HEAD OFFICE OF GEODESY AND CARTOGRAPHY

HEAD OFFICE OF GEODESY
AND CARTOGRAPHY (GUGIK)

geoportal.gov.pl

GEOPORTAL IN PRACTICE

From Spatial Data to Smart Public Services



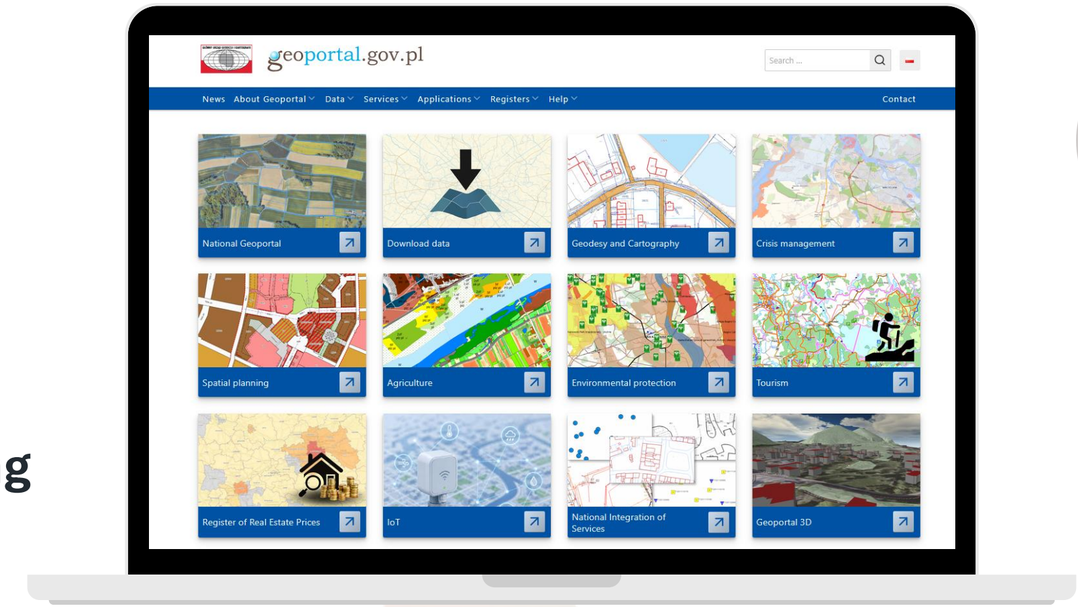
Deputy Surveyor General of Poland
Ph. D. Anna Bober

National Geoportal – what do we have today?

The **geoportal.gov.pl** service provides acess to spatial data and services and serves as the central node of the Spatial Information Infrastructure.

browsing

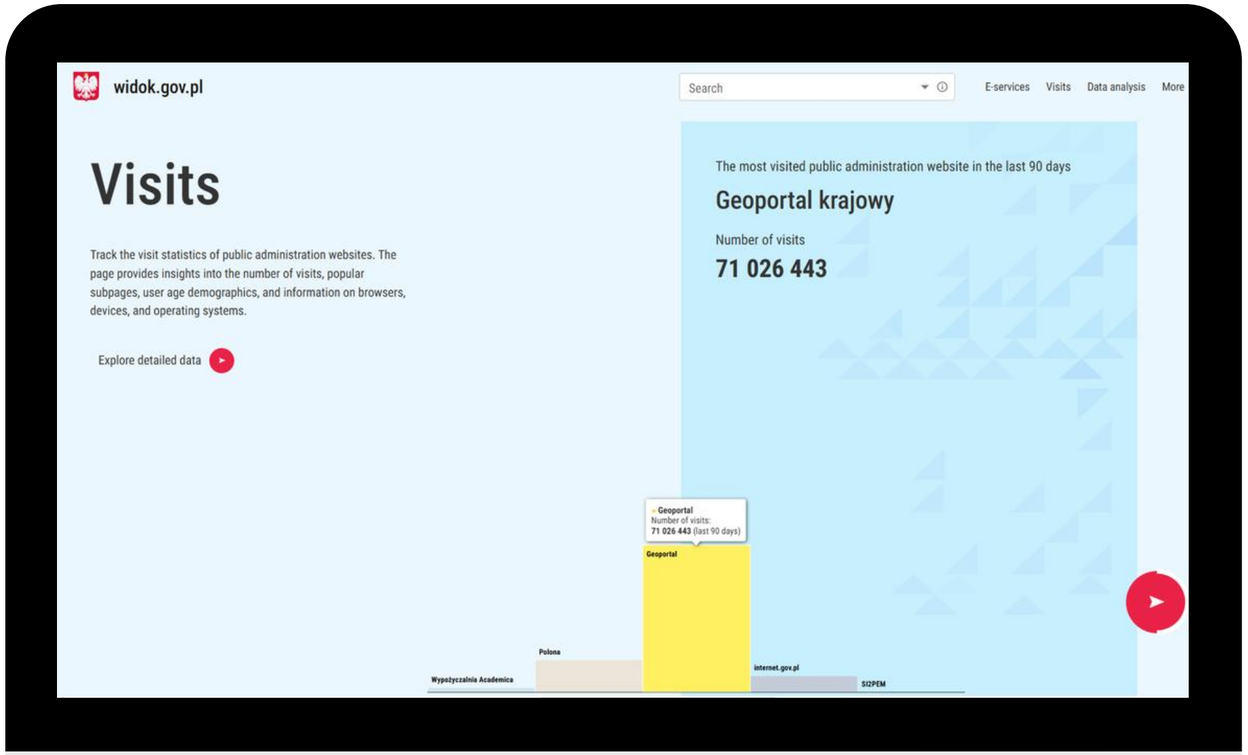
downloading



analysis

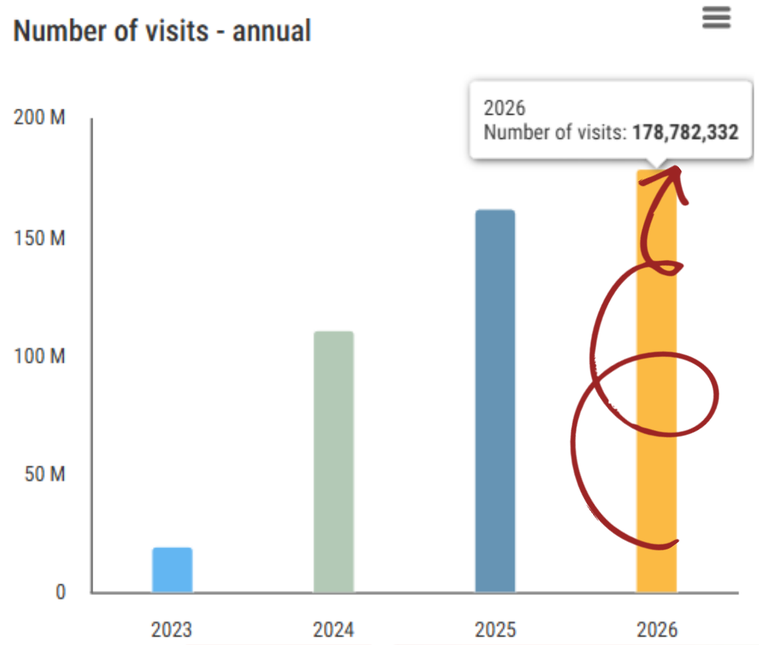
access for citizens and public administration

National Geoportal



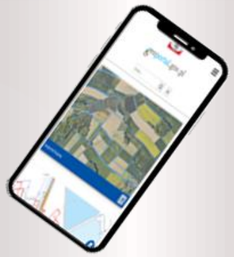
The www.geoportal.gov.pl website has been the most visited portal over the past 90 days.

