



REPUBLIC OF ESTONIA
LAND BOARD



Delivering 3D open data for Estonia

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Estonian Land Board

7th April 2022



Open data

Data ▼

Studies ▼

data.europa academy

News ▼

Contact

7 February 2022
Launch
of competition31 March 2022
Deadline to
submit ideas25 April 2022
Preselected
teams
announced26 June 2022
Deadline
to submit
full proposals15 July 2022
Finalist teams
announced20 October 2022
Competition
finals

#eudatathon

op.europa.eu/eudatathon

20 OCTOBER 2022

EUDATATHON'22



The official portal for European data

173

Catalogues

36

Countries

1 438 102

Datasets

Trending datasets ⓘ

- Consolidated list of persons, groups and entities subject to EU financial sanctions
- Taxpayer Identification Number (TIN)
- The European Commission's Oil Bulletin
- Number of COVID-19 people killed by age
- CORDIS - EU research projects under Horizon 2020 (2014-2020)

Search datasets


Agriculture, Fisheries,
Forestry & Foods

Economy & Finance

Education, Culture &
Sport

Energy



Environment

Government & Public
Sector

Health



International Issues

Justice, Legal System
& Public Safety

Population & Society



Regions & Cities



Science & Technology



Transport

> DATA CATALOGUES

> ALL DATASETS

> EU INSTITUTIONS DATASETS

Open data news

Join the data.europa.eu webinar on real-time data
04/04/2022

The webinar will focus on the latest critical
source of information
Read more...

Studies

Report 19: Understanding data supply
and demand on the European Data
Portal
17/03/2021

Open Data Best Practices in Europe:
Estonia, Slovenia and Ukraine
25/03/2022

- Access, use, share
- Open Data Directive
- <https://data.europa.eu/>



Estonian open data portal

Open data is for everyone to use, reuse and share, it can be used to launch commercial and non-profit ventures, conduct research and to do data-driven decisions.

Open data portal gives everyone the opportunity to consume and visualize open data, it includes usage stories that are based on open data.

[View datasets](#)

860 datasets 2212 publishers ¹



- Estonian open data score 94%
- 860 datasets, 2212 publishers
- <https://avaandmed.eesti.ee/>

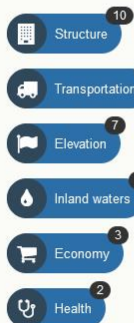
Search ...



Search 237 data sets, services and maps, ...

