Status and Perspectives of the Geodesy, Cartography and Cadastre Authority – Availability of Geographic Information in Slovakia

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Geodesy, Cartography and Cadastre Authority of the Slovak Republic

State administration

The Government Office of the Slovak Republic

– The Ministry of Foreign Affairs of the Slovak Republic
– The Ministry of Economy and Construction of the Slovak Republic
– The Ministry of Defence of the Slovak Republic
– The Ministry of Interior of the Slovak Republic
– The Ministry of Finance of the Slovak Republic
  The Ministry of Culture and Tourists of the Slovak Republic
– The Ministry of Health Service of the Slovak Republic
– The Ministry of Education, Science, Research and Sport of the Slovak Republic
– The Ministry of Justice of the Slovak Republic
– The Ministry of Labour, Social Affairs and Family of the Slovak Republic
– The Ministry of Agriculture, Environment and Regional Development of the Slovak Republic
– The Ministry of Transport, Posts and Telecommunications of the Slovak Republic

– **Geodesy, Cartography and Cadastre Authority of the Slovak Republic**
– Antimonopoly Office of the Slovak Republic
– Statistical Office of the Slovak Republic
– The National Inspection Office of Labour of the Slovak Republic
– The Industrial Property Office of The Slovak Republic
– Slovak Office of Standards, Metrology And Testing
– Nuclear Regulatory Authority of the Slovak Republic
– Telecommunications Office of the Slovak Republic
– INFOSTAT, Institute of Informatics and statistics
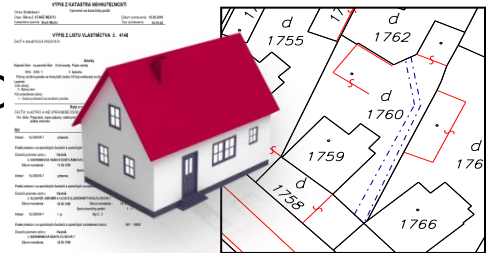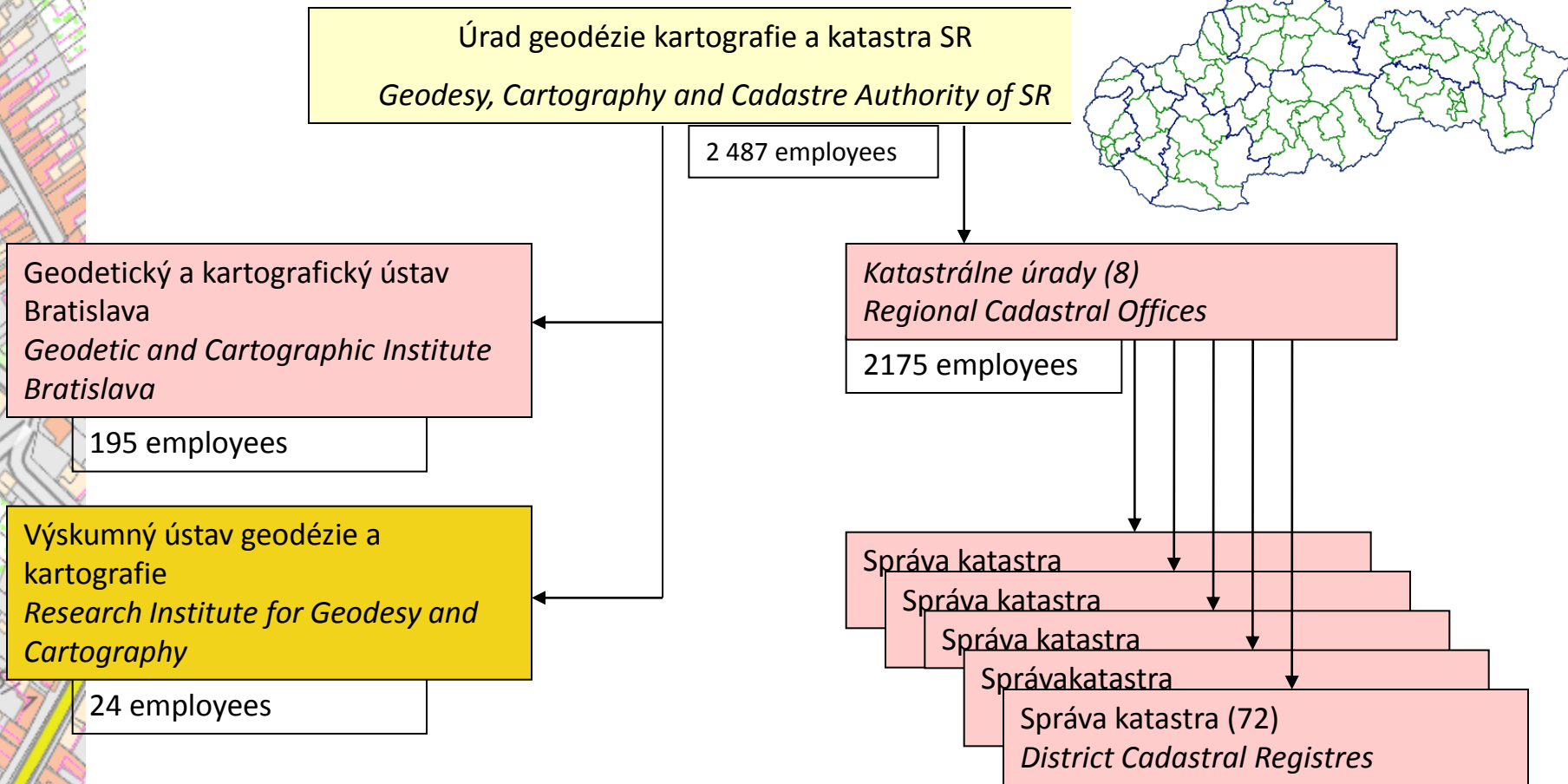
Legal framework

