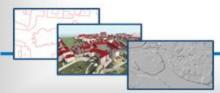
INTERNATIONAL CONFERENCE OF THE PERMANENT COMMITTEE ON CADASTRE (PCC)





Cadastral System in Poland

Surveyor General of Poland Alicja Kulka 5th of May, Warsaw



Cadastre Law



Dz. U. 1989 Nr 30 noz. 163

Opracowano n podstawie: t.j. Dz. U. z 2024 r.

z dnia 17 maja 1989 i

Prawo geodezvine i kartografica

Przepisy ogóln

- Art. 1. Ustawa reguluje sprawy: 1) krajowego systemu informacji o terenie;
- organizacji i zadań Służby Geodezyjnej i Kartograficznej:
- wykonywania prac geodezyjnych i kartograficznych;
- ewidencji gruntów i budynków;
- zintegrowanego systemu informacii o nieruchomościac
- gleboznawczej klasyfikacji gruntów:
- rozgraniczania nieruchomości:
- geodezyjnej ewidencji sieci uzbrojenia terenu oraz koordynacji sytuowania tych
- państwowego zasobu geodezyjnego i kartograficznego uprawnień zawodowych w dziedzinie geodezji i kartografii;
- 11) ewidencji miejscowości, ulic i adresów.
- Art. 2. Ilekroć w ustawie jest mowa o:
- pracach geodezvinych rozumie się przez to:
- a) projektowanie i wykonywanie pomiarów: geodezyjnych, imetrycznych, magnetycznych oraz astronomicznych, w związku z
- realizacją zadań określonych w ustawie,

Geodetic and Cartographic Law from 17th of May 1989



Warszawa, dnia 30 lipca 2021 r.

Poz. 1390

ROZPORZĄDZENIE MINISTRA ROZWOJU, PRACY I TECHNOLOGII

w sprawie ewidencji gruntów i budynków

Rozdział 1 Przepisy ogólne

- szczegółowy zakres informacji objętych ewidencją gruntów i budynków, zwanej dalej "ewidencją"
- rodzaje budynków i lokali, które nie są wykazywane w ewidencji;
- szczegółowe zasady wymiany danych ewidencyjnych;
- sposób i terminy sporządzania powiatowych, wojewódzkich i krajowych zestawień zbiorczych danych objętych ew dencją;
- ustawa ustawę z dnia 17 maja 1989 r. Prawo geodezyjne i kartograficzne

- budynek obiekt budowlany, który jest budynkiem w rozumieniu przepisów ustawy z dnia 7 lipca 1994 r. Prawo budowlane (Dz. U. 2020 r. poz. 1333, z późn. zm.²⁰);
- blok budynku cześć budynku wyodrebniona ze względu na liczbe kondygnacji;
- stny posiadacz osobę lub podmiot władający gruntem na zasadach samoistnego

Regulation of Minister of Economic Development and Technology from 27th of July 2021 regarding land cadastre



Surveyor General of Poland



Head Office of Geodesy and Cartography (GUGiK) is Polish National Mapping and Cadastral Authority

The Head of GUGiK is the Surveyor General of Poland (GGK)

Main tasks:

- supervises implementation of national policy in geodesy and cartography
- manages central geodetic and cartographic data resource and geoportal
- elaborates and establishes registers and databases
- grants professional entitlements (licences) in geodesy and cartography and manages a register of authorised persons
- cooperates with foreign and international, specialised institutions and authorities as well as with local governments and professional organisations



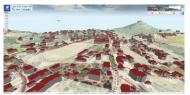
Head Office of Geodesy and Cartography (GUGiK)



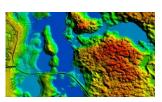
- Head Office of Geodesy and Cartography (GUGiK) is Poland's main spatial data provider. The role of GUGiK is to provide access to current spatial data and manage national spatial data infrastructure (NSDI).
- Spatial data in Poland is collected in the registers by many central institutions and local government units at all levels.
- The largest and the most important resources of spatial data is collected on the basis of the Geodetic and Cartographic Law.
- GUGiK is focused on data acquisition, digitalisation of geodesy and integration
 of e-services providing easy access to data for a wide range of users
 (environment, investment process, spatial planning, energy, etc.).







