

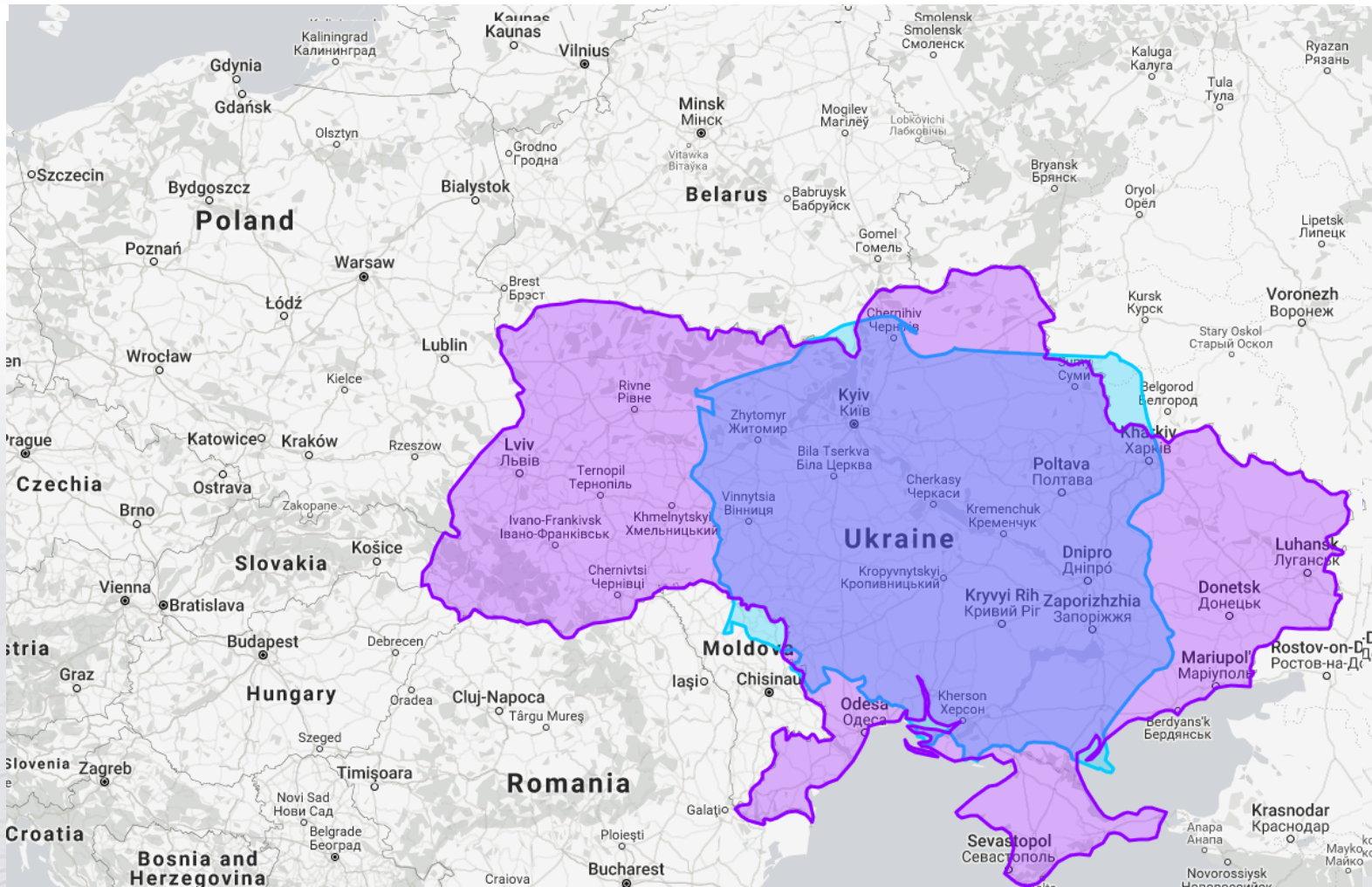


Role of authoritative geospatial data in development of the national information system in Poland

Ewa Surma

Head Office of Geodesy and Cartography Kiev, Ukraine 23 May 2019

Good neighbours ;)



Area – 312 679 km²

Population – 38,43 M

Density 123/km²

GDP - 524.5 billion USD

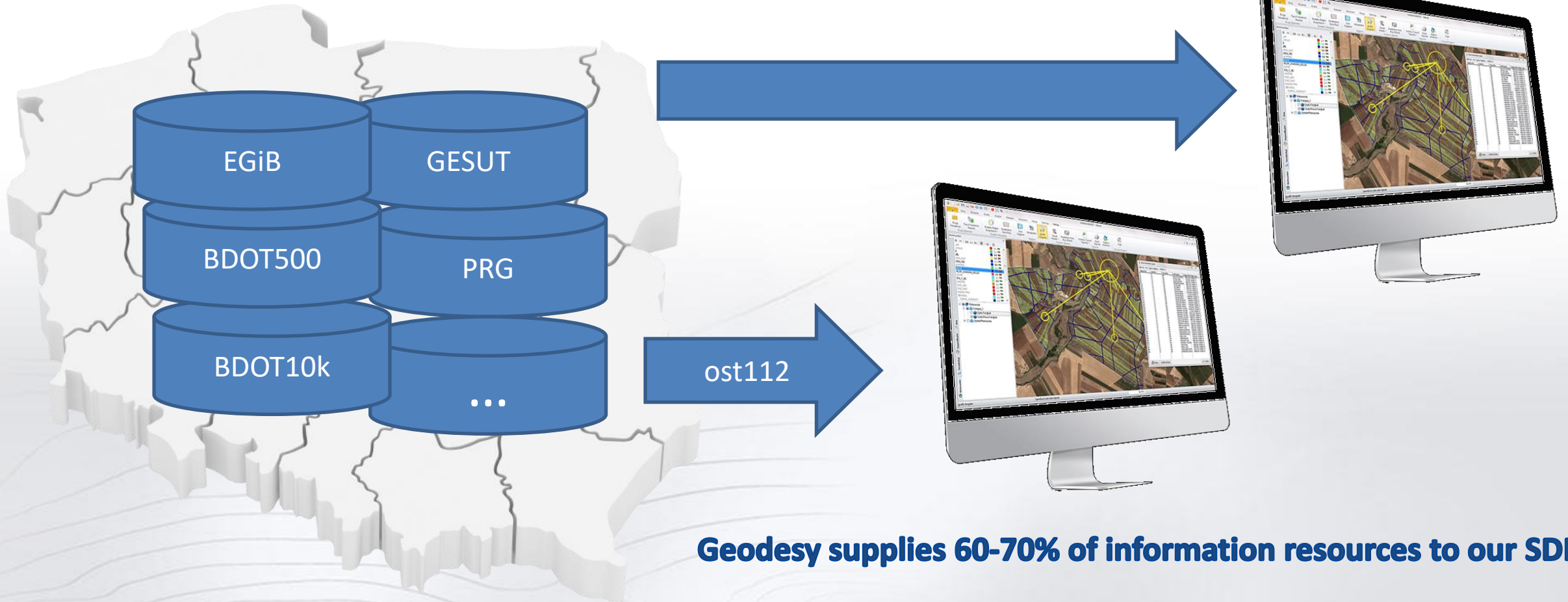


- Coordinates development of the Polish Spatial Data Infrastructure
- Leads the activities of the SDI Council
- Responsible for 15 Data Themes in the SDI
- Supervises implementation of national policy in geodesy and cartography
- **Maintains the national geoportal and public register of spatial data sets and services**
- Establishes and supervises maintenance of core referential registers and databases
- Cooperates with foreign and international, specialised institutions and authorities, local governments and professional organisations

Geodesy vs geoinformation



Authoritative data main source for National IT systems



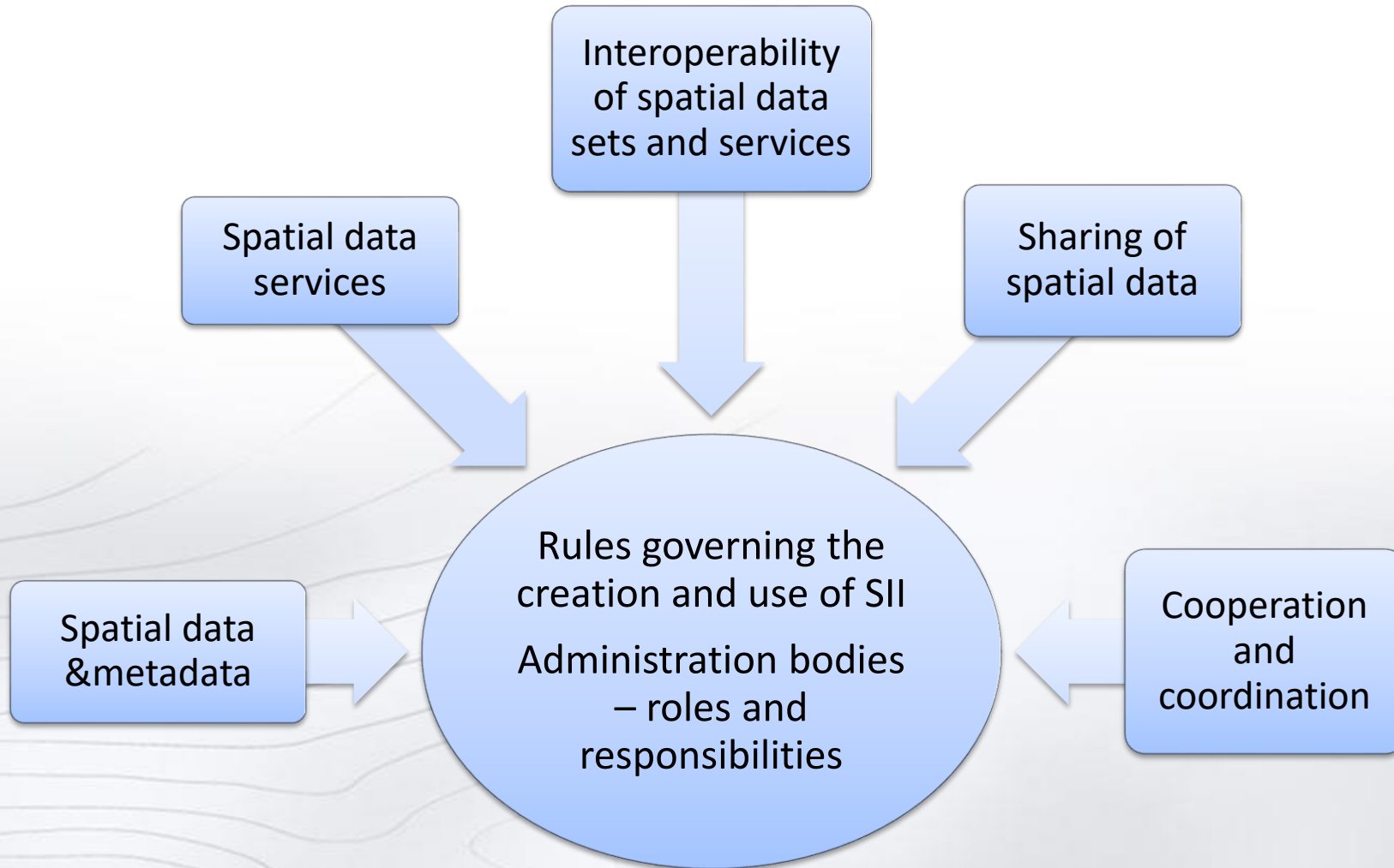
Geodesy supplies 60-70% of information resources to our SDI

