

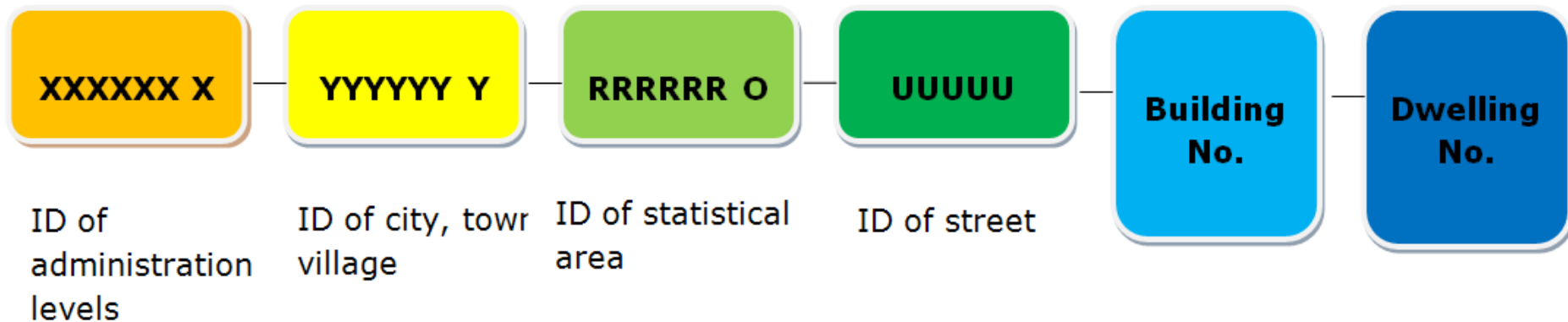
# **Methodologies and IT-tools for managing and monitoring field work using geo-spatial tools and other IT- Tools for monitoring**

**Janusz Dygaszewicz**

**Central Statistical Office of Poland**

**Jerusalem, 11-14 July 2016**

# 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*

Where types of gmina are market in the following manner:

- 1 - urban gmina,
- 2 - rural gmina,
- 3 - urban-rural gmina,
- 4 - city within an urban-rural gmina,
- 5- rural area within an urban-rural gmina,
- 8 - quarters of the Warszawa-Centrum gmina,
- 9 - quarters and representations of other urban gminas.

# x,y GEOCODING

- 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 linking microdata from several registers.

# **x,y GEOCODING**

- ▶ This eliminate the necessity to recalculate data when administrative boundaries are changing. Furthermore, the point assignment will allow easy aggregation and processing of statistical data in any chosen area - even for the GRID - based dissemination,
- ▶ x,y geocoding is crucial in all three stages of the census:
  - the preparatory works,
  - management of enumerators during the fields works,
  - and for multidimensional spatial analysis.

# **Changing the classification allowed a more flexible grouping of data in national censuses for the smallest areas.**

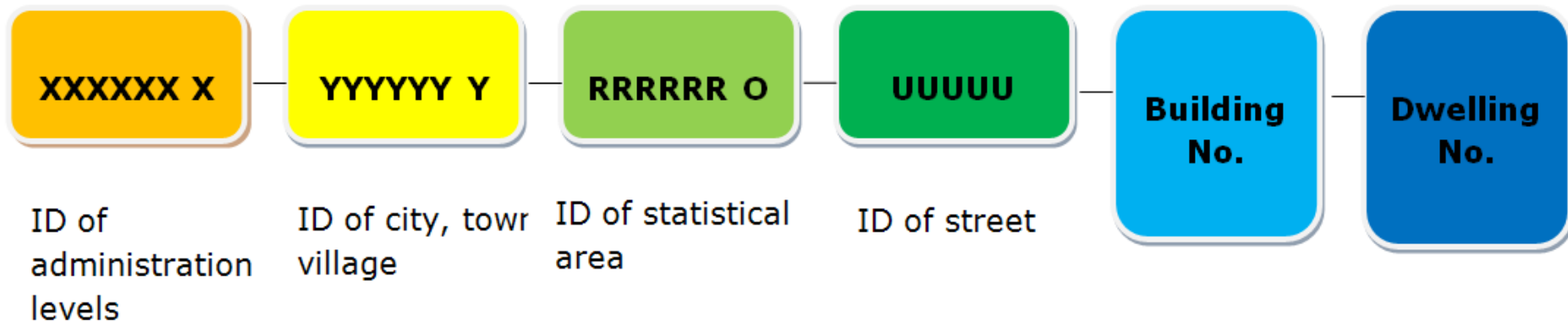
It also make it possible to create a base of microdata of a spatial nature enabling carrying out of spatial analyses of various phenomena concerning for instance:

- demography (e.g. the average distance between children's and parents' residence, commuting to work, school, distance to hospital etc.),
- 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).

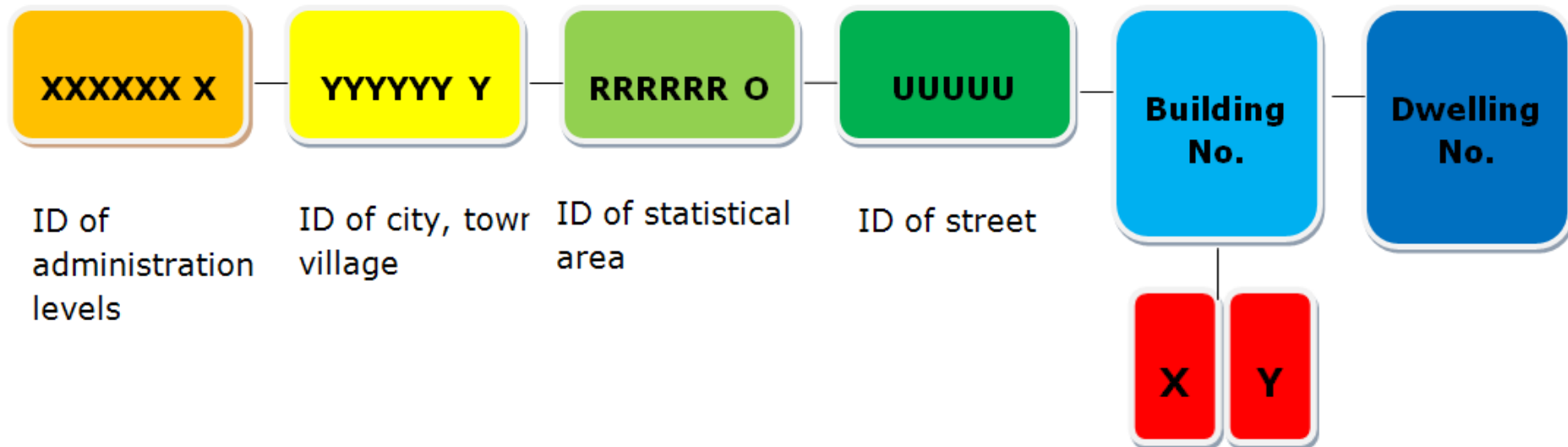
# This is a key, even revolutionary, for the application of geostatistics.