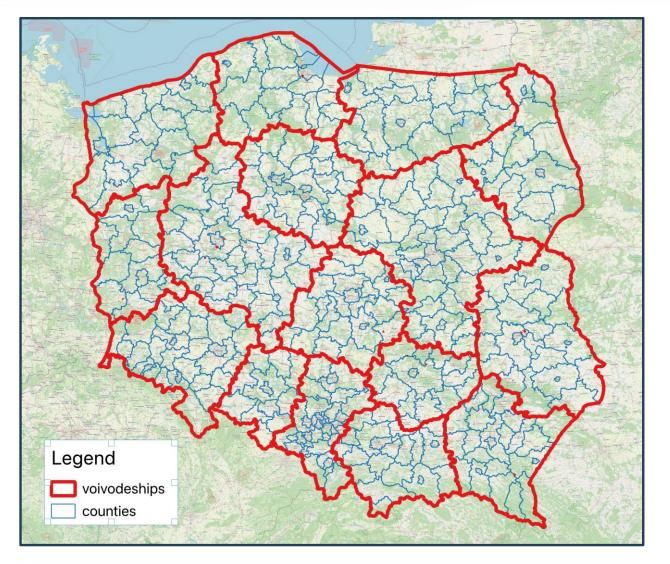


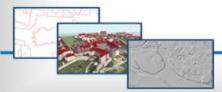


Structure of the Polish Geodetic and Cartographic Service



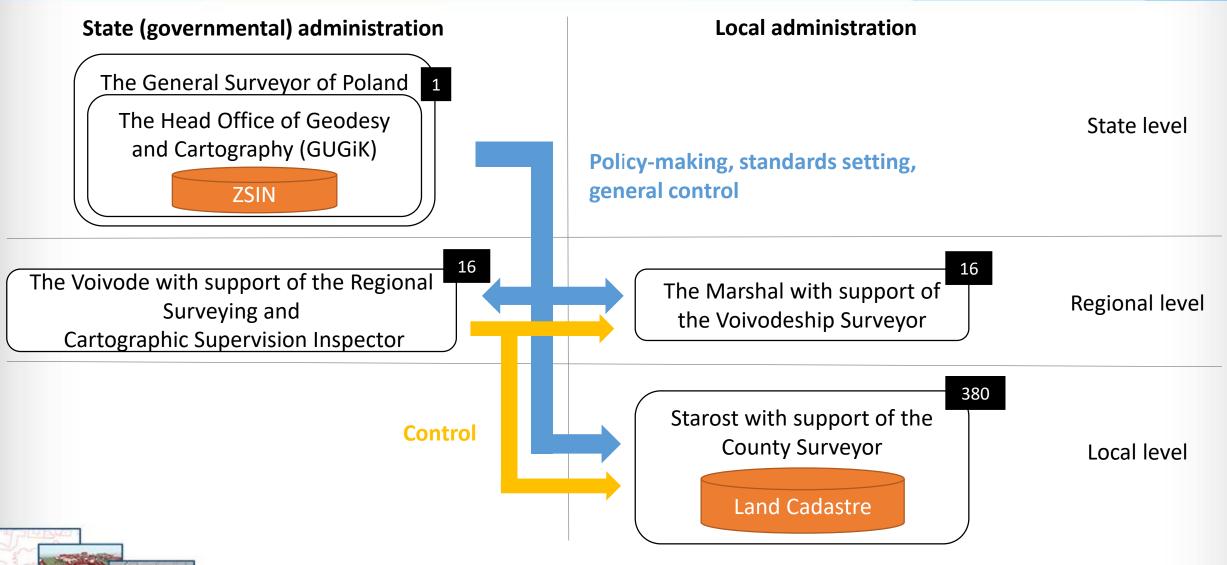
- ✓ 16 voivodeships
- ✓ 380 counties
- √ 385 cadastral databases
 - ✓ 380 in counties
 - ✓ 5 in communes as a result of an agreement with Starost





Structure of the Polish Geodetic and Cartographic Service





Land Cadastre vs Land Register



Land Cadastre

- Managed by the Geodetic and Cartographic Service
- Legally binding regarding spatial extent of ownership rights
- Contains information about parcels, buildings, premises (flats), land use and soil quality (for agriculture land only)
- Contains data about owners

Land Register

- Managed by Ministry of Justice and courts
- Legally binding regarding ownership
- Contains information about real estates (consisting of parcels, buildings and premises), mortgage and limited real rights
- Contains data about owners



Data in land cadastre



Subjective data

- parcels
- buildings
- flats (premises)

Objective (personal) data

- owners
- description of ownership
- information about documents
- registered address

Other data

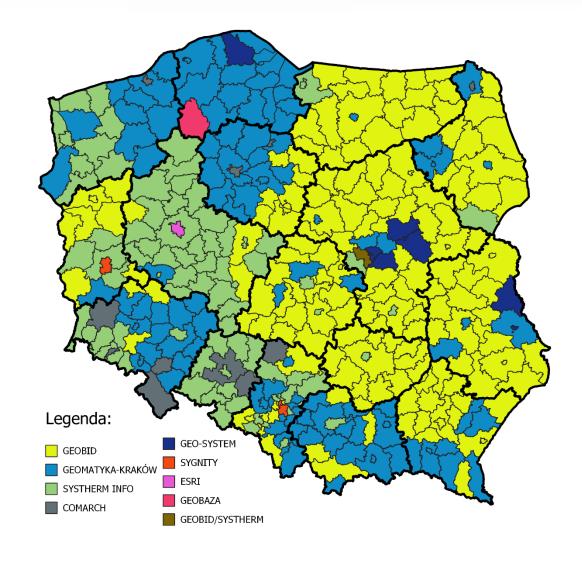
- perpetual user
- other land users
- entity shares
- information about documents
- classification contours and land use



Geodetic IT systems - producers



Comarch	11
Esri	1
Geobaza	1
Geobid	166
Geobid i Systherm	1
Geobid i Systherm Geomatyka	1 113
	_
Geomatyka	113





IT systems



Typically IT systems in counties manage following databases:

Land Cadastre

Cadastre of Utilities

Basic Topographic Database

Prices of Real Estate Register Register of
Geodetic Detailed
Control Points

Documents of Geodetic and Cartographic Resource

Cadastral data distribution





Network services



Counties (geo)portals



Other digital means (email, eGov)



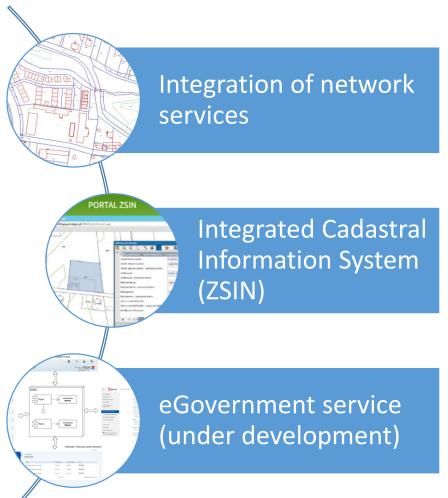
Visit in the office

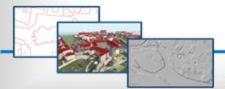


How GUGiK integrates fragmented cadastre?









