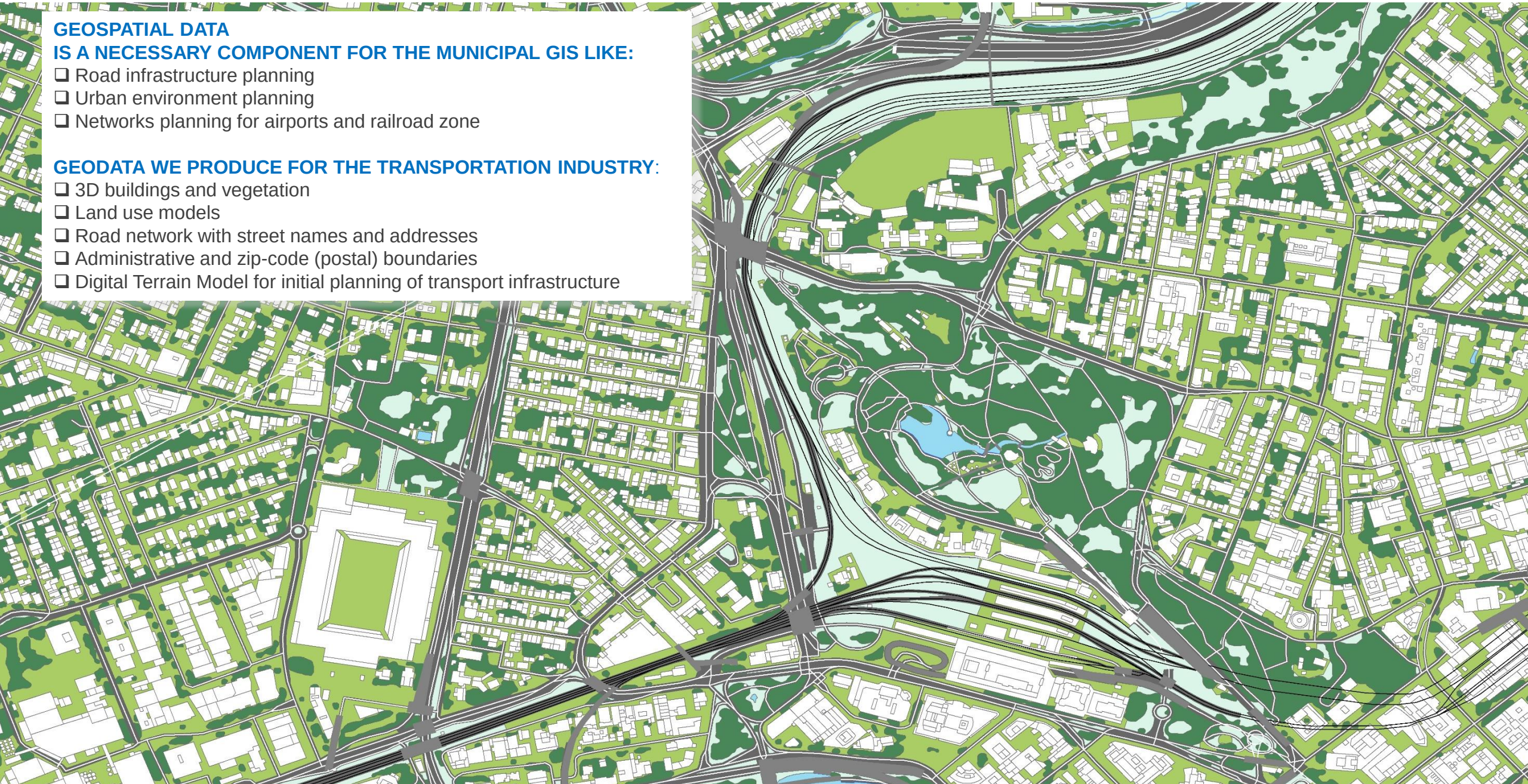
VISICOM®

GEOSPATIAL DATA
IS A NECESSARY COMPONENT FOR THE MUNICIPAL GIS LIKE:

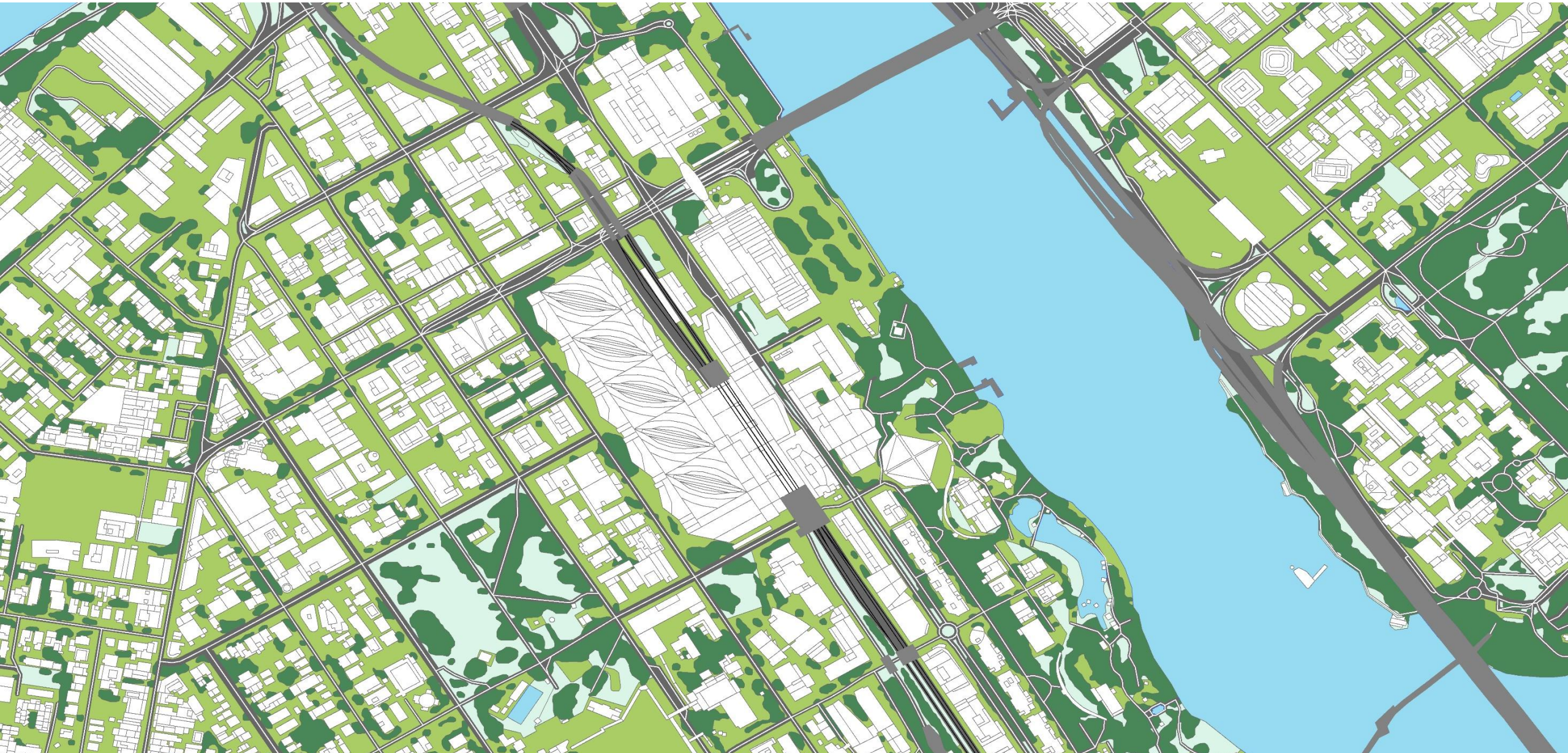
- ❑ Road infrastructure planning
- ❑ Urban environment planning
- ❑ Networks planning for airports and railroad zone

GEODATA WE PRODUCE FOR THE TRANSPORTATION INDUSTRY:

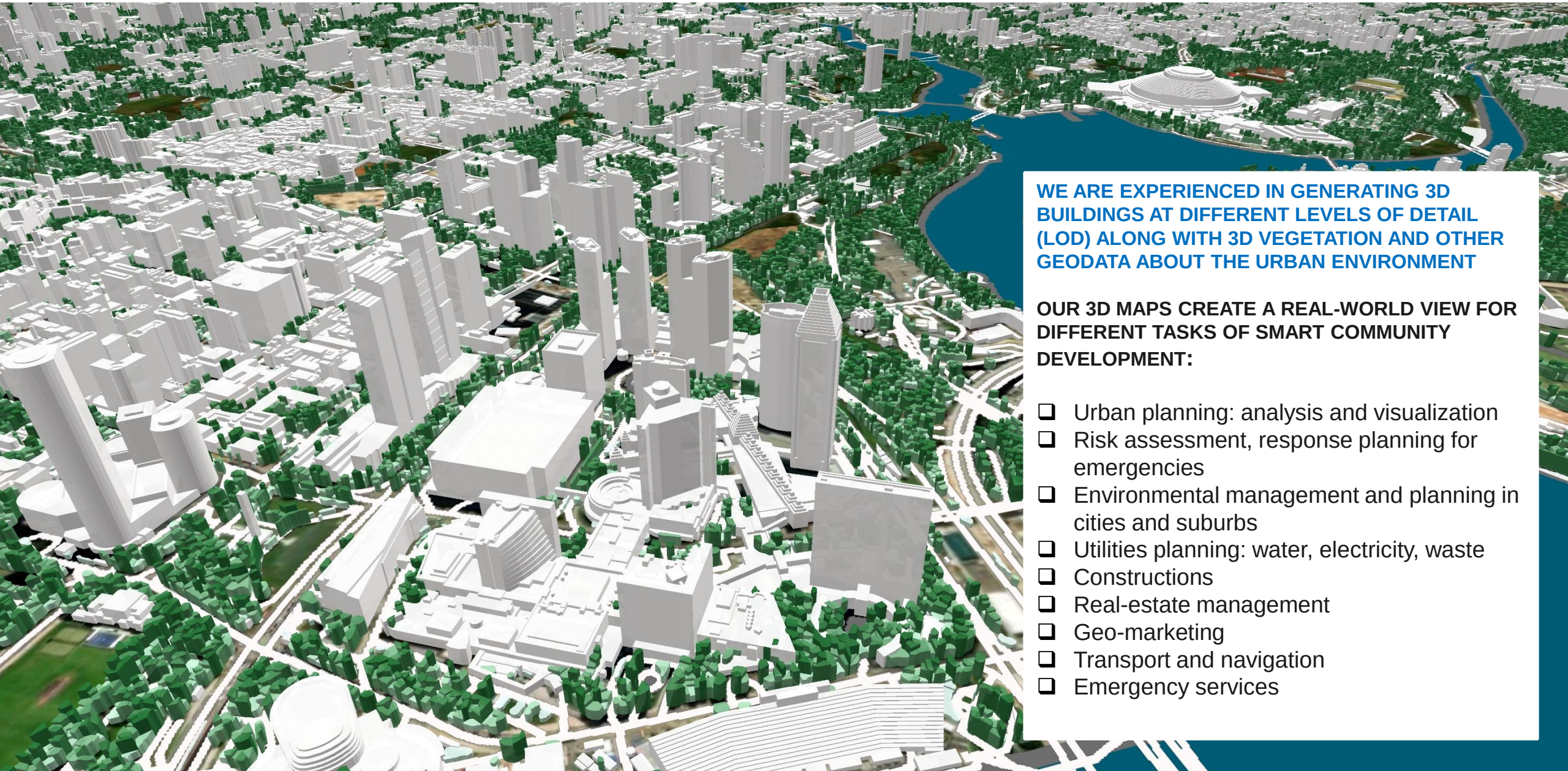
- ❑ 3D buildings and vegetation
- ❑ Land use models
- ❑ Road network with street names and addresses
- ❑ Administrative and zip-code (postal) boundaries
- ❑ Digital Terrain Model for initial planning of transport infrastructure



ONE OF OUR PROJECT- BRISBANE CITY MAP (AUSTRALIA)