Estonian spatial data catalogue

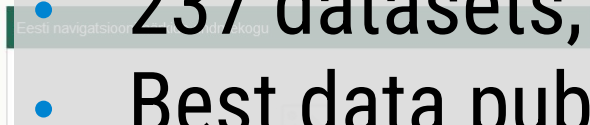
Browse by ☐ INSPIRE themes ☒ Topics



Browse resources



Latest news Most popular Comments

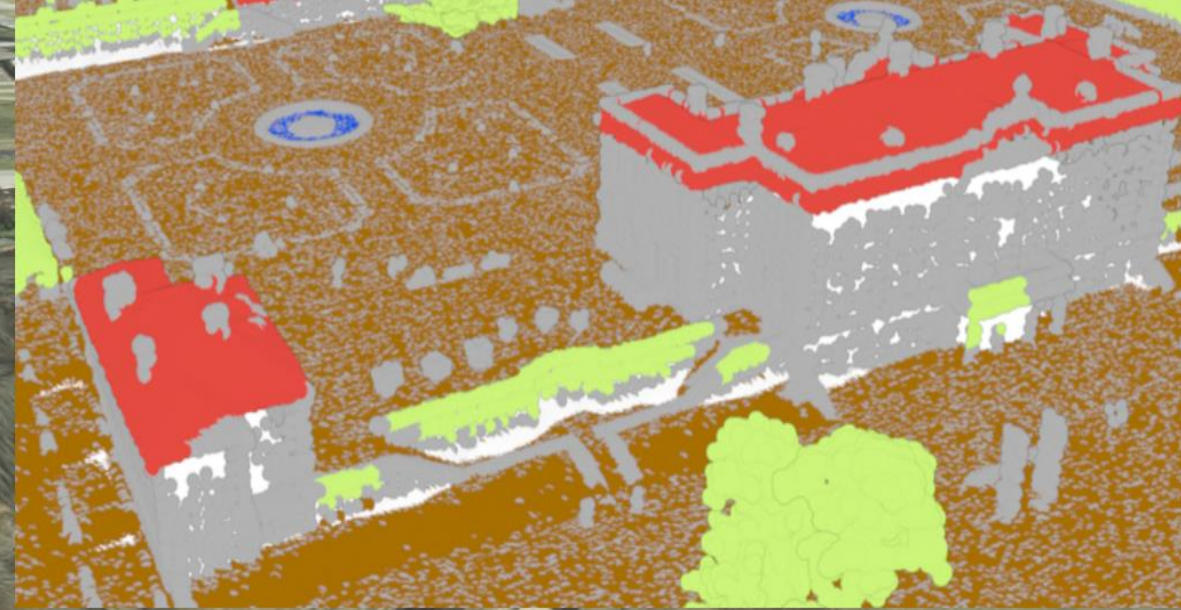


• <https://metadata.geoportaal.ee/>

• 237 datasets, services, maps
• Best data publisher in 2022 🏆



3D open geodata



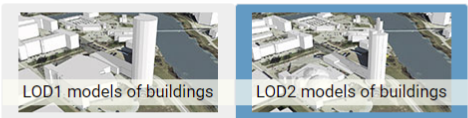
- Airborne lidar point cloud
- Digital terrain model
- Buildings

Download 3D data

- Elevation Data 
- Cadastral Data 
- Address Data 
- Administrative and Settlement Division 
- Estonian Soil Map
- Geo3D **
- Geo3D strategy
- 3D Data
- [Download 3D data](#)
- Geological Data 
- Geodetic Data 
- ESTPOS
- Topographic Maps 
- ESTHub Satellite Data 
- Map Sheet Indexes and Coordinate Systems 
- 30DayMapChallenge

 Spatial data below is for everybody to use free of charge. **Please, refer to the origin and extraction date of data** (e.g. " **Building 3D model data: Estonian Land Board 2022 or 04.04.2022**"). By downloading data you agree to  [terms of use of open data](#).

Questions and feedback are welcome by e-mail:  avaandmed@maaamet.ee.



LOD2 models of buildings

Full dataset of entire Estonia

- [Geodatabase \(gdb\)](#), objects: 804149,  (348.2 MB)
- [CityGML](#), objects: 804149,  (343.3 MB)
- [Wavefront \(obj\)](#), objects: 804149,  (281.3 MB)

Entire Estonian dataset divided into municipalities

[Harju maakond](#) 

Municipality	Objects	Geodatabase (gdb)	CityGML	Wavefront (obj)
Anija vald	6671	 2.7 MB	 2.6 MB	 2.1 MB
Harku vald	14166	 6.9 MB	 6.4 MB	 5.6 MB
Jõeselähtme vald	8151	 3.4 MB	 3.2 MB	 2.7 MB
Keila linn	11246	 4.4 MB	 4.1 MB	 3.3 MB
Kiili vald	4155	 1.5 MB	 1.4 MB	 1.2 MB
Kose vald	6629	 2.6 MB	 2.5 MB	 2.1 MB
Kuusalu vald	11246	 4.4 MB	 4.1 MB	 3.3 MB
Loksa linn	11246	 4.4 MB	 4.1 MB	 3.3 MB
Lääne-Harju vald	15030	 6.2 MB	 6 MB	 5 MB
Maardu linn	6006	 2.8 MB	 2.6 MB	 2.3 MB