Source: https://widok.gov.pl/pl

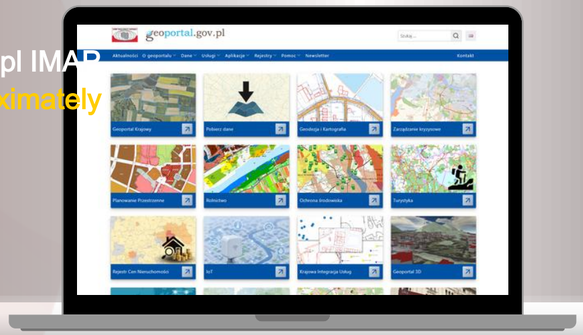


PERIOD: 01/01/2026 – 06/10/2026

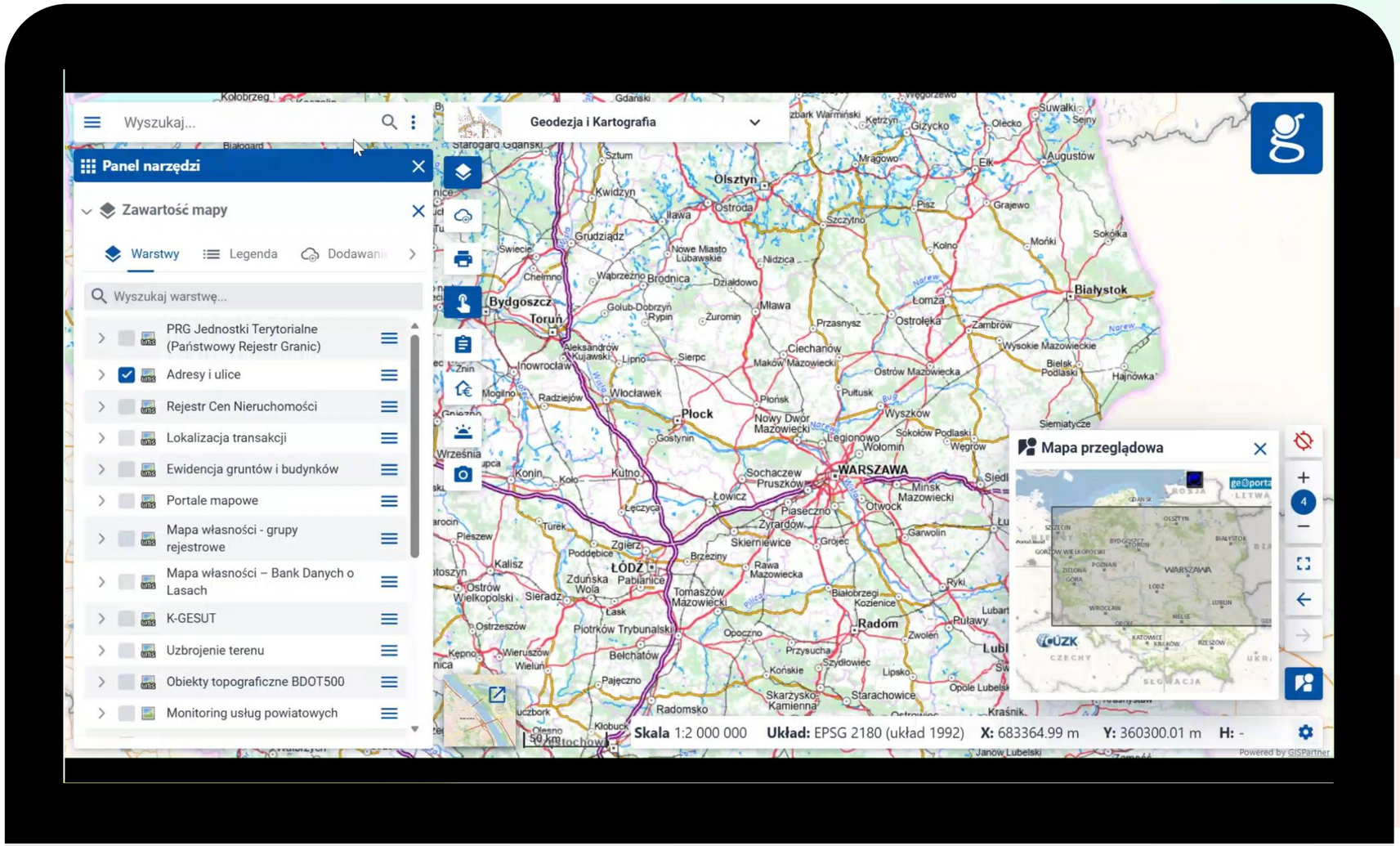
Approximately 375.5 thousand people used the Geoportal mobile application.



The Geoportal service (mapy.geoportal.gov.pl IMAP and IMAPNEXT) recorded more than approximately 6 million users.

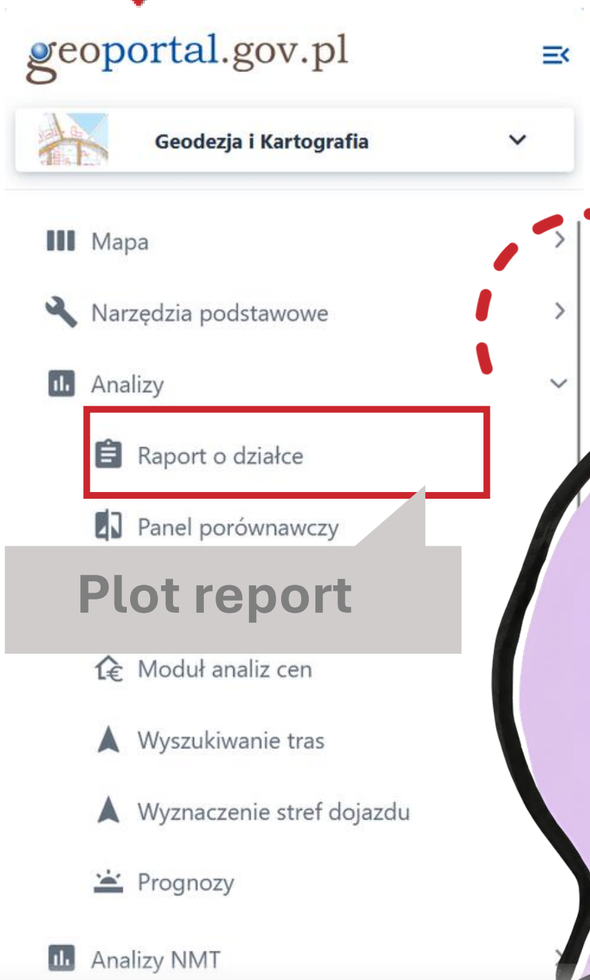


National Geoportal – what do we have today?