Potential of geoinformation



80 % of the decisions of the public administration relate to phenomena and object in a specific location

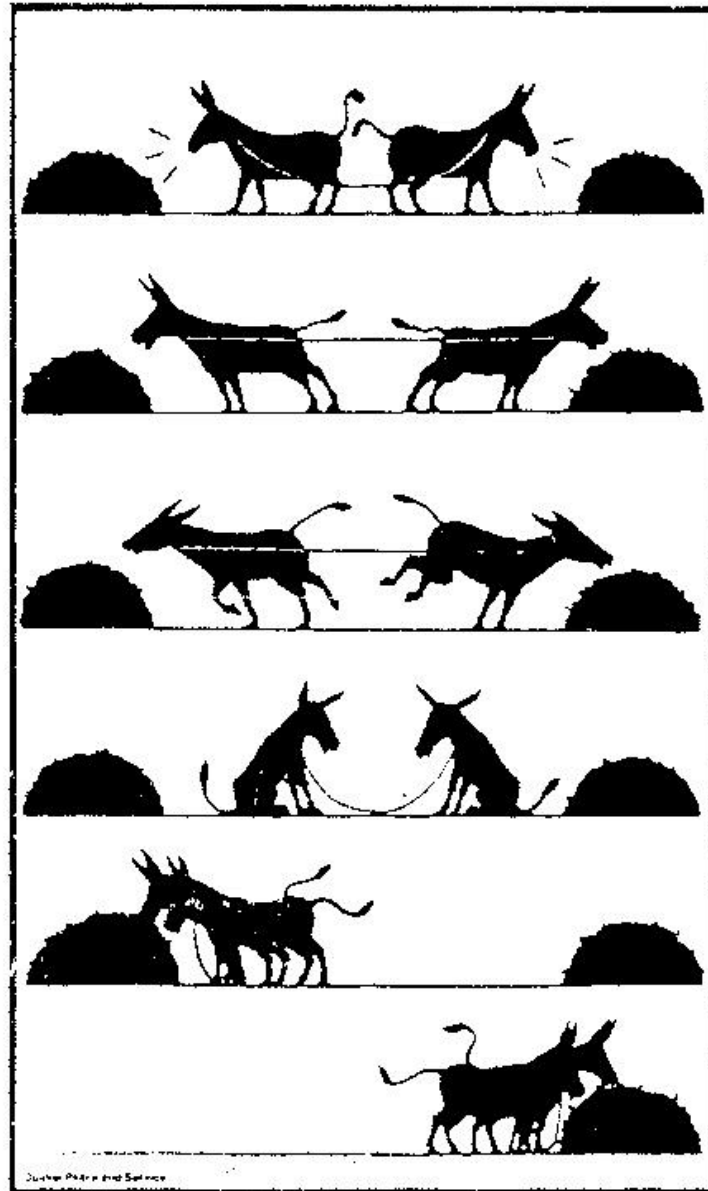




Cooperation – key factor



- Well defines roles and responsibilities
- Every theme is assigned to leading body which coordinates works and assures realisation of SDI Act within a scope of these theme.



Increasing shift from sector-based (silos) policy making towards more integrated, cross-sectoral approaches.

This approach particularly important for environmental policy and others but also for users

National Geoportal



- Spatial Information Infrastructure – metadata, spatial data sets and services, technology, processes, procedures
- Surveyor General of Poland provides the geoportal as a **central access point to spatial data services** in the full thematic and territorial range of this infrastructure



News /

News

20.05.2019 Usługa ULDK z nowymi funkcjami

Od 20 maja 2019 r. usługa do lokalizacji działek ewidencyjnych ULDK została wyposażona w nowy interfejs oraz dodatkową funkcjonalność. W nowym interfejsie dotychczasowe funkcje lokalizacji działki przez identyfikator i współrzędne realizowane są przez zapytania GetParcelById oraz ...

[View »](#)

16.05.2019 Podstawowa Osnowa Wysokościowa dostępna do pobrania przez powiaty

W serwisie www.geoportal.gov.pl uruchomiono funkcjonalność umożliwiającą powiatom bezpośrednie pobieranie danych dotyczących podstawowej osnowy wysokościowej. Aby pobrać paczkę danych dla powiatu należy w grupie warstw „Dane do pobrania” włączyć widoczność warstwy „ Podstawowa osnowa...”

[View »](#)



Value-added – external services



National geoportal

eng Scale: 4000000

Map contents

- Integration of cadastral data
- Integration of utilities networks
- Integration of local development plans
- Grids and coordinate systems
- Points of interest
- Data of other organisations
- Institute of Meteorology and Water Management
- Polish Geological Institute
- General Directorate for National Roads and Motorways
- National Water Management Authority
- Statistics Poland
- National Heritage Board of Poland
- Ministry of Health
- Office of Rail Transport
- Polish Railways S.A.
- Agency for Restructuring and Modernisation of Economy
- General Directorate for Environmental Protection

Niezabezpieczona | mapy.geoportal.gov.pl/imap/lmcp_2.html?gpmap=gp0&locale=en

geoportal.gov.pl

FILE VIEW MEASUREMENTS SEARCHES

National geoportal

eng Scale: 4000000

Map contents

- Polish Geological Institute
- Landslides and areas threatened by landslides
- Flooding areas
- Mineral deposits, mining areas, mineral resources
- Forecasting and prospective areas
- Drilling holes
- Drilling holes - hydrological
- Detailed geological map
- Hydrology - groundwater monitoring
- Caves
- General Directorate for National Roads and Motorways
- National Water Management Authority
- Statistics Poland
- Statistical units (BREC 2017)
- National Heritage Board of Poland

0.693s National geoportal | Loaded
 0.002s National geoportal | Loaded
 0.397s National geoportal | Loaded

Map coordinate system 1992 (EPSG 2180) X: 555500.23 Y: 1245168.09 N: 52°21'17.1" E: 29°57'42.65" Current scale 1:4000000

Value added - combining different data sets



geoportal.gov.pl

FILE VIEW MEASUREMENTS SEARCHES

Map contents Legend

- Flood threat map
- Statistics Poland
- National Heritage Board of Poland
- Ministry of Health
- Office of Rail Transport
- Polish Railways S.A.
- Agency for Restructuring and Modernisation
- General Directorate for Environmental
- General Directorate of State Forests
- The Polish Social Insurance Institution
- dform
- a for download
- a acquisition status
- axes
- ographic maps
- Orthophotmap

