

BIRGIT Data Sources
April 2025



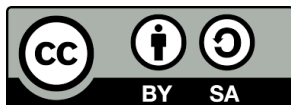
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3D Data Sources

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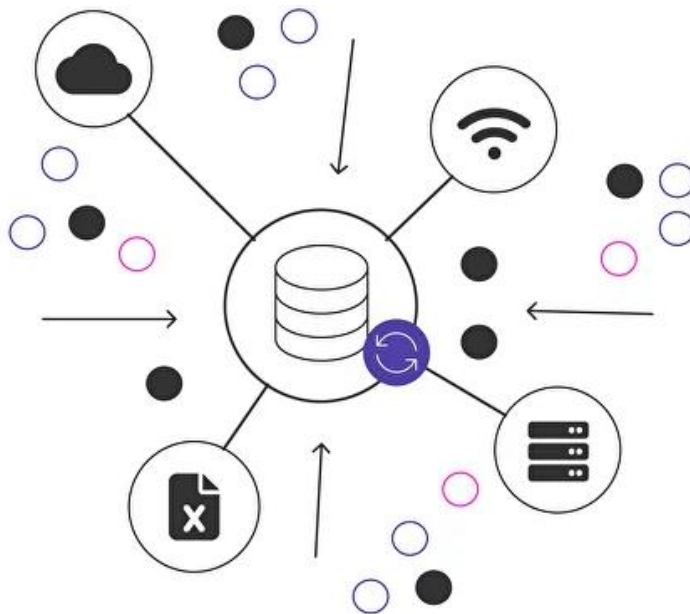
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Learning outcomes

- At the end of this module, the participant is expected to be able to
 - Identify and describe available 3D data sources that can be used for GIS and BIM



- **Data source** refers to the physical or digital location where data can be stored as a data table, data object, or another storage format (<https://www.alphaservesp.com/blog/what-is-a-data-source-definitions-types-examples#types>)

- A **data source** is the location where data that is being used originates from (<https://www.talend.com/resources/data-source/>)
- It may be the initial location where data is produced or where physical information is first digitized
- A data source is a place where the data is modeled, that is organised in a logical structure. A data model is a set of fundamental rules of how data is organized inside a data source
- Some examples: a database, a flat file, live measurements from physical devices, scraped web data, etc.
- Classification into two broad categories: machine data sources and file date sources

- The machine data source is created on the client machine, be it a computer, a phone, an Internet of things, or another device, and cannot be easily shared
- File Data Sources are not assigned to particular machines, applications, systems, or users. They can be shared between devices
- Data sources are used in a variety of ways. Data can be transported thanks to diverse network protocols, such as the well-known File Transfer Protocol (FTP) and HyperText Transfer Protocol (HTTP), or any of the myriad Application Programming Interfaces (APIs) provided by websites, networked applications, and other services

- Data sources are necessary for organizations to collect, store, and organize their data to the tools or other destinations they are willing to use it
- Data sources serve as links between different applications, tools, and systems and allow migrating data from one location to another or from one format to another
- Data sources provide a secure, reliable, and efficient way to access data
- Data Source Connectors are used to facilitate the flow of data between applications, databases, analytics tools, etc. It makes it easier for organizations to access and analyze their data quickly and efficiently

- Metadata - data about data

Examples of Metadata

Identification

Title? Area covered? Themes? Currentness? Restrictions?

Data Quality

Accuracy? Completeness? Logical Consistency? Lineage?

Spatial Data Organization

Indirect? Vector? Raster? Type of elements? Number?

Spatial Reference

Projection? Grid system? Datum? Coordinate system?

Entity and Attribute Information

Features? Attributes? Attribute values?

