Rules of the territorial division

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Rules of territory division (the Polish case)

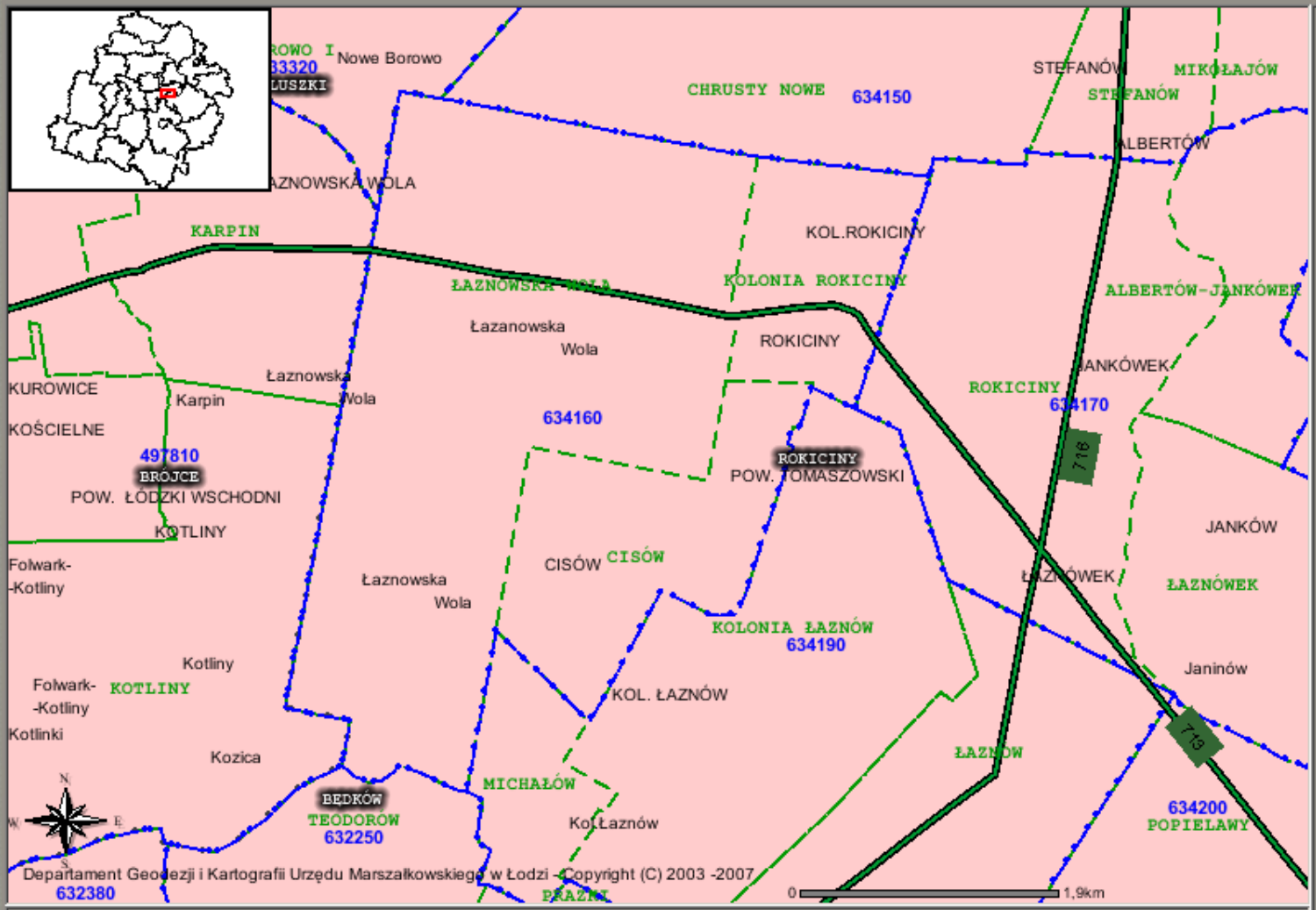
- The area of each unit of territorial division is divided into **statistical regions and census enumeration areas**.
- The boundaries of statistical regions and census enumeration areas are always adapted to the limits of territorial division units.
- They are consistent with the borders of precincts and boundaries of a village or administrative units.
- The size criterion of the statistical regions and census enumeration areas is the number of dwellings and populations.
- Concerning the area of statistical regions the size criterion consists no more than **2,700 people and 999 apartments, and for a census enumeration area no more than 500 people and 200 apartments.**

Rules of territory division (the Polish case) 2.