Search

1.075s National geoportall Loaded

0.024s National geoportall Loaded

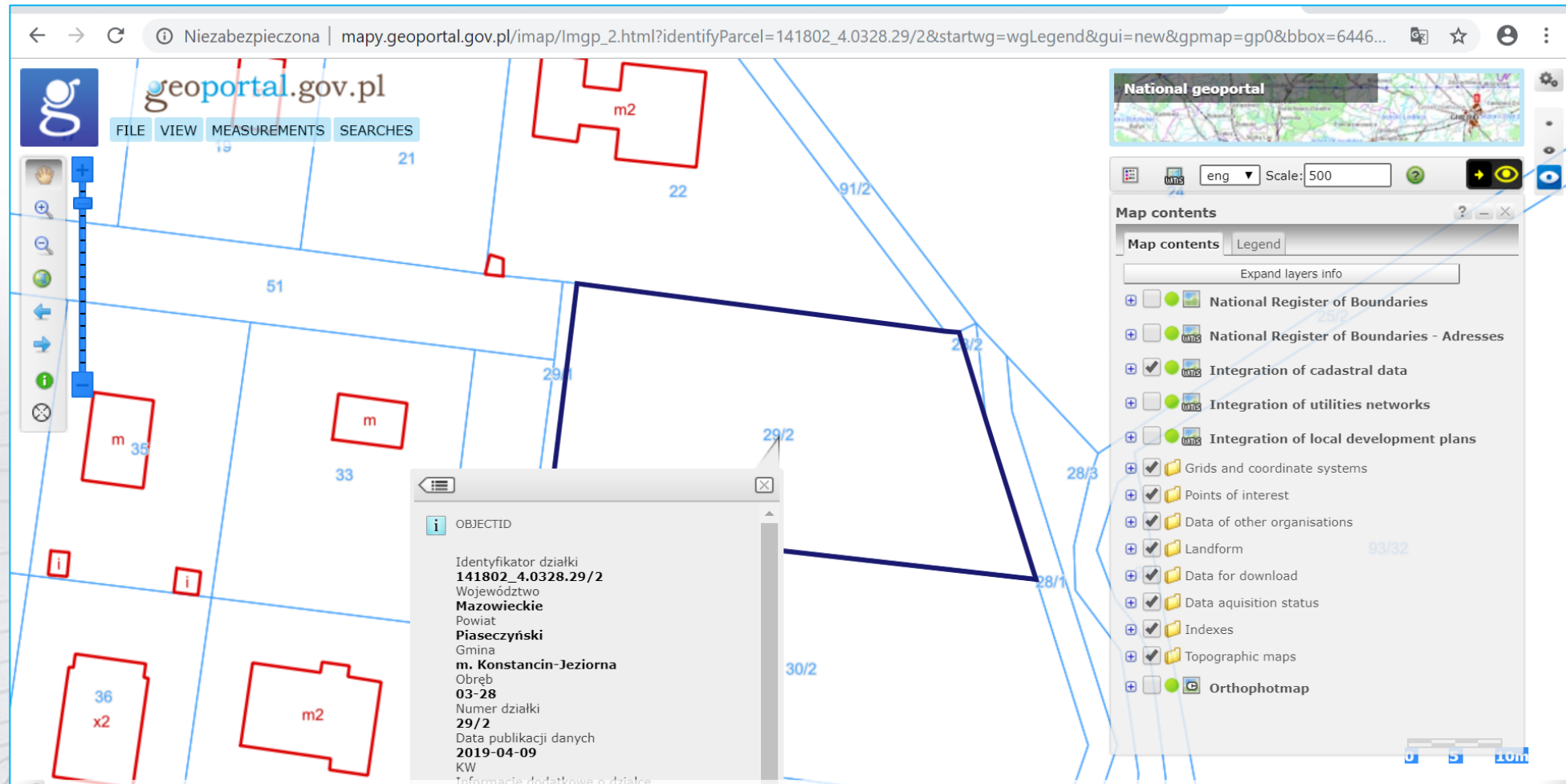
1.023s National geoportall Loaded

Map coordinate system 1992 (EPSG 2180) Xr: 419265.10 Yr: 678908.10 Nr: 51°36'41" E: 21°35'5.04" Current scale 1:5000

Parcel identification – use of location



http://mapy.geoportal.gov.pl/imap/?identifyParcel=141802_4.0328.29/2



The screenshot shows the Geoportal.gov.pl web application interface. The main map area displays a cadastral map with several parcels outlined in red. One parcel is highlighted in dark blue. A pop-up window is open over the highlighted parcel, displaying the following information:

OBJECTID

Identyfikator działki
141802_4.0328.29/2
Województwo
Mazowieckie
Powiat
Piaseczyński
Gmina
m. Konstancin-Jeziorna
Obręb
03-28
Numer działki
29/2
Data publikacji danych
2019-04-09
KW
Informacje dodatkowa działki

The right sidebar contains the 'Map contents' panel, which lists various layers and their status:

- National Register of Boundaries
- National Register of Boundaries - Adresses
- Integration of cadastral data
- Integration of utilities networks
- Integration of local development plans
- Grids and coordinate systems
- Points of interest
- Data of other organisations
- Landform
- Data for download
- Data acquisition status
- Indexes
- Topographic maps
- Orthophotmap

Public registers connections



https://przegladarka-ekw.ms.gov.pl/eukw_prz/KsiegiWieczyste/pokazWydruk

Niezabezpieczona | mapy.geoportal.gov.pl/imap/lmgp_2.html?identifyParcel=141201_1.0001.2335/10&startwg=wgLegend&gui=new&gmap=gp0&bbox=6...

geoportal.gov.pl
 FILE VIEW MEASUREMENTS SEARCHES

Map contents
 Legend
 Expand layers info

- National Register of Boundaries
- National Register of Boundaries - Adresses
- Integration of cadastral data
- Integration of utilities networks
- Integration of local development plans
- Grids and coordinate systems
- Points of interest
- Data of other organisations
- Landform
- Data for download
- Data aquisition status
- Indexes
- Topographic maps
- Orthophotmap

WMS, 141201_1.0001.2335/10

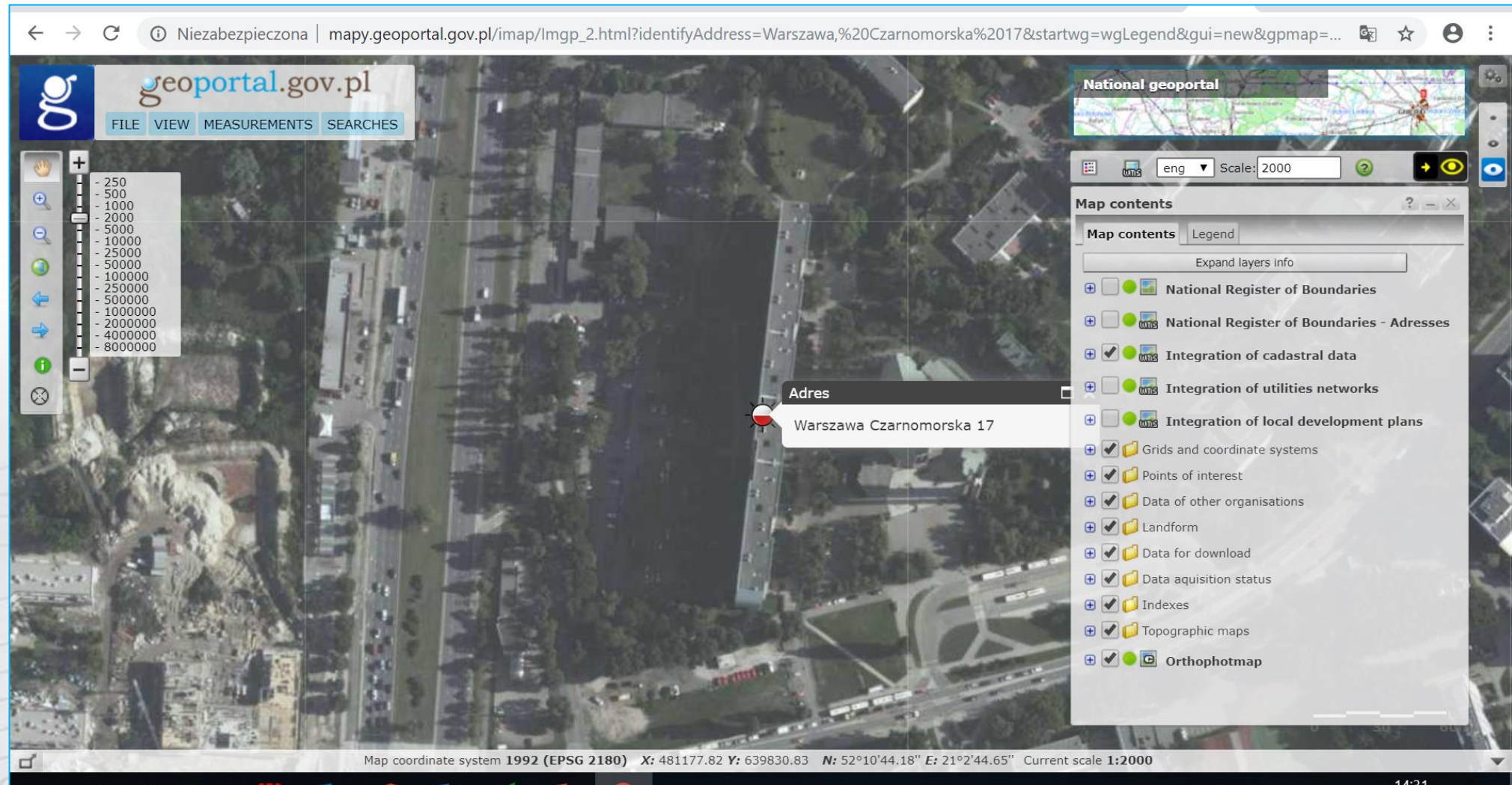
Map coordinate system 1992 (EPSG 2180) X: 482227.66 Y: 675725.66 N: 52°10'41.16" E: 21°34'15.27" Current scale 1:1000

8. Przyłączenie	Numer księgi	1.	---	---	//
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Geoportal – for location



<http://mapy.geoportal.gov.pl/imap/?identifyAddress=Warszawa,Czarnomorska 17>



The screenshot displays the Geoportal website interface. At the top, the browser address bar shows the URL: `mapy.geoportal.gov.pl/imap/lmgp_2.html?identifyAddress=Warszawa,%20Czarnomorska%2017&startwg=wgLegend&gui=new&gpmmap=...`. The main map area shows an aerial view of a city street with a red location pin and a tooltip that reads "Adres: Warszawa Czarnomorska 17".

The interface includes several key components:

- Navigation and Tools:** A vertical toolbar on the left contains icons for home, zoom in (+), zoom out (-), pan, and other map controls. A scale bar below the toolbar shows distances from 250 to 800,000 meters.
- Map Contents Panel:** A panel on the right titled "Map contents" lists various data layers. The "Legend" tab is active, and an "Expand layers info" button is visible. The layers listed include:
 - National Register of Boundaries
 - National Register of Boundaries - Adresses
 - Integration of cadastral data
 - Integration of utilities networks
 - Integration of local development plans
 - Grids and coordinate systems
 - Points of interest
 - Data of other organisations
 - Landform
 - Data for download
 - Data acquisition status
 - Indexes
 - Topographic maps
 - Orthophotmap
- Map Settings:** A small panel at the top right shows the language set to "eng" and the scale set to "2000".
- Status Bar:** At the bottom, the map coordinate system is identified as "1992 (EPSG 2180)" with coordinates: X: 481177.82, Y: 639830.83, N: 52°10'44.18", E: 21°2'44.65". The current scale is "1:2000".

