



**Latvian Geospatial
Information Agency**

Insight into the Latvian Geospatial Information Agency

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Manchester, Great Britain

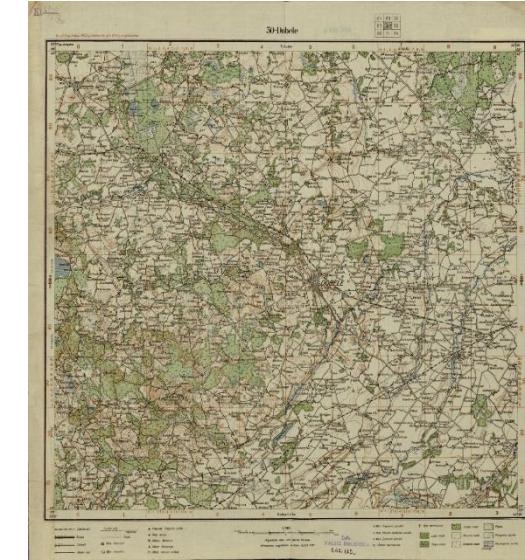
06-09 October 2019





Some Events in the History of Cartography in Latvia

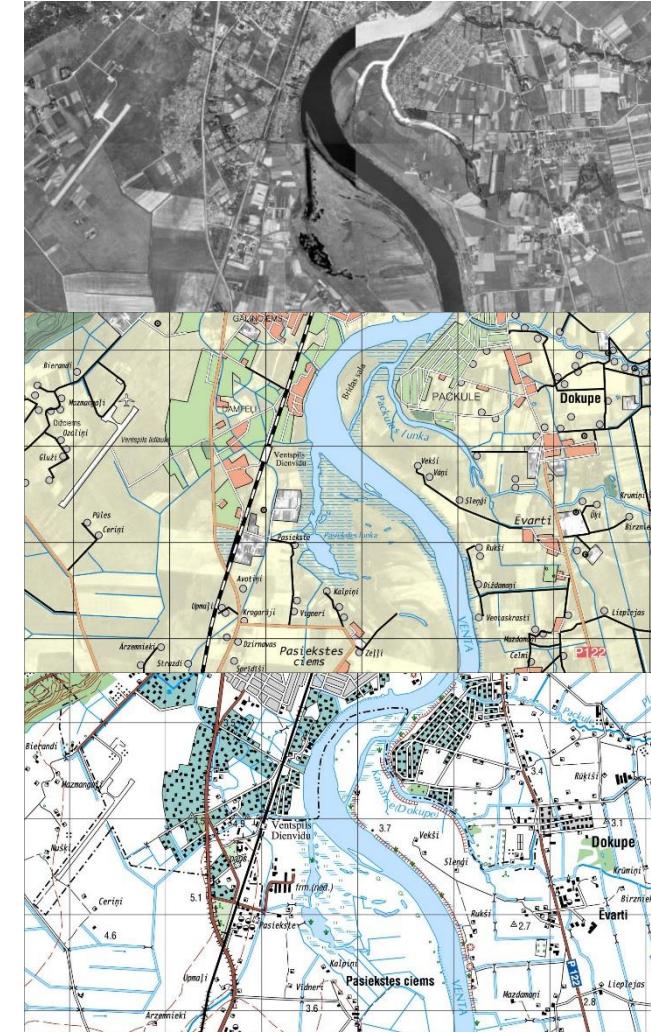
- **1907** - the first map in Latvian language (K.J.Simanis Map Publishing House)
- **July 15, 1919** - establishment of Topography Unit under the Operational Department of the Latvian Army Chief of Staff
- **April 1, 1921** – establishment of Division of Geodesy and Cartography on the basis of Topography Unit
- **1922 – 1940** – production of topographic map at scale 1:75 000
- **beginning of the 30's** - aerial photography is widely used for the mapping
- **the early 40's - the early 90's** - periods of German and USSR occupation (the map publishing is under close supervision by the authorities)
- **beginning of 1947** - establishment of Riga Cartography Factory (only one in the Baltic States)