Land Cadastre dissemination – network services (1)



Subset of Land Cadastre is published as Open Data via network services

Web Feature Service (WFS)

Cadastral parcel

- geometry
- cadastral parcel identifier
- parcel number
- identifier of cadastral zone
- identifier of cadastral unit
- name of cadastral zone
- name of commune
- date of data publication

Building

- geometry
- building identifier
- type of building
- date of data publication



Land Cadastre dissemination – network services (2)



Subset of Land Cadastre is published as Open Data via network services

Web Map Service (WMS)

Cadastral Parcels

- cadastral parcel identifier
- number
- identifier of cadastral zone
- Identifier of cadastral unit
- name of cadastral zone
- name of the commune
- area
- land use classes
- ownership category

Building

- building identifier
- type of building
- number of above ground floors
- number of underground floors

Land use

land use category

Soil quality

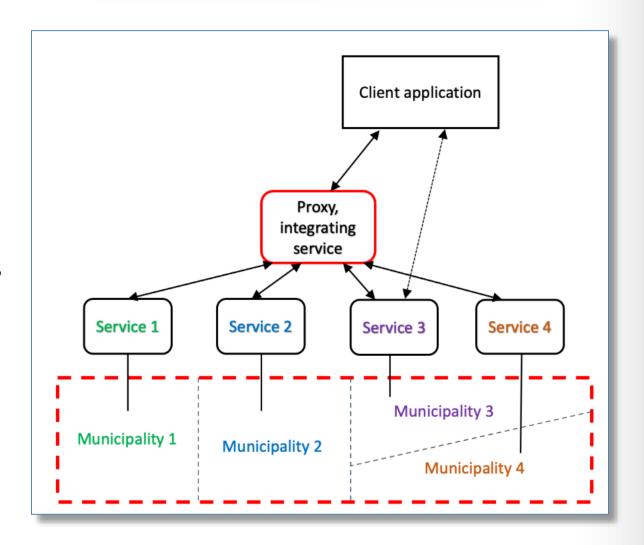
soil quality category



Land Cadastre dissemination – network services KIEG



- ✓ GUGiK integrates local WMS and WFS services published by local governments (counties)
- ✓ Integrating service allows users to access cadastral data from one endpoint instead of 385 local endpoints
- ▼ The European Commission endorsed this way of integrating spatial data as INSPIRE Good Practice





Land Cadastre dissemination – network services (4)

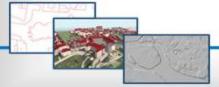


State Integration of Land Cadastre Service (KIEG)

- WMS API
- Works on top of local view WMS services
- Allows to display a cadastral map for any part of Poland
- Allows to display attributes of any cadastral parcel in Poland

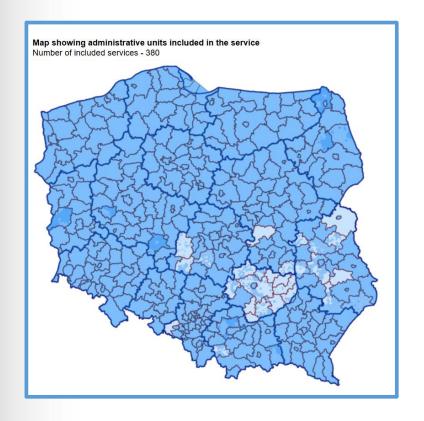
Cadastral Data Localisation Service (ULDK)

- Custom API
- Works on top of local download WFS services
- Allows to find any cadastral parcel or building in Poland using different parameters e. g. id, geometry, cadastral zone name and parcel number

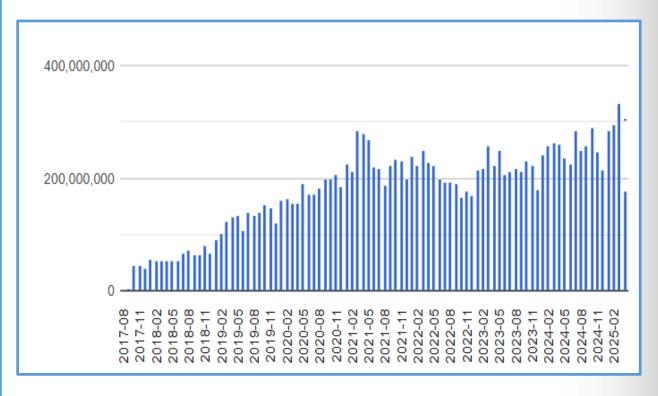


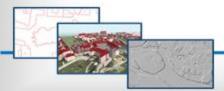
National Integration of Lands and Buildings (KIEG)