3D buildings in geoportal



geoportal.gov.pl

FILE VIEW SEARCHES

Stare Miasto

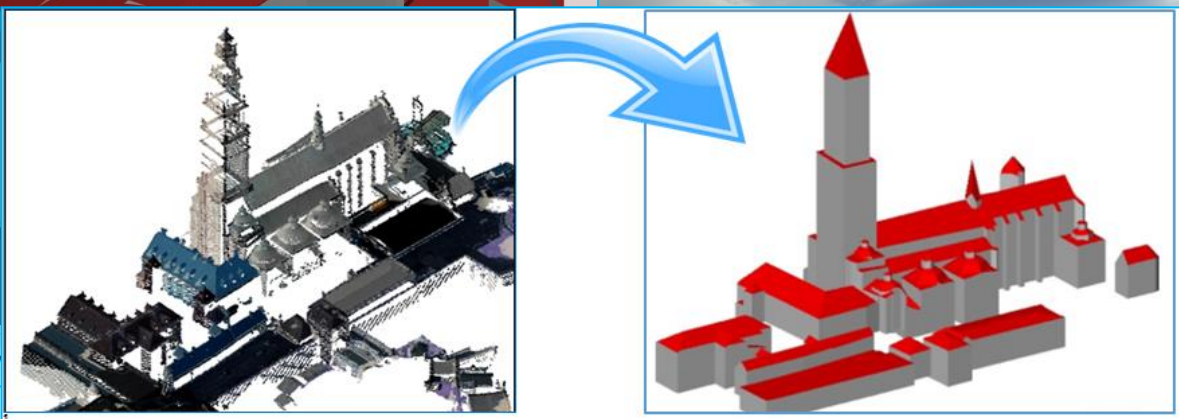
Lublin

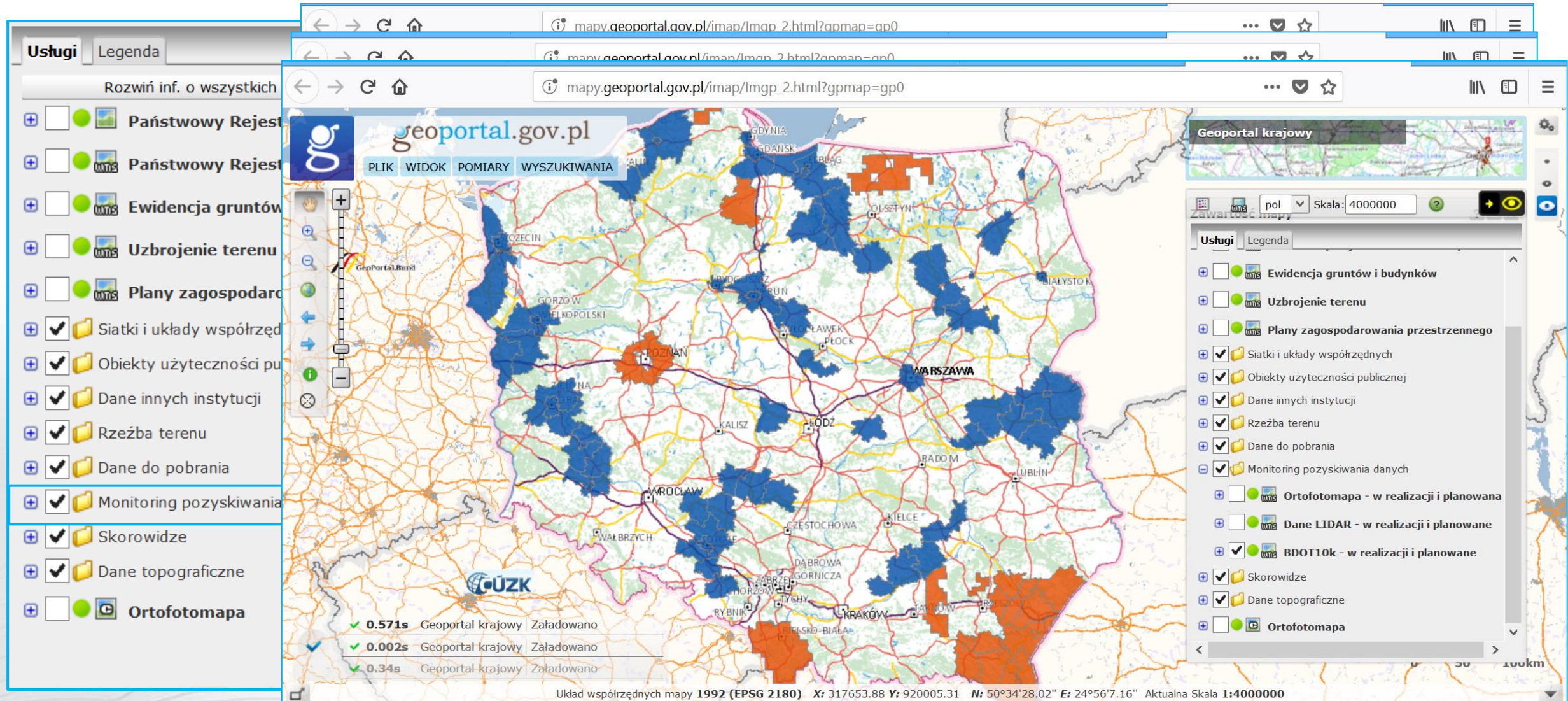
Map contents

- PRG Adresy
- Buildings (BDOT)
- Topographic map (BDOT)
- Orthophoto
- Roads (BDOT)
- Named places
- CABAN LOD3 aggregated

Scale: 4000000

eng



The screenshot displays the geoportal.gov.pl interface with three browser tabs open. The main map shows Poland with various data layers overlaid in blue and orange. The left sidebar contains a legend with the following items:

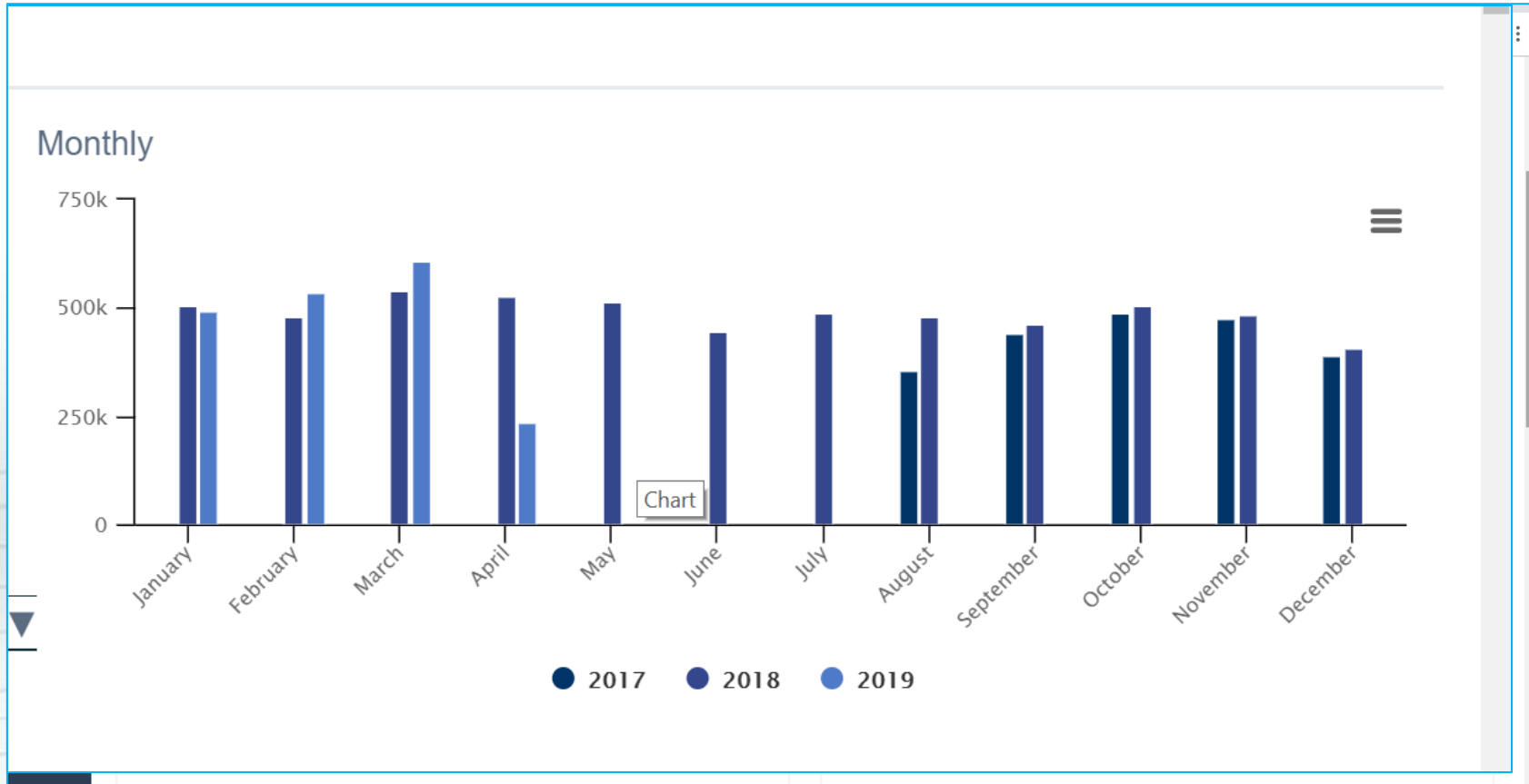
- Państwowy Rejestr
- Państwowy Rejestr
- Ewidencja gruntów
- Uzbrojenie terenu
- Plany zagospodarowania
- Siatki i układy współrzędnych
- Obiekty użyteczności publicznej
- Dane innych instytucji
- Rzeźba terenu
- Dane do pobrania
- Monitoring pozyskiwania danych
- Skorowidze
- Dane topograficzne
- Ortofotomapa