Some Events in the History of Cartography in Latvia

- **1990** - establishment of Department of Geology, Geodesy and Cartography of the Council of Ministers
- **1993** - establishment of State Land Service
 - Cartography Division of the National Surveying Centre
 - Photogrammetry Division of Latvian Land Cadastre Centre
- **1999** - reorganization of State Land Service, establishment of Geodesy, Cartography and Large-scale mapping boards





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Latvian Geospatial Information Agency

- **January 1, 2006** - in result of the SLS reorganization, the functions of the State Geodesy and Cartography are taken over by the State Agency "Latvian Geospatial Information Agency" (LGIA)
- LGIA is the leading governmental authority for implementation of the national policy in the field of geodesy, cartography and geospatial information
- LGIA is the only governmental authority in Latvia creating geospatial reference data for military and civil purposes
- LGIA operates under supervision of Minister of Defence





Size and Population Density of Latvia



Latvia

Area: 64 589 km²
Population: 1 919 968
Density: 34.3/km²
GDP per capita: €28 727



The Netherlands

Area: 41 543 km²
Population: 17 336 891
Density: 417.8/km²
GDP per capita: €53 143



Switzerland

Area: 41 285 km²
Population: 8 570 156
Density: 207/ km²
GDP per capita: €75 671



Belgium

Area: 30 688 km²
Population: 11 420 163
Density: 374.2/km²
GDP per capita: €43 992



Denmark

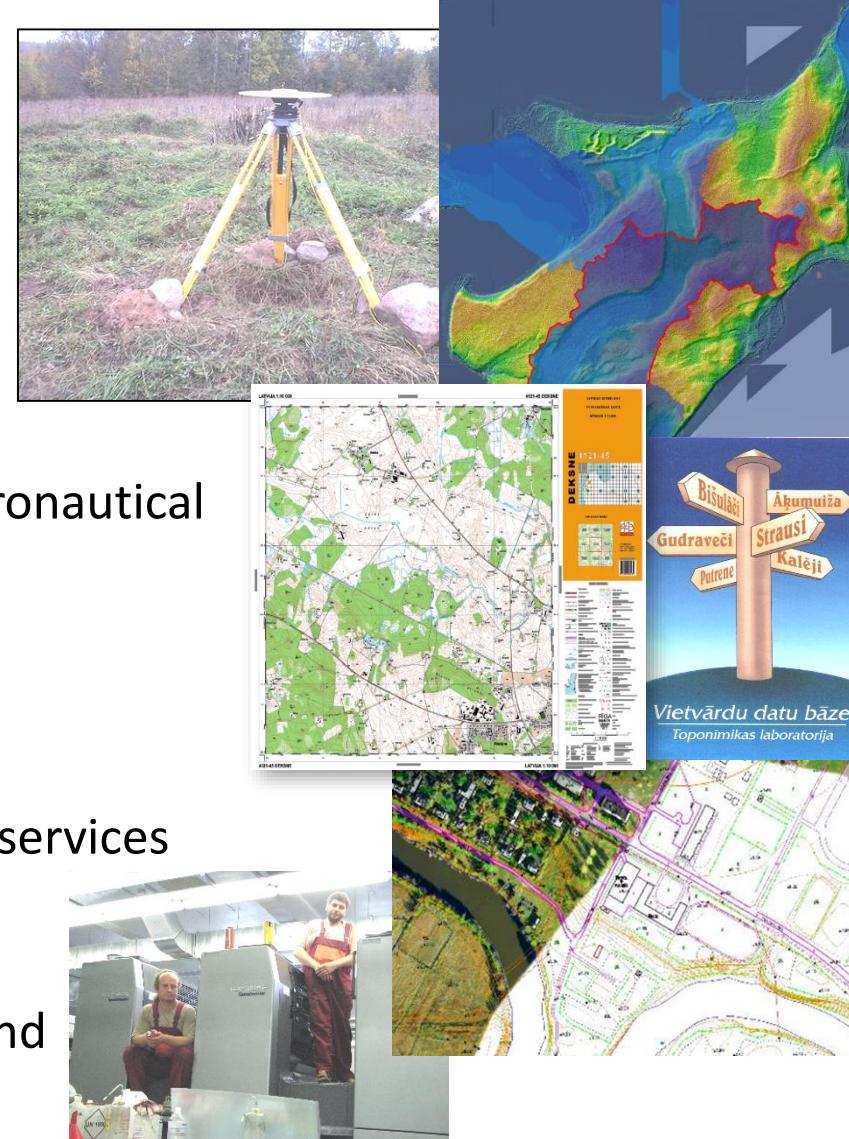
Area: 42 933 km²
Population: 5 814 461
Density: 135.43/km²
GDP per capita: €47 111