- Act on Geodesy nad Cartography

- Act on Cadastre of Real Estate

- Act on National Spatial Data Infrastructure

Main tasks

- realisation of reference systems, geodetic controls,

- GNSS real-time positioning service - SKPOS,

- state map series,

- standardisation of geonames,

- central map archive

- Information System on Geodesy, Cartography and C

  - Geodetic controls

  - Cadastre (ownership rights + graphical information)

  - Reference topographical database **as the basis for NSDI**

- provision of the information from the
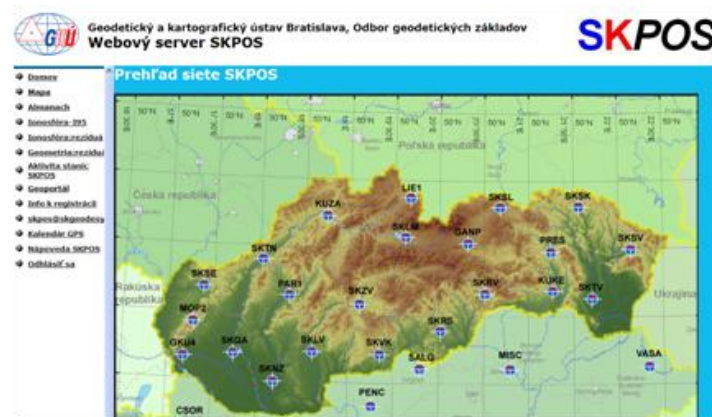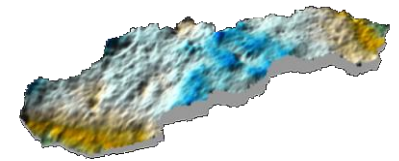
  state documentation

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Organisational structure

Úrad geodézie kartografie a katastra SR

Geodesy, Cartography and Cadastre Authority of SR

2 487 employees

Geodetický a kartografický ústav Bratislava
Geodetic and Cartographic Institute Bratislava

195 employees

Výskumný ústav geodézie a kartografie
Research Institute for Geodesy and Cartography