3D MAPS IS THE FIRST STEP AND A BASIS FOR SMART COMMUNITY CONSTRUCTION



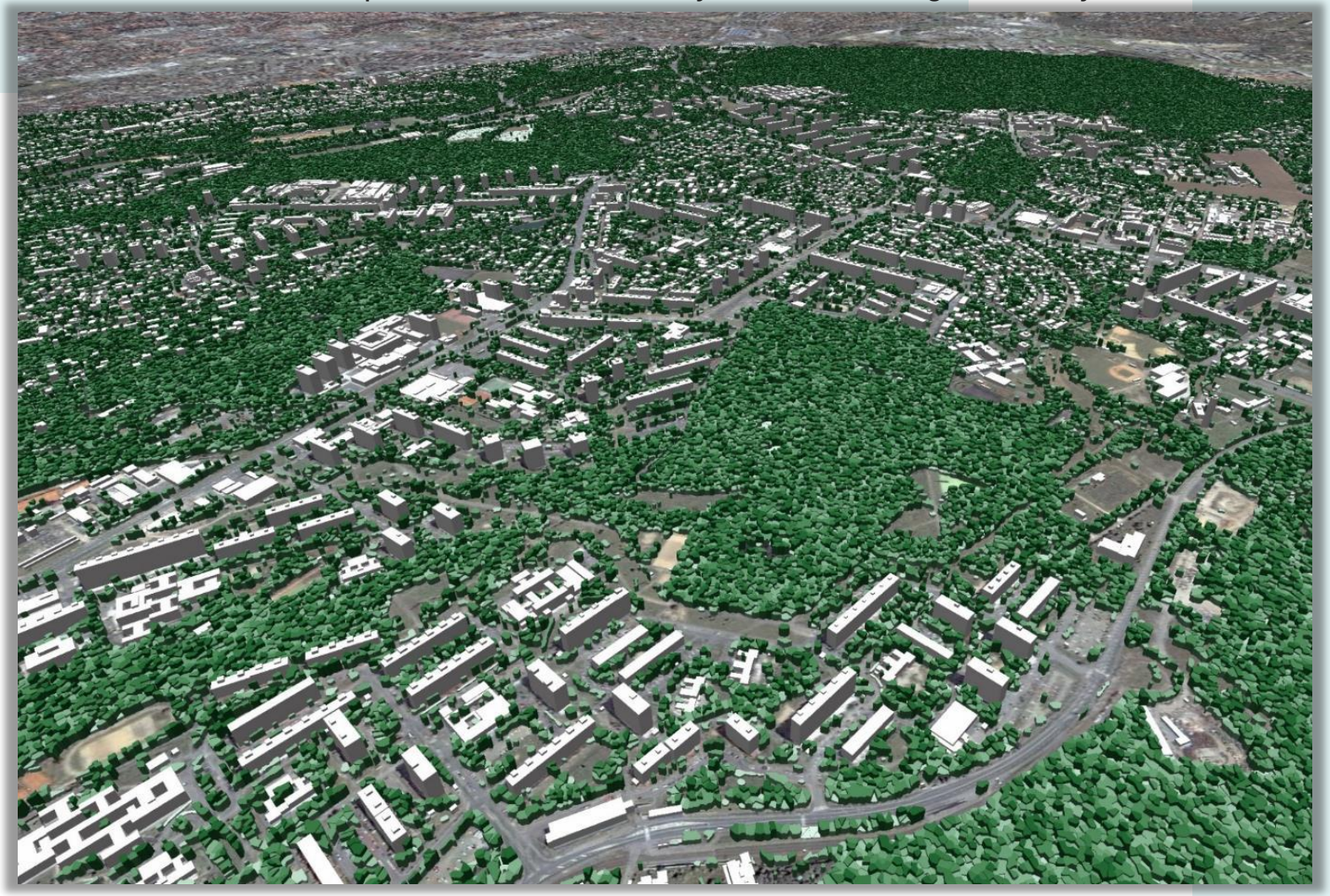
WE ARE EXPERIENCED IN GENERATING 3D BUILDINGS AT DIFFERENT LEVELS OF DETAIL (LOD) ALONG WITH 3D VEGETATION AND OTHER GEODATA ABOUT THE URBAN ENVIRONMENT

OUR 3D MAPS CREATE A REAL-WORLD VIEW FOR DIFFERENT TASKS OF SMART COMMUNITY DEVELOPMENT:

- ❑ Urban planning: analysis and visualization
- ❑ Risk assessment, response planning for emergencies
- ❑ Environmental management and planning in cities and suburbs
- ❑ Utilities planning: water, electricity, waste
- ❑ Constructions
- ❑ Real-estate management
- ❑ Geo-marketing
- ❑ Transport and navigation
- ❑ Emergency services

BUILDING FOOTPRINTS AND TREE POLYGONS EXTRACTION USING MACHINE LEARNING ALGORITHMS

Building shapes and tree polygons are created using an automated production process of object recognition from high-resolution multispectral satellite images. Our Machine Learning methods developed based on Convolutional Neural Networks and the Deep Learning Techniques allow to extract 3D and 2D shapes for the entire country fast and at a high accuracy level



