



Latvian Geospatial
Information Agency

Latvian Geospatial Information Agency and it's Role in National Geospatial Data Infrastructure of Latvia

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Latvian Geospatial
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In Nacional Level

- Legislative framework:
 - **Concept of the development of geospatial information in Latvia** (Policy planning document - defined responsibilities about INSPIRE data themes between ministries)
 - **Geospatial Information Law** - provides for the following Cabinet regulations to create SDI in the Republic of Latvia and take over the requirements of the INSPIRE Directive:
 - Regulations Regarding the State Uniform Geospatial Information Portal;
 - Regulations Regarding the Mandatory Content of Metadata of Geospatial Data Sets;
 - Mandatory Content of the Provisions for the Use of a Geospatial Data Set and Procedures for the Receipt of a Permit for the Use;
 - Regulations Regarding Geographical Names Information;
 - High-level detailing topographic information and its central database rules (scale 1:500);
 - Regulations Regarding the Basic Geospatial Information Data System



The Role of Ministry of Defence in National SDI of Latvia (3)

Geospatial Information Law notify:

- Chapter II Competence of State Administration in the Field of Geospatial Information
 - Section 4. Institutions for the Management of Geodetic, Cartographic and Geospatial Information and Co-ordination of Activities Thereof
 - (1) The Ministry of Defence shall **organise and co-ordinate the implementation of State policy in the field of geodetic, cartographic and geospatial information:**
 - » 1) develop the State policy and development strategy, co-ordinate the circulation of geospatial information in the State in the field of geodesy and cartography, except for drawing up and publication of maritime navigation maps, which is determined by the Maritime Administration and Marine Safety Law;
 - » 2) ensure the development of draft regulatory enactments in accordance with legal acts of the European Union, the North Atlantic Treaty Organization and other international organizations;
 - » 3) plan and supervise the fulfilment of the acquisition, preparation and updating of geodetic and cartographic basic data, as well as the provision of geospatial data services of the State agency "Latvian Geospatial Information Agency" within the framework of annual State budget;
 - » 4) establish the Council of Geospatial Information Experts and ensure the operation thereof;
 - » 5) determine the procedures for the provision of geospatial information support for the fulfilment of the tasks of the National Armed Forces and participation in the North Atlantic Treaty Organization;
 - » 6) in co-operation with sectoral ministries ensure the development of standards and/or adaptation of international standards in the field of geospatial information; and
 - » 7) co-ordinate the entering into international agreements regarding the use of geospatial information, which has been acquired using the remote sensing method, for the fulfilment of the functions and tasks of all concerned ministries.



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The Role of Latvian Geospatial Information Agency in National SDI of Latvia (1)

Geospatial Information Law notify:

- Chapter II Competence of State Administration in the Field of Geospatial Information
 - Section 4. Institutions for the Management of Geodetic, Cartographic and Geospatial Information and Co-ordination of Activities Thereof
 - (2) The State agency "Latvian Geospatial Information Agency" shall be the **managing authority in the implementation of the State policy in the field of geodetic, cartographic and geospatial information.** It shall obtain, prepare and update the geodetic and cartographic basic data referred to in Section 12, Paragraph five, Section 17, Paragraph three and Section 18, Paragraph two of this Law for civil and military needs, provide geospatial data services and perform other tasks specified in this Law and special regulatory enactments of other sectors.
 - Section 12. Geodetic Reference System
 - (4) Geodetic activities, which are related to the performance of geomagnetic or gravimetric measurements and other services provided in the field of geodesy, which should be available to the society, shall be ensured by the State agency "Latvian Geospatial Information Agency" according to the resources thereof.
 - (5) The State agency "Latvian Geospatial Information Agency" shall create and maintain a data base of the national geodetic network and markers thereof. The State agency "Latvian Geospatial Information Agency" shall be the manager of the State information system of the national geodetic network.
 - (6) The State agency "Latvian Geospatial Information Agency" shall create and maintain the system of permanent global positioning base stations "Positioning System of Latvia", ensuring the use thereof for a fee