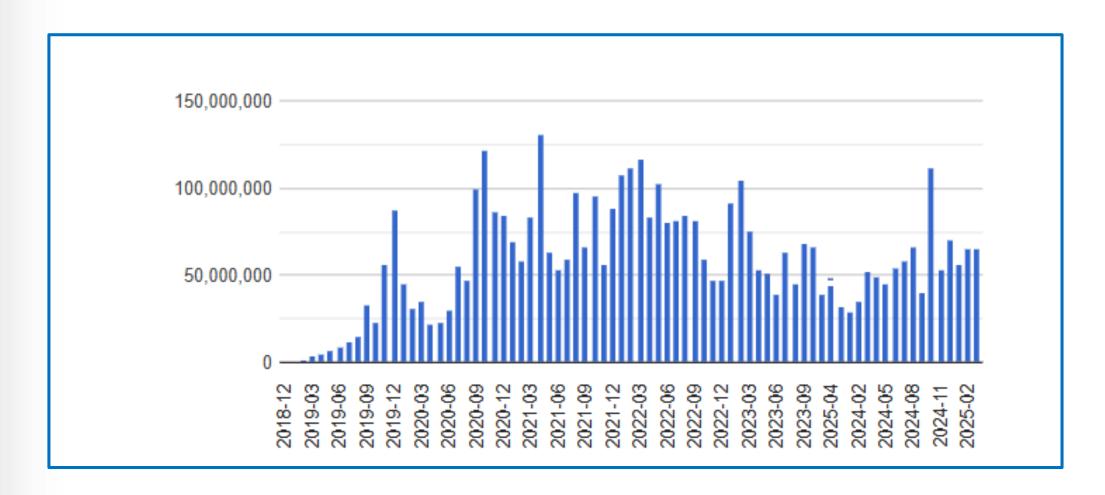
2023-03	257 168 447	
2023-04	222 371 695	
2023-05	250 436 136	
2023-06	205 499 963	
2023-07	212 821 710	
2023-08	218 162 470	
2023-09	212 833 732	
2023-10	229 634 956	
2023-11	221 674 408	
2023-12	178 843 076	
2024-01	240 518 741	
2024-02	256 768 660	
2024-03	263 956 780	
2024-04	260 511 666	
2024-05	235 720 483	
2024-06	225 544 234	
2024-07	285 197 803	
2024-08	249 927 232	
2024-09	258 261 731	
2024-10	289 787 973	
2024-11	245 794 225	
2024-12	215 056 097	
2025-01	285 033 024	
2025-02	294 807 401	
2025-03	333 780 576	
2025-04	290 289 301	
2025-05	9 266 221	
Σ	16 664 781 709	





Cadastral Data Localisation Service (ULDK)







Land and Building register - statistics

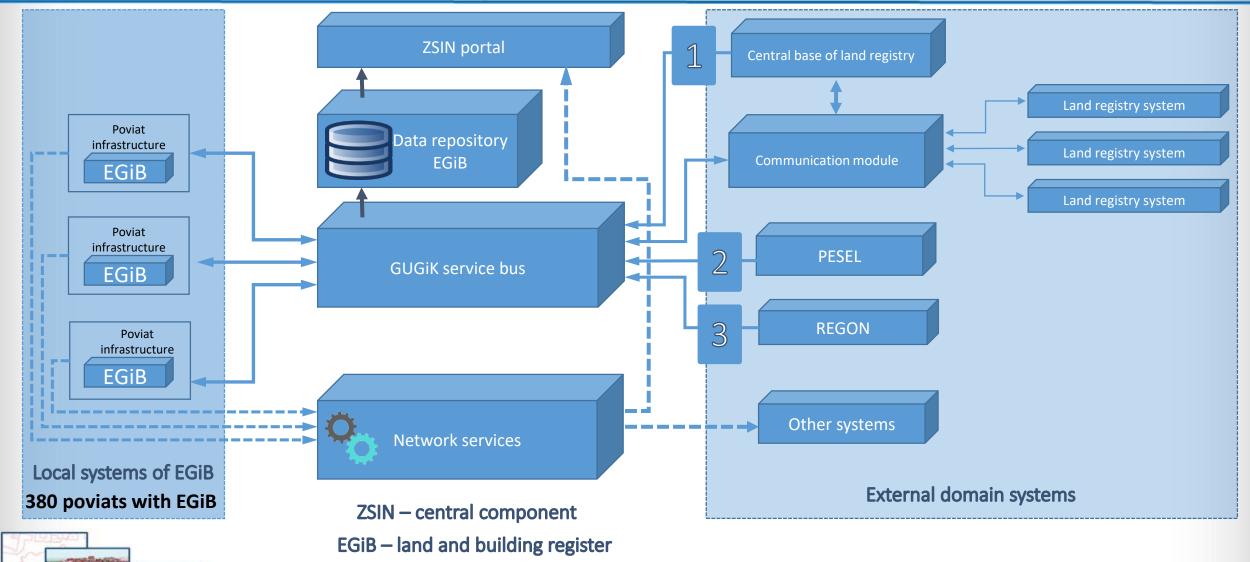


- 3 176 cadastral units
- 53 913 registration precincts (obręby)
- √ 38 853 536 cadastral parcels
- √ 16 855 025 buildings
- √ 6 985 265 premises