Distribution

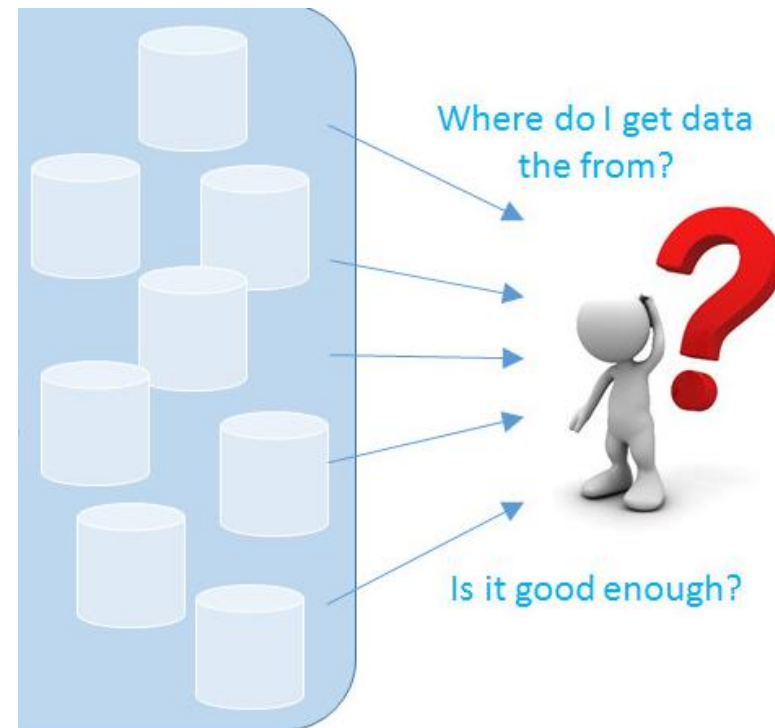
Distributor? Formats? Media? Online? Price?

Metadata Reference

Metadata currentness? Responsible party?



- Classification into authoritative and non-authoritative data sources
- Authoritative: Governmental bodies, Public sector
- Non-Authoritative: Private Sector, Volunteered data, Citizen Science
- Open data



- Authoritative Source: A managed repository of valid or trusted data that is recognized by an appropriate set of governance entities and supports the governance entity's business environment
- Each governance entity establishes its criteria in the following areas, which may vary per business environment, subset of operations within the business environment, and by Authoritative Source.
 - Data that needs to be collected
 - Data that is collected
 - Data quality (accuracy, reliability, freshness, ...)
 - Data usage (aka what data can be used for)
 - ...

- Authoritative Source: Examples
 - The official portal for European data (<https://data.europa.eu/>)

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data.europa.eu - The official portal for European data

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Datasets found (1 548 689)

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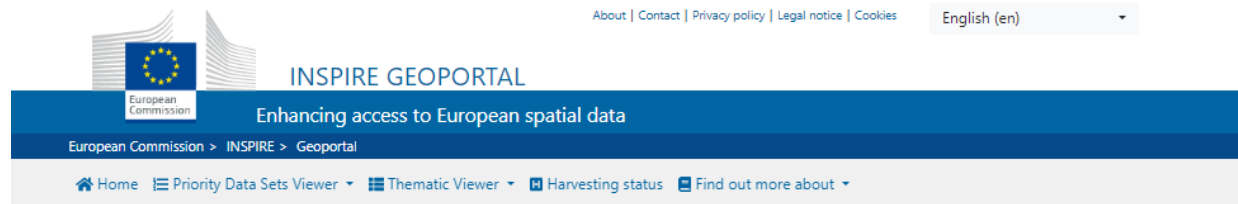
Relevance

Official electronic address (e-address)

Information on activated, deactivated accounts and cancelled e-addresses of the Official Electronic Address.
Data is updated once an hour.