The right sidebar shows the legend for the 'Geoportal krajowy' layer, including:

- Ewidencja gruntów i budynków
- Uzbrojenie terenu
- Plany zagospodarowania przestrzennego
- Siatki i układy współrzędnych
- Obiekty użyteczności publicznej
- Dane innych instytucji
- Rzeźba terenu
- Dane do pobrania
- Monitoring pozyskiwania danych
- Ortofotomapa - w realizacji i planowana
- Dane LIDAR - w realizacji i planowane
- BDOT10k - w realizacji i planowane
- Skorowidze
- Dane topograficzne
- Ortofotomapa

At the bottom of the map, the following coordinates and scale are displayed:

Układ współrzędnych mapy 1992 (EPSG 2180) X: 317653.88 Y: 920005.31 N: 50°34'28.02" E: 24°56'7.16" Aktualna Skala 1:4000000



National geodetic and cartographic resource on-line



Zaloguj się lub załóż konto

geoportal.gov.pl

Portal PZGIK



Zintegrowane Kopie
BDOT10k



Mapy topograficzne



Mapy tematyczne i
specjalne



Rejestr podstawowych
osnów geodezyjnych



Fotogrametryczne zdjęcia
lotnicze



Ortofotomapy



Numeryczne Modele
Terenu



ASG-EUPOS



Zgłoszenia prac
geodezyjnych i
kartograficznych



Dane bezpłatne



Weryfikacja licencji

<https://pzgik.geoportal.gov.pl/imap/>

Online service was launched enabling clients to request and purchase data from the National Geodetic and Cartographic Resource (PZGIK). In addition to making requests, the portal also allows electronic payment and the downloading of purchased data and licenses.

Land use – part of Polish SDI

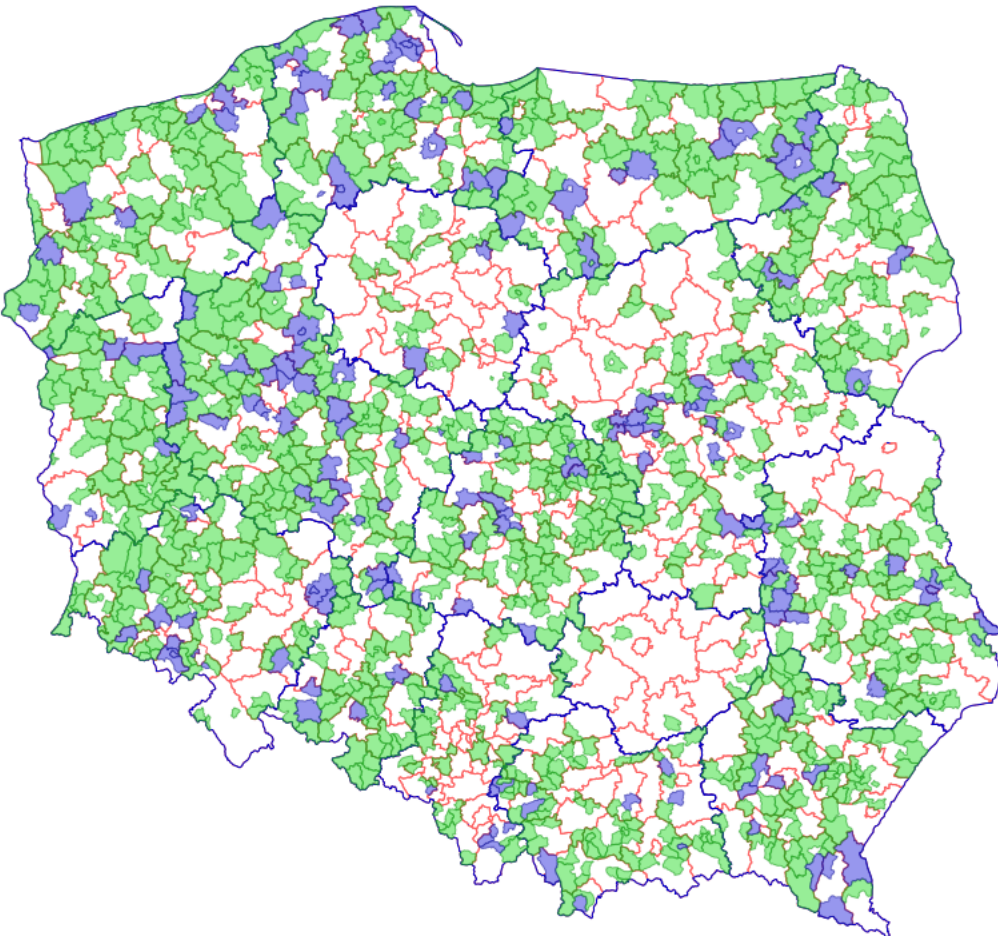


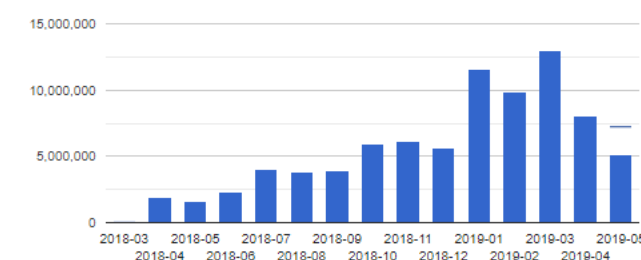
← → ↻ mapy.geoportal.gov.pl/imap/Imgp_2.html?startwg=wgLegend&gui=new&gmpmap=gp0&bbox=458375.02931130177,243108.2320577402,458819.53020030353,243350.5908757912&SRS=2180&active_lyr=

Mapa pokazująca jednostki, których usługa WMS jest dodana do usługi zintegrowanej
Liczba dodanych usług - 1143 (wektor: 188; raster: 955)

TERYT:

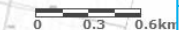
Lp.	Identyfikator zbioru danych
1	PL.ZIPPZR.100
2	PL.ZIPPZR.181
3	PL.ZIPPZR.182
4	PL.ZIPPZR.184
5	PL.ZIPPZR.184
6	PL.ZIPPZR.200
7	PL.ZIPPZR.201
8	PL.ZIPPZR.201
9	PL.ZIPPZR.2014





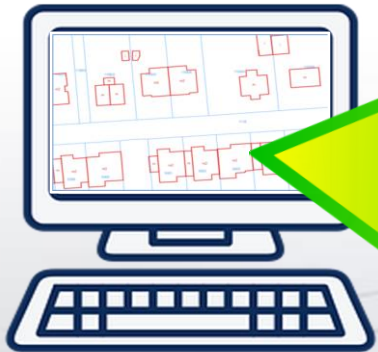
Zapytania wg miesięcy	
2018-03	74 996
2018-04	1 876 527
2018-05	1 605 870
2018-06	2 343 095
2018-07	3 981 431
2018-08	3 851 613
2018-09	3 910 763
2018-10	5 915 127
2018-11	6 167 200
2018-12	5 602 307
2019-01	11 538 912
2019-02	9 844 631
2019-03	12 972 291
2019-04	8 038 785
2019-05	5 127 902
Suma wywołań	82 851 450

Map coordinate system 1992 (EPSG 2180) X: 685831.77 Y: 303545.57 N: 53°59'58.24" E: 16°0'6.03" Current scale 1:25000





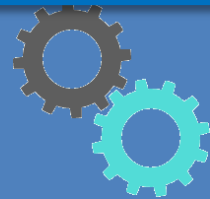
Geoportal



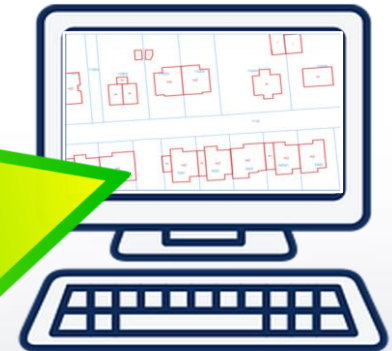
ISOK



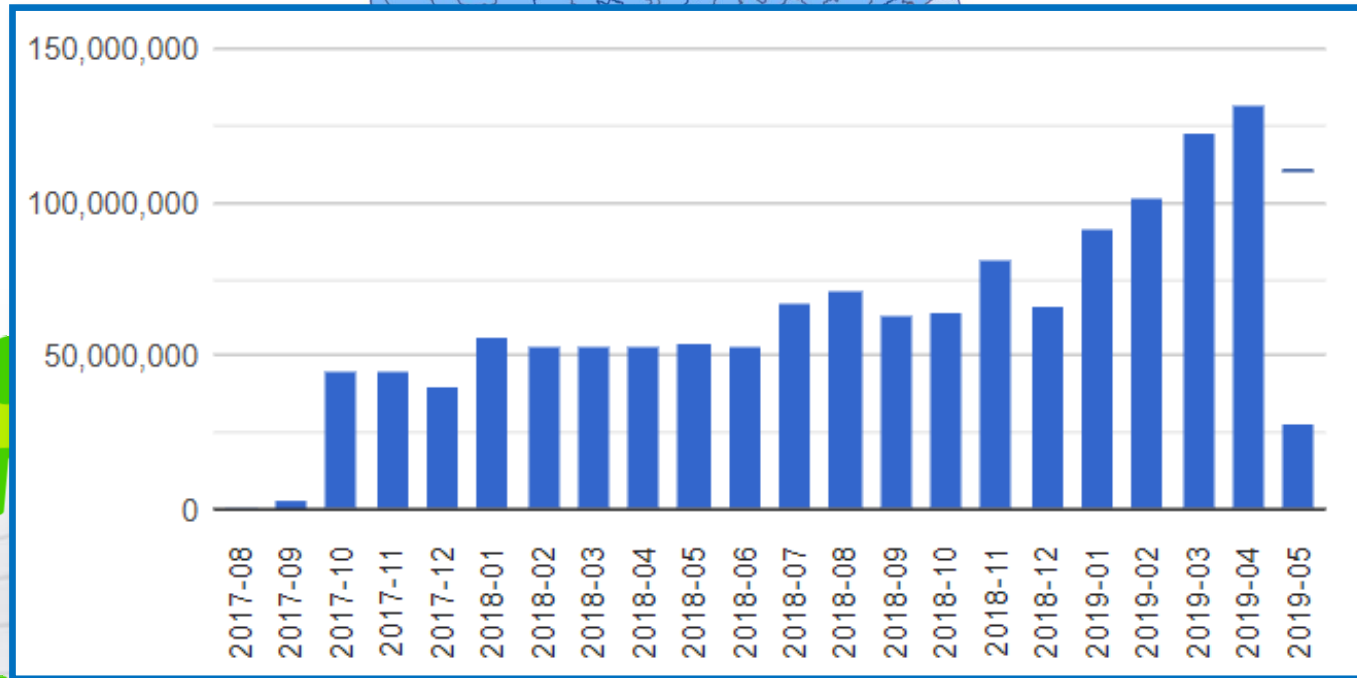
KIEG



ZSIN



...