<https://geoportaal.maaamet.ee/>

 > Spatial Data > Geo3D > Download 3D data

 > Spatial Data > Elevation Data > Download Elevation Data

View 3D data

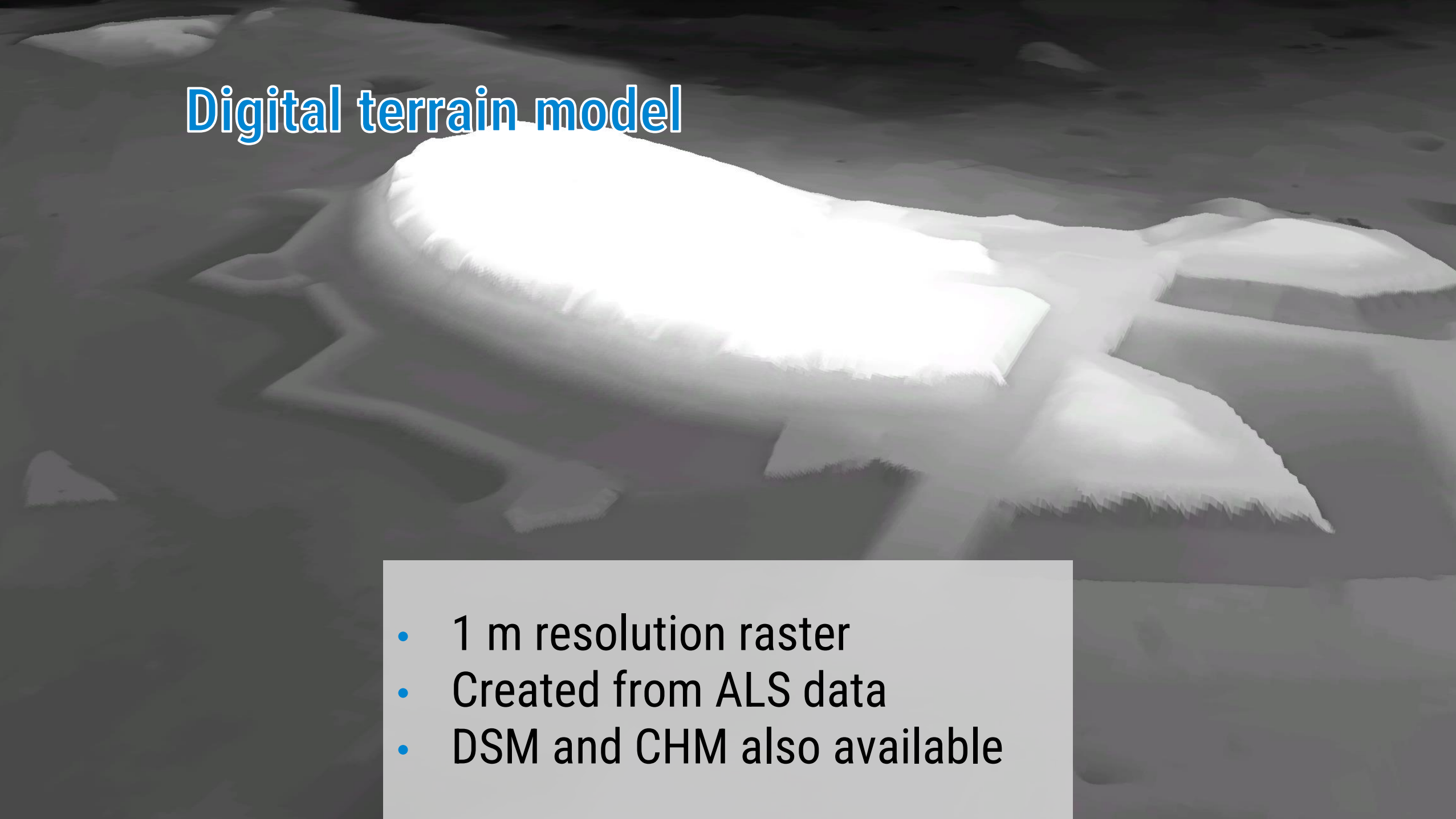
- <https://3d.maaamet.ee/>
- Terrain, buildings
 - Vegetation, lidar
- Best use of data: Su/g 2022 🏆

Airborne laser scanning points

- Two scanning densities
 - Urban areas: 18 pts/m²
 - Rural areas: 2 pts/m²
- 10¹¹ total points