CSV

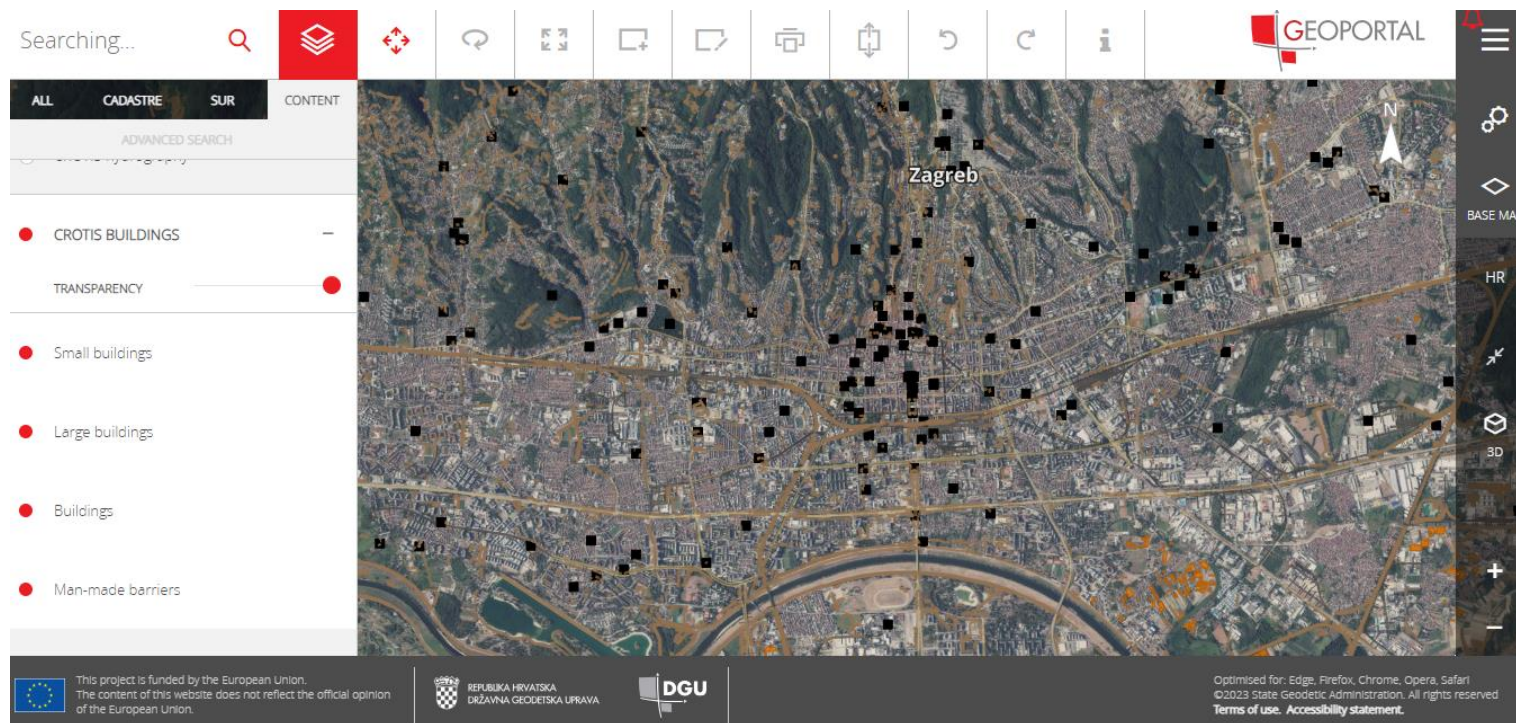
- Authoritative Source: Examples
 - EU - INSPIRE Geoportal (<https://inspire-geoportal.ec.europa.eu/>)