BUILDINGS LOD1/LOD2

- ❑ For core cities
- ❑ For large urban and suburban areas
- ❑ For countrywide

PRODUCT FEATURES

- ❑ 99% of buildings > 25 sq.m matched automatically by the machine learning algorithm
- ❑ Completeness (achieved 100% coverage due to manual post-processing and validation)
- ❑ 3m SE90 accuracy
- ❑ Rapid production of countrywide building footprints dataset
- ❑ Available worldwide
- ❑ Based on up-to-date satellite images of 0,3–0,5m resolution

VEGETATION FEATURES

- ❑ The vegetation is diverse in nature and can be presented differently in the satellite image depending on various types, colors, heights, and seasons
- ❑ Our experts accomplished the training of neural network models using the training set comprised of 30 thousand objects of various vegetation patterns worldwide. This made it possible to achieve a high level of accuracy - 95-98%

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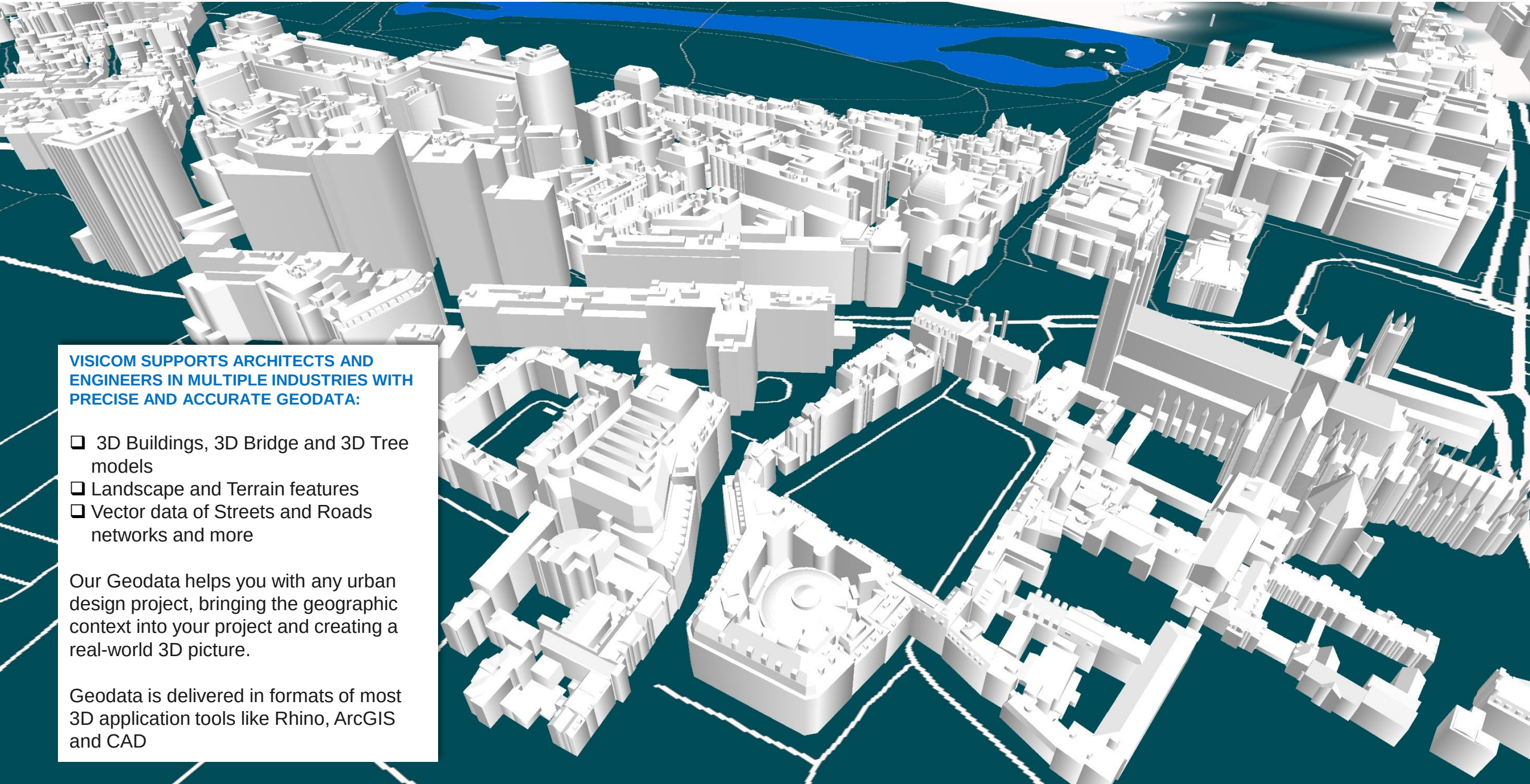