- Classification of the analyses conducted by points with x, y coordinates also make it possible to become **independent from boundaries changes** (in the regional division of the country), usually resulting in changes in census districts and laborious recalculations.
- This facilitated a comparative analysis of time series, regardless of the changes taking place in this division.
- An additional advantage is the **possibility of the data aggregation** both in the structure of the NUTS administrative division and the GRID divisions.

# Address point identification system



# Spatial address point Identification system

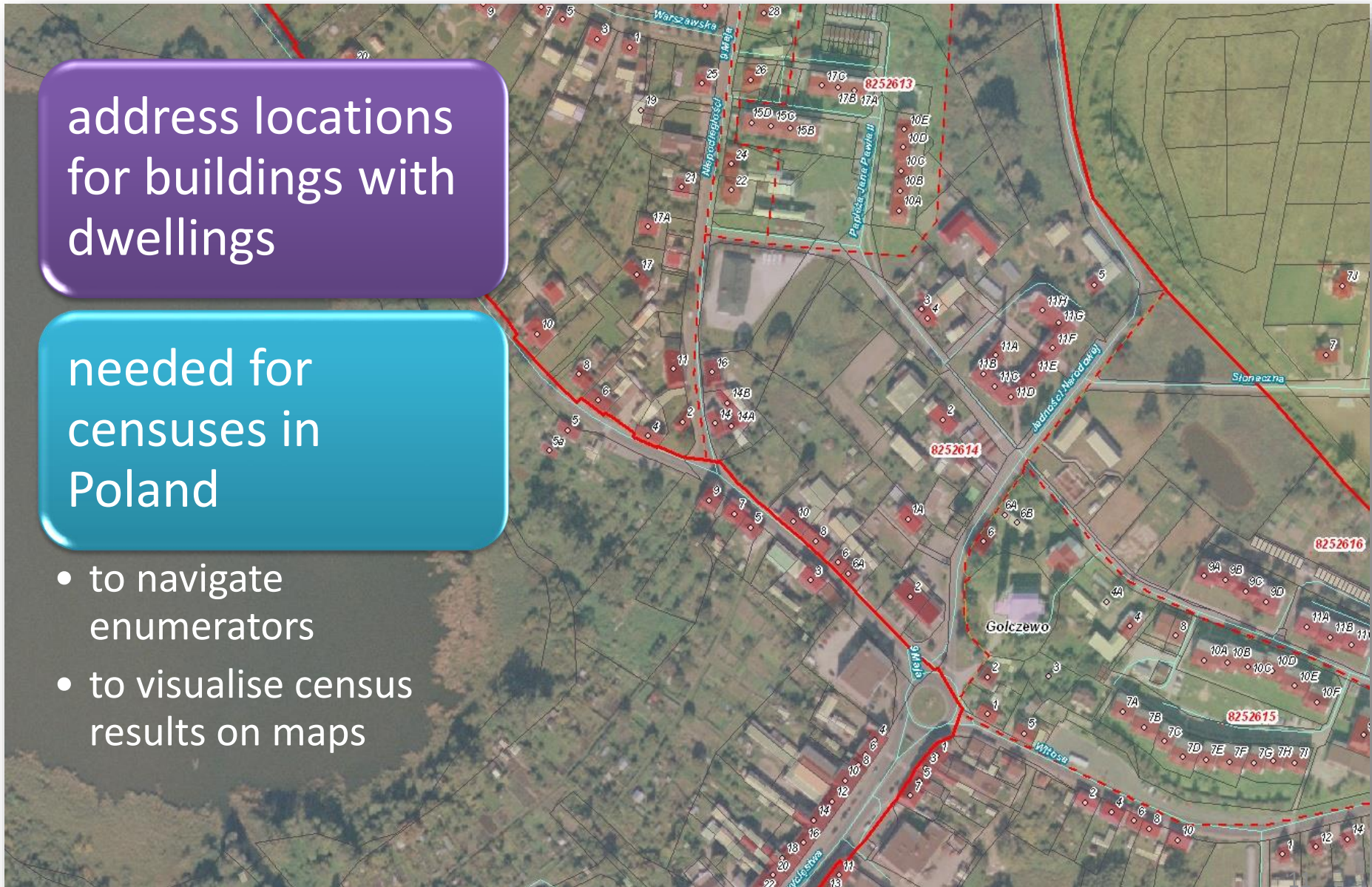


# Statistical address points

address locations  
for buildings with  
dwellings

needed for  
censuses in  
Poland

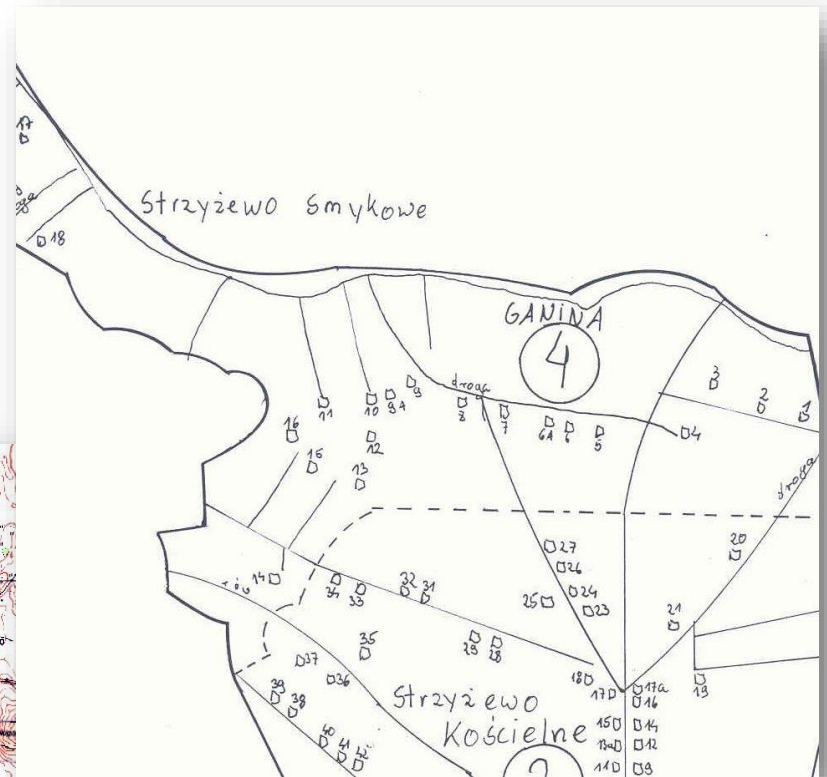
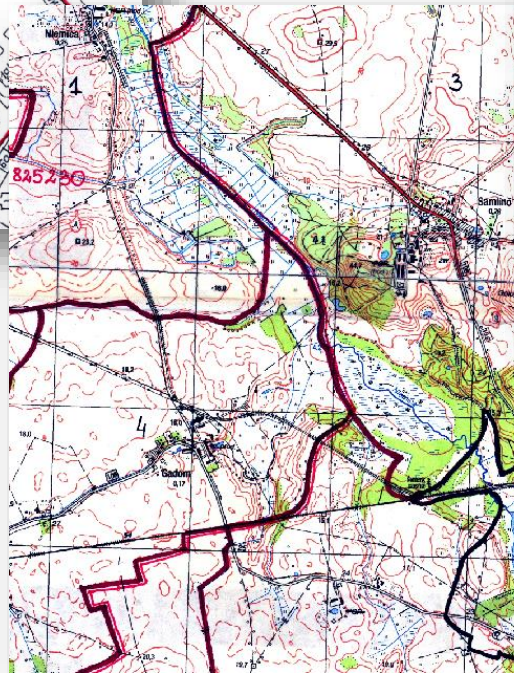
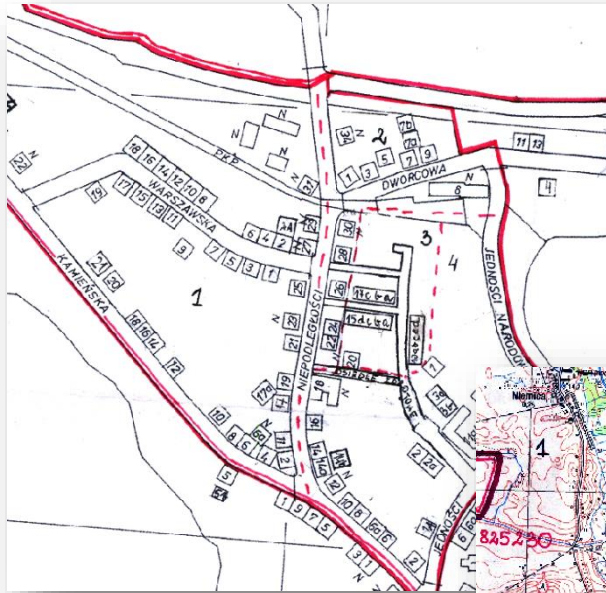
- to navigate enumerators
- to visualise census results on maps



# **Keeping address points up to date using GIS**

**(update from registers, local governments actions  
and pre-census survey with GPS devices)**