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The Role of Latvian Geospatial Information Agency in National SDI of Latvia (2)

Geospatial Information Law notify:

- Section 17. Basic Data of Geospatial Information
 - (3) The State agency "Latvian Geospatial Information Agency" shall acquire, prepare and update the following basic data and shall be the holder thereof:
 - » 1) images of the surface, data of **remote sensing and orthophotos** of the Earth within the framework of the scale line 1:50 000 - 1:2000;
 - » 2) **digital models of area and surface**, which are used for drawing up of topographic plans and topographic maps within the framework of the scale line 1:250 000 - 1:500;
 - » 3) geospatial information, which is included in **topographic plans and topographic maps** within the framework of the scale line 1:250 000 - 1:2000; and
 - » 4) the **basic data of geospatial information** in order to provide support for the fulfilment of the tasks of the National Armed Forces and the participation thereof in the North Atlantic Treaty Organization in accordance with the procedures specified by the Ministry of Defence.
- Section 18. Information Regarding Place Names
 - (2) Information regarding place names, which is necessary for the performance of geodetic and cartographic activities, shall be compiled in the **Data Base of Place Names**. The State agency "Latvian Geospatial Information Agency" shall be the holder of the Data Base of Place Names and the manager of the national information system of place names.



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Geospatial Data Infrastructure of Latvia – an Other Main Players (1)

State Land Service of Latvia

- The State Land Service (SLS) is a governmental institution which is in charge of real property object data accumulation and dissemination to institutions responsible for land management and supervision
- The SLS is supervised by Minister of Justice
- Main tasks of the SLS:
 - maintenance of State Information System of Real Property Cadaster,
 - maintenance of the State Address Register,
 - mass valuation of real property,
 - maintenance of Rural Land Privatization Register,
 - maintenance of central database of high detailed topographic data,
 - maintenance of Information System of restricted areas.



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Geospatial Data Infrastructure of Latvia – an Other Main Players (2)

Ministry of Environmental Protection and Regional Development of the Republic of Latvia is responsible for implementing policy in three areas:

- environment protection
- regional development
- information and communication technologies
- In the area of environmental protection
 - establishment of prerequisites and conditions for nature conservation,
 - clean environment,
 - ensures that natural resources are used effectively and in sustainable manner.
- In the area of regional development:
 - implements and evaluates regional policy at state level,
 - provides methodological guidelines and supervises the territorial development planning process,
 - to achieve well-balanced and sustainable development of the country.
- Implementation and coordination of the e-Governance:
 - establishment of one-stop principle for provision of state and local government services,
 - implementation of modern and effective information and communication technologies in the public sector.

Main tasks of Ministry of Environmental Protection and Regional Development related with geospatial information:

- **ensure the management of the creation and maintenance of the State Geoportal** and ensure the interoperability geoportal with the geoportal of the European Community (operation is provided by State Regional Development Agency (SRDA))
- Coordination of the implementation of the INSPIRE Directive in the State (from January 2018)
- Supervision of the operation of Territorial Development Planning Information System (operation is provided by SRDA)
- Supervision of the institutions, response about environmental spatial data;
- responsible institution for Open data policy



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LGIA Tasks in the Field of Geodesy

- Maintenance of the geodetic reference system in Latvia
- Maintenance of the National Geodetic Network Database
- Maintenance of the system of permanent global positioning base stations "Positioning System of Latvia" (LatPos)





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National Geodetic Network Database

Valsts Ģeodēziskā tīkla datubāze

Sistēma

- Statistika
- Adrese
- Zīmes noformējums
- Zīmes tips**
- Tīkla veids
- Par programmu
- Lietotāja instrukcija
- Vietējo Ģeodēzisko tīklu DB

Atlase

Atlases parametri

Meklēt arī Vietējo Ģeodēzisko tīklu DB Attīrīt

Punkta nosaukums:

Punkta klase: G3

Markas numurs:

Adrese

Novads/pilsēta: Krāslavas novads

Pagasts/pilsēta:
 Indras pagasts
 Izvaltas pagasts
 Kalniešu pagasts
 Kaplavas pagasts
 Kumbuļu pagasts
 Krāslava
 Krāslavas pagasts
 Piedrujas pagasts
 Robežnieku pagasts
 Skaistas pagasts
 Ūdrīšu pagasts

Koordinātas

X (LKS-92):

Y (LKS-92):

B (Ģeogrāfiskās):

L (Ģeogrāfiskās):

G0
G1
G2
G3
N1
N2
N3
N4
T1
T2
T3

kārtība
 liet meklēšanas kritēr
 iediet pogu "Meklēt"
 radītos meklēšanas kr

Ojekta atrašanās vieta - Mozilla Firefox

http://geodezija.lgia.gov.lv/export_karte.php?p_id_sar=24318,7460,24322,24320,24319,7285,7288,7289,7290,7291

Visa Latvija Mērogs 1 : 100000

Valsts Ģeodēziskā tīkla punkts

Nosaukums: Ūziņi

Nivēl. nosaukums: 89244

Grāv. nosaukums:

Citi nosaukumi:

Adrese:
 Jēlgavas novads
 Zāļenieku pagasts

Ūziņi

No Jēlgavas līdz Zāļeniekiem 21 km; Zāļeniekos pa kreisi 4.9 km; pa labi 0.44 km; pa kreisi uz mājām "Zeltiņi"; punkts atrodas 0.2 km aiz mājām, lauka vidū.

Abriņu sagatavoja: Jānis Leģzdiņš
 LĢIA Ģeodēzijas departaments Gads: 2006

Ģeodēziskā zīme

Zīmes noformējums: N - norādītājslabi Markas Nr.:

Punkta stāvoklis: Uzraksti uz markas:

Apsveikšanas gads: 2009

Orientierpunkti:
 Nr. Direkc. leņķis Attālums (m)

Noformējums:
 AP - apvilkta priekšmeti; AV - aizsargrūķi; K - aprakums (duplāts); N - norādītājslabi; P - piramīda; P5 - pazīšanas stabi; S - signāls (torņi); SS - signālsstabs

Klase: G1, G3

Koordinātas:
 LKS92: TM4
 x=260101.337
 y=472290.602
 z=0.89960940

Augstums:
 1977 g.Baltijas
 H=29+
 (= ģeom.niv.)
 (- trig.niv.)

GPS mērījumi veikti: Nivēlējuma veids:

Darba Nr.: 11; 35; 100; 52; 136; 162; 153; 180; 181

Piezīmes:

Īpašnieks:

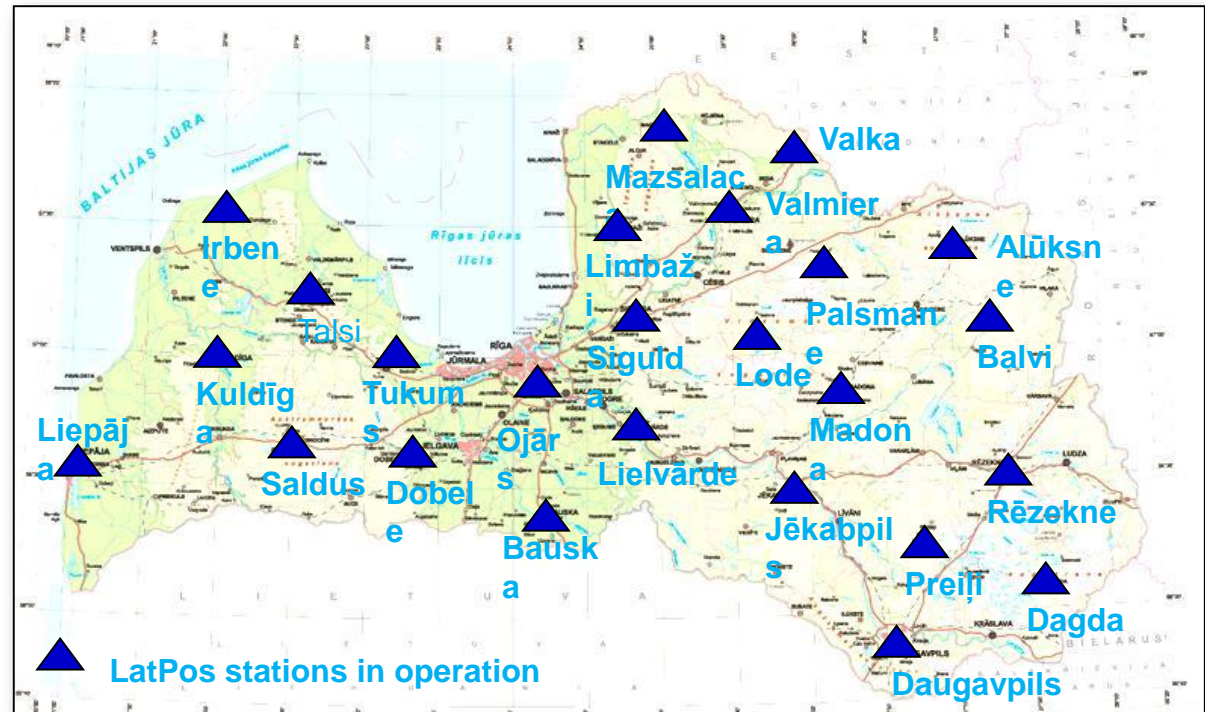
<http://geodezija.lgia.gov.lv>



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System of Permanent Global Positioning Base Stations (LatPos)

LatPos includes continuously operated **25 GNSS base stations** evenly distributed in territory of Latvia. Average distance between stations is 70km.





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Aerial Photography

- Full territory (~ 64500 sq.km) in 3 years
- Pixel resolution 25 cm
- Panchromatic, colour and infrared orthoimages (CIR)
- Mixed production model - aerial photography outsourced, orthoimages own production
- The 6th update started in 2016