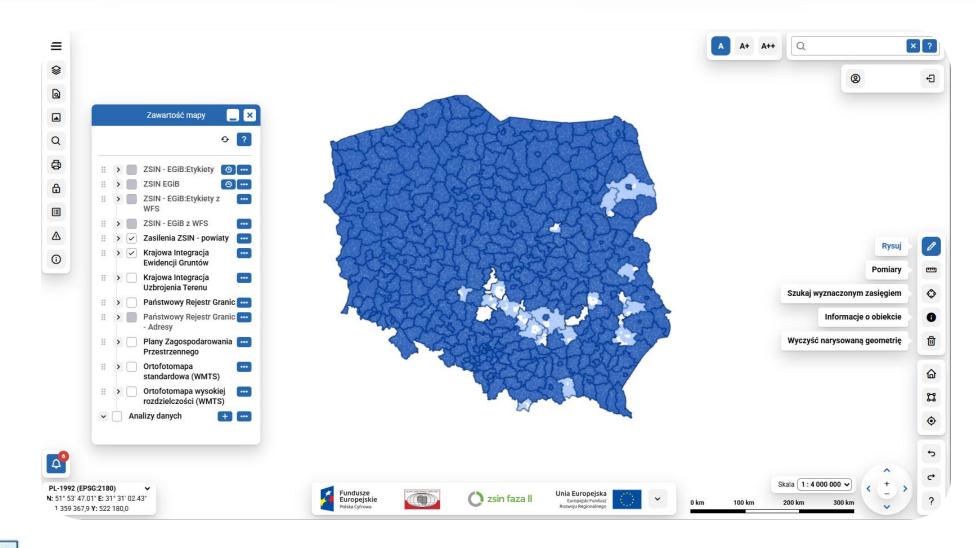
Integrated Real Estate Information System Cadastral system – architecture





New Portal of ZSIN – Integrated Real Estate Information System





Challenges - New projects



Implemented projects:

- 1. Integration of National Geodetic and Cartopgrahic resource [FERC]
- 2. Real-Time GNSS Monitoring System (RTGMS) [**ESA NAVISP Element 3**]
- 3. Automatic Detection of Topographical objects [INFOSTRATEG NCBiR]

Planned projects:

- 4. "Smart Geoportal"- Ensuring the availability and use of innovative network services and spatial data by citizens and entrepreneurs, along with improving safety, health and human life protection provided by public administration [FERC] acceptance RA IT and KRMC
- 5. IT GUGiK -[Cyberbezpieczny rząd]
- National Data Processing Center [MC-NASK]











Real - Time GNSS Monitoring System for Poland



- ✓ In a consortium with the Institute of Communications we submited an application to the European Space Agency for the impementation of a project to monitor GNSS signals in Poland;
- ✓ Pilot project for the area of north-eastern Poland;
- √ The agreement was signed on 18.1029024,
 with an implementation deadline of 18 month;
- ✓ Total project cost 300 000 Euro







038 - REAL-TIME GNSS MONITORING SYSTEM FOR POLAND (RTGMS)

Status: On Going

Activity Code: NAVISP-EL3-038

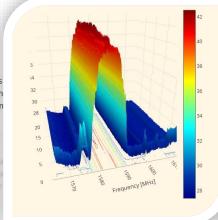
Start date: 21/10/2024

Duration: 18 Months

Reliable and uninterrupted access to satellite navigation data is nowadays a key element for various same time, GNSS systems are not 100% reliable and the issue of interference (both unintentional an becoming more and more significant – especially in current geo-political situation. That is why a con interference is so important.

interference is so important.

Reliable and uninterrupted access to satellite navigation data is nowadays a key element for vario same time, GNSS systems are not 100% reliable and the issue of interference (both unintentional becoming more and more significant — especially in current geo-political situation. That is why a d





Real - Time GNSS Monitoring System for Poland



- Reliable and uninterrupted access to satellite navigation data is nowadays a key element for various branches of economy, security and safety. At the same time, GNSS systems are not 100% reliable and the issue of interference (both unintentional and intentional) affecting their operation is becoming more and more problematic
- The main goal of this project is development of the concept, pilot implementation and functional tests of national, Polish system for GNSS signals monitoring.

Major functions of this system will include:

detection of interference and/or unavailability of GNSS signals on the territory of Poland,

generating alarms regarding any instances where satellite navigation systems may work

incorrectly,

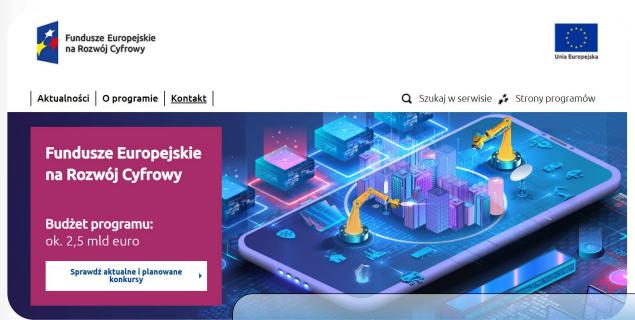
• real-time visualizations via a dedicated web service available to all interested users.

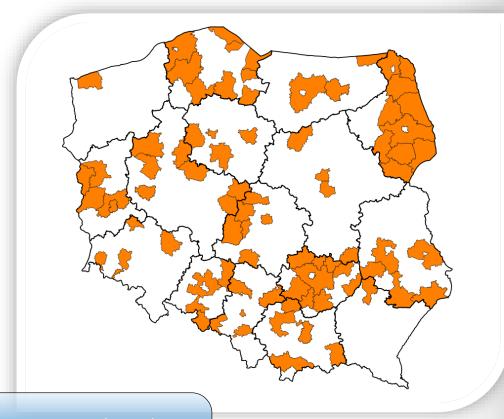


Integration of National Geodetic and Cartographic Resource



- ✓ Financing agreement signed on 26th of April 2024 r.
- ✓ Total costs 252 312 114 zł
- ✓ Duration of the project: 36 months





Program Fundusze Europejskie na Rozwój Cyfrowy 2021 – 2027 (FERC)
Priorytet II "Zaawansowane usługi cyfrowe"
Działanie 2.1 "Wysoka jakość i dostępność e-usług publicznych"