# What we had (2009)



# Reference materials



## Primary:

- Ortophotomap,
- Cadastral Data,
- Administrative division borders,

## Secondary:

- LPIS (Land Parcel Identification System),
- Road and street network (commercial),
- Geographical Names.
- Topographic Data Base.

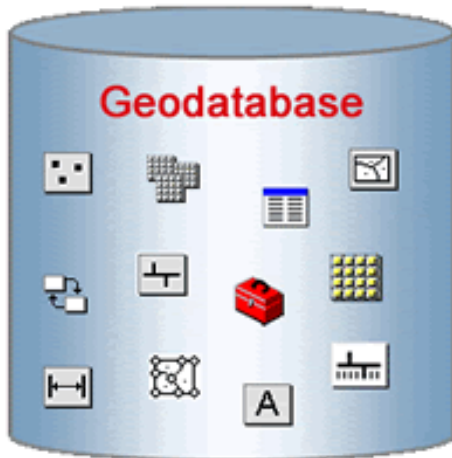
# Software

## ArcGIS 9.3.1

- ArcInfo
- ArcEditor
- ArcView

## Geodatabases

- personal
- file



# Address point acquisition – pilot project



4 municipalities selected  
for the Trial Agricultural  
Census 2010

statistical division borders  
and address point acquisition

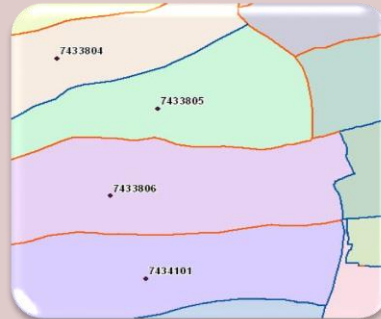
reference material quality  
assessment

assessment of time needed  
for a nationwide operation

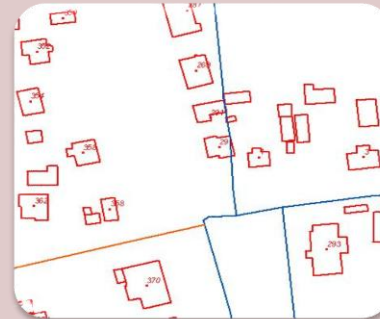
# Address point acquisition – pilot project



scanning  
and  
calibration  
of statistical  
maps



digitization  
of statistical  
division  
borders  
(statistical  
regions and  
census areas)



automatic  
address point  
extraction  
from cadastral  
data



manual  
address point  
acquisition  
(with  
situation  
sketches  
as primary  
reference)