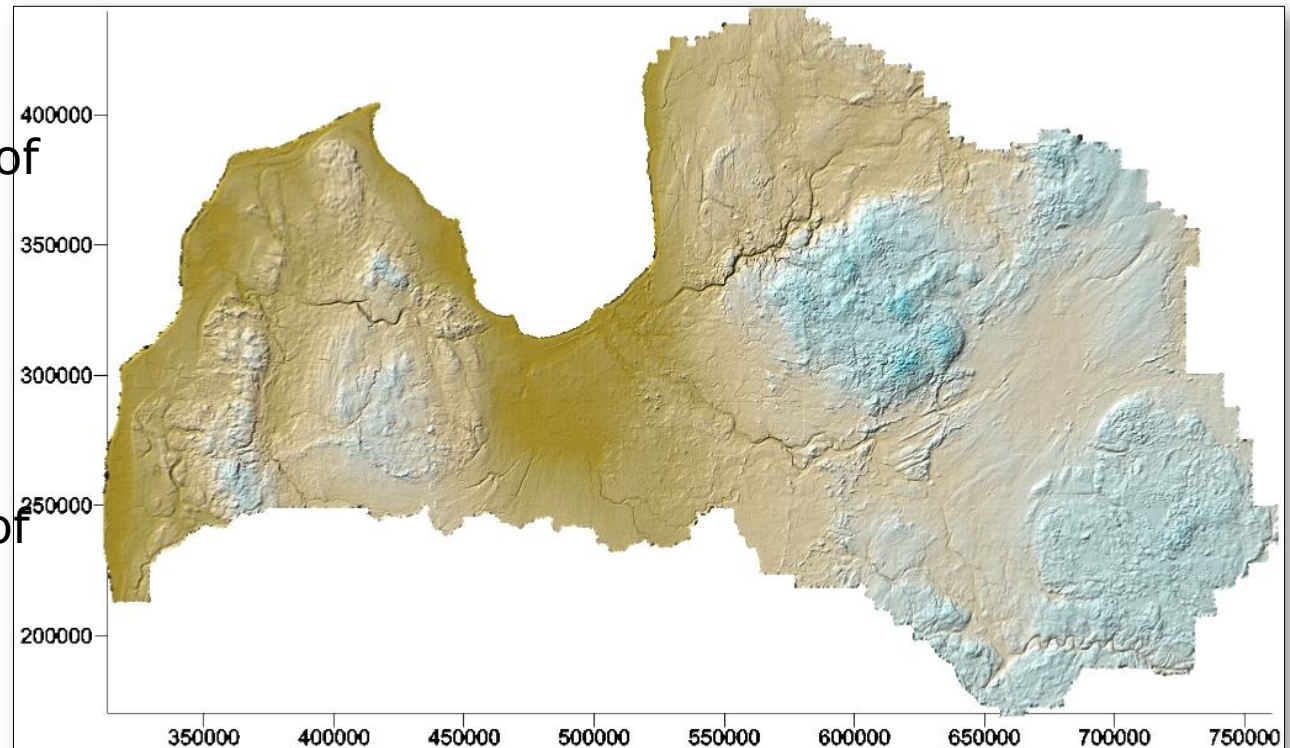


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Continuous Airborne Laser Scanning of the Territory of Latvia

Scanning period
2013-2019

Main parameters of
the acquired data
density of the
ground surface
points – at least
1.5 points/m²
the total density of
points – at least
4 points/m²





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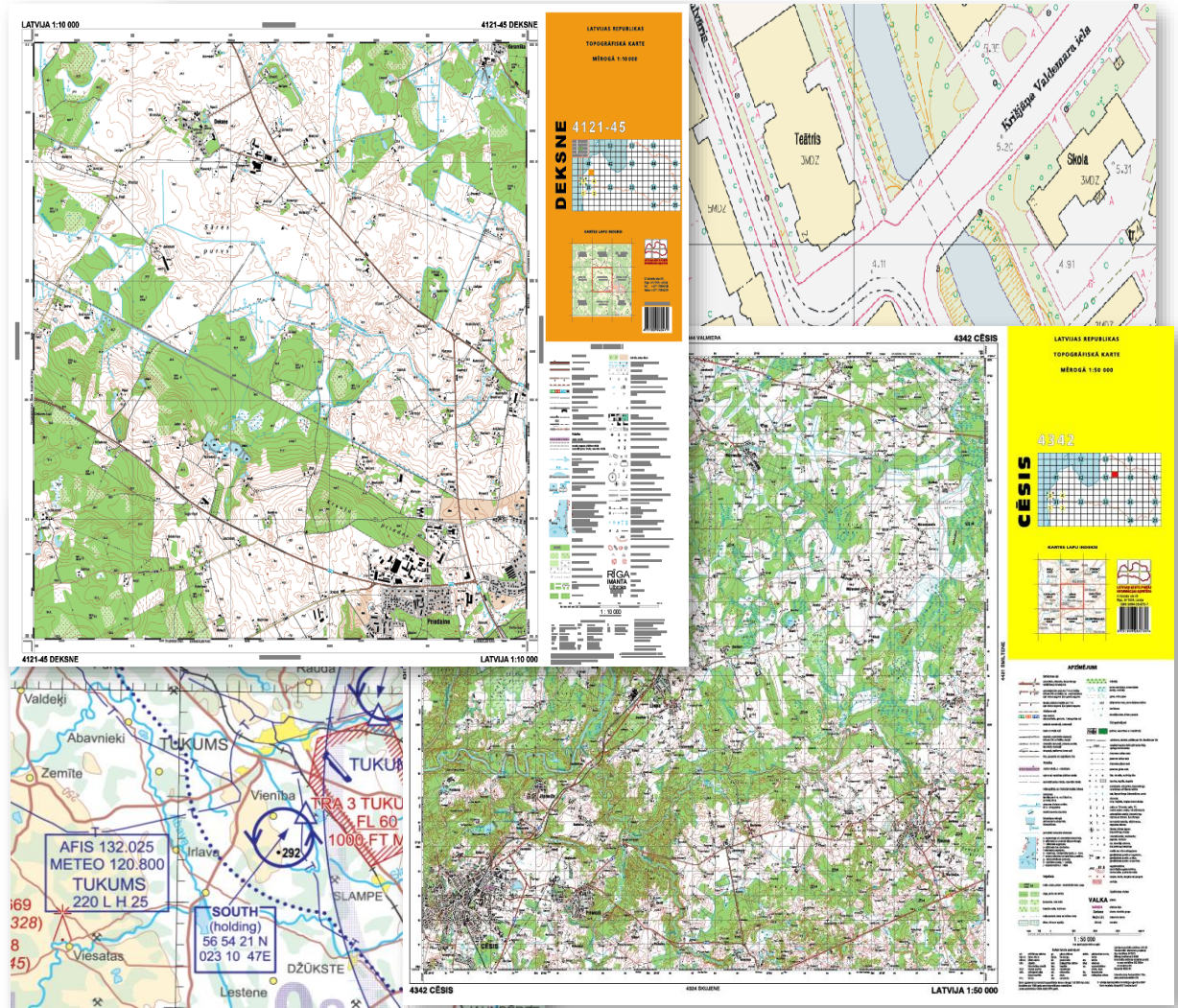
Mapping