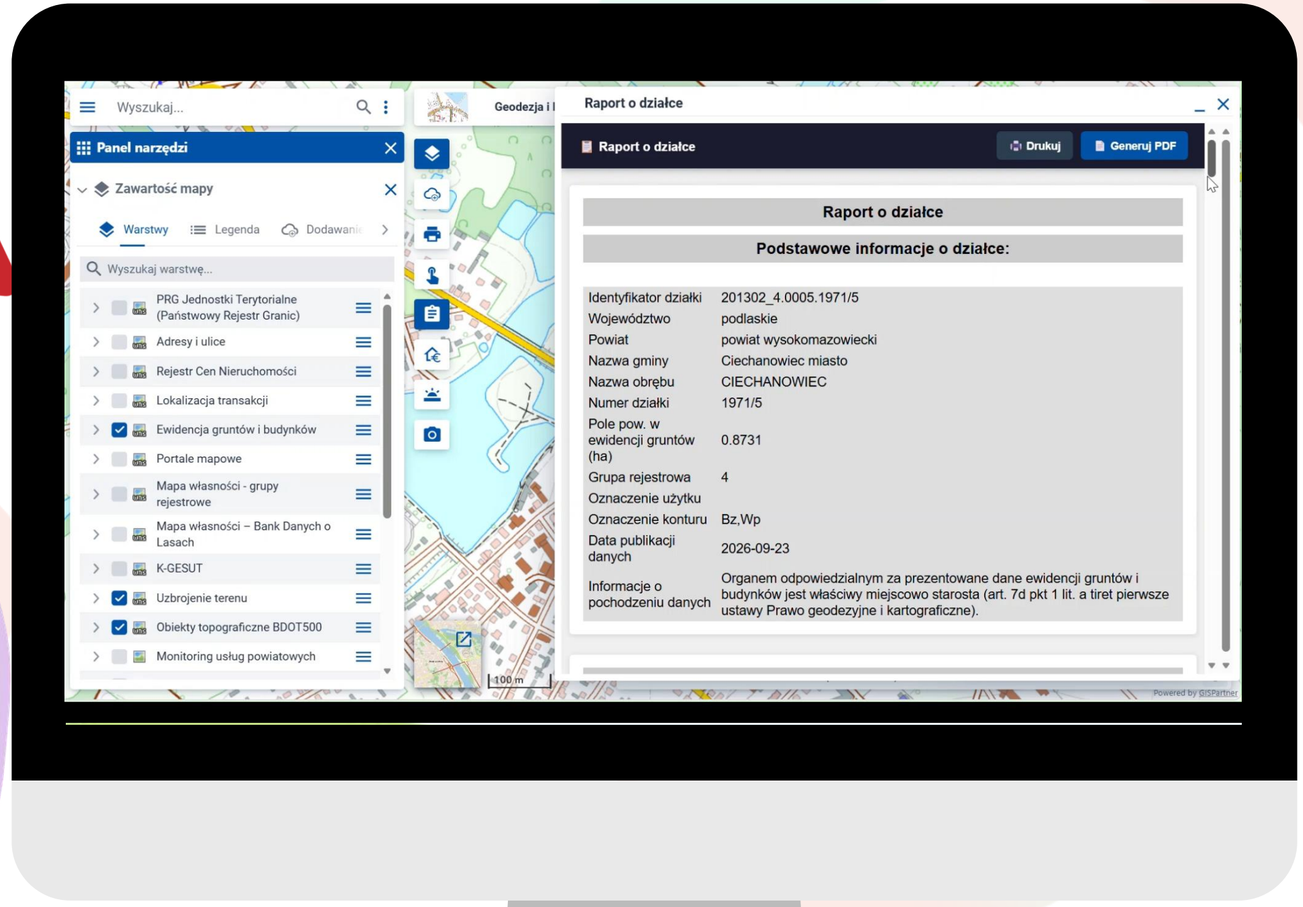
National Geoportal – what do we have today?

The Geoportal does more than just display data – it also enables users to perform selected analyses directly within the service.



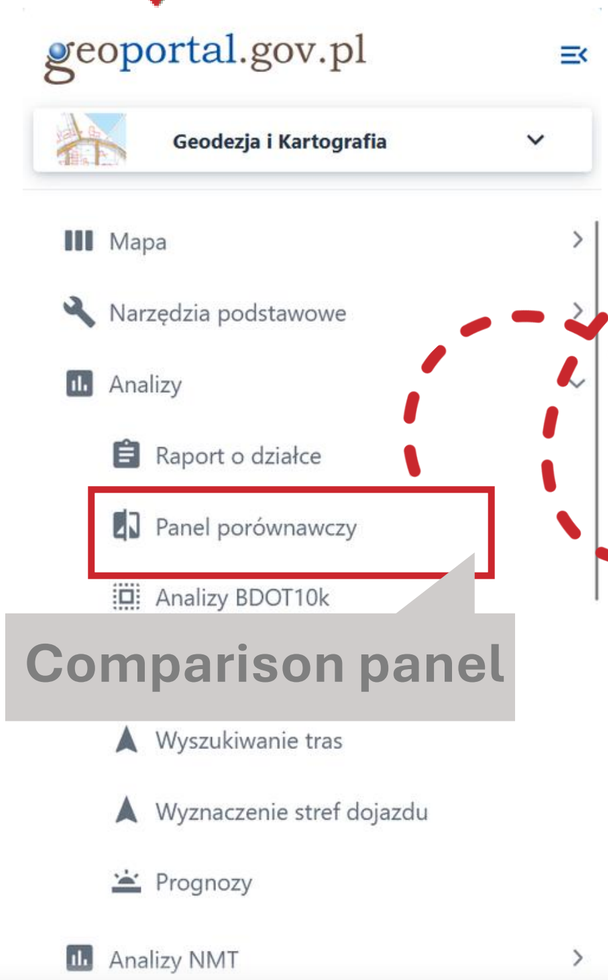
Plot report

- Basic information about the plot, including EGiB and GESUT
- Information on land use and development
- Register of Applications, Decisions and Notifications (GUNB)
- Information on terrain and elevation
- Noise pollution
- Current and historical orthophotomaps, as well as an index of aerial imagery