# Spatial data collected by official statistics



## Statistical address points

- address points for dwelling locations (only)

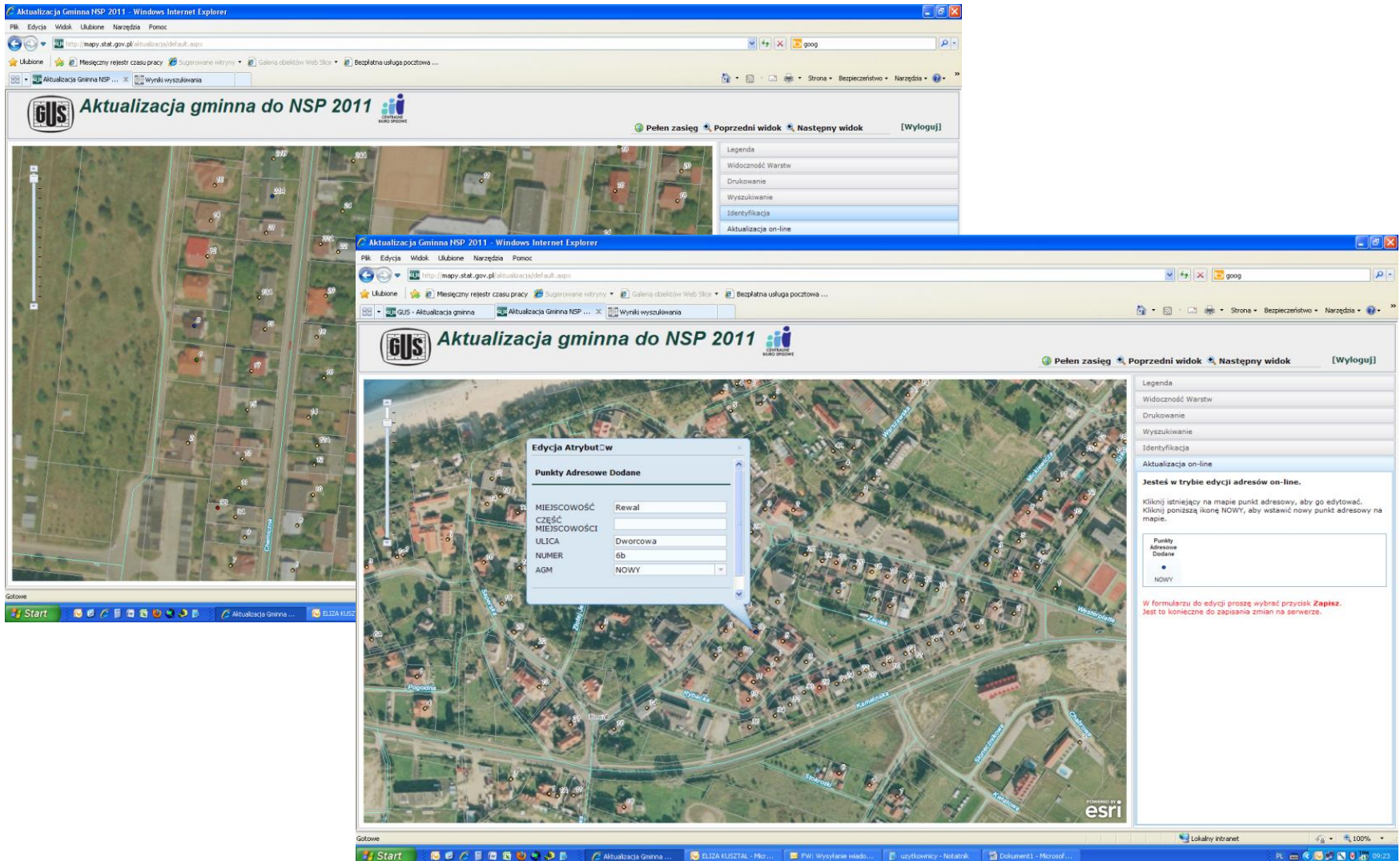


## Statistical division borders

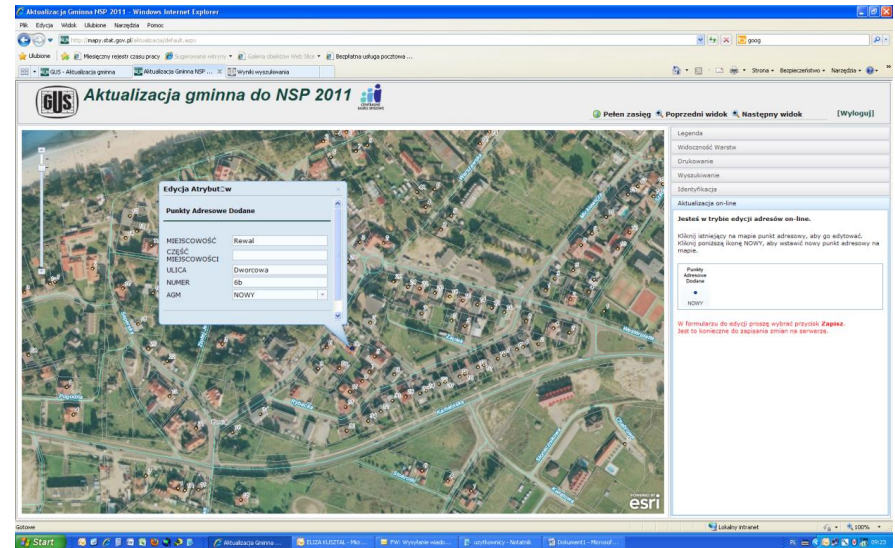
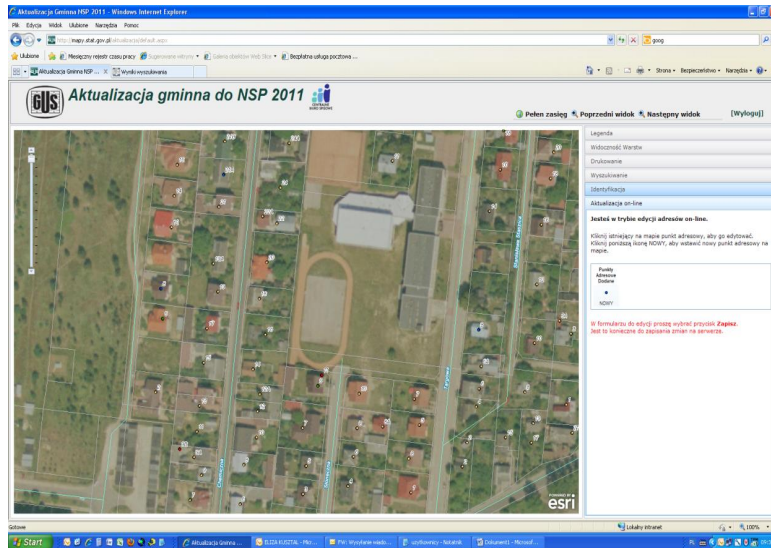
- Statistical regions
- Census areas

# **CENSUS UPDATE OF ADDRESS POINTS**

# Population and Housing Census 2011 webservice for municipalities



# Statistical address point database update in cooperation with municipalities on the website basis



- 3 weeks
- internet map service provided by CSO
- on-line application for spatial address point database editing
- printouts still available in case of bad internet connection

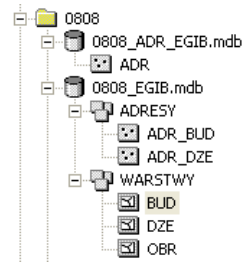
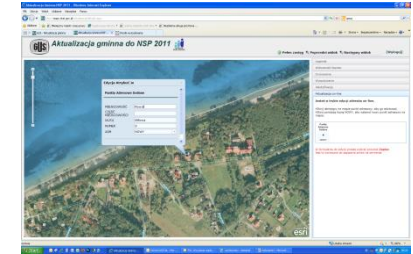
# Keeping address points up to date using GIS

- On-line editing made it possible for gmina officers to modify the location and attributes of address points (city/town, street, address number), as well as to introduce new points directly in the application.
- Modifications were saved directly on a server, without the need for their repeated introduction by Statistical Offices, which greatly streamlined and accelerated future updating.

# Keeping address points up to date using GIS

- The Statistical Offices could also monitor the progress of work carried out by the employees of Gmina Offices on an ongoing basis. Changes introduced by gmina offices, following their verification and approval by Statistical Offices, were automatically introduced to a list, which constituted a basis for further census work.