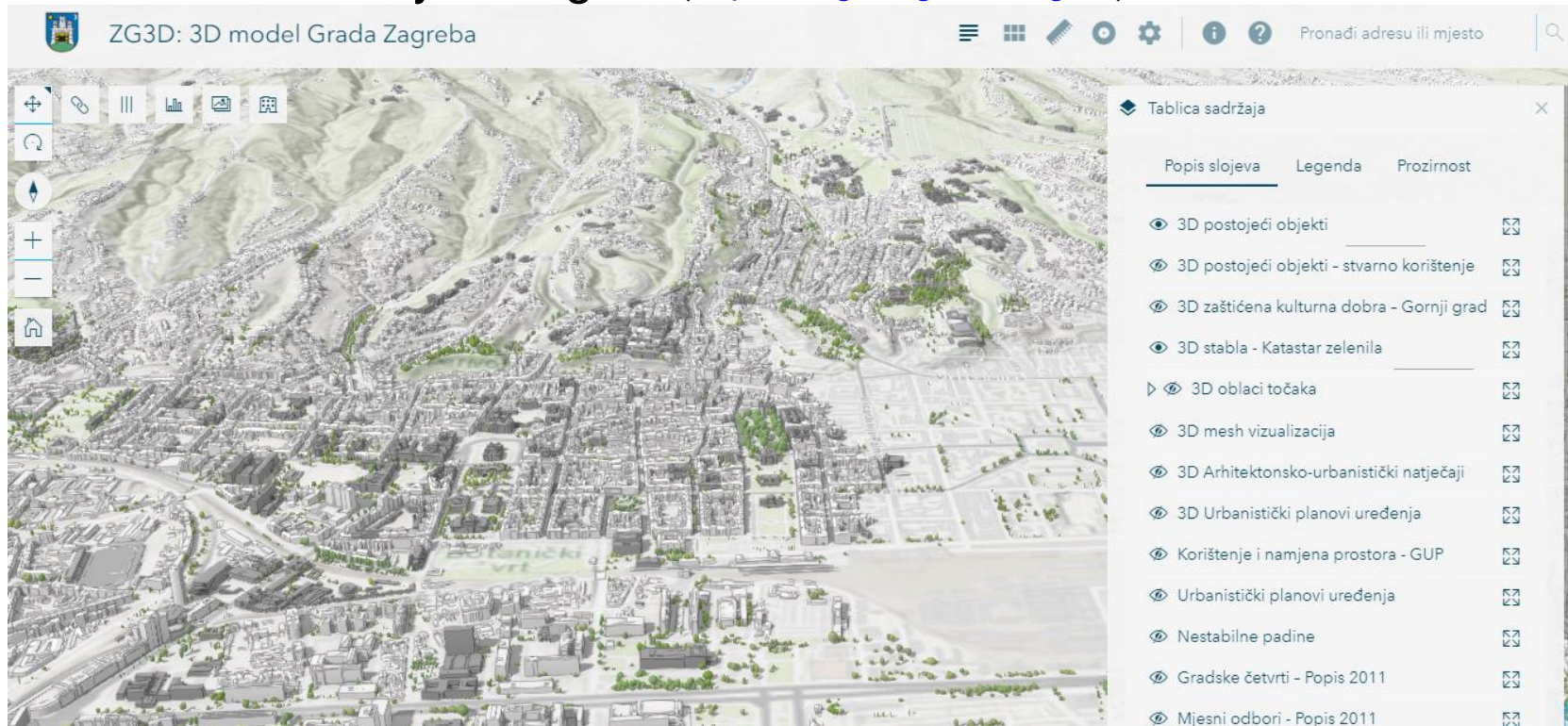
INSPIRE Data Sets - EU & EFTA Country overview