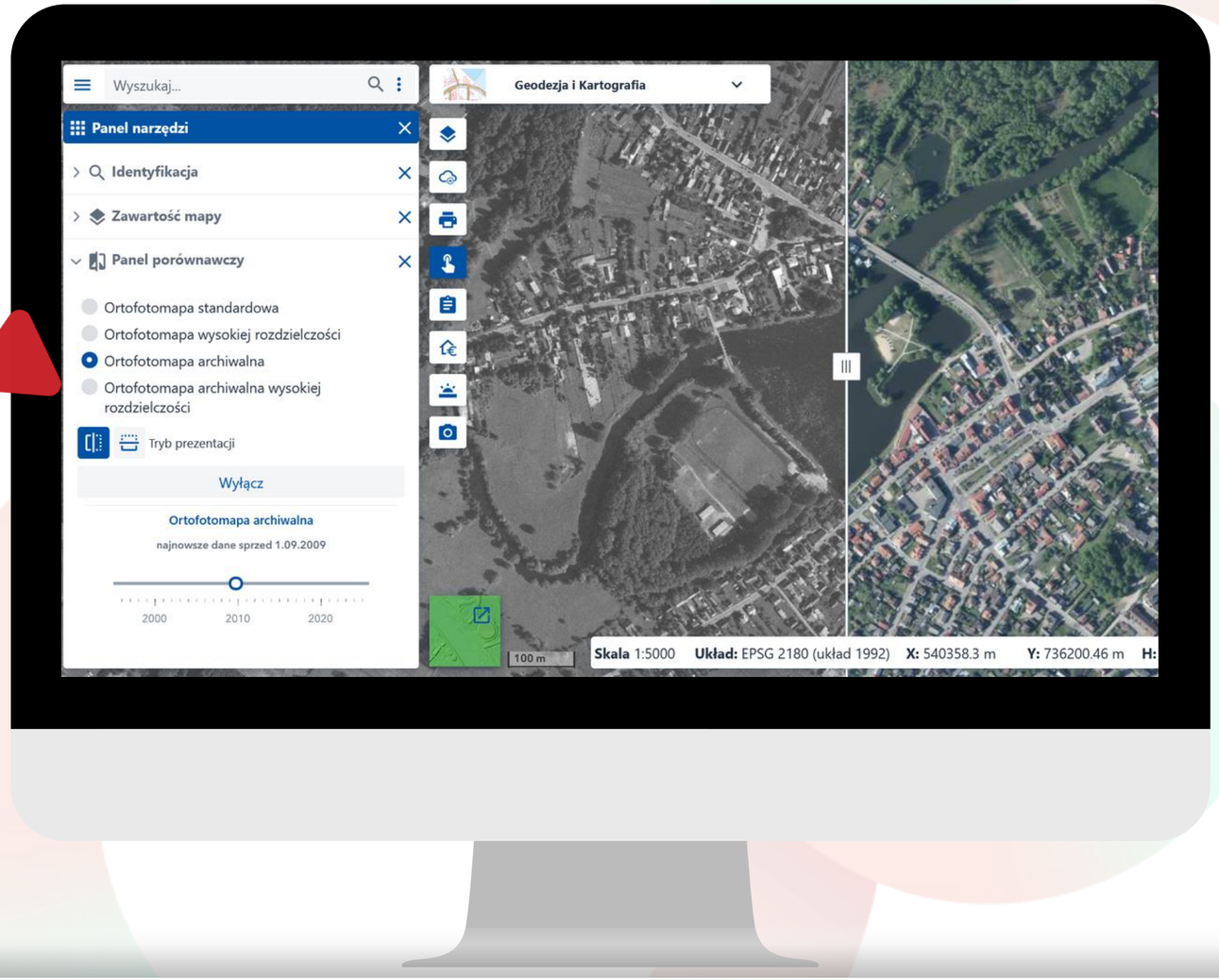


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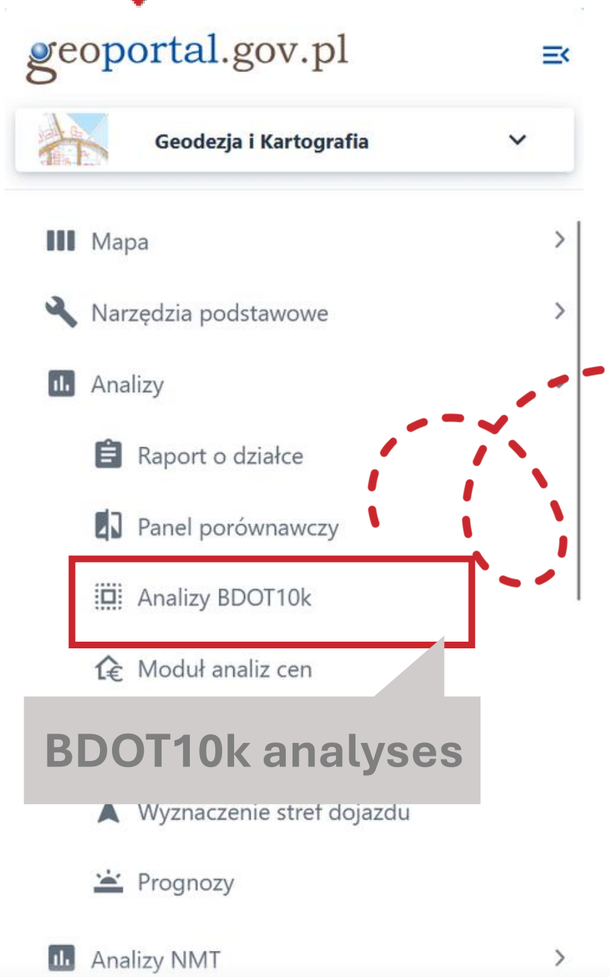


Comparison panel

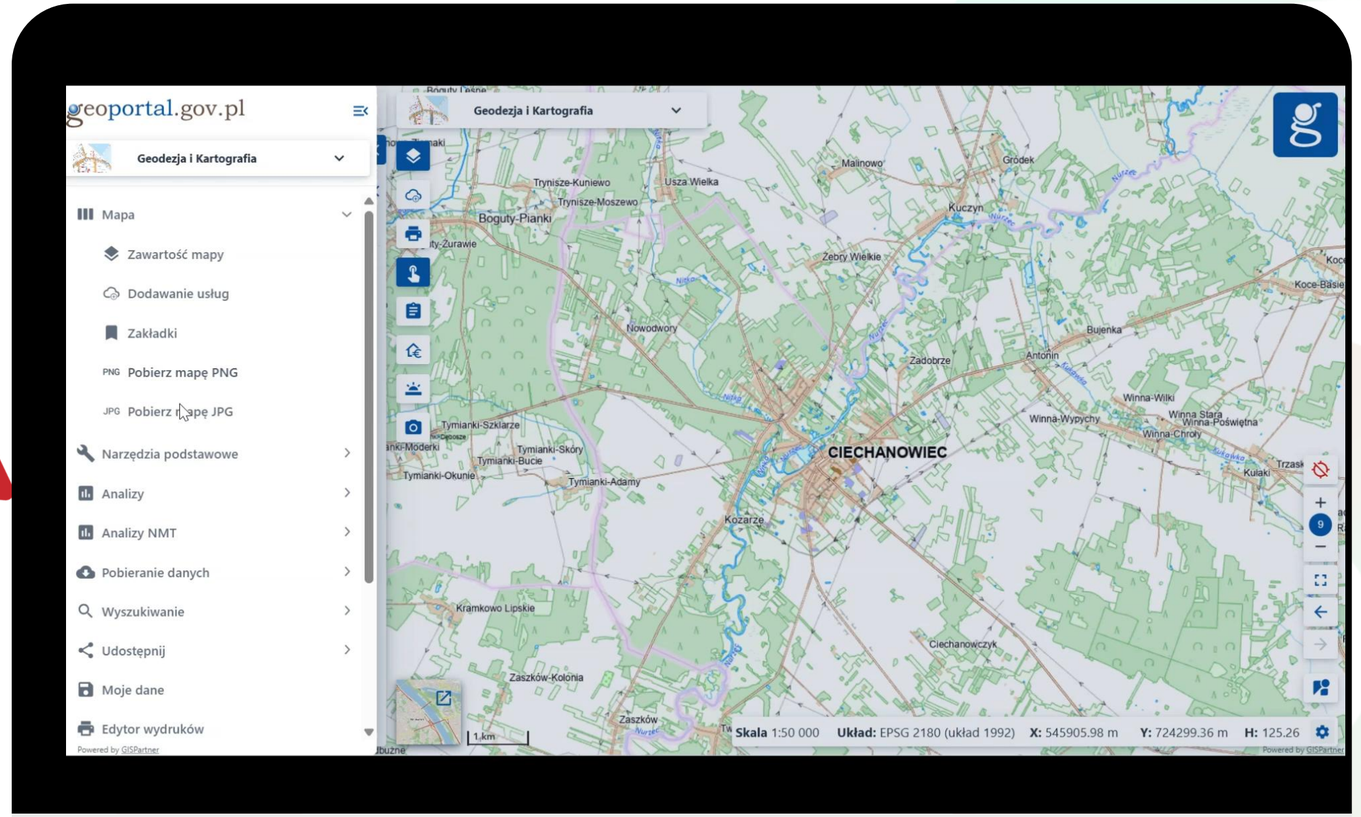


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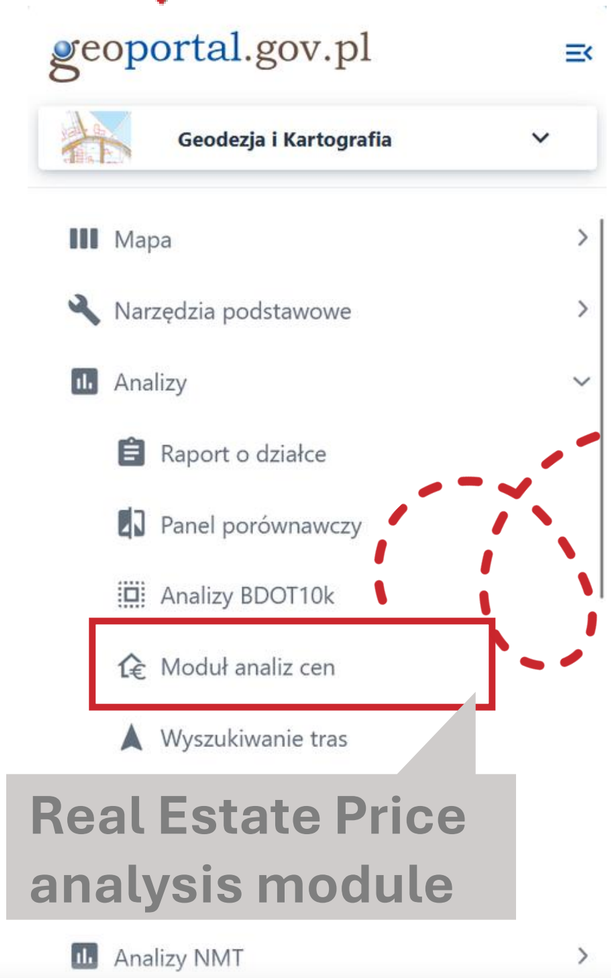