- When determining boundaries of statistical regions and census enumeration areas local **conditions of the terrain** (eg. lakes, swamps, inequality, character building, considering conditions and directions to the various residential buildings) are also taken into account.
- Each statistical area receives an unique six-digit identifier.
- If the indentifier exeeds a single-digit range in numbers **from 1 to 9 in one statistical region a new division is created.**

Województwo Łódzkie - RSIP - mapa administracyjna

Informacje



Warstwy

W	A	
☐	○	Urzędy pocztowe
☐	○	Obwody statystyczne
☑	○	Rejony
☑	◉	Obręby
☑	○	Miasta
☑	○	Miejscowości
☑	○	Gminy
☑	○	Powiaty

Odśwież mapę

Obręby

L.p.	NAZWA	KOD_TERYT
1	CISÓW	101607202

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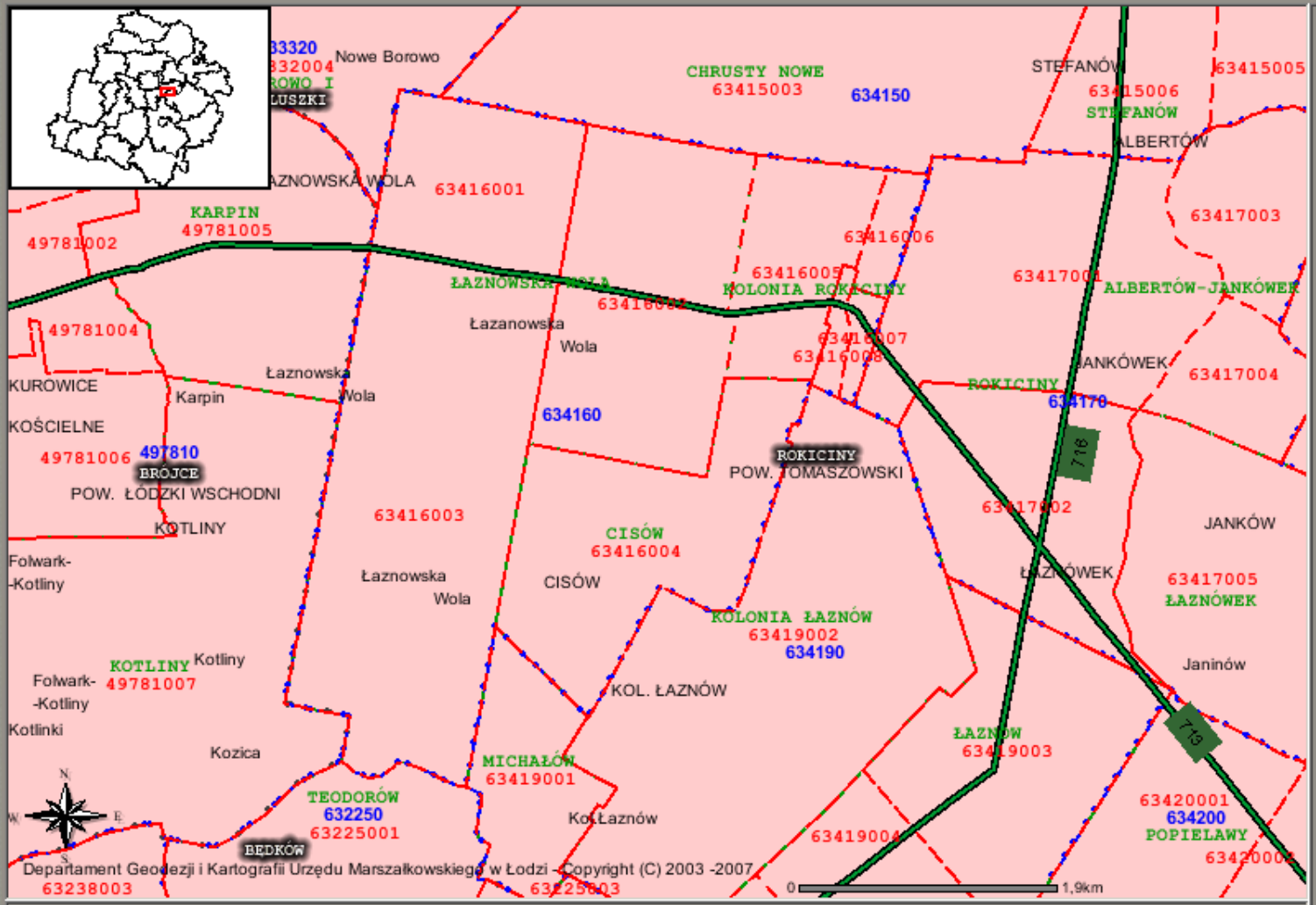