24 employees

Katastrálne úrady (8)
Regional Cadastral Offices

2175 employees

Správa katastra

Správa katastra

Správa katastra

Správakatastra

Správa katastra (72)
District Cadastral Registres
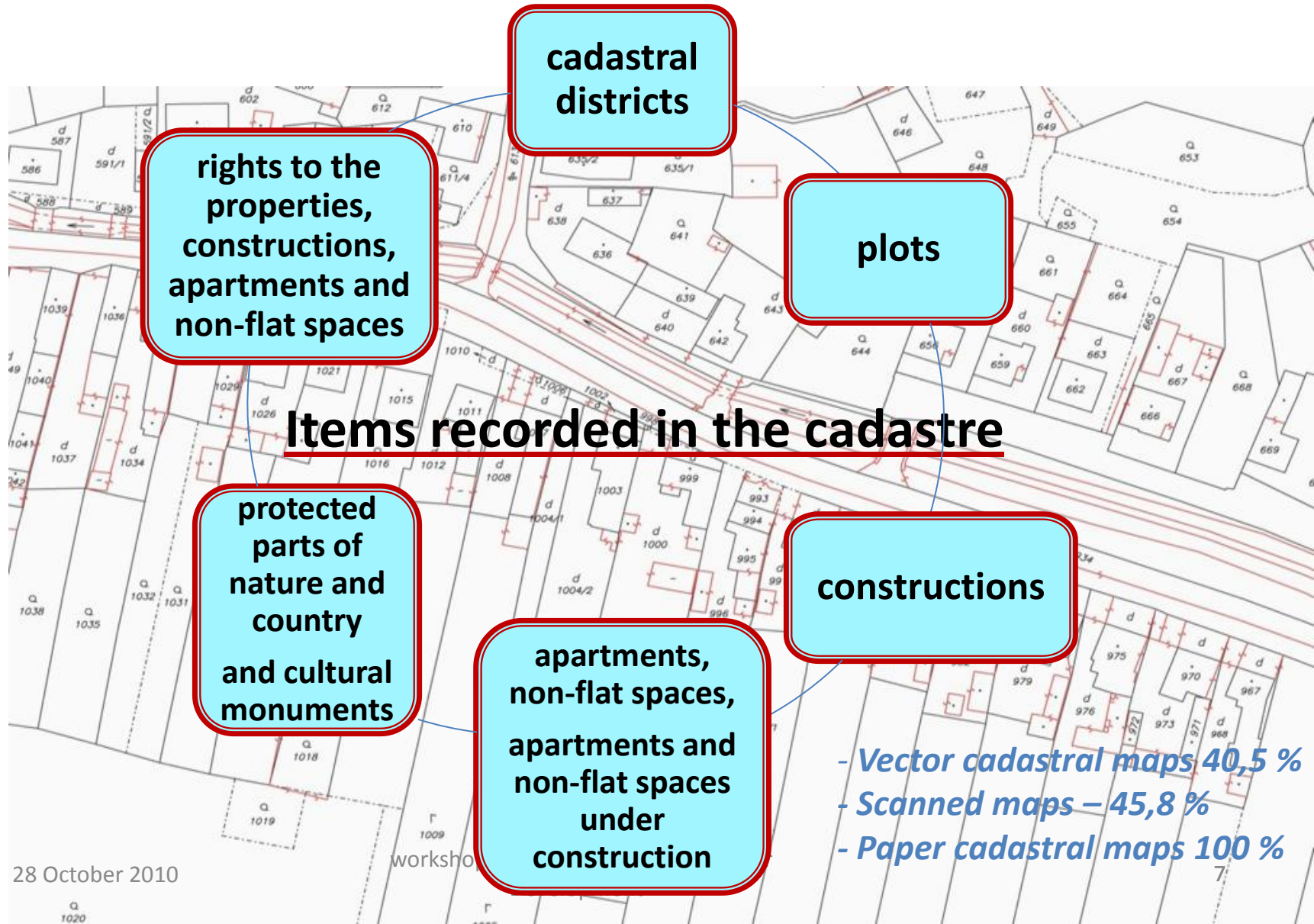
Reference systems as basis for unified location of geographic information
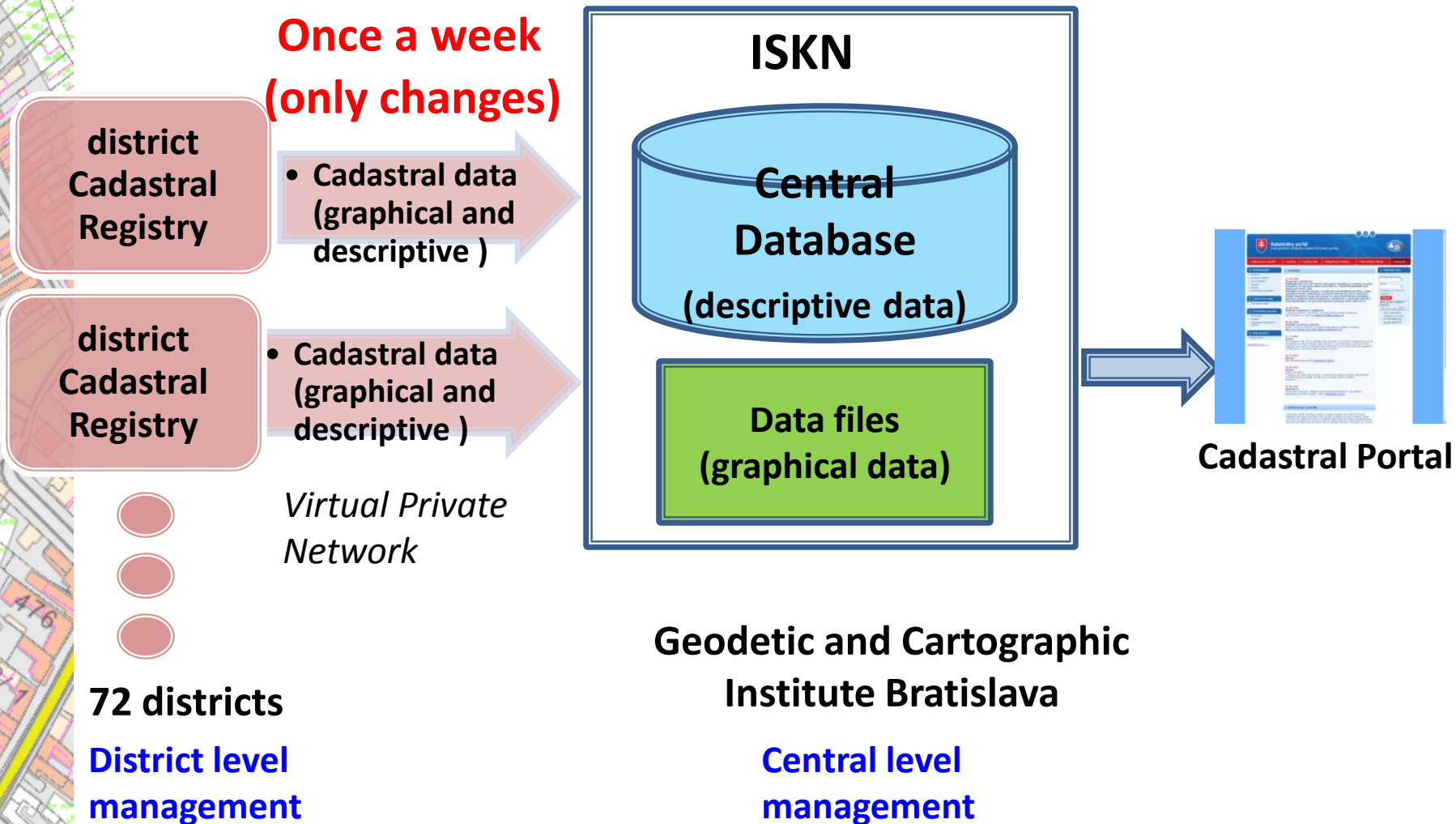
- spatial   ETRS89
- horizontal   S-JTSK, new frame JTSK03
- vertical   BpV
- SK*POS* in ETRS89 - ideal tool for real-time data collection for NSDI