- Alternatively, changes in the location of address points and introduction of new points could also have been made on map printouts, on which a given point was located.
- Statistical Offices were tasked to introduce the amendments sent by the gminas on printouts. Most gminas, however, chose the on-line way.

## The figure consists of two maps of the same geographic area, presented side-by-side. The left map is a red-outlined map, showing a network of roads and building footprints in red. The right map is a green-outlined map, showing the same area with green fields, a blue river, and brown buildings. The maps are oriented vertically, with the red-outlined map on the left and the green-outlined map on the right.

[illegible]

- January 2009 –  
December 2009

January 2010 –  
May 2010

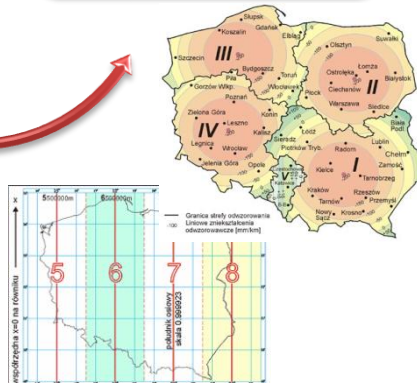
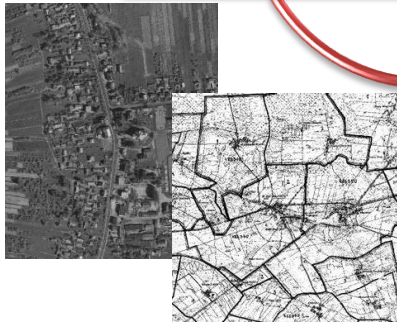
- reference material processing

- address point acquisition

January 2010 –  
June 2010

- continuously  
since July 2010

- address point database update



# Summary of works

In 6 months  
(I – VI 2010)  
GIS operators in  
official statistics  
created spatial  
address  
databases with 6  
million address  
points



# Results



# Agricultural Census 2010

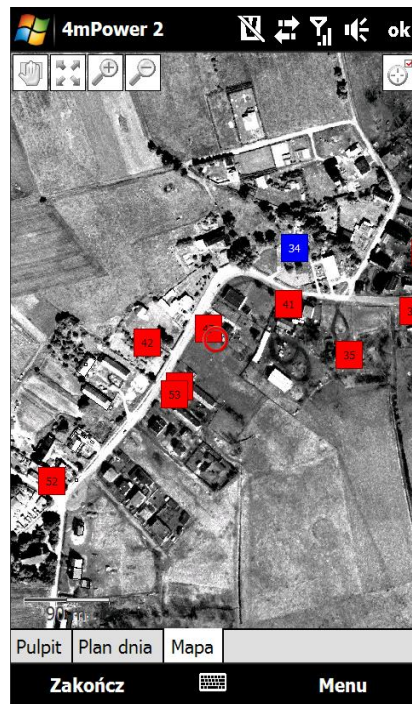


update in municipalities  
(July 2010 – 3 weeks)