Warstwy

W	A	
☐	○	Urzędy pocztowe
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☑	●	Obręby
☑	○	Miasta
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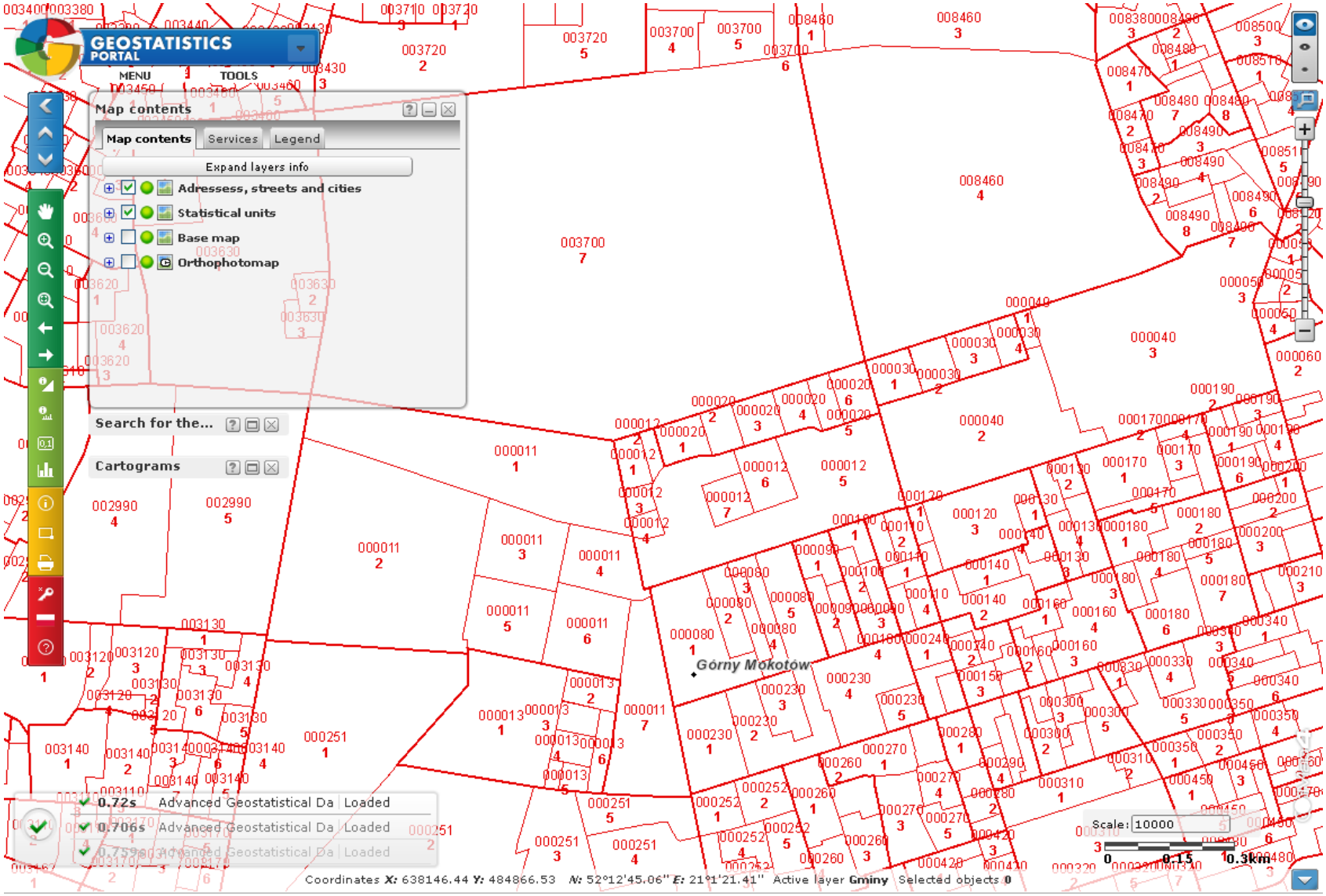
Statistical division