Cadastre of real estate

cadastral districts

rights to the properties, constructions, apartments and non-flat spaces

plots

Items recorded in the cadastre

protected parts of nature and country

and cultural monuments

apartments, non-flat spaces,

apartments and non-flat spaces under construction

constructions

- *Vector cadastral maps 40,5 %*
- *Scanned maps – 45,8 %*
- *Paper cadastral maps 100 %*

worksho...

Decentralized IS on cadastre

Once a week (only changes)

ISKN

district Cadastral Registry

- Cadastral data (graphical and descriptive)

district Cadastral Registry

- Cadastral data (graphical and descriptive)

Virtual Private Network

Central Database (descriptive data)

Data files (graphical data)

Cadastral Portal

72 districts

District level management

Geodetic and Cartographic Institute Bratislava

Central level management

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Reference data for GIS (ZBGIS)

- geometrical and positional frame for NSDI
- public administration is obliged to use ZBGIS for their thematic GIS
- public administration is obliged to submit their data to update ZBGIS
- aerial photogrammetry
- cooperation between MoD and GCCA
- year 2010 – finished the data collection – data available for the whole Slovakia
- updating is necessary – 3 years interval
- state map series

Data and information provision

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INSPIRE

Annex I	Annex II	Annex III
Coordinate reference systems	**Elevation**	Statistical units
Geographical grid systems	Land cover	**Buildings**
Geographical names	Orthoimagery	Soil
Administrative units	Geology	Land use
Adresses		Human health and safety
Cadastral parcels		Utility and governmental services
Transport networks		Environmental monitoring facilities
Hydrography		Production and industrial facilities
Protected sites		Agricultural and aquaculture facilities
		Demography ...

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„Informatisation of the society"

- 2 projects (2009 – 2012) funded by EU
- infrastructure for provision of electronic services :
  - *Cadastre*
  - *Reference topographical data*
- electronical services as part of the e-Gov
- electronical services as part of ESDI (INSPIRE)

Project – electronical cadastral services

- desentralized system $\Rightarrow$ centralized system
- graphics and descriptive inf. in common database
- scanning of the paper documents
- electronic registry
- new mapping – 4 pilot projects
- upgrade of the cadastral portal
- web services: CSW, WMS, WFS,
- electronical submissions for the registration

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Project – reference topo-database

- upgrade of the photogrammetry processing system,
- update of the feature catalogue,
- methodologies
- quality control according to ISO
- metainformation system
- geoportal with CSW, WMS, WFS, WFS-T
- trading with geodata
- state maps

Plans for further development

- provision of authorized, quality data, delivered in time
- long-term data updating
- national standards for data harmonisation
- implementation of ISO, OGC
- DEM
- orthoimageries
- flood maps
- new cadastral mapping
- 3D cadastre

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Thank you for your attention.

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