- internet map service
- modifications indicated on printouts
- results sent to statistical offices to be manually entered into the databases

visual survey by enumerators  
(August 2010 – 3 weeks)

- results imported to statistical address point databases



# Population and Housing Census 2011

update in municipalities  
(January 2011 – 3 weeks)

- internet map service
- **on-line editing**
- printouts still available

visual survey by enumerators  
(March 2011 – 3 weeks)

- results imported to statistical address point databases



# Results

The only set  
of address points  
in Poland that:

- is complete,
- has been verified in  
the field,

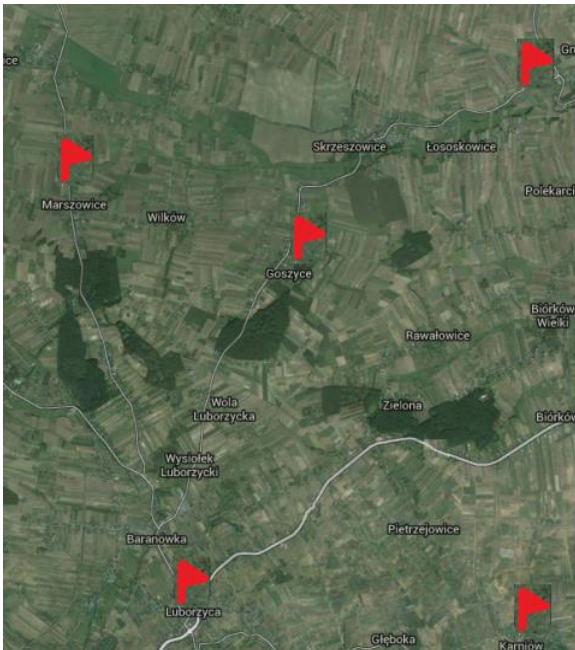
Created  
and maintained  
within official  
statistics



# **SPATIAL SAMPLE OPTIMISATION USING GIS TOOLS**

# Sampling optimisation

Hypothetical sample distribution for surveys with single-stage and two-stage sampling:



Single-stage sampling.

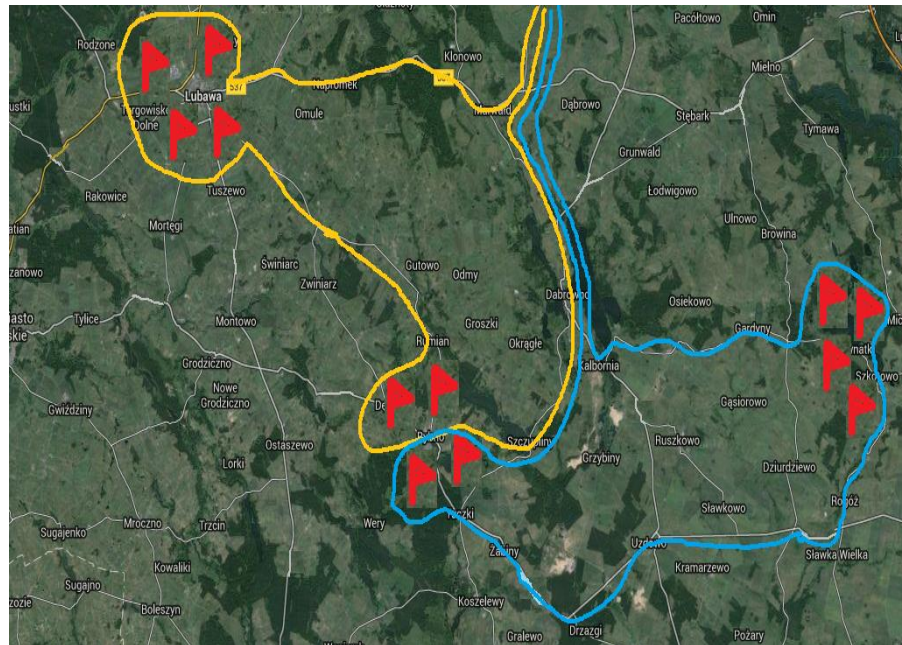


Two-stage sampling.

Most first stage units (FSU), as well as the number of dwellings sampled from one FSU can be regulated.

# Sampling optimisation – example

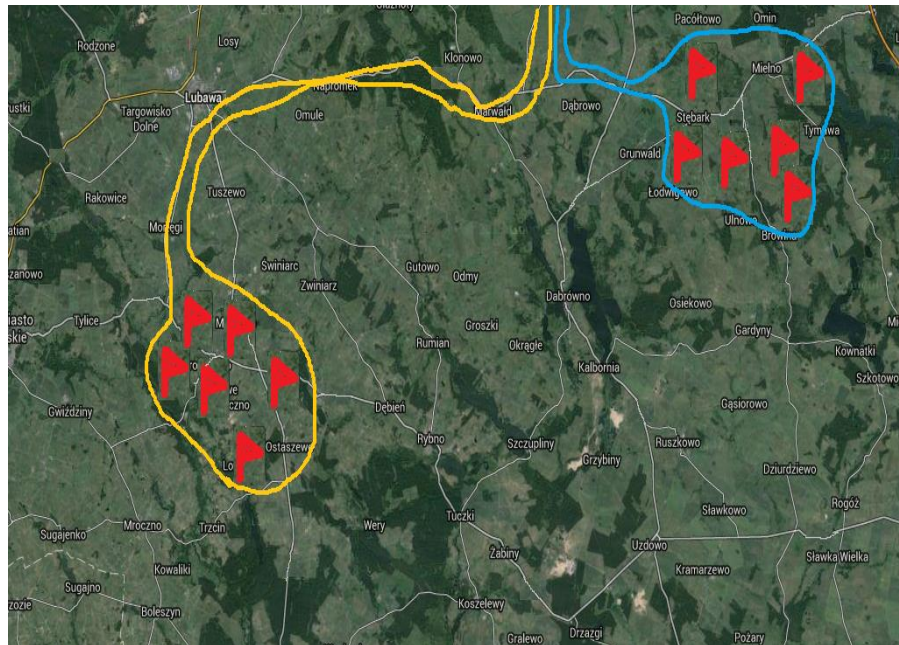
Example: The optimisation of the number of units sampled from one FSU in respect of interviewers' travels. Sampling of 12 addresses. Yellow route – 1 travel by an interviewer (1 day), blue route – 2 travels by an interviewer (2 days):



**Option one:** 3 FSUs, 4 addresses each. Conclusion: Too few addresses sampled from one FSU – the interviewer visits more than 1 FSU during one travel, longer travels by the interviewer.