A number of statistical units

The territorial division is complete and continuous without omissions and contains:

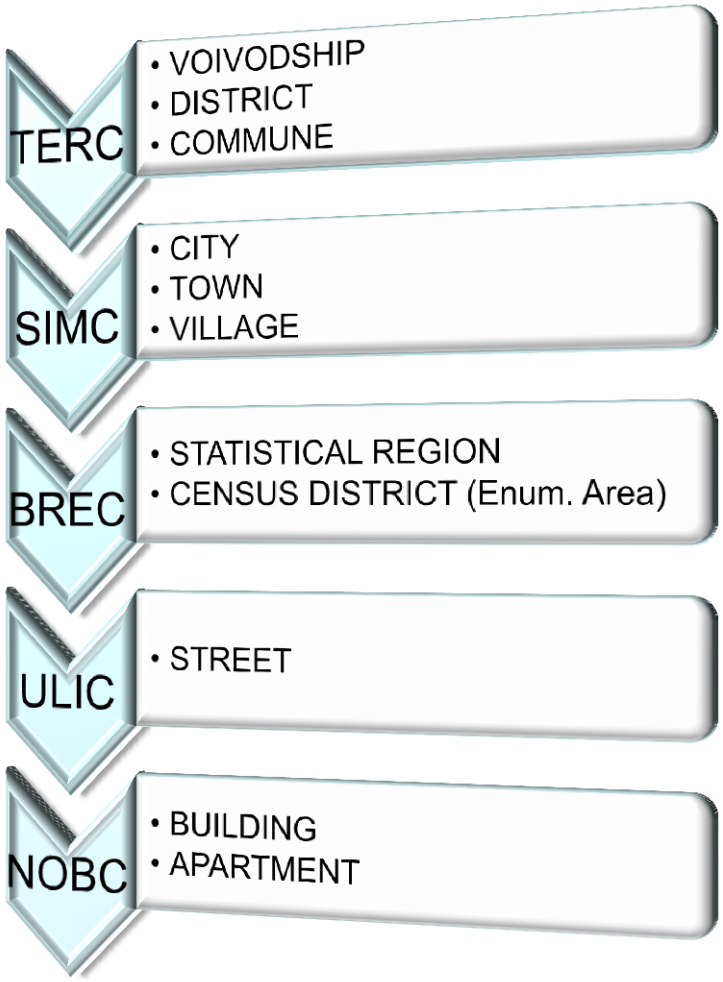
33 739 Statistical regions

183 917 Enumeration Areas

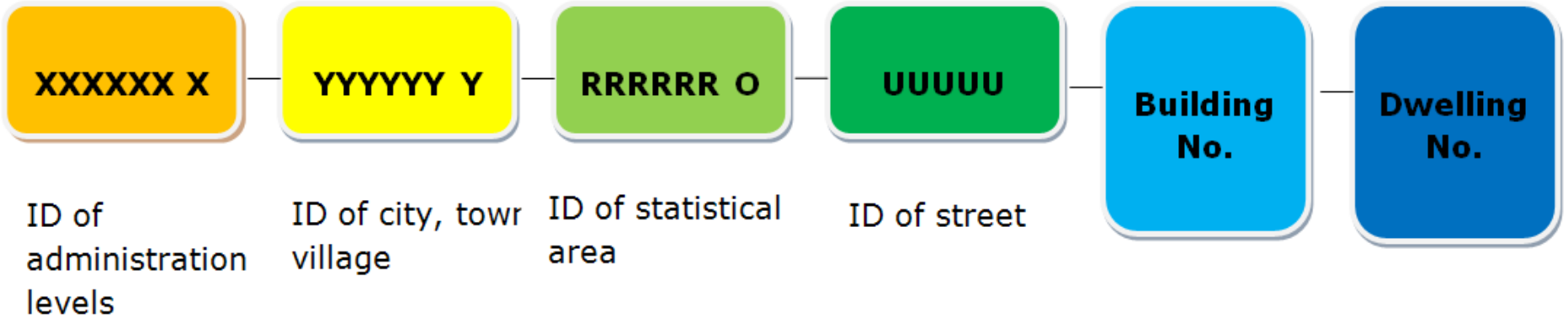