BDOT10k analyses

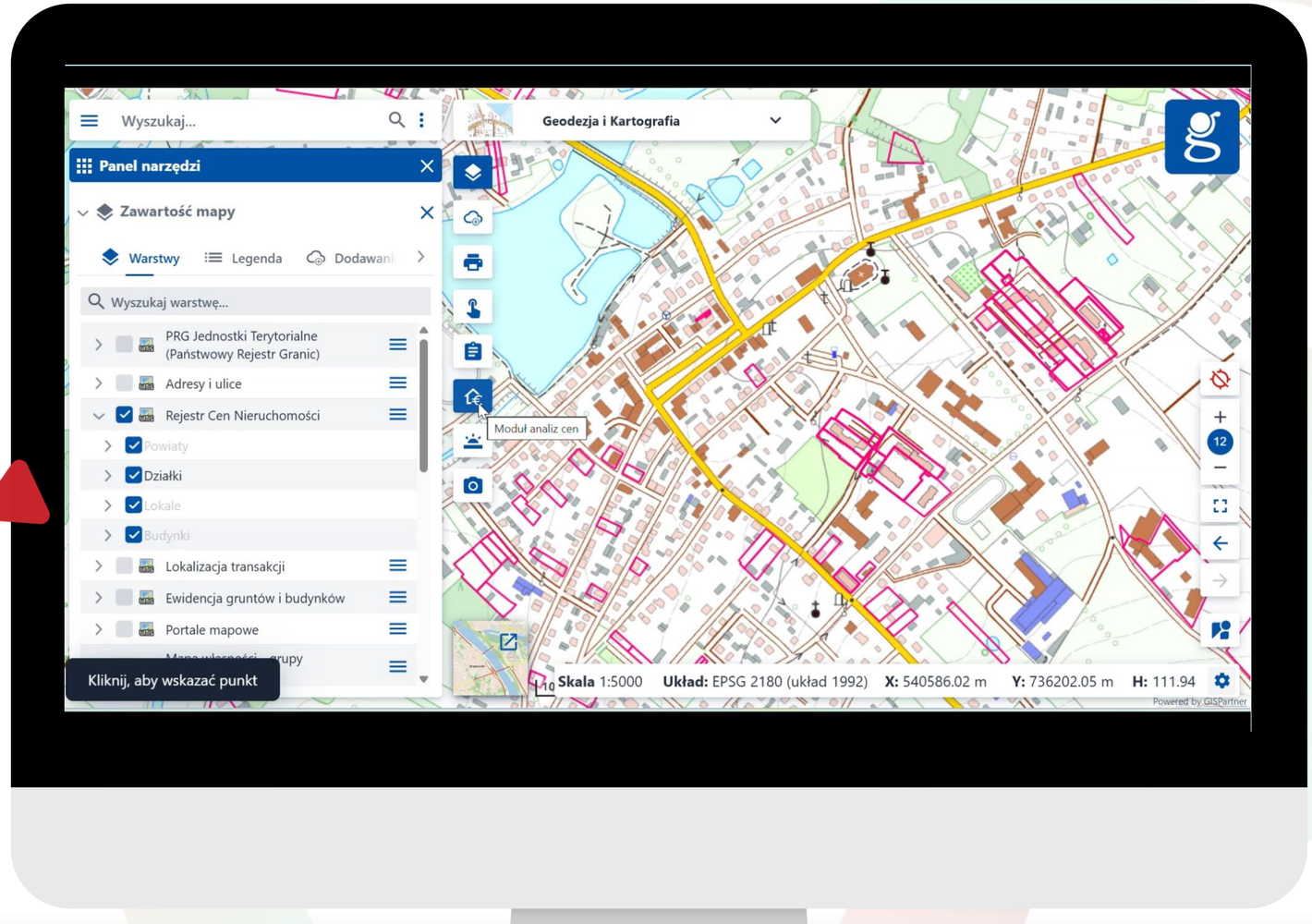


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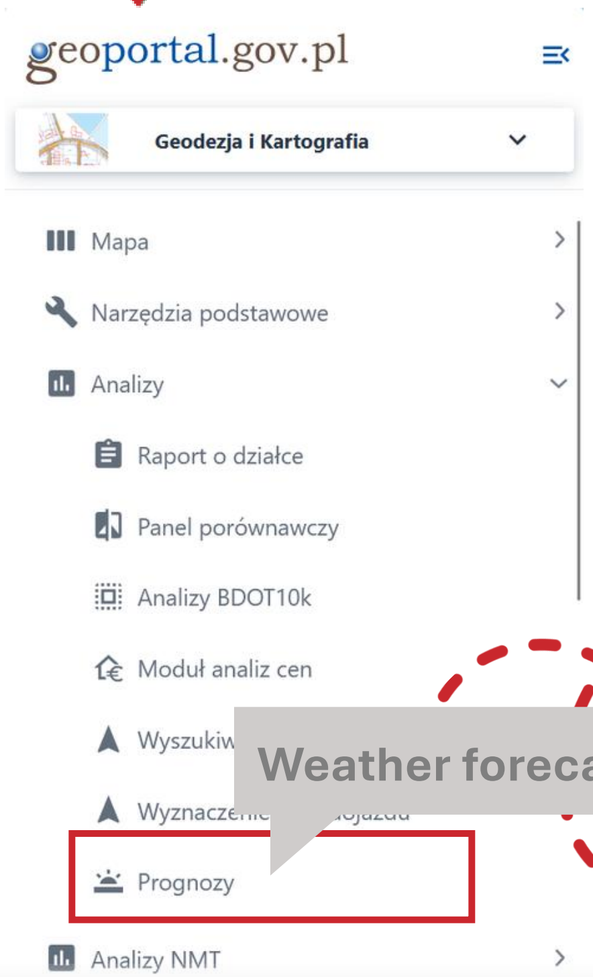