# Sampling optimisation – example

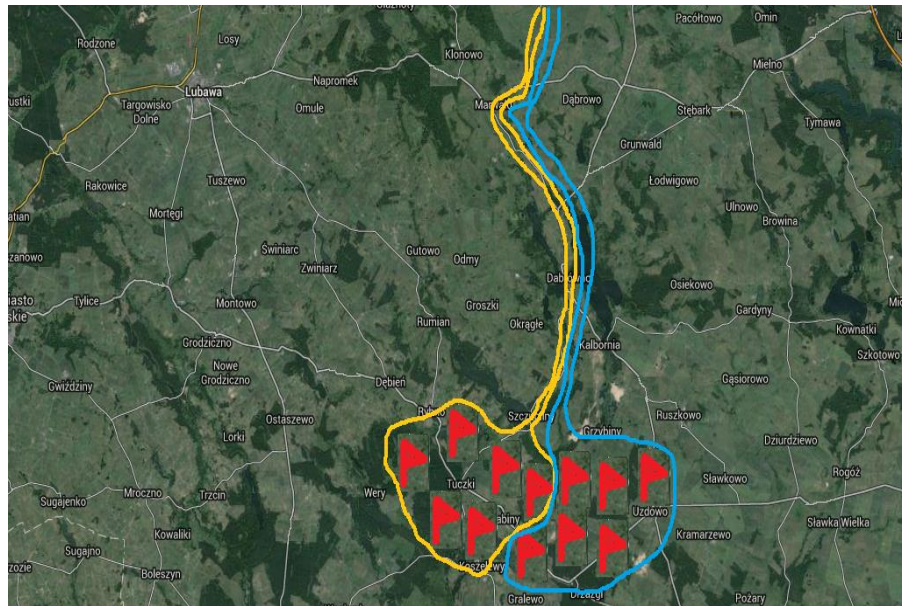
Example: The optimisation of the number of units sampled from one FSU in respect of interviewers' travels. Sampling of 12 addresses. Yellow route – 1 travel by an interviewer (1 day), blue route – 2 travels by an interviewer (2 days):



**Option two:** 2 FSUs, 6 addresses each. **Conclusion:** An optimal solution.

# Sampling optimisation – example

Example: The optimisation of the number of units sampled from one FSU in respect of interviewers' travels. Sampling of 12 addresses. Yellow route – 1 travel by an interviewer (1 day), blue route – 2 travels by an interviewer (2 days):

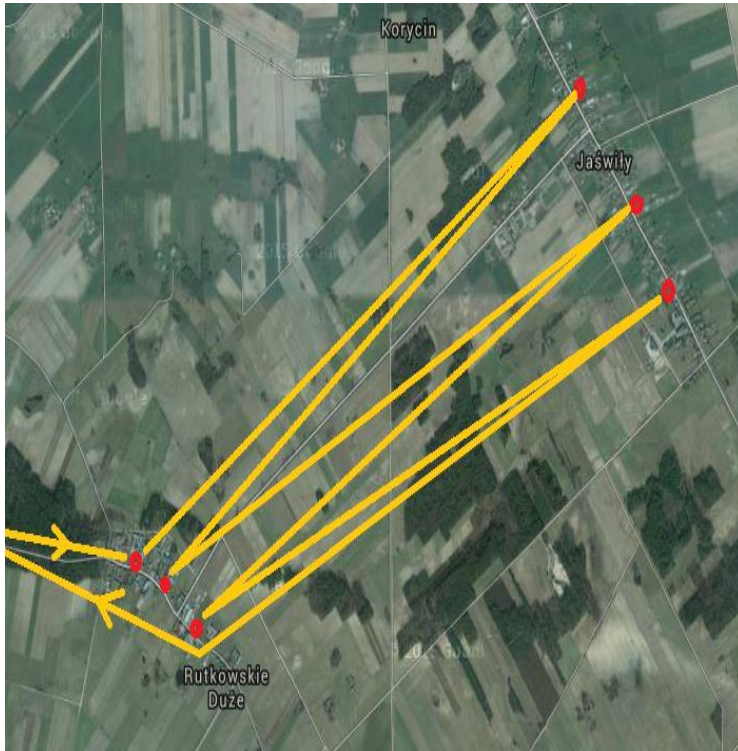


**Option three:** 1 FSU with 12 addresses. **Conclusion:** The number of dwellings sampled from one FSU is too large. The number of travels by the interviewer is not smaller than in the previous solution, but the quality of the survey has worsened (a decrease in precision).