Digital terrain model

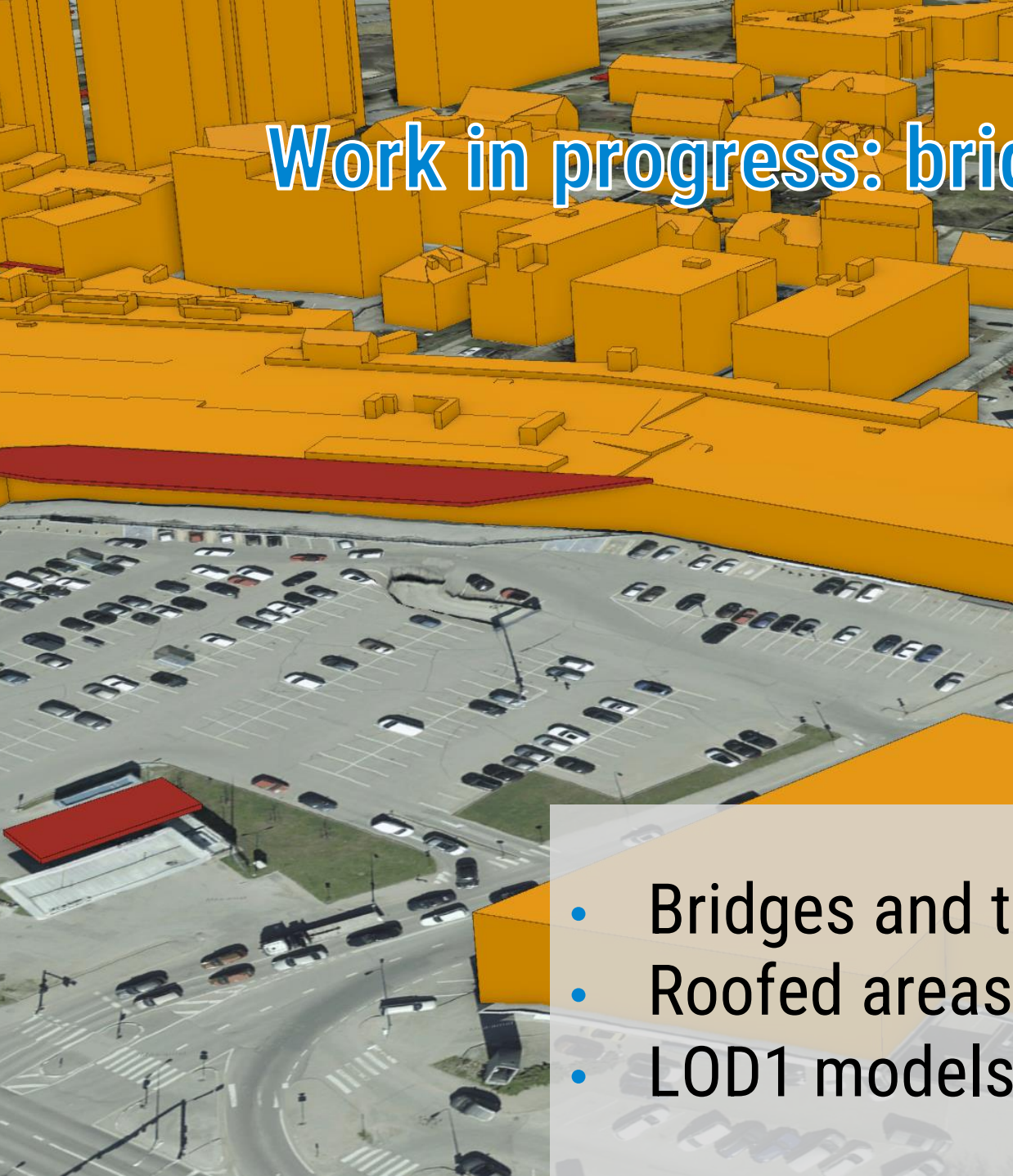


- 1 m resolution raster
- Created from ALS data
- DSM and CHM also available

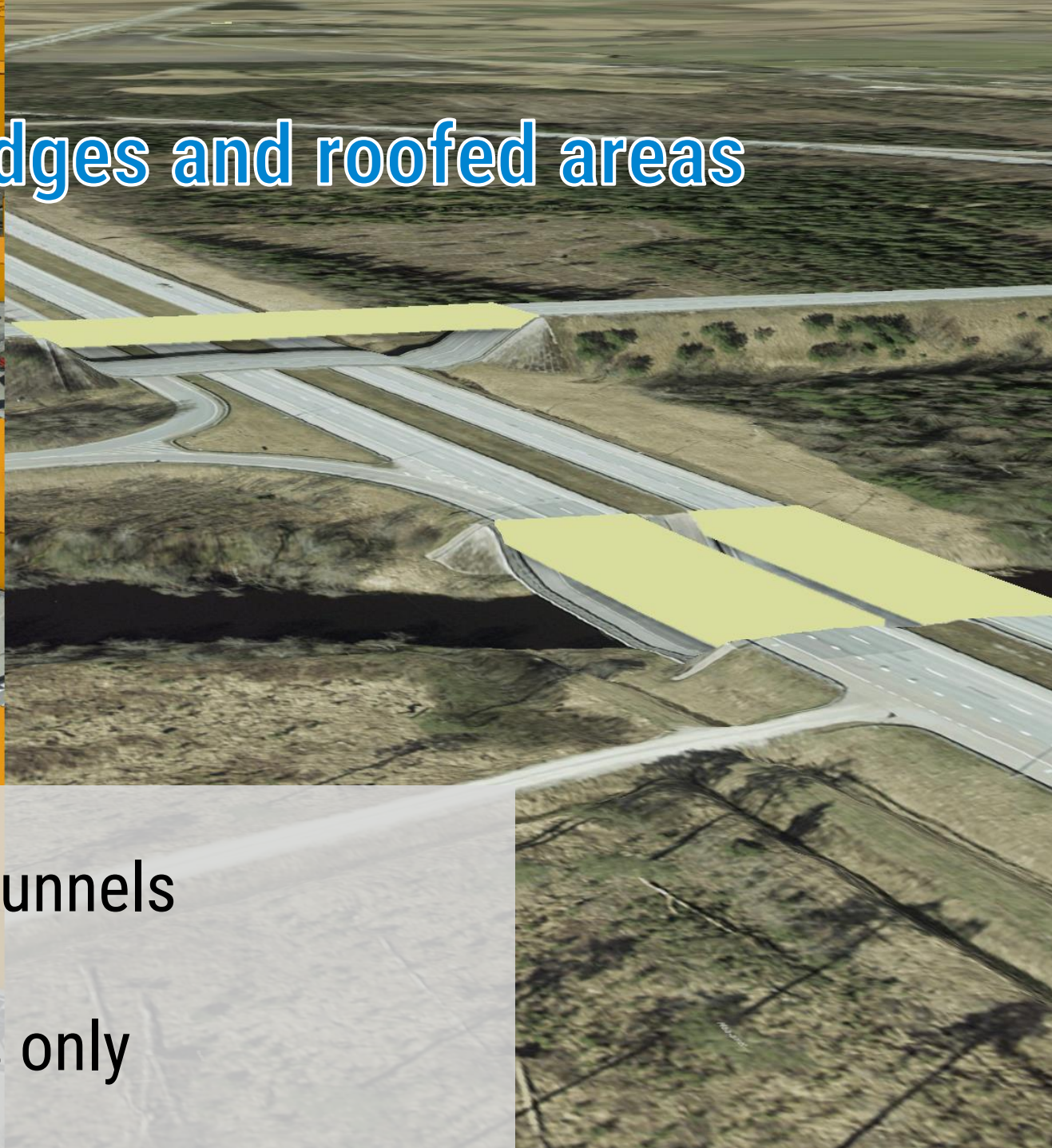
3D Buildings

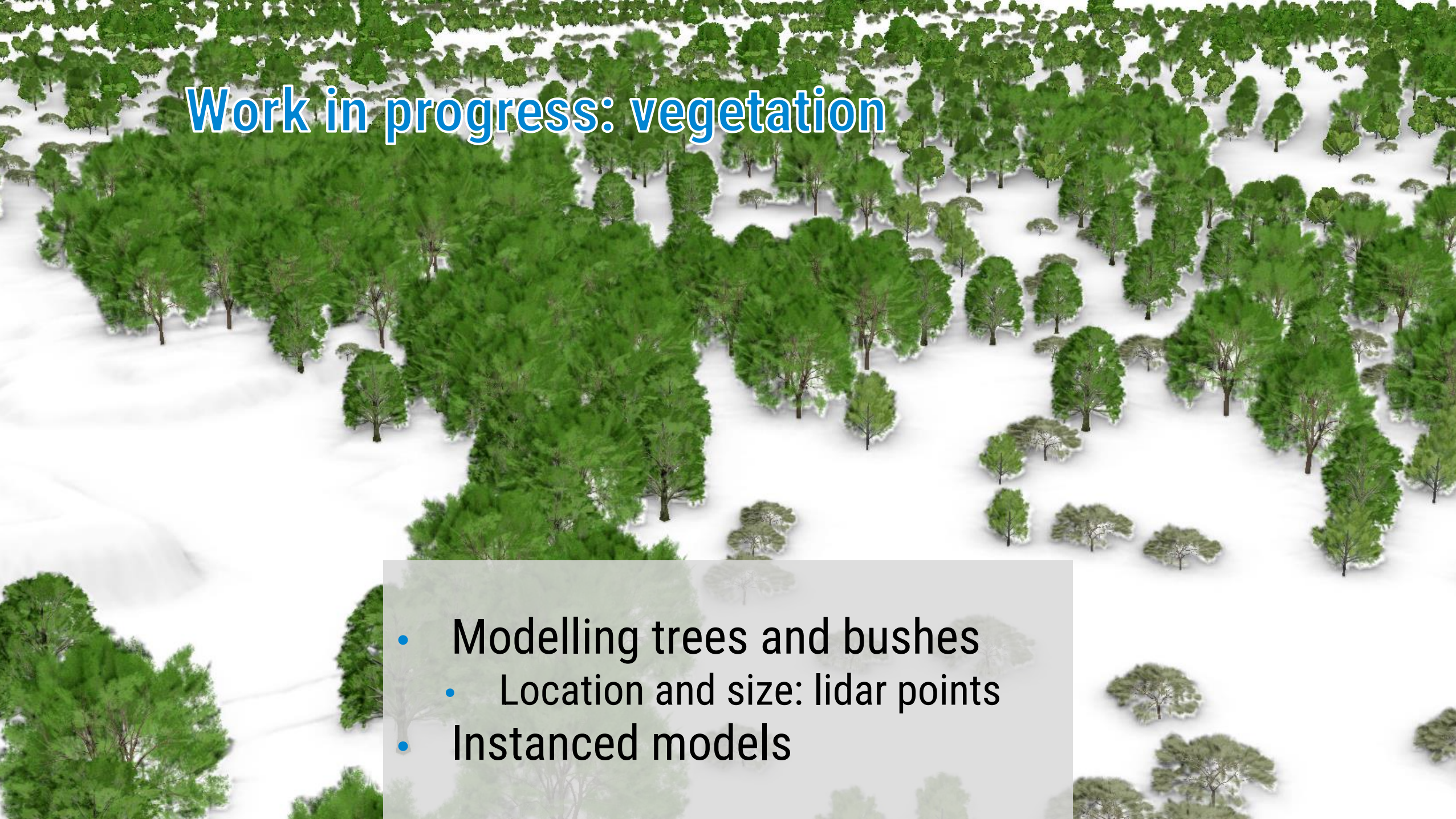
Hoone	
ETAK ID	582898
Tüüp	Elu- või ühiskondlik hoone
ADS Lähiaadress	Endla tn 3 // Tõnismägi 2
Meja kõrgus	35
Ehitisregister	120557715
Aadressiandmed	EE01124907
Maakataster	78401:107:0110 78401:107:0570
Kaldaerofotod	ava viide
X-GIS	ava viide
Andmete muutmise aeg	24.06.2019
Geomeetria muutmise aeg	05.12.2017
Laserskaneerimise aasta	2020
Zoom to	

- LOD1 and LOD2 models
- Automatically reconstructed
 - ALS points and building roofprints
- Links to registers