Methodologies for managing and monitoring field work using geospatial tools

Territorial identification registry (TERYT)

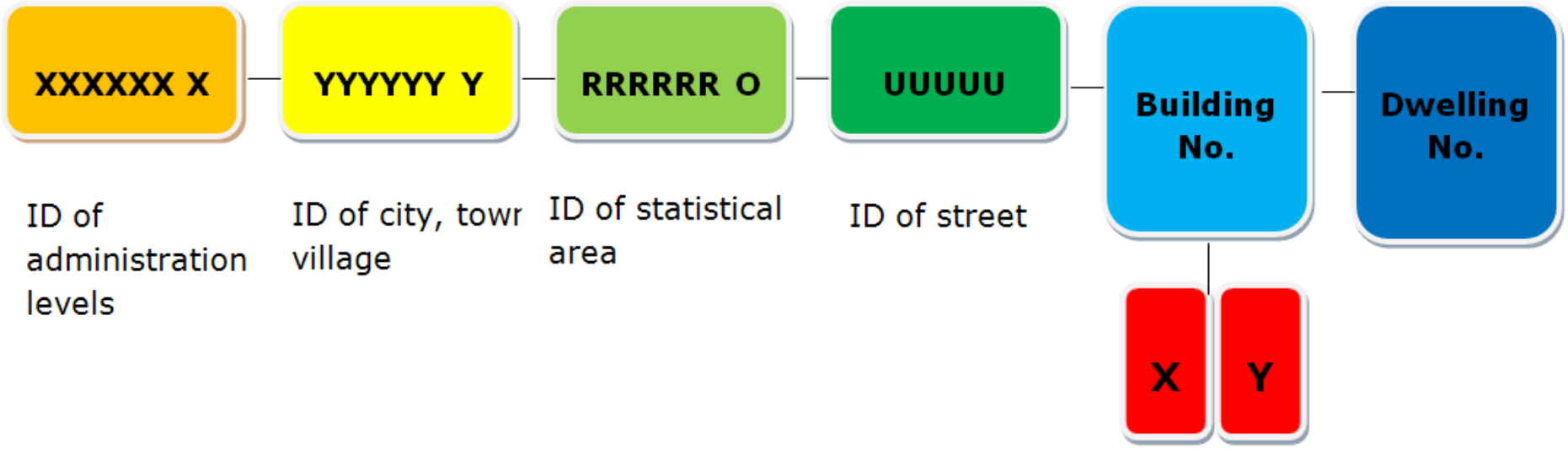
Adding spatial information to various levels of the territorial identification registry