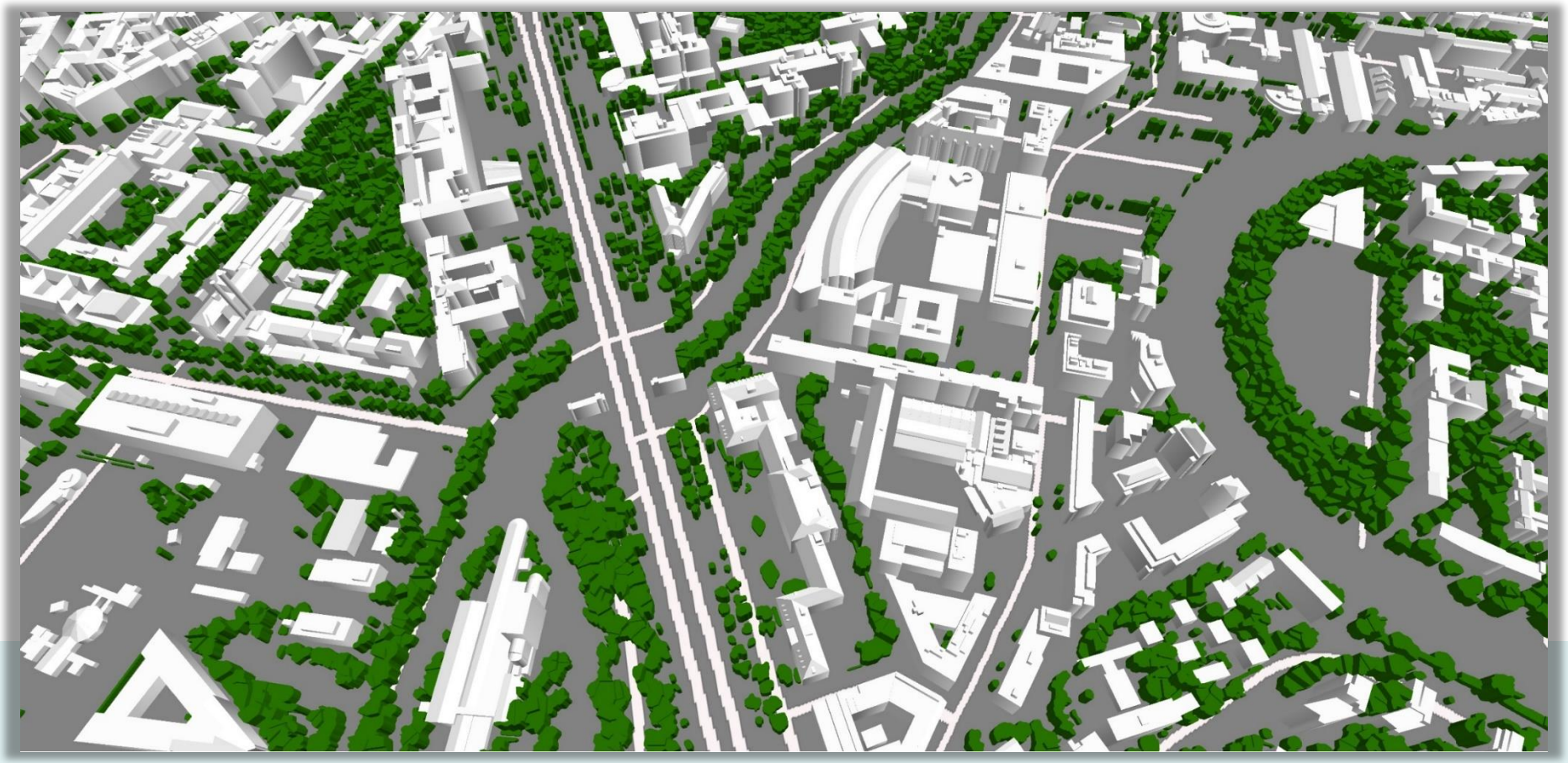
VISICOM SUPPORTS ARCHITECTS AND ENGINEERS IN MULTIPLE INDUSTRIES WITH PRECISE AND ACCURATE GEODATA:

- ❑ 3D Buildings, 3D Bridge and 3D Tree models
- ❑ Landscape and Terrain features
- ❑ Vector data of Streets and Roads networks and more

Our Geodata helps you with any urban design project, bringing the geographic context into your project and creating a real-world 3D picture.