Integration of National Geodetic and Cartographic Resource

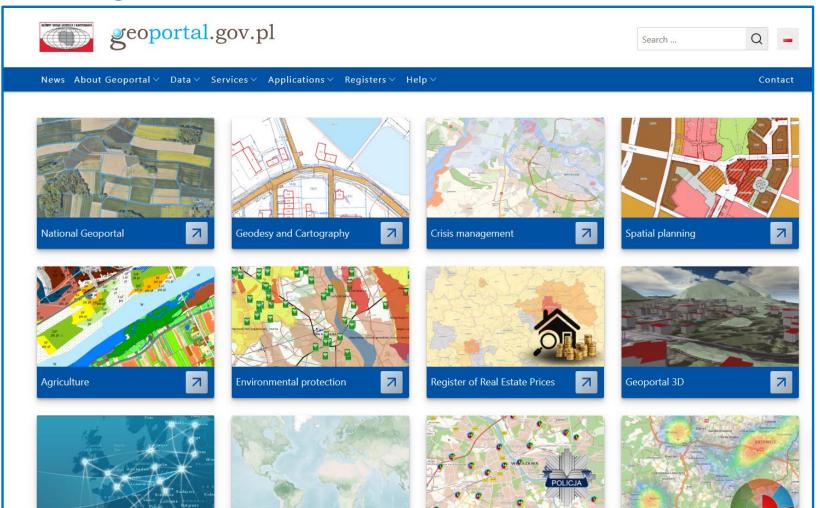


- Transformation of documentation from the country level from analog/hybrid format to digital format (database) format, and integration with the country systems where the transformed documentation originates:
 - scanned and metadata-tagged technical reports and other documents stored in National Geodetic and Cartographic Resource,
 - conversion of large-scale analog maps into database format, including original maps on metal substrates, e.g., for district areas or sheets of the map containing (Land Parcels and Buildings)
 EGIB, (Geodetic Control Network) GESUT, and Topographical Feature Database500 (BDOT500) data.
- Launch of a consolidated e-service that allows requesting of data from National Geodetic and Cartographic Resource from any area in Poland in one place.