Address point identification system



Spatial address point Identification system



The structure of the identifier of the three-tier territorial division of the country

X - region

XX - voivodship

XX - subregion

XX - powiat

XX - gmina

x - *type of gmina*

Types of gminas are marked in the following manner:

1 - urban

2 - rural

3 - urban-rural

4 - city within an urban-rural

5- rural area within an urban-rural

8 - quarters of the Warszawa-Centrum

9 - quarters and representations of other urban

x,y GEOCODING

- **The Territorial Identification Registry *(System TERYT)* provides location data of all statistical units as the address-point of a related building**

- **Location of buildings is specified using geographical x,y coordinates, giving the exact location of each building and make possibility to link microdata from several registers.**

x,y GEOCODING

- **Geocoding eliminates the necessity of recalculating data when administrative boundaries are changing. Furthermore, the point assignment will allow for easy aggregation and processing of statistical data in any chosen area - even for the GRID – based presentation,**

- **x,y geocoding is crucial in all three stages of the census:**
  - **the preparatory works,**
  - **The management of enumerators during the fields works,**
  - **and for multidimensional spatial analysis.**

Changing the classification allowed a more flexible grouping of data

It also makes possible create a base of spatial microdata enabling carrying out spatial analyses of various phenomena concerning:

- demography e.g. the average distance between children's and parents' residence, commuting to work, school, distance to a hospital,
- urbanisation and planning e.g. useful in determining the boundaries of urban agglomerations, metropolies, and the drawing up of land development plans,
- agriculture and environment (analysing the structure of crops, environmental pollution),
- the economy e.g. analysing the effects of burdensome road and industry investments.

A revolutionary key for the application of geostatistics.

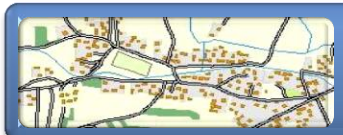
- Using x, y coordinates make possible classifications and analyses conducted become **independent from boundaries changes** (in the regional division of the country) resulting with changes in census districts and avoiding laborious recalculations.
- Enabling comparative analysis of time series, regardless of the changes taking place in given divisions/areas.
- An additional advantage is the **possibility of data aggregation** both in the structure of NUTS and the GRID divisions.

Data Sources

National Registry of Borders
and Areas of the Country's Administrative Division

Cadastral Data

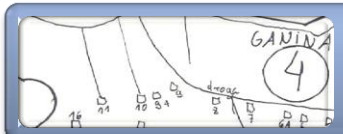
LPIS (Land Parcel Identification System)