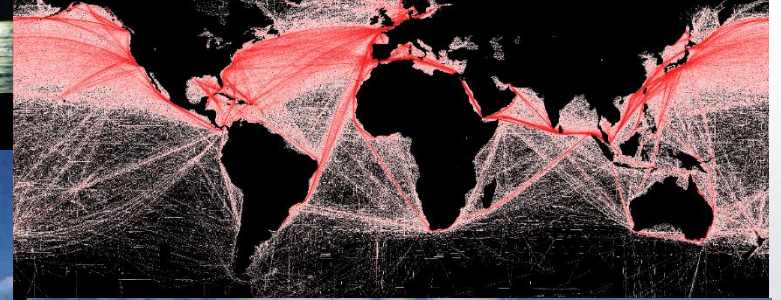


Our place in the bigger picture

Dominik Kopczewski



Global challenges



Sustainable Development Goals?



Resolution A/RES/70/1 - Transforming our world: the 2030 Agenda for Sustainable Development

- **National ownership in supporting and tracking progress**
- **Authoritative Data – a ‘trusted’ source**
- **national official data sources**
- **wide range of data, including earth observation and geospatial information**

UN-GGIM – Global Geospatial Information Management



The intention of UN-GGIM: Europe is therefore to:

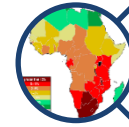
- **build on what already exists**
- **avoid duplication of efforts**
- **improve the joint response to user needs and requirements**
- **encourage geospatial data interoperability, harmonisation and sharing and**
- **optimise the overall management of geospatial information in Europe**



Global agenda



Global geodetic reference frame



Global fundamental geospatial data themes



Institutional arrangements, legal and policy frameworks



Standards and technical specifications



Integration of geospatial and statistical information



Land administration and management



Sustainable development and disaster risk reduction

SDG as a core component of EU policies

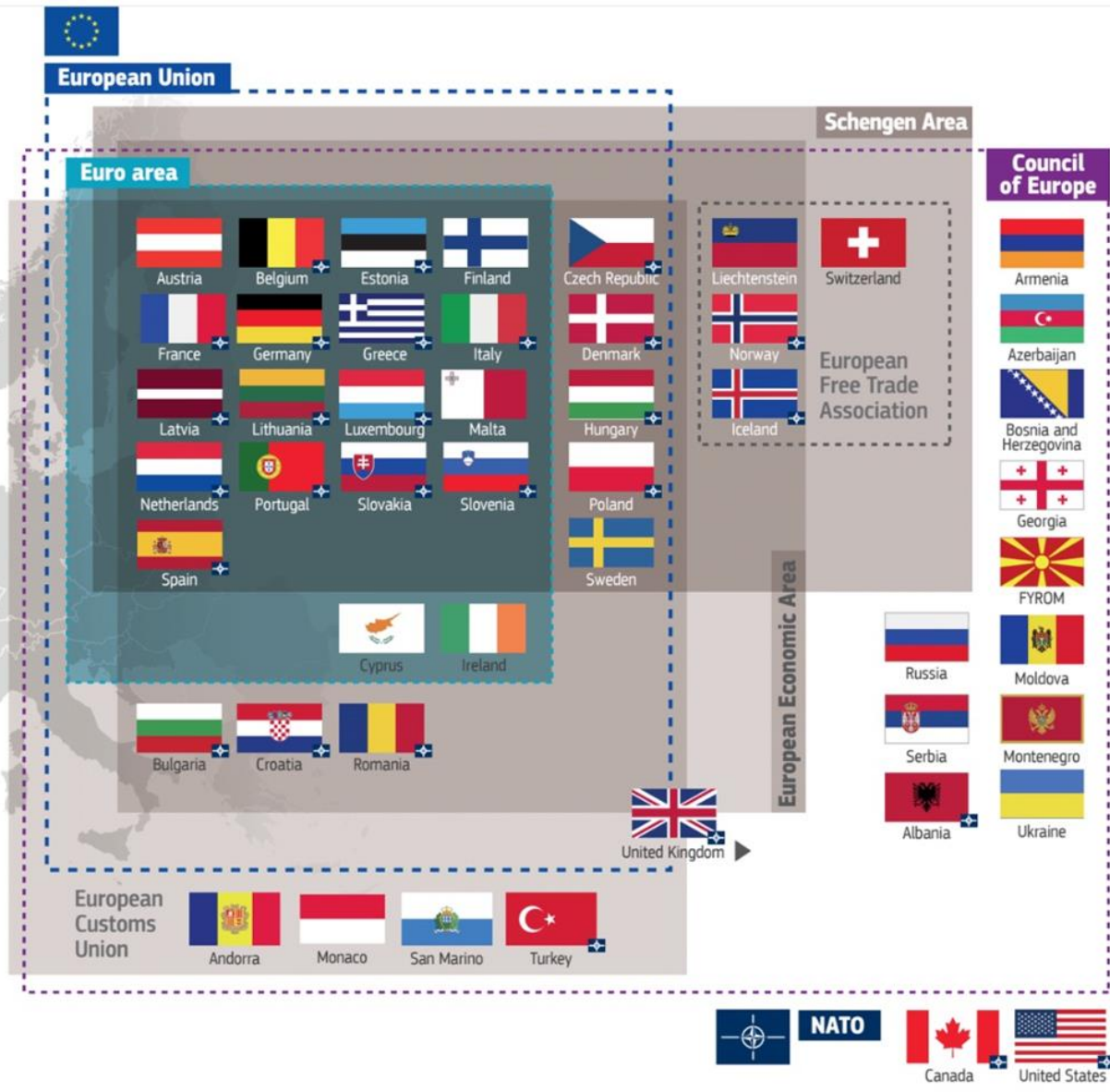


- **Sustainable Development at the core of EU principles**
- **UN sustainable development goals will be a “compass” for EU**
- **Commission reflection paper – “Towards an ever more sustainable Union by 2030”**
- **SDGs endorsed at the highest political level**
- **Overriding strategy will guide actions by the EU and MS.**
- **EU Institutions to work closer together and with MS, including with regional and local authorities**
- **SDGs to be ‘mainstreamed’ in all relevant EU internal and external policies**
- **More focus on external action**
- **Conclusion – SDG will form a core component of EU policies over next five years**





Europe



- **Europe – a multi-layered complex continent**
- **Not just EU 28 (27?)**
- **EU**
- **Euro**
- **EFTA / EEA**
- **Customs Union**
- **Council of Europe**
- **Schengen**
- **NATO**

EU influences beyond the 28 (27)



Example - 28th February Eastern Partnership declaration on Digital economy:

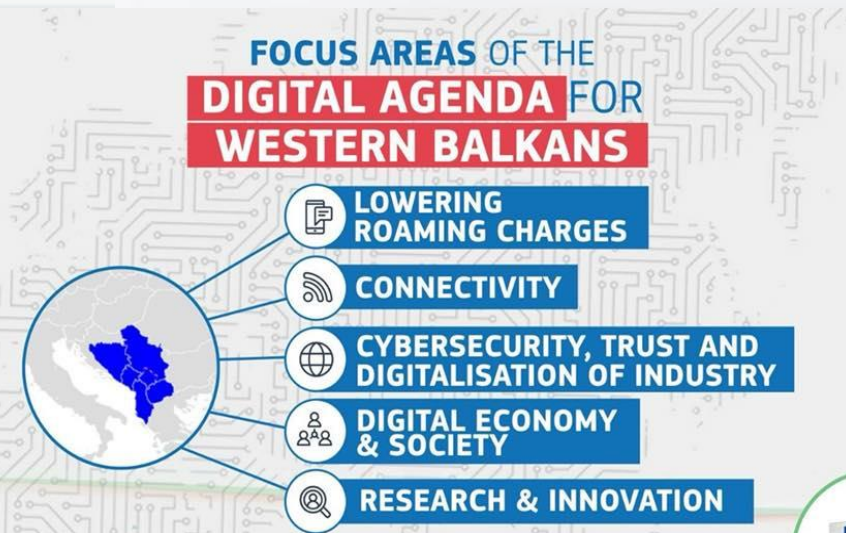


Creating a Digital Single Market

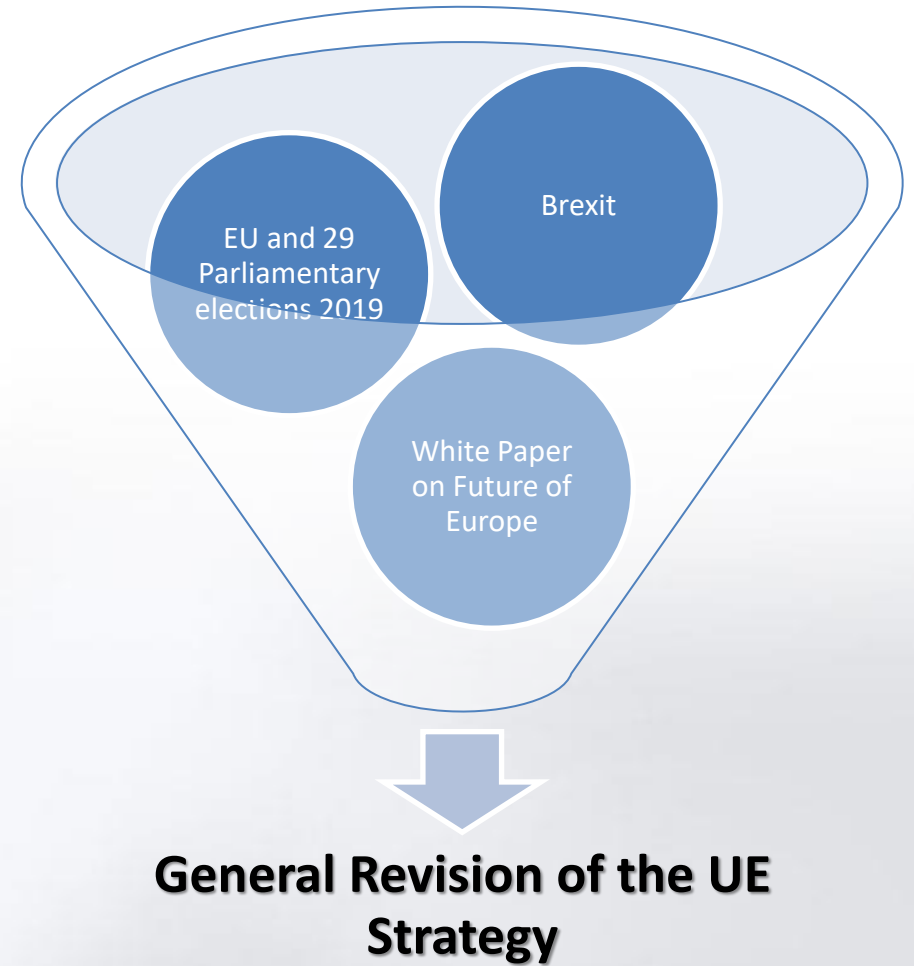
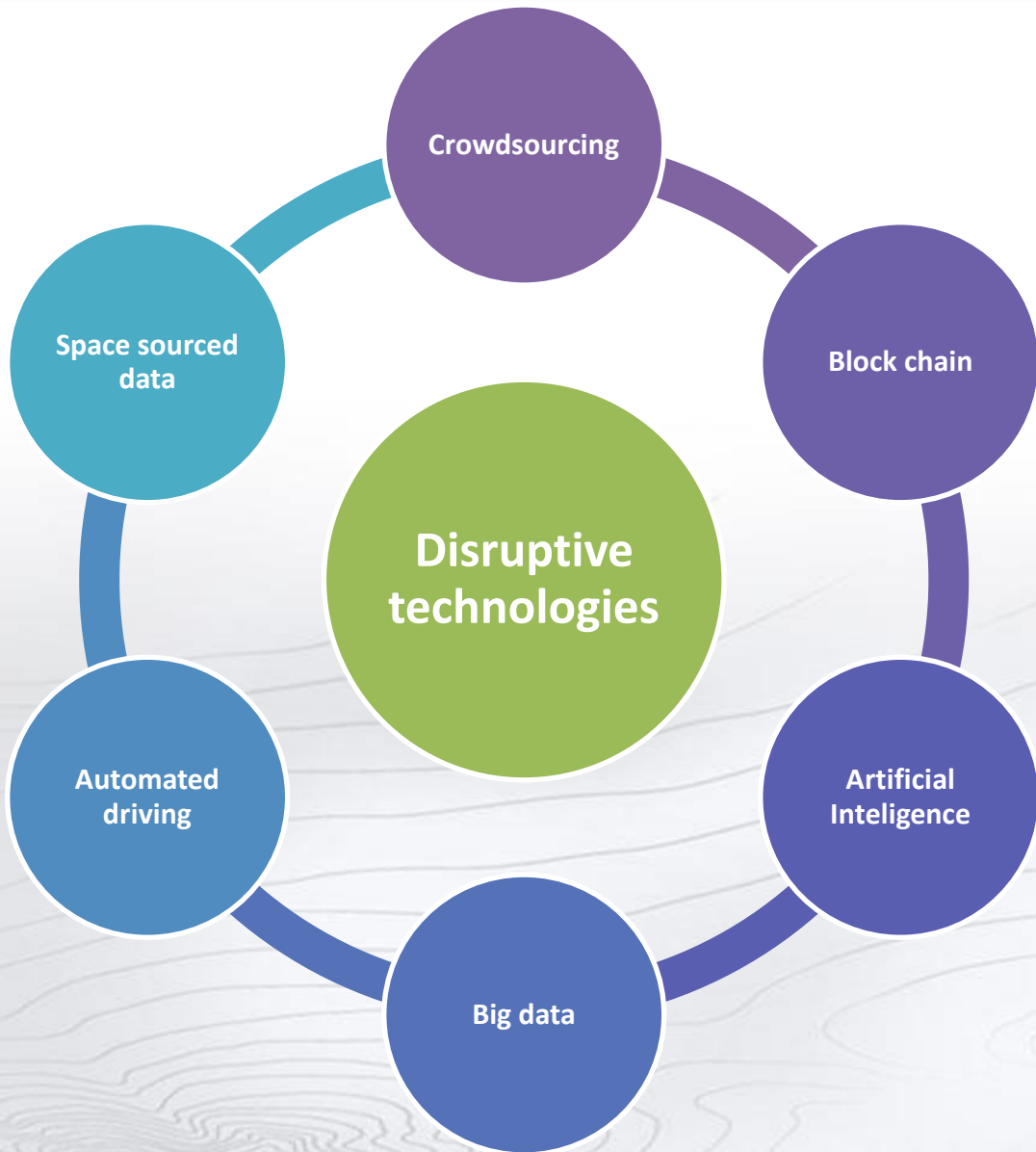
- promoting stronger digital economies for the EU's six Eastern Partners to help deepen cooperation in the digital area across the region, Harmonisation of

Digital Markets

- four priority areas (stronger economy, stronger governance, stronger connectivity, stronger society).
- EU4Digital will contribute to eliminate existing obstacles and barriers for pan-European online services for citizens, public administrations and businesses, including through the harmonisation of the digital environments, such as broadband infrastructure



Global Challenges



European Drivers and Challenges



Bargaining power of users

European users are free to obtain data from any source;

No legal or policy requirement to use national data at European level

Substitute Products

Over the last 10 years there has been an explosion of new entrants into the global geospatial 'market'

New entrants have successfully introduced substitute products that are proxies for authoritative data,