Geodata is delivered in formats of most 3D application tools like Rhino, ArcGIS and CAD

DIGITAL MAPS FOR SOLAR ENERGY



LOD2 3D buildings with sloping roof elements along with 3D vegetation are key initial sources for evaluating solar resource availability and running solar energy simulations

High-accuracy 3D datasets provide high solar project value and increase its performance. Therefore, data details, accuracy, and relevance are critical parameters for solar resource assessment and modeling

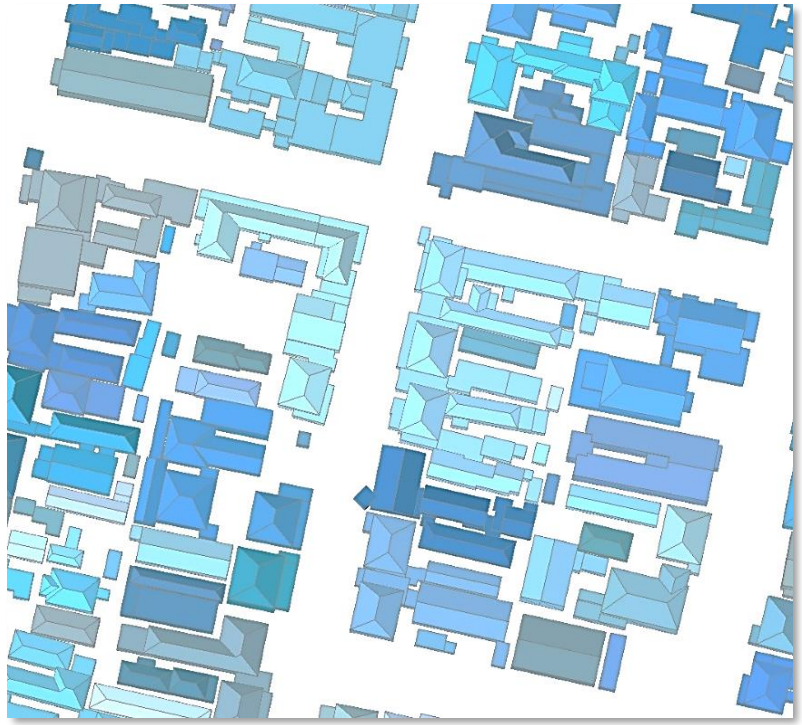
DIGITAL MAPS FOR SOLAR ENERGY

DELIVERED DATA LAYERS

- Digital Terrain Model
- Digital Surface Model
- 3D Buildings LOD 2
- 3D Vegetation crowns
- Orhtorectified imagery

The assigned roof parameters

- Azimuth
- Tilt angle
- Area of flat parts
- Roof height
- Roof ID
- AGL/AMSL

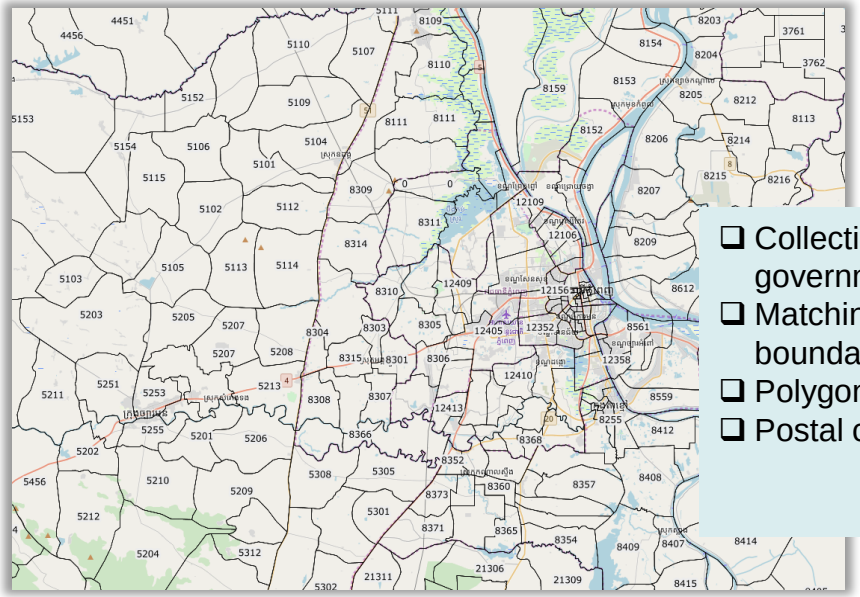


The roof parameters are calculated for each element separately, creating the background for producing solar rooftop maps (solar cadaster)