Topographic Data Base

VMap Level 2

Ortophotomap



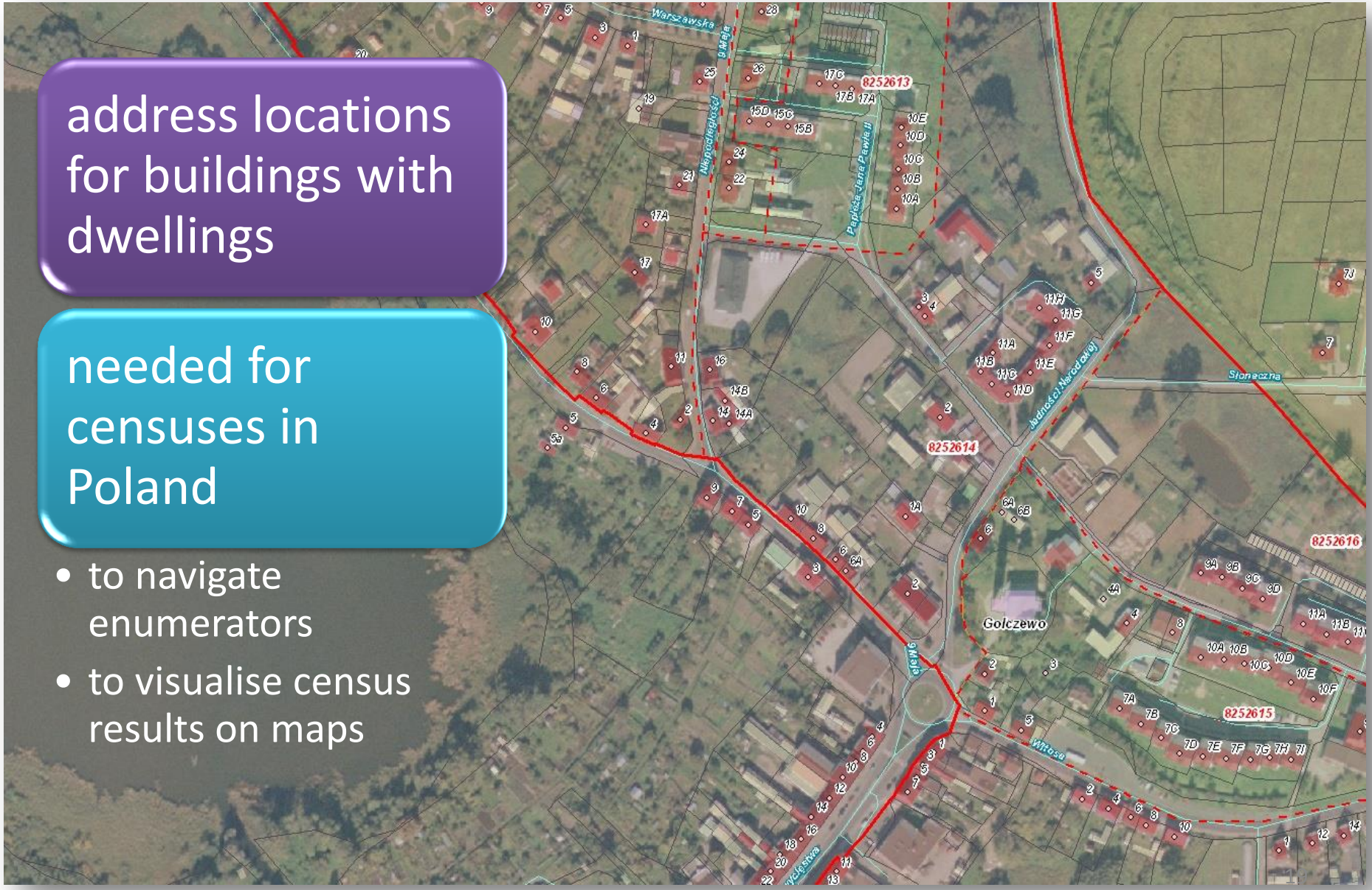
Address point sketches

Statistical address points

address locations for buildings with dwellings

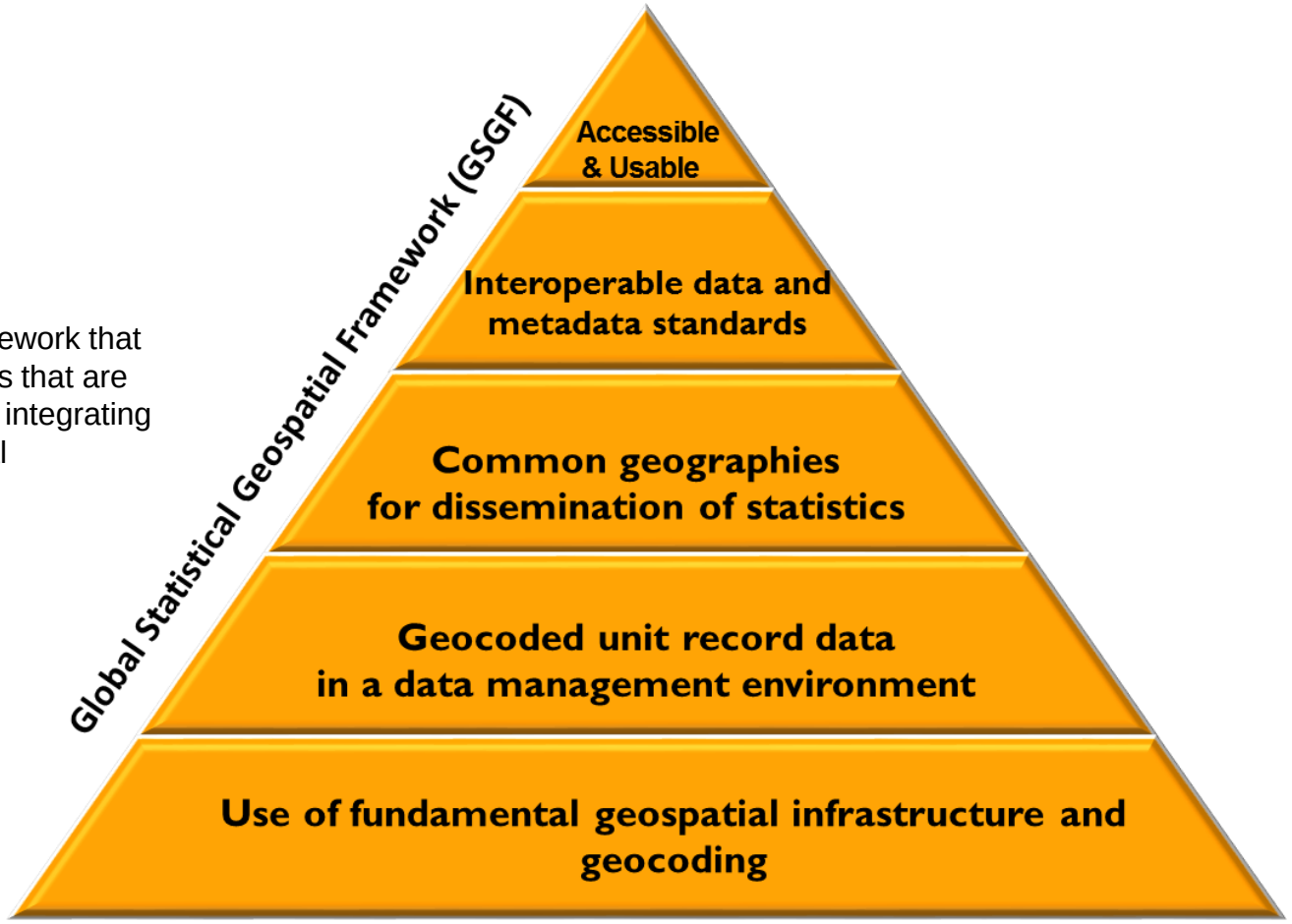
needed for censuses in Poland

- to navigate enumerators
- to visualise census results on maps



Five principles of the Global Statistical Geospatial Framework

High-level, generic framework that consists of five principles that are considered essential for integrating geospatial and statistical information



GSGF prepared by Australian Bureau of Statistics and approved by UN-GGIM on August 2016

The 10 Level Model

unique identifiers system

Geodetic System	Layers (suitable for geocoding)	Statistical System
✚	NUTS1 - Administrative level 1	✚
✚	NUTS2 - Administrative level 2	✚
✚	NUTS3 - Administrative level 3	✚
✚	LAU1 - Administrative level 4	✚
✚	LAU2 - Administrative level 5	✚
Cadastral units Cadastral parcels	INDIVIDUAL UNITS	Statistical regions Enumaration areas
✚	POLYGON	? ←
→ ?	GRID	✚
✚	LINE	? ←
✚	POINT	✚

Personal proposition of
Janusz Dygaszewicz CSO Poland

Proposition of European application of Global Statistical Spatial Framework