Real Estate Price analysis module

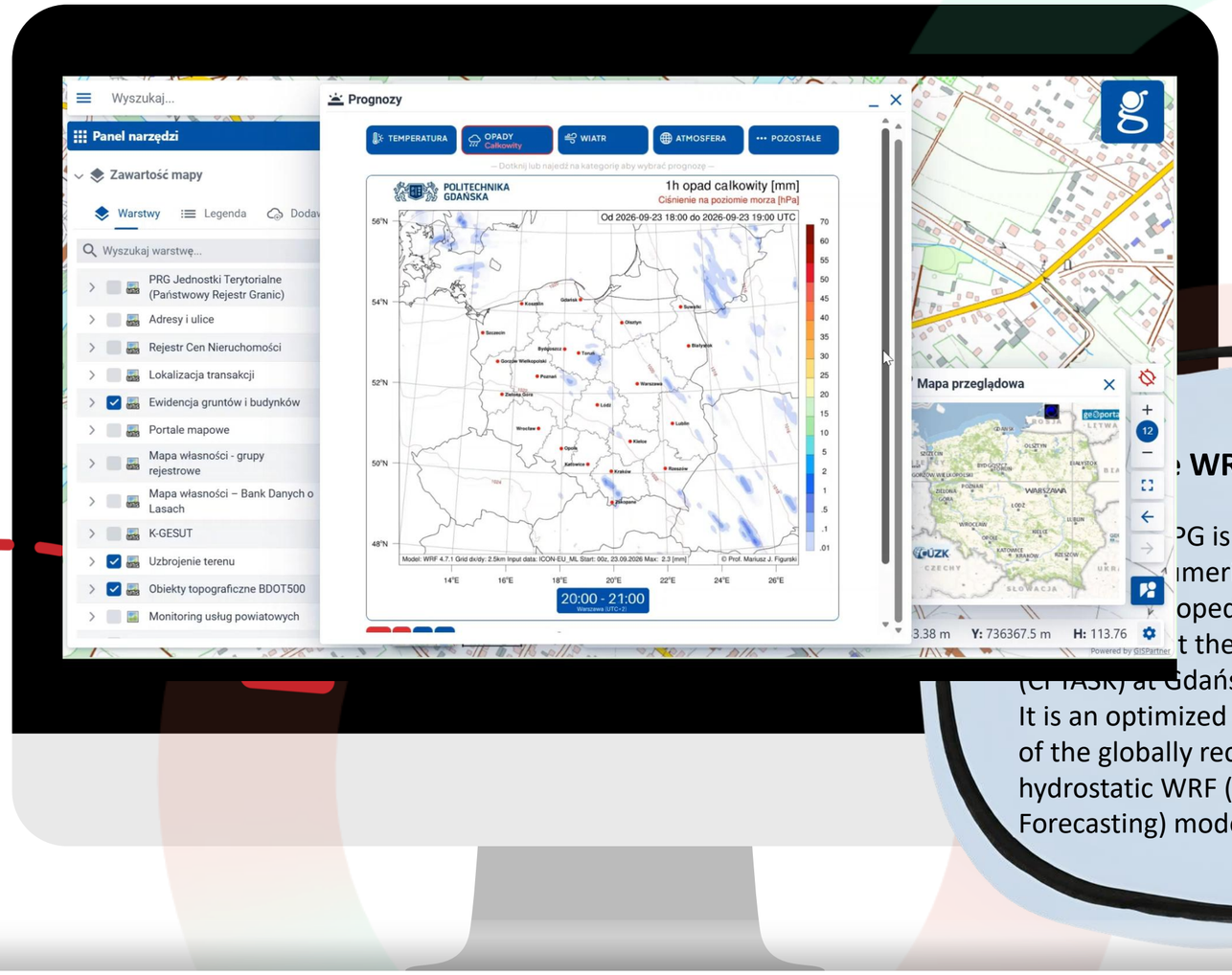


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Weather forecasts

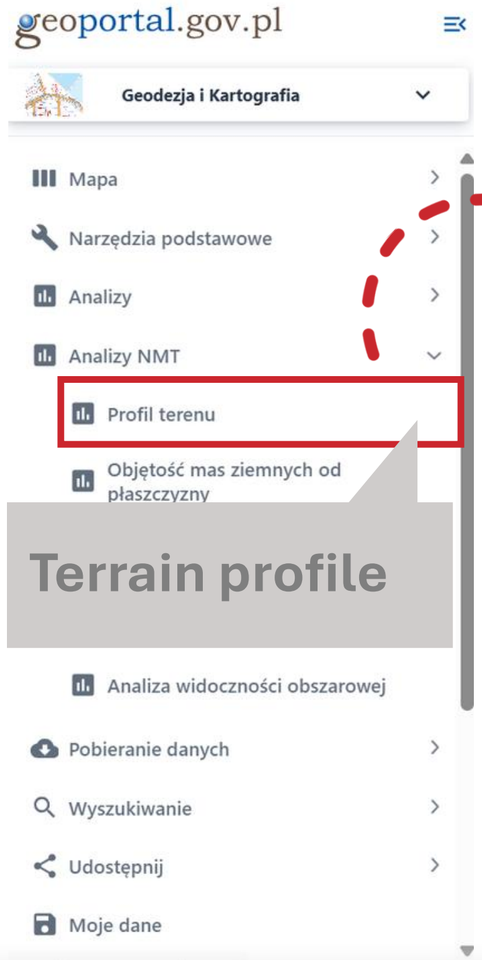


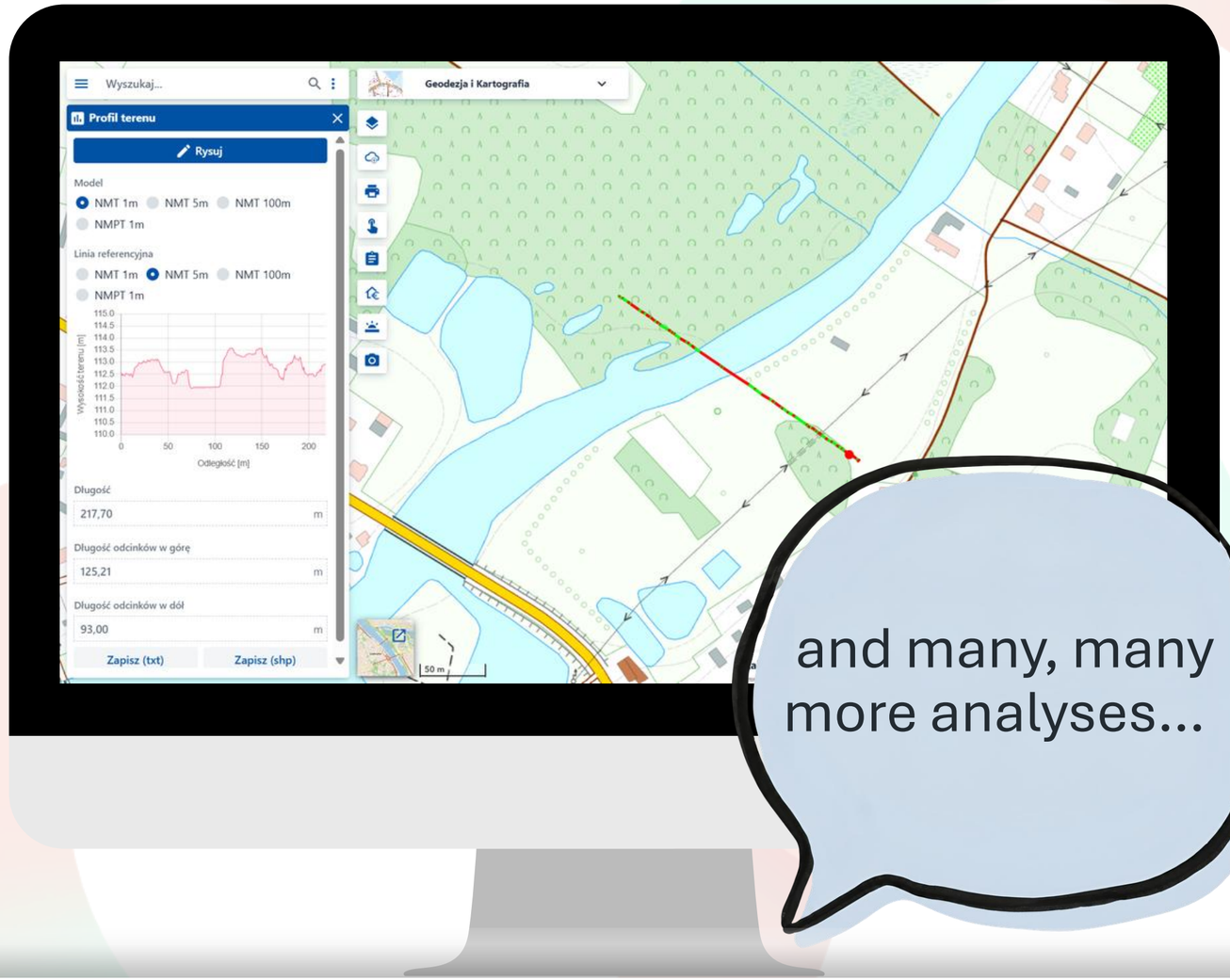
e WRF METEOPG model?