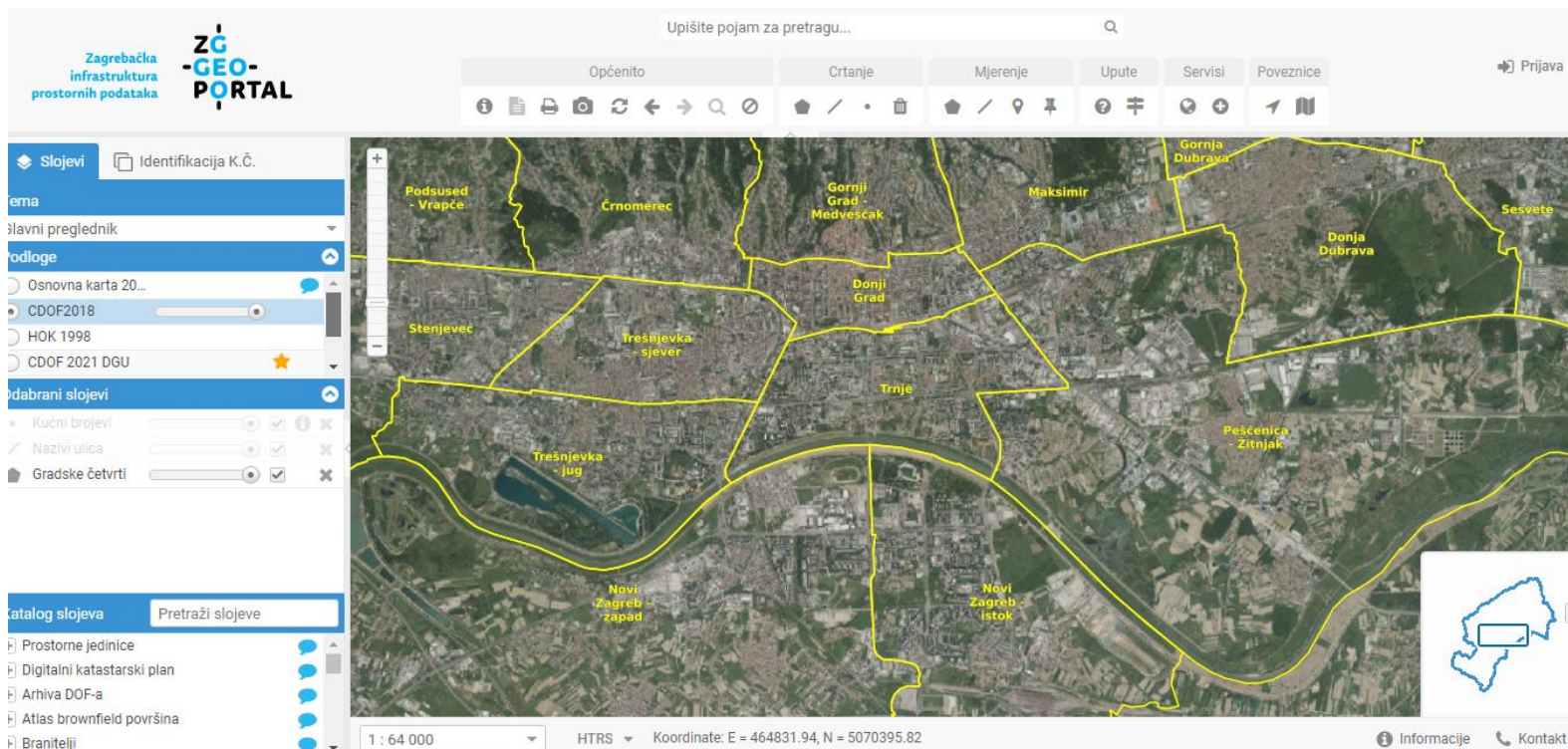
- Authoritative Source: Examples
 - Croatia - State geodetic administration (<https://geoportal.dgu.hr/>)