The high accuracy of the building elements' footprints is tailored explicitly to the estimation and calculation of the solar energy potential for each roof

OTHER GEODATA LAYERS WE DELIVER

POST CODES POLYGONS



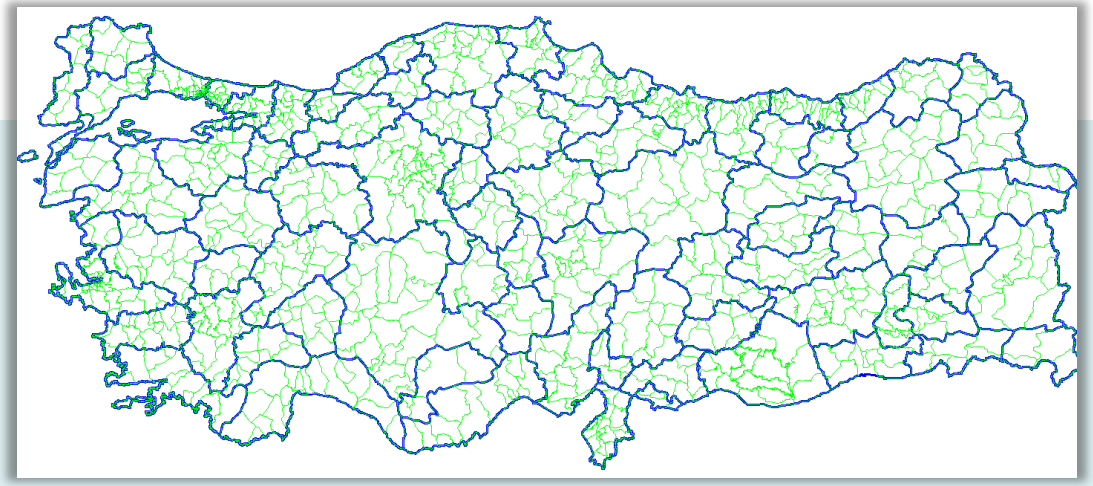
- ❑ Collection from governmental sources
- ❑ Matching with administrative boundaries
- ❑ Polygons geocoding
- ❑ Postal code applying

ADDRESSES DATA BASE – GEOCODED POINTS

ADDRESS ATTRIBUTES

- ❑ Unique building ID
- ❑ Country code
- ❑ Name od admin unit
- ❑ Type of street
- ❑ Name of street
- ❑ Zip/postal code
- ❑ House number

DETAILED ADMIN BOUNDARIES



ADMIN LEVELS:

- ❑ State
- ❑ Provinces
- ❑ Districts
- ❑ Municipalities
- ❑ Settlements etc.

GEODATA BASES OF WATER OBJECTS FOR THE NATIONWIDE COVERAGE

The National coverage of water objects realized by VISICOM is a high-precision vector map generated by leveraging our AI-based algorithms developed for high-resolution satellite images processing

Depending on the project demands, the hydrographic objects are divided into groups and classes, by type of water (salt, fresh, etc.) with attributes of:

- Length of coastline
- Area of enclosed water bodies
- Name of the hydrographic objects in English and local language

PREVIEW OF WATER MAP OF GREECE

The water objects are categorized into 31 different classes:

- oceans - seas - bays - estuaries - lakes - rivers - streams - reservoirs - springs - waterfalls - rapids etc.

The dataset serves as the foundation for many land use and city planning applications, telecom as well as for a diverse range of environmental management tasks, namely:

- Climate change mitigation
- Flood mapping
- Infrastructure deployment

- 131,957 sq.km across the country
- 77,000 water objects featuring individual names in English and Greek

VERTICAL MARKETS WE SUPPORT






- SMART CITIES AND IoT
- SOLAR ENERGY
- ENVIRONMENTAL MANAGEMENT
- ARCHITECTURE
- TRANSPORTATION

Detailed maps are an essential and mandatory background for spatial analysis.
Precise and up-to-date geodata ensure the relevant information to estimate all the possible outcomes and make a better decision

With our many years of experience in mapping products production, we provide our customers with wide range of high-quality geodata fitted to their needs and budget

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