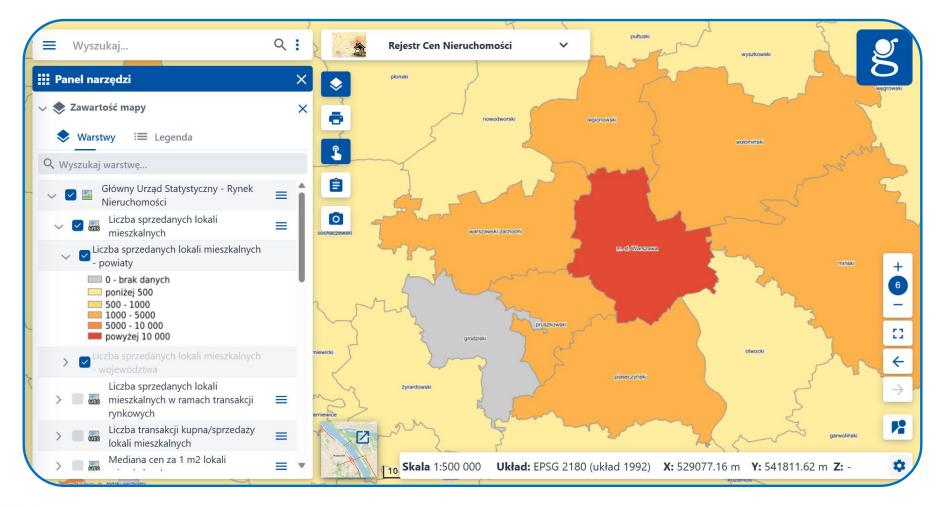
✓ New Real Estate Price Register module





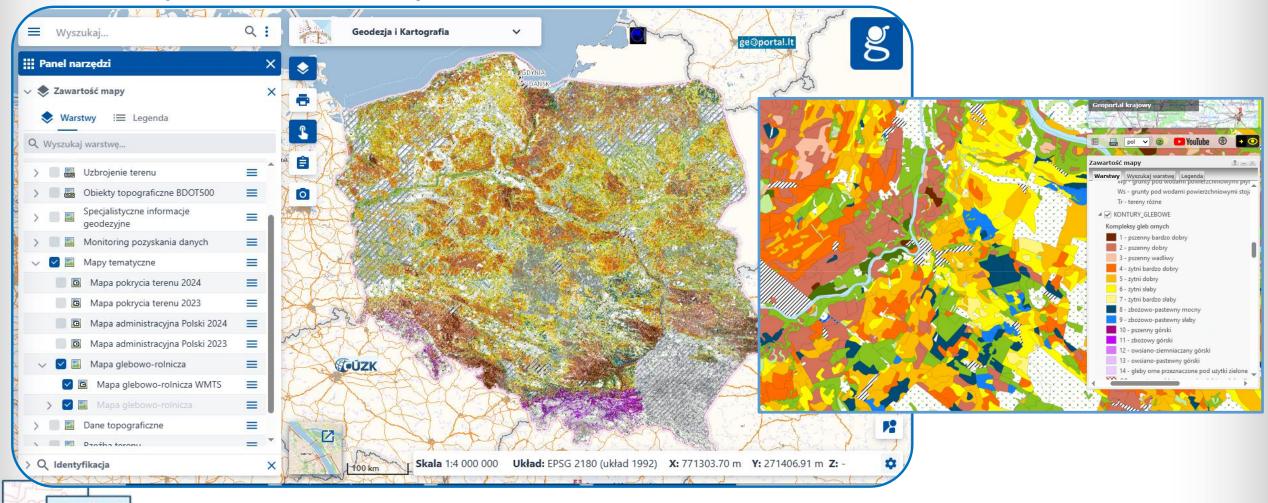


✓ New Real Estate Price Register module



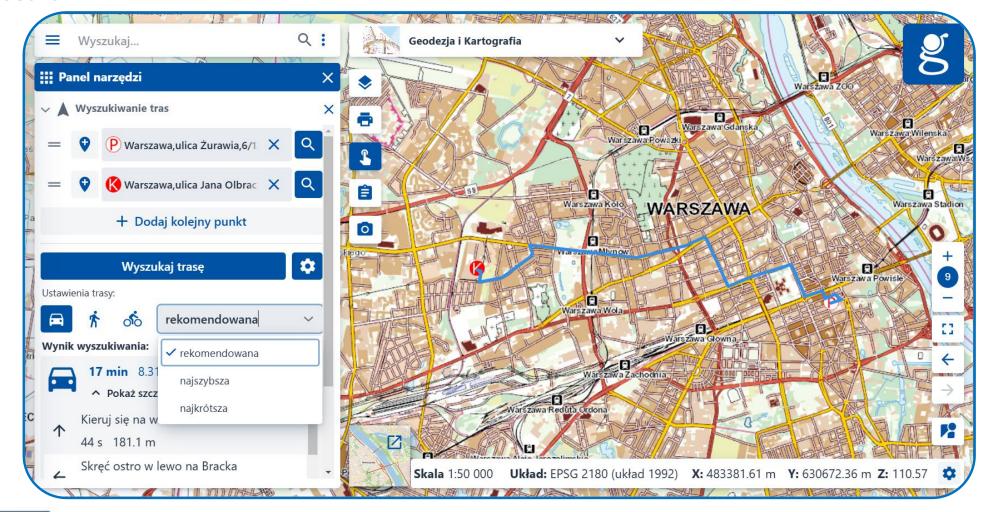


✓ Soil map for the whole country



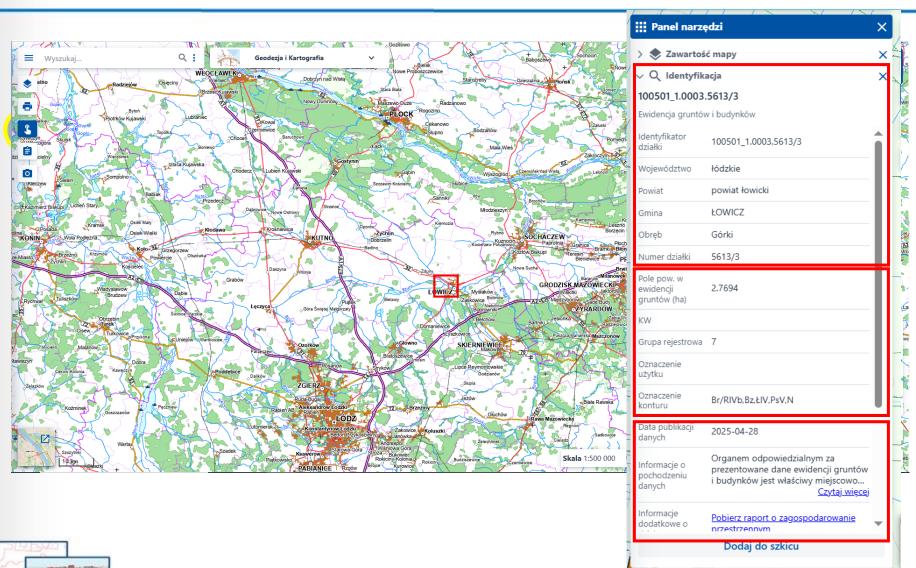


✓ Route search



Identification tool





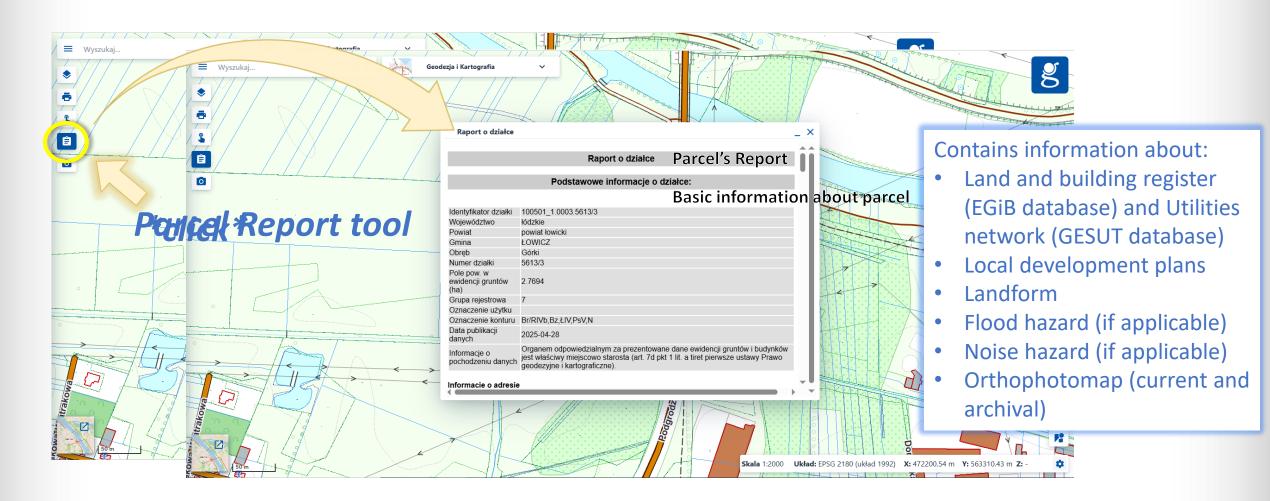
Basic information about parcel