Data supply side issues

INSPIRE issues

Data coverage

Copernicus and space regulations

Diverse policy, legal, financial landscape

Changing demand

Competition of good enough data

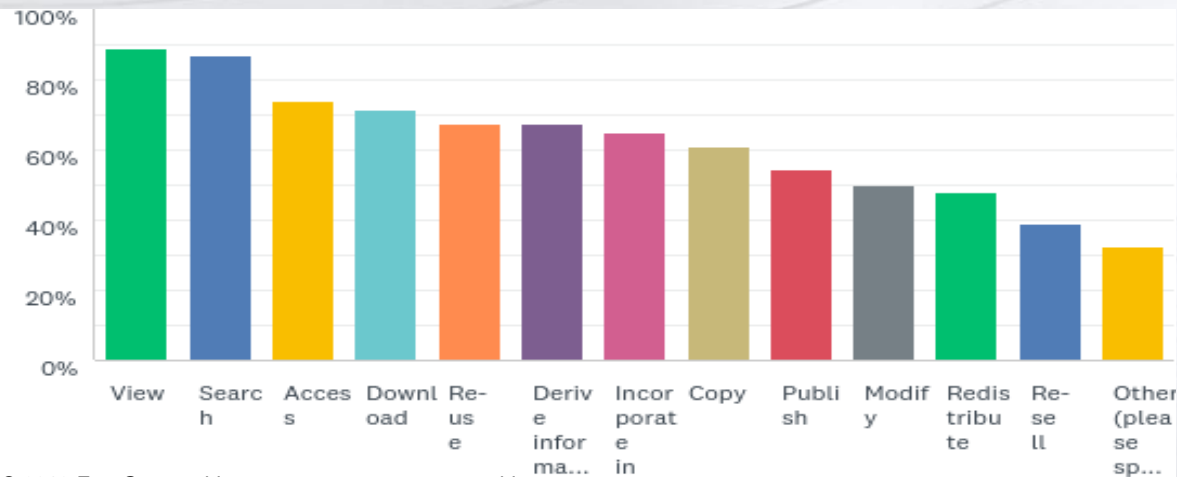
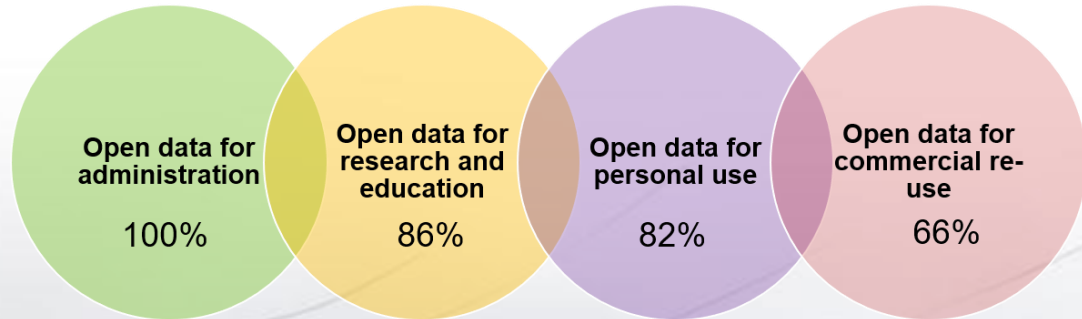
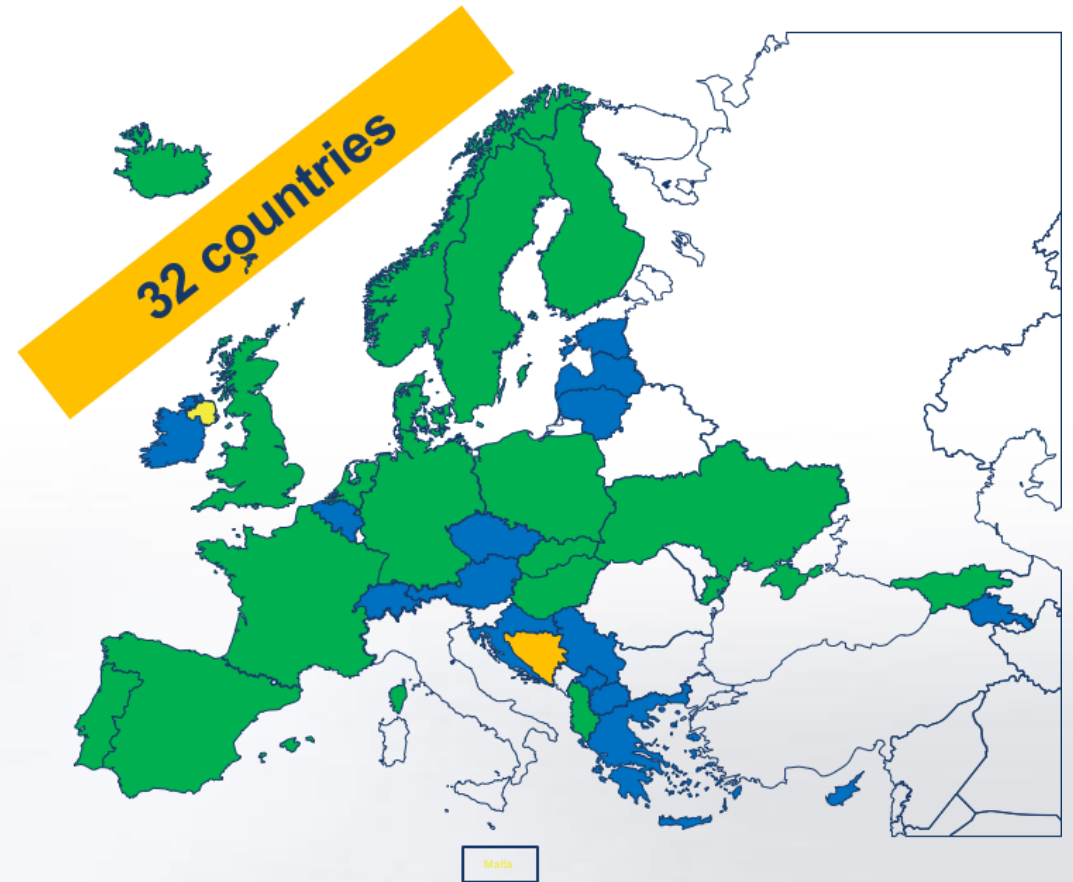
Authoritative data

Open Data

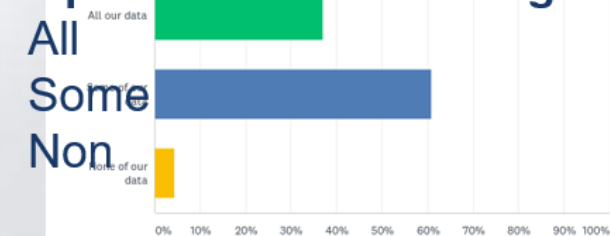
Open Data



Armenia	Estonia	Ireland	Slovakia
Austria	Finland	Latvia	Spain
Bosnia and Herzegovina, Rep. Srpska	France	Lithuania	Sweden
Belgium	Georgia	Norway	Switzerland
Croatia	Germany	Poland	The Netherlands
Cyprus	Greece	Portugal	Ukraine
Czech Republic	Hungary	Rep. Macedonia	United Kingdom



Open data free of charge





Registers as Open Data

- National Register of Boundaries and Areas of territorial division units of the country;
- National Register of Geographic Names,
- NMT – Digital Terrain Model (100m),
- BDO250 - Database of general geographic objects

All geodetic data is freely available for:

- educational and research purposes
- public bodies and tasks

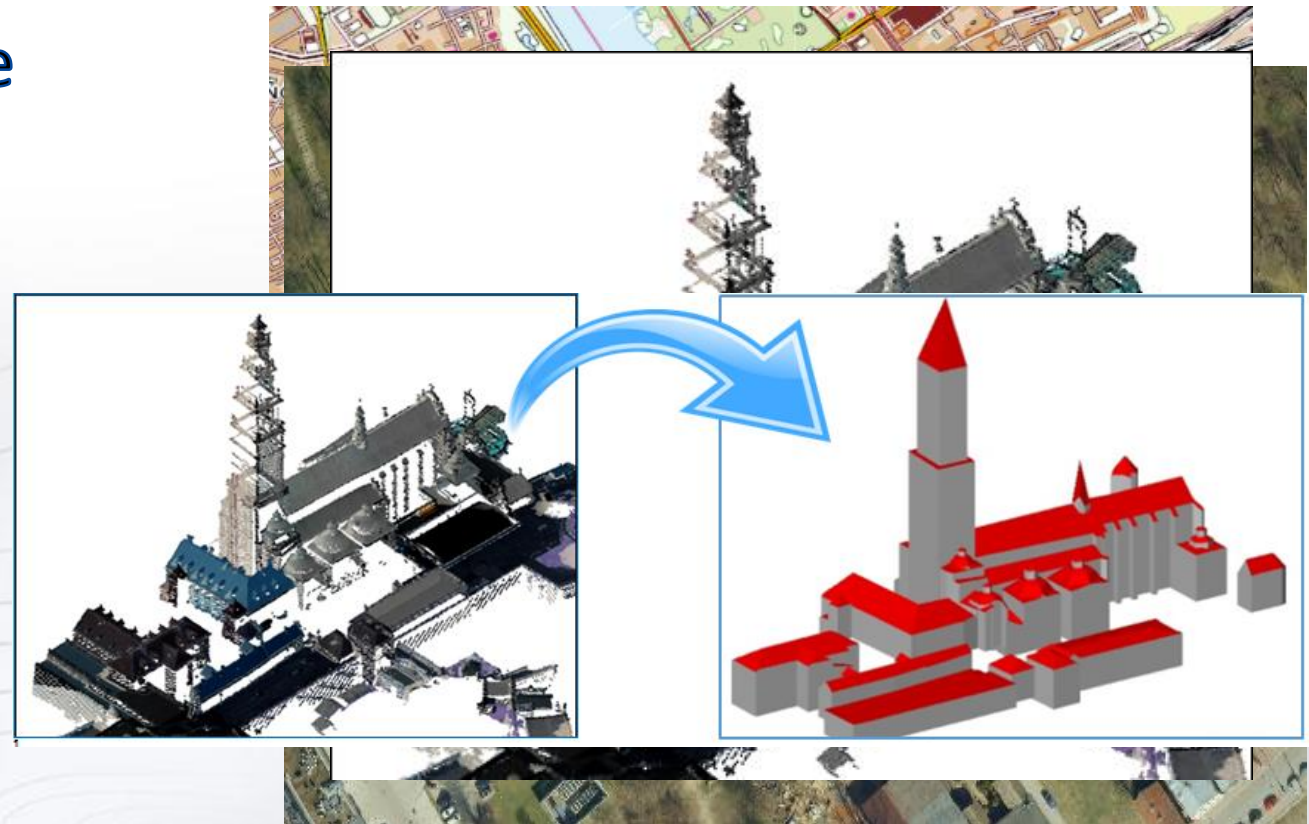
The screenshot shows the 'OTWARTE DANE' website interface. At the top, there is a navigation bar with links for 'HOME PAGE', 'DATA', 'INSTITUTIONS', 'APPLICATIONS', 'NEWS', and 'KNOWLEDGE BASE'. Below the navigation bar, a search bar is present with the text 'Search for institution...' and a 'Search' button. A 'Show filters' link is also visible. The main content area displays a list of institutions under the heading 'Institutions (125)'. The list is sorted by 'Name ascending'. Each institution card includes the name of the institution and the number of datasets it has available.

Institution Name	Number of datasets
Agencja Restrukturyzacji i Modernizacji Rolnictwa	10
Agencja Rynku Rolnego	3
Biblioteka Narodowa	2
Biuro Nasiennictwa Leśnego	7
Biuro Rzecznika Praw Pacjenta	0
Centralny Ośrodek Informatyki	0
Centrum Informatyki Resortu Finansów	0
Centrum Obsługi Projektów Europejskich Ministerstwa Spraw Wewnętrznych i Administracji	2
Centrum Onkologii – Instytut im. Marii Skłodowskiej-Curie	2
Centrum Projektów Polska Cyfrowa	18
Centrum Systemów Informacyjnych Ochrony Zdrowia	8
Centrum Unijnych Projektów Transportowych	2
Dyrekcja Generalna Lasów Państwowych	2
Generalna Dyrekcja Dróg Krajowych i Autostrad	7
Generalna Dyrekcja Ochrony Środowiska	9
Główny Inspektorat Jakości Handlowej Artykułów Rolno-Spożywczych	2
Główny Inspektorat Ochrony Roślin i Nasiennictwa	6
Główny Inspektorat Ochrony Środowiska	22
Główny Inspektorat Sanitarny	10
Główny Inspektorat Transportu Drogowego	7

Next steps – more open data



1. Topographic database in scale 1:10 000
2. Ortophotomap
3. LIDAR measurements
4. 3D buildings





Thank you for your attention!

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dominik.kopczewski@gugik.gov.pl