Main products:

topographic chart
at scale 1:2000

topographic maps
at scales 1:10 000
1:50 000,
1:250 000

aeronautical charts





State border

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- LGIA participates in demarcation of the state border and is responsible for surveying (borderline and state border marks) and for drawing up the state border demarcation maps
- Latvia – Estonia - 2000
- Latvia – Lithuania - 2001
- Latvia – Byelorussia - 2008
- Latvia – Russia - 2017

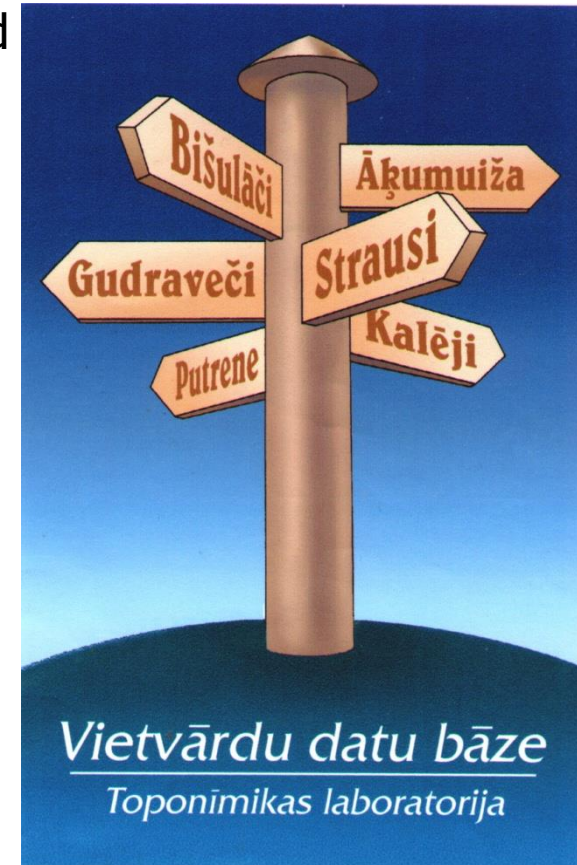




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Geographical Names Database

- The database covers the territory of Latvia and borderlands of neighbored Lithuania, Belarus, Russia, Estonia
- The main reason of the database is to provide geographical names for maps
- Each entry of the database contains (at least):
 - name, type of feature, administrative territory of the feature, co-ordinates or textual description of the location, information source
- The database contains information about 152134 names of 118437 geographic features





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Web Services Provided by Basic Geospatial Information Data System

LGIA provide open services:

- View services (Web Map Services: WMS, WMTS) – 18;
- Download services:
 - Web Feature Services (WFS) – 5
 - Web Coverage Services (WCS) – 5
- INSPIRE Services:
 - INSPIRE View Services – 12;
 - INSPIRE Download Services – 9.