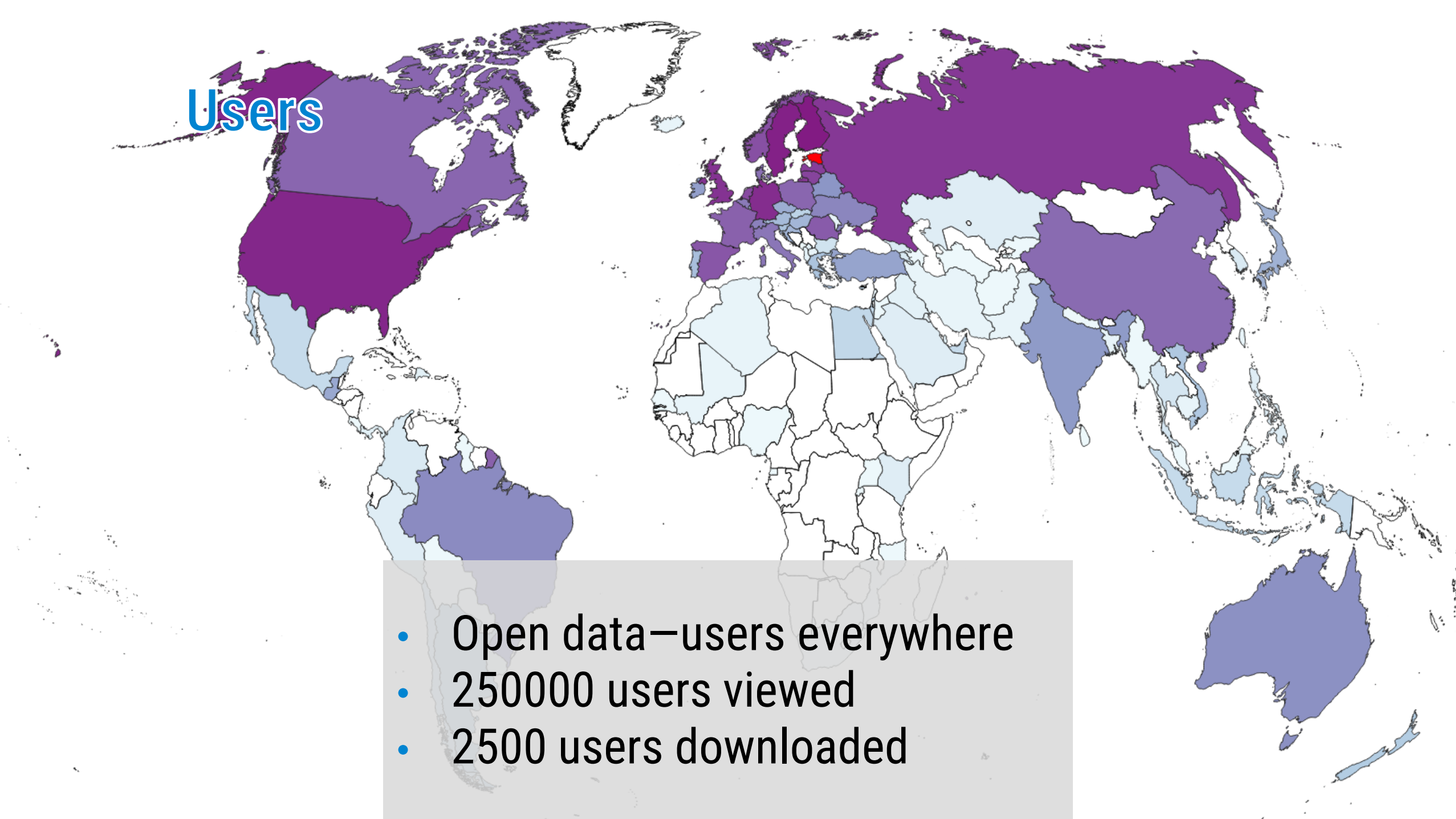
Work in progress: bridges and roofed areas

- 
- Bridges and tunnels
 - Roofed areas
 - LOD1 models only

An aerial, top-down view of a dense forest. The trees are represented as green, textured models with brown trunks, scattered across a white, flat ground. The distribution is uneven, with some large, dense clusters and many smaller, individual trees. The perspective is from directly above, looking down at the canopy.

Work in progress: vegetation

- Modelling trees and bushes
 - Location and size: lidar points
- Instanced models

A world map where countries are colored in shades of purple and blue to represent user density. Darker purple indicates higher density, while lighter blue indicates lower density. The United States, Canada, and Russia are the most prominent dark purple areas. Europe, Australia, and parts of Asia and South America are in medium purple. Africa, the Middle East, and parts of Asia and South America are in light blue. The word 'Users' is written in blue text in the top left corner.