PG is an advanced, high-
umerical weather forecasting
oped and operationally
t the TASK Computer Centre
(CI TASK) at Gdańsk University of Technology.
It is an optimized regional implementation
of the globally recognized, nonlinear and non-
hydrostatic WRF (Weather Research and
Forecasting) model.

National Geoportal – what do we have today?

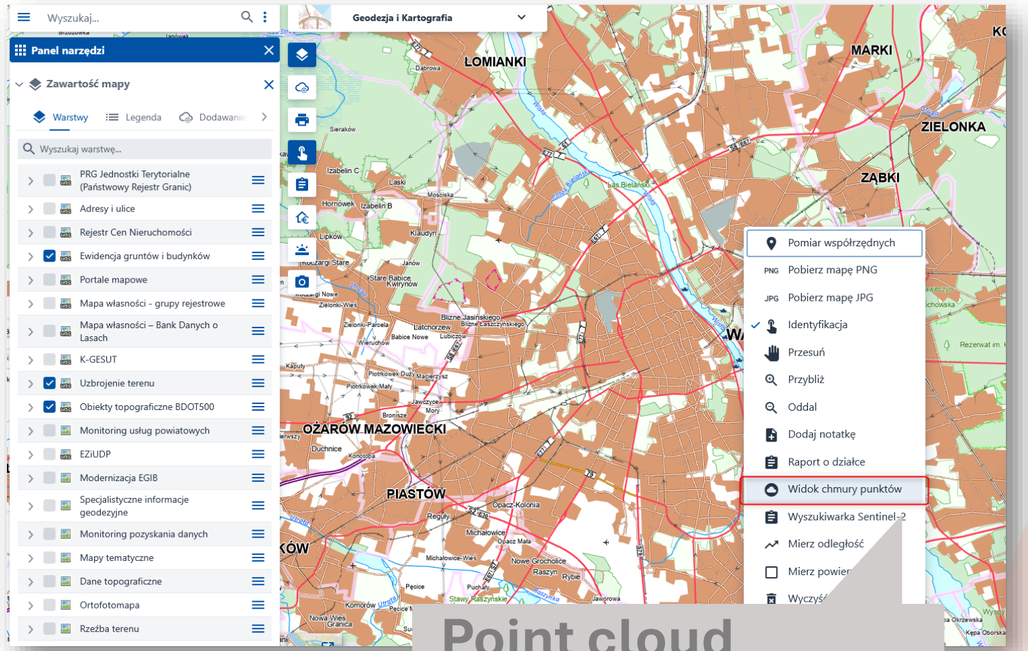
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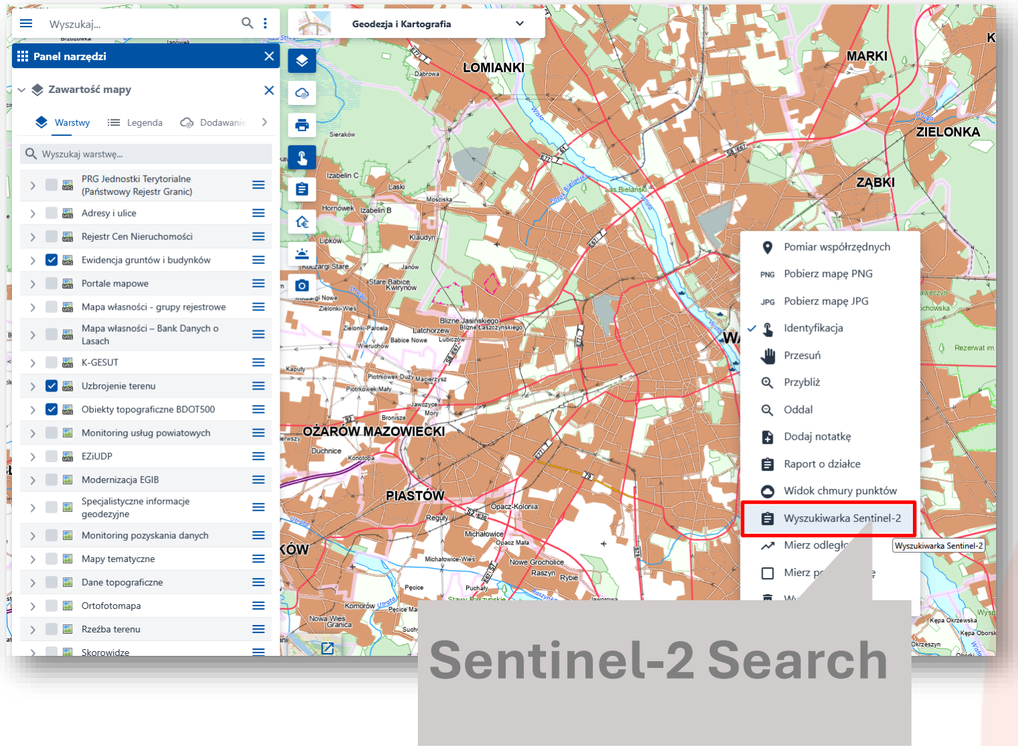
Point cloud visualization (ALS)



Available via the right-click context menu

National Geoportal – what do we have today?

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Sentinel-2 Search



Available via the right-click context menu

Where is the issue?



- fragmentation and diversity of data
- a lot of analyses
- specialized GIS terminology
- the growing scale of 3D and dynamic data

What does a user expect from a geoportal?

UX research shows that the challenge is not just data availability**, but also the way to find and use them.**

easy and flexible search

efficient map interaction

clear results and metadata

guiding the user throught the task

Smart Geoportal – change of model

New!

modern 2D/3D tools

Providing modern tools for the presentation, analysis, processing, and sharing of two- and three-dimensional spatial data, including the development of modern e-services powered by artificial intelligence (AI) to improve digital accessibility.

e-services, including AI-powered services

The use of artificial intelligence tools, including to enrich archival photogrammetric data (e.g. automatically colorizing archival aerial imagery) and to support interface accessibility.
Users will also be supported by a virtual assistant that will enable them to quickly find information and guide them to the appropriate services and descriptions.

digitization of archival photogrammetric data

Acquisition of Poland's archival photogrammetric data (aerial photographs and orthophotomaps) from sources outside the Central Geodetic and Cartographic Resource (CZGiK) - digitization of a key public register using AI.

user skills

Raising user awareness and skills to improve understanding and enable effective use of newly implemented services by public administration, businesses, and citizens.

Smart Geoportal as an intelligence layer

The **Smart Geoportal** will include specialized analytical modules supporting decision - making in public administration and business, including:

- **Area Analysis Module** (multidimensional terrain analysis),
- **Change Detection Module** (monitoring changes within local government areas),
- **Investment Attractiveness Assessment Module,**
- **Satellite and IoT Data Integration Module** (real-time data integration).



Smart Geoportal – digital twin of Poland

The public 3D Geoportal will bring 2D and 3D data together in a single environment.