LGIA provide payed services:

- View services (Web Map Services: WMS, WMTS) – 27;
- Download Services – 4;

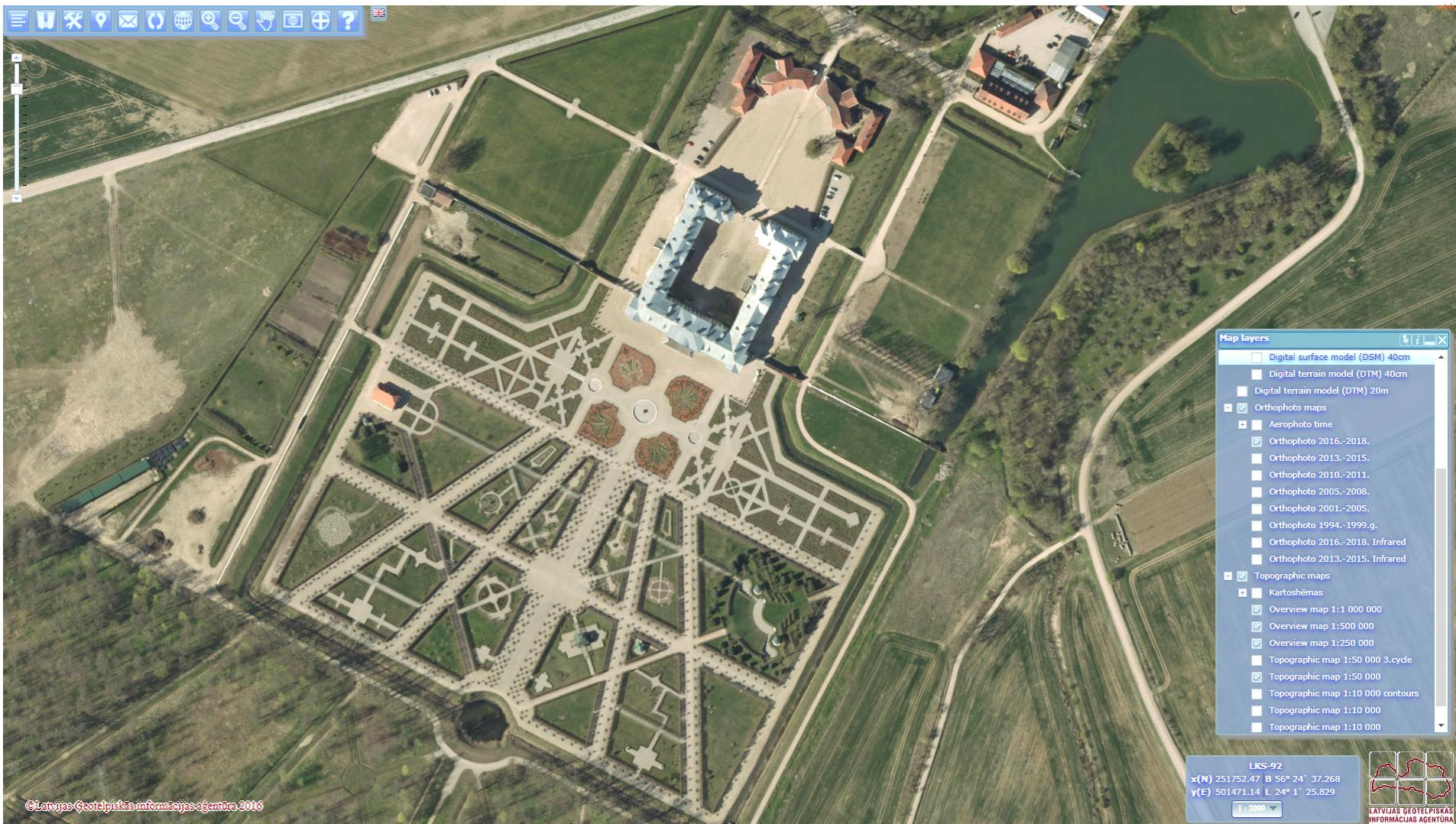
Web Services total: 80 services (free services – 49)



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LGIA Map Browser

<https://kartes.lgia.gov.lv/>





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Thank you for your attention!