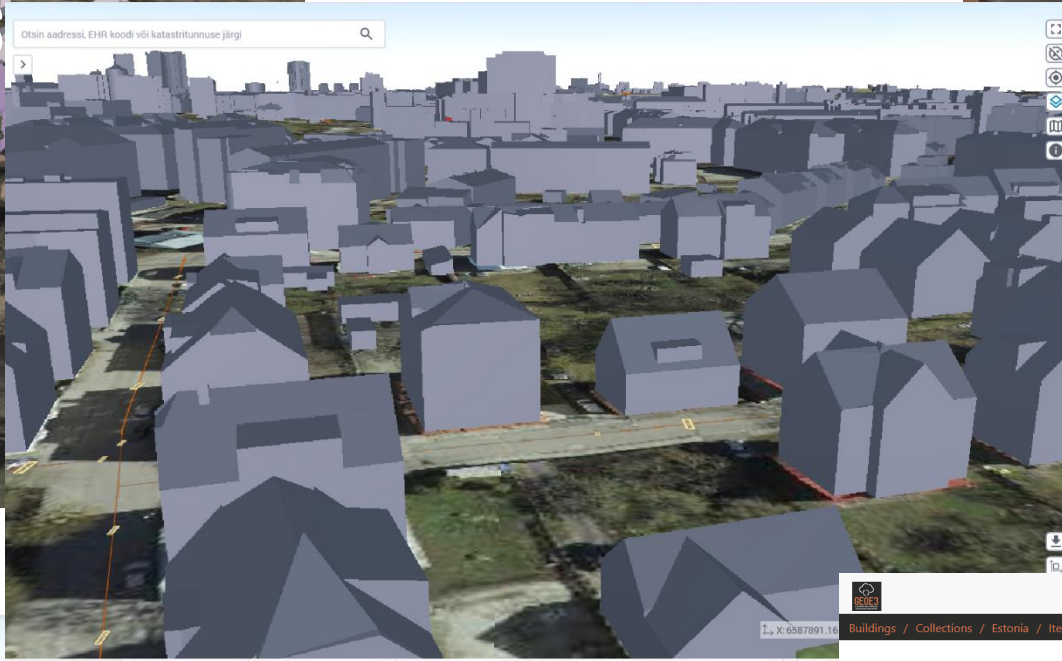
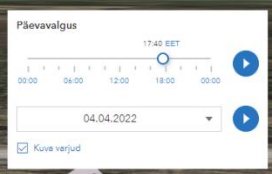
Users

- Open data—users everywhere
- 250000 users viewed
- 2500 users downloaded

Linnu tee 8 DP



Use cases



ArcGIS - Lügänu valla hooned (3D)

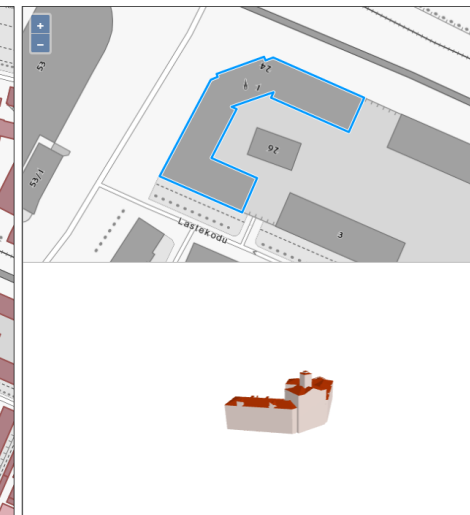
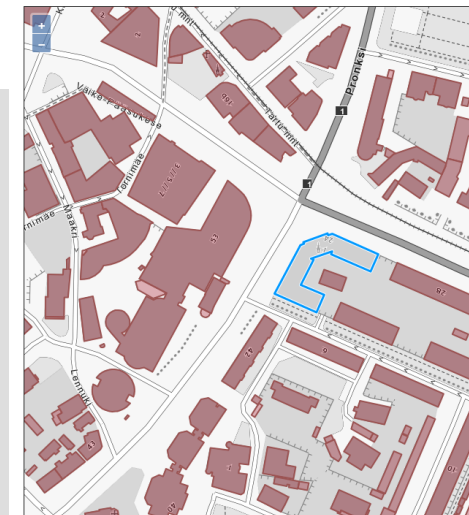


- Planning
- Construction
- Research

Buildings / Collections / Estonia / Items / BU.Buildings_2D.ETAK-5699853

Estonia

Zoom in to see the items in this collection.



Geo3D: a new strategy for Estonian Land Board



- Smarter production of geodata
- New sensors, more 3D data
- Integrated 2D+3D geoportal
- Innovative applications



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Thank you!

Hanno Kuus

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<https://3d.maaamet.ee/>

<https://geoportaal.maaamet.ee/>