Specific information about parcel

Other information

Parcel Report

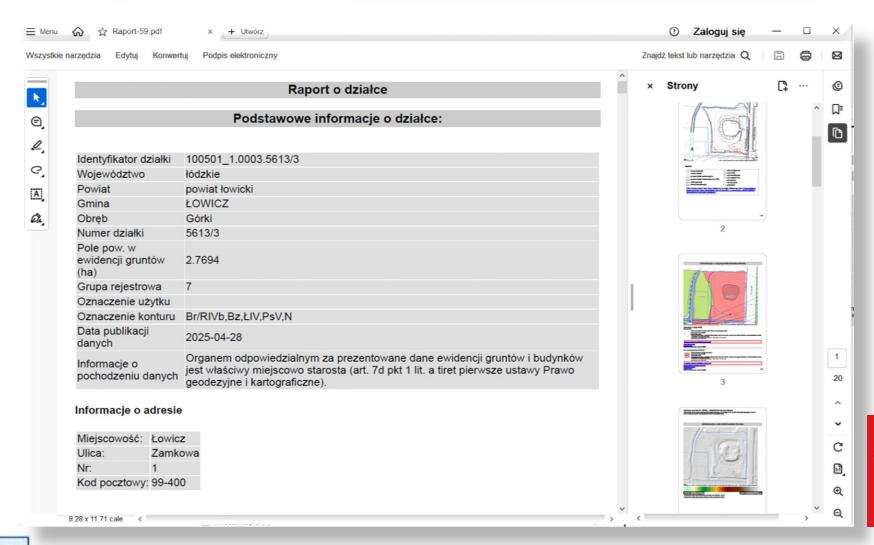






Parcel Report

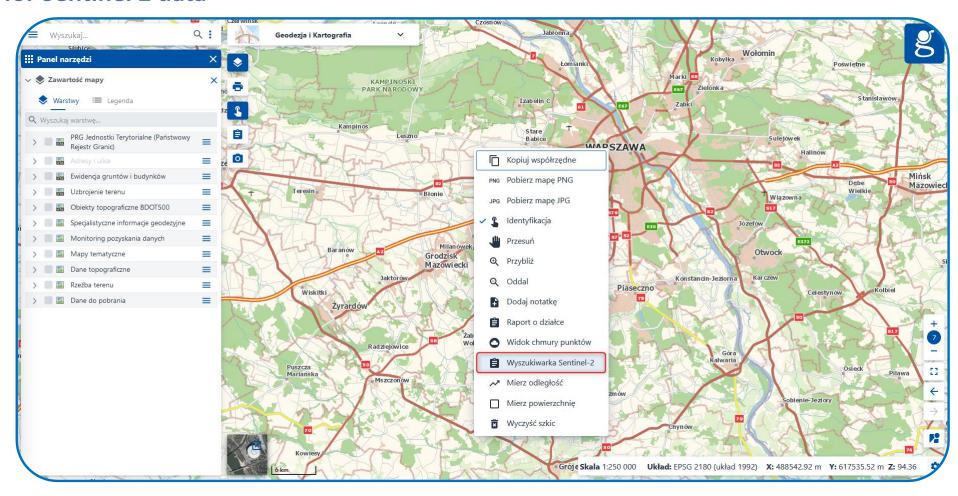








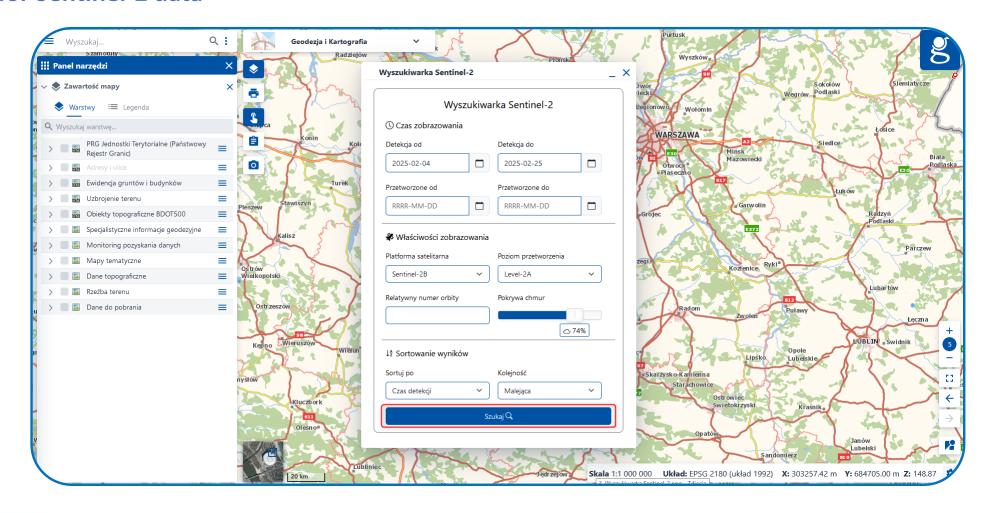
✓ Search for Sentinel 2 data







✓ Saerch for Sentinel-2 data





Thank you for your attention mapy.geoportal.gov.pl

Surveyor General of Poland Alicja Kulka