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Areas of Activity

- Geodesy, GNSS Base-stations
- Remote sensing
- Cartography
 - Military mapping (including aeronautical charts)
 - Civil mapping
 - Place names
- Geoinformation systems (GIS) and services
- Printing
- Archive and material circulation fund



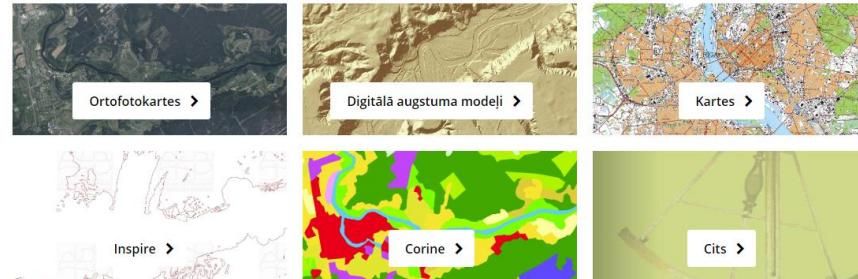


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Open data



Atvērtie dati



Orthophotos:

- 1994 – 1999 (1 cycle)
- 2003 – 2005 (2 cycle)
- 2016 – 2018 (6 cycle)
- 1997 – 2002 city orthophotos

Maps:

- Overview map 1:250 000
- Topographics map 1:50 000
- Satellite map 1:50 000

Geographical names Geodetic network data

Digital elevation models:

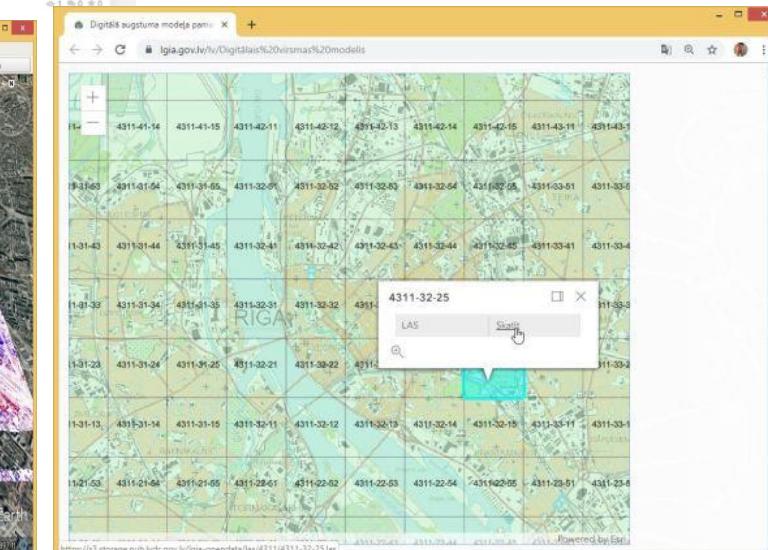
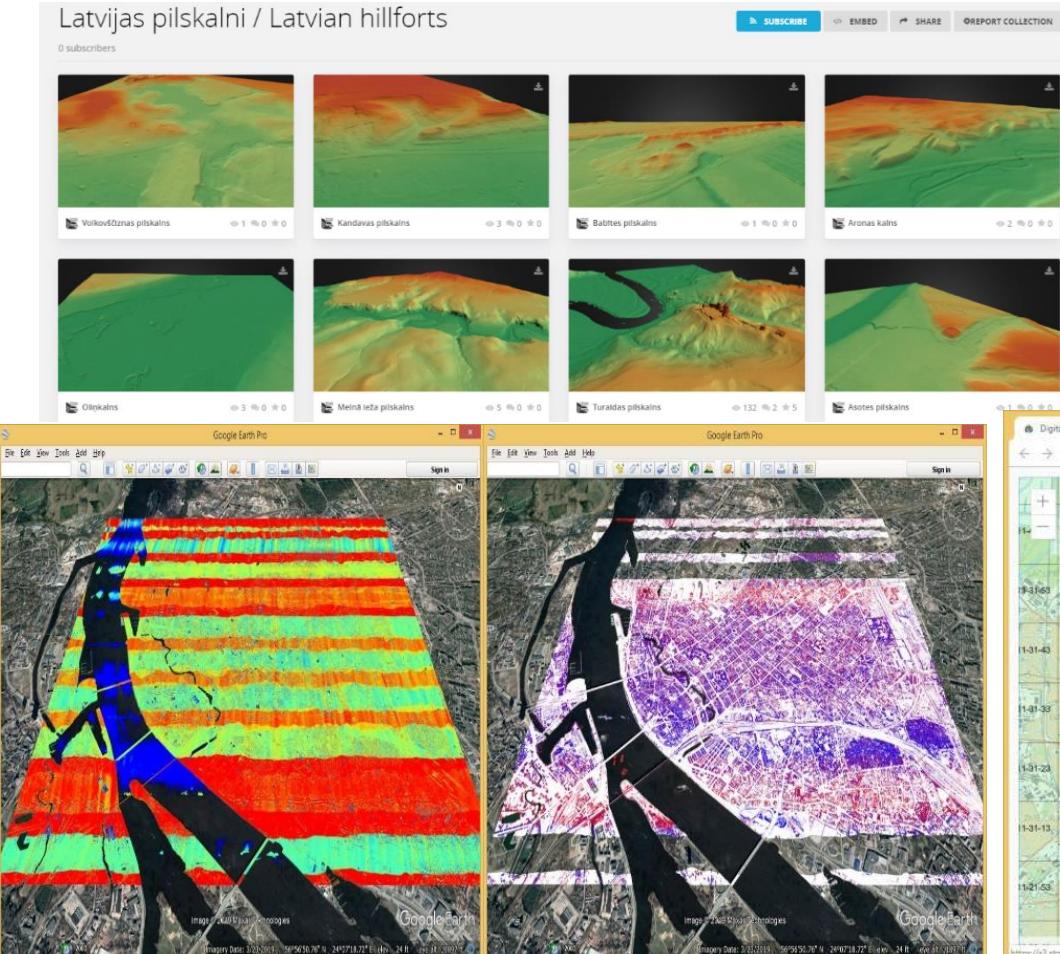
- LIDAR data
- Digital terrain model 20m GRID