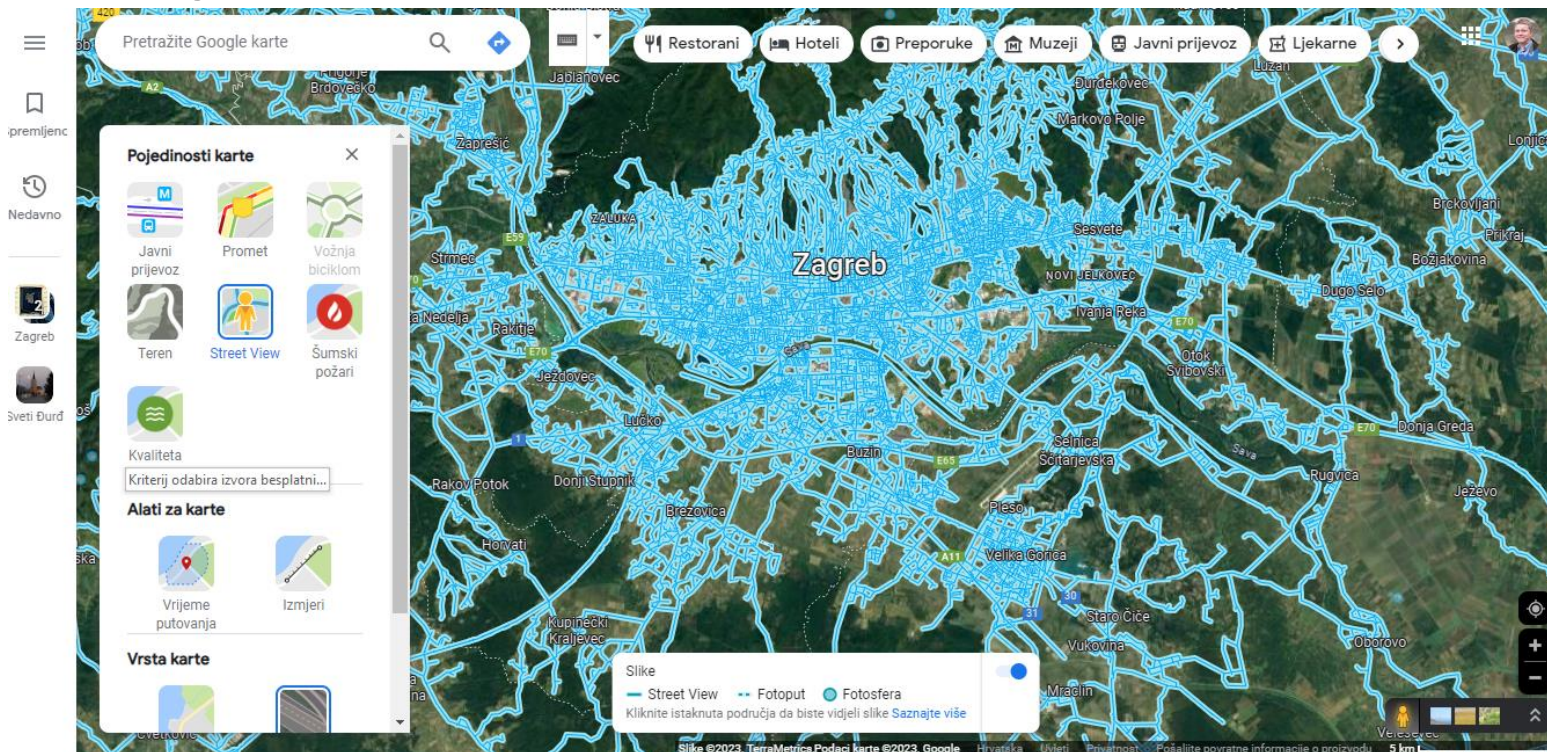
- Authoritative Source: Examples
 - Croatia - City of Zagreb (<https://zagreb.gdi.net/zg3d/>)



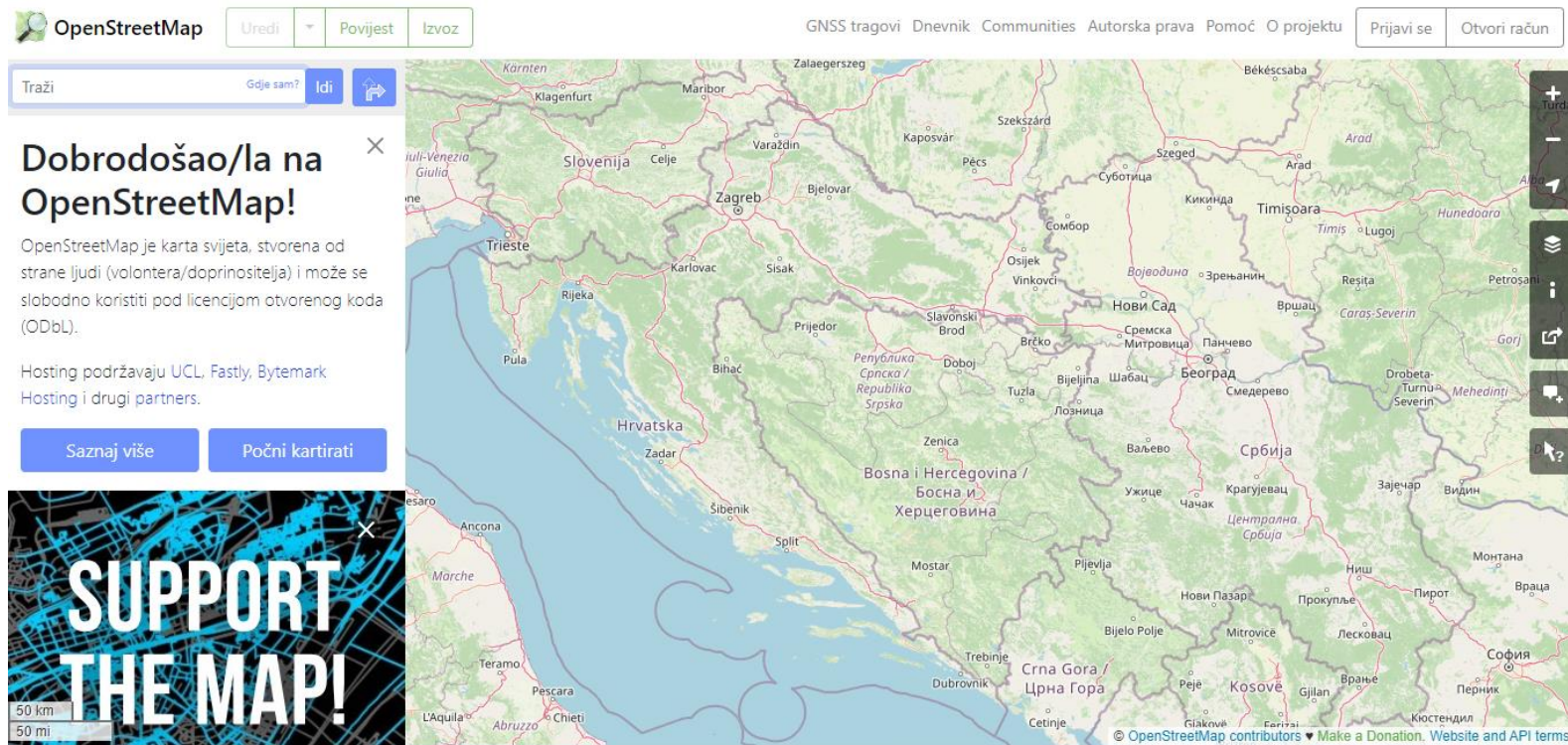
- Authoritative Source: Examples
 - Croatia - City of Zagreb (<https://geoportal.zagreb.hr/Karta>)