A key element will be a public **3D Geoportal** enabling users to view and analyze data in a three-dimensional environment, without installing plugins. **The system will support working with both 2D and 3D data,……**, including orthophotomaps, 3D MESH models, CityGML, ALS point clouds, and digital terrain models (DTMs), **as well as loading selected formats and services.**

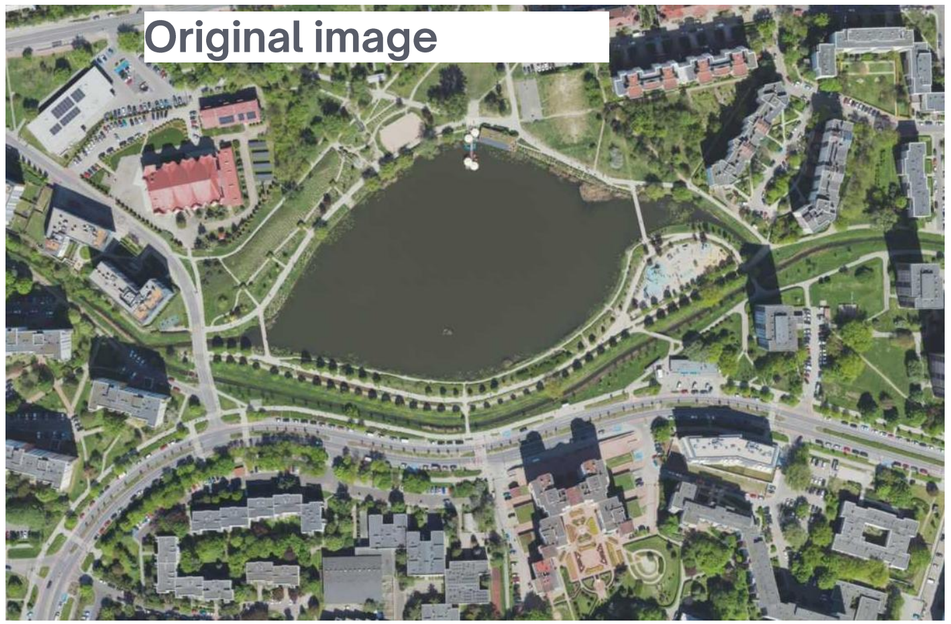


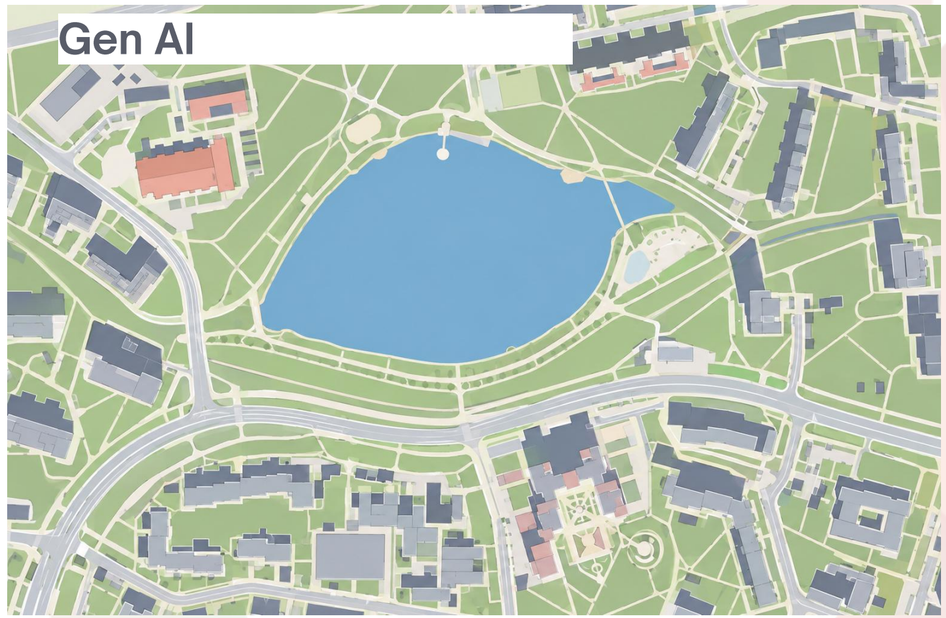
What Could a Natural-Language Geoportal Look Like?



source

Prompt: Can you create a map based on the image, showing roads, paths, buildings, and water?





result

What Could a Natural-Language Geoportal Look Like?

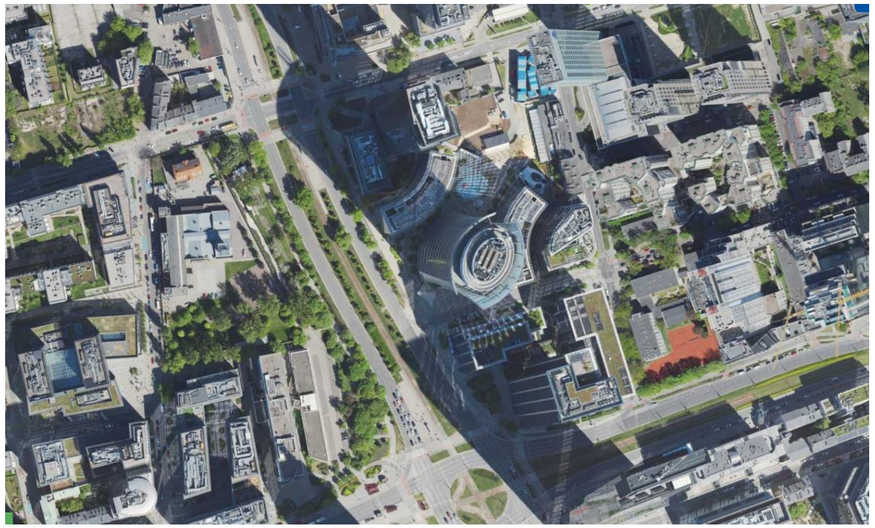
Original image



source

Prompt: Could you correct this area and remove the shadows?

Original image



Gen AI



result

What Could a Natural-Language Geoportal Look Like?



source

Prompt: Can you describe what is visible in orthophoto?



It is most likely a **VOR/DVOR (VHF Omnidirectional Range) ground-based radio-navigation station** for aircraft.

More specifically, the circular array visible in the orthophoto is characteristic of a **DVOR antenna array**, used to provide aircraft with an accurate bearing/radial relative to the station for **en-route and terminal navigation**.

Identification: ✈ **DVOR/VOR aviation navigation facility Not:** an agricultural installation.

result

What Could a Natural-Language Geoportal Look Like?

Original image



source

Prompt: Can you remove the building?

Original image



Gen AI



result

From data to intelligent public services



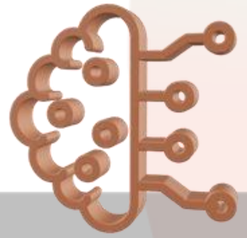
DATA



ANALYTICS



INFORMATION



INTEGRATION



AI

Summary

The Geoportal of the Future is more than just a place where spatial data can be found. This is a place where we ask a question and receive an answer.

- Data
- Analysis
- AI
- Public services

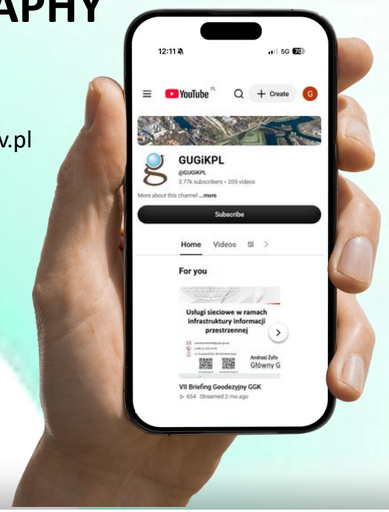
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SOCIAL MEDIA

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