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Open Data Use Samples

<https://sketchfab.com/gatons/models>

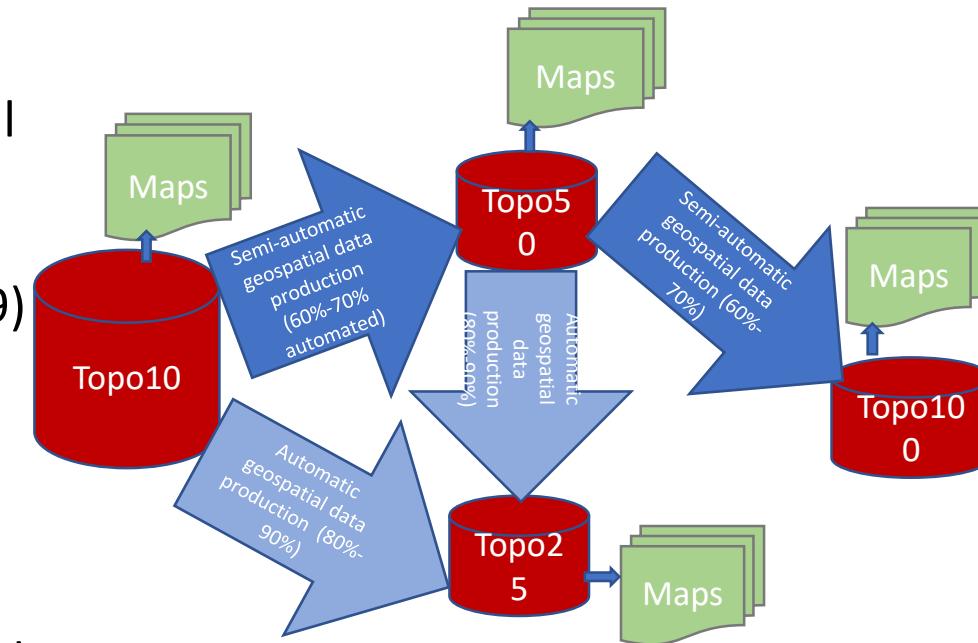


<https://rapidlasso.com/2019/09/03/national-open-lidar-strategy-of-latvia-humiliates-germany-austria-and-other-european-closed-data-states>



Automation of Mapping

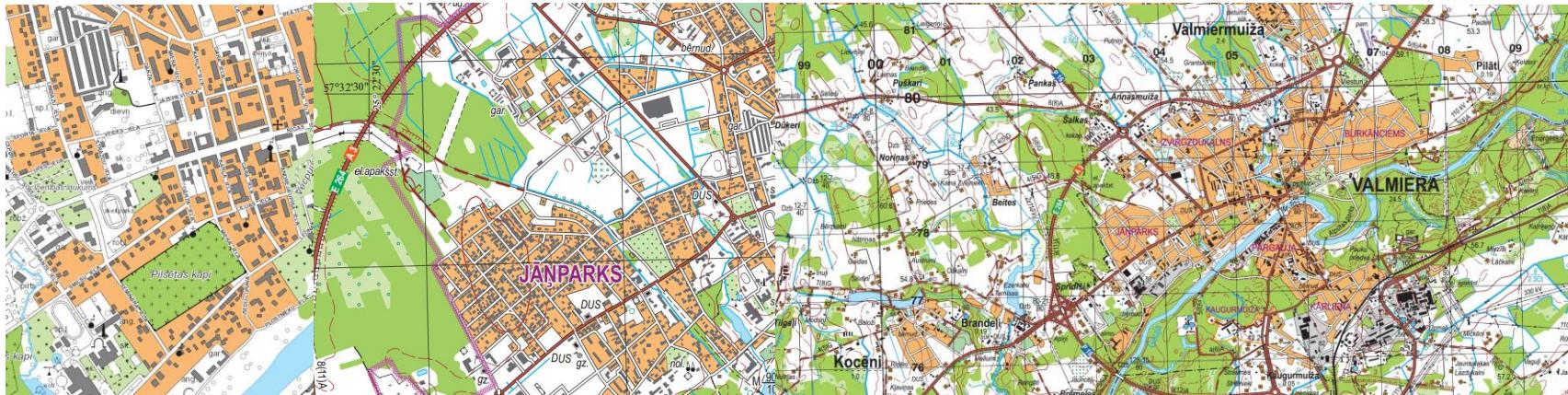
- 3 semi-automated mapping products:
 - Military topographic map at scale 1:25 000 (from 2016, full coverage in 2020)
 - Military topographic map at scale 1:100 000 (from 2019)
 - Military topographic map at scale 1:50 000 (research work in 2019)
- Output – printed map
- 60-90% of information generalised automatically, 10-40% generalised manually





Automation of Mapping – The Future

- Begin research and preparatory work to implement automated generalization solutions for cartographic products in future
- Basic map - topographic map at scale 1:10 000, from which data will be automatically derived in other scales 1:25 000, 1:50 000 etc.
- Maps on demand service





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Our Websites

- Official website www.lgia.gov.lv (general information about LGIA)
- Products and services website <http://map.lgia.gov.lv>
- (detailed information about LGIA products and services)





Our Websites – Map Browser

- <https://kartes.lgia.gov.lv>
- Free of charge
- Possibility to look at any place in Latvia
- Available all geospatial information for civilian use
- Functionality:
- Distance measurement capability, link to a particular object by email, recalculation of coordinates, adding freely available map services etc.





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Thank you for your attention!