- Non-Authoritative Source: Examples
 - Google Maps (<https://www.google.com/maps/>)



- Non-Authoritative Source: Examples
 - OpenStreetMap (<https://www.openstreetmap.org/>)



- Non-Authoritative Source: Examples
 - Open Buildings (<https://sites.research.google/open-buildings/>)


Open Buildings

A dataset of building footprints to support social good applications.

Building footprints are useful for a range of important applications, from population estimation, urban planning and humanitarian response, to environmental and climate science. This large-scale open dataset contains the outlines of buildings derived from high-resolution satellite imagery in order to support these types of uses. The project is based in Ghana, with an initial focus on the continent of Africa and new updates on South Asia, South-East Asia, Latin America and the Caribbean.

[Explore](#)[FAQ](#)[Data format](#)[Download](#)

- Non-Authoritative Source: Examples
 - Architecture, Engineering and Construction (AEC) Open Data directory (https://wiki.osarch.org/index.php?title=AEC_Open_Data_directory/)

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OSArch navigation

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
Featured pages

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Featured software

- BlenderBIM
- FreeCAD
- Sverchok
- Speckle
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- Ladybug Tools
- OpenFOAM
- OpenProject

AEC Open Data directory



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On this page you can find resources for datasets, sample files, testing files and other types of [Open Data](#) useful for AEC projects & software development & testing.

On the [AEC Open Data Standards Directory](#) page are data resources publicly available which use these data formats.

We are collecting a selection of high quality BIM files in multiple format in the [OSArch Example Files Collection](#). Feel free to suggest files in the [sample files for openbim in multiple formats](#) forum thread.

Open Data directories

◆	Name	Description	◆	License	◆
	DURAARK 	DURAARK - Durable Architectural Knowledge worked on developing methods and tools for the Long-Term Preservation (LTP) of architectural knowledge, including approaches to enrich Building Information Models with "as built" information from scans; semantically enrich building models with additional data sets and preserve 3D models for future reuse. Files from the project can be found by searching the tib.eu website (https://www.tib.eu/en/search?tx_tibsearch_search[query]=duraark).		License varies	

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-CC BY-NC (Attribution-NonCommercial)



-CC0 (Creative Commons Zero) and Public Domain Dedication and License (PDDL)

-ODbL (The Open Database License)



Some logo's and links to web site and social media here

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