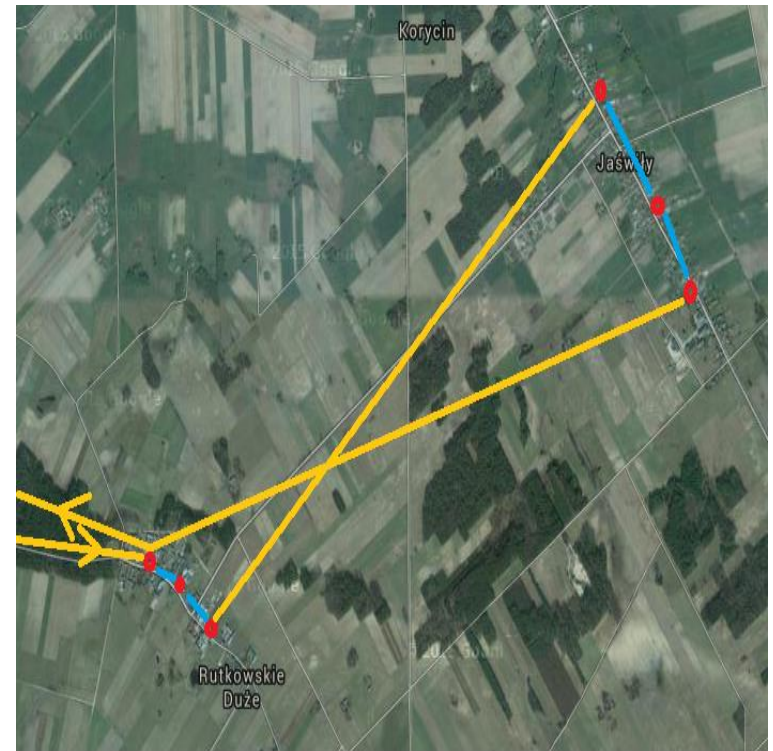
# Activities in respect of a sampling scheme

In surveys in which the interviewer has to visit a number of dwellings in a given order, and the addresses are scattered across a large first stage unit (FSU) consisting of several cities/towns, there appears the necessity of **going back and forth between the cities/towns**. Such a situation could be observed in a survey of household budgets (BR). In response to suggestions filed by the interviewers, a method of **address list sorting** was devised, which does not significantly impact on survey quality. This method has been used in surveys carried out since 2015 (sampling in 2014). This solution has been already positively verified in practice, as it made it possible to **reduce the length of routes** travelled by interviewers. Some obstacles to interviewers' work can also appear in cities, if two or more areas or regions, which are poorly connected to one another, e.g. divided by a river, channel, railway tracks or an express road, are joined. To avoid such problems, dwelling list grading by regions (areas) can be introduced if they are joined.

# Activities in respect of a sampling scheme – example



Interviewer's route – a pessimistic scenario without grading.



Interviewer's route after sample grading.

Yellow route – travels by the interviewer between the cities/towns, blue route – travels by the interviewer within one city/town.

# Activities in respect of a sampling scheme

Developing a method of linking small areas and statistical regions (relevant to the determination of first stage units (FSUs)), as the currently used sampling algorithms assume some minimum numbers of dwelling in each FSU.

The present sampling method does not take into account the location of areas, but only the vicinity of their numbers. Taking into account information on the location of dwellings would make it possible to analyse distances between areas or statistical regions before their possible combination.

# **SYSTEMS FOR INTERVIEWER AND SURVEY MANAGEMENT**

# Systems for interviewer and survey management

- **ADYS** – An application designed to carry out tasks associated with planning and monitoring and controlling the work of census enumerators.
- **ZABA** - a system whose use is planned for interviewer/telephone interviewer and survey management
- **AnkietGUS** – an application for interviewer/telephone interviewer management
- **AnkietMenager** – an application for survey management
- **CORStat** – a system for survey management

# **The dispatching application - monitoring and managing the work of census enumerators in PSR 2010 and NSP 2011**

An application designed to carry out tasks associated with planning and monitoring and controlling the work of census enumerators

- planning the tasks of enumerators
- assigning census units to enumerators
- controlling the correctness and timeliness of tasks

# The KOMU module

Support offered by the KOMU module included especially:

- the preparation of messages and communications to be delivered to enumerators:
  - in normal mode – messages were delivered to the enumerator terminal during differential synchronisation,
  - in instant mode – forces synchronisation of the enumerator terminal, resulting in the instant delivery of the message to the addressee,
- handling safety emergencies reported by the enumerators,
- handling enumerators' locations "on request",
- also access to communication and message history,
- handling forces enumerator synchronisation.



# The MONI module

Support offered by the MONI module included especially:

- allowing the configuration of census tracking parameters,
- providing information on census progress for a given area on a given day, taking into account effectiveness, plan implementation status and the planned completion risk factor,
- estimating the probability of planned completion and simulating further census progress,
- visualising the position (based on GPS data) and route of the enumerators,
- providing information on the completion of tasks by the enumerators,
- providing information on the completion of tasks in census units,
- reviewing historical reports in the repository.

# Census monitoring (tabular mode)

**Monitorowanie spisu**

Filtry dla statystyk

Stan danych na dzień < 2009-07-24 > Dzisiaj ☒ Stan spisu ☐ Efektywność ☐ Prawd. niezakończenia w terminie

Poziom grupowania Województwa, powiaty, gminy, rejony, obwody

Obszary   
 Rachmistrze

Mapa Tabela

Uwzględnij rachmistrzów

Obszar	Wartość wskaźnika
WOJ. DOLNOŚLĄSKIE	77%
Powiat Wrocławski	36%
Gmina Św. Katarzyna	50%
Rejon: 123	50%
Obwód: 123_44	50%
Jan Kowalski	100%
Anna Nowak	0%
Janusz Zieliński	0%
Gmina M. Wrocław	100%
Rejon: 122	100%
Obwód 122_1	100%
Andrzej Nowak	100%
Anna Jarosz	100%

Szczegóły rachmistrza... Wiadomość do rachmistrza... Planowanie...

# The PLAR module

Support offered by the PLAR module included especially:

- the possibility of reviewing the census frame (at the detailed information level),
- assigning address points (in a survey) and census units (in the census) to the enumerators,
- manual (hand-over/receipt) and automatic (transfer) distribution of tasks to the enumerators,
- planning the schedule of meetings,
- handling the census status for a given territory (census unit, area, region),
- handling the verification of address points (based on information provided by the enumerators) during a pre-census survey,
- reviewing census data,
- reviewing the history of contacts with respondents and the history of events in a census unit,
- approving/rejecting verified census data,
- blocking the CAPI channel, as well as opening and closing address points.

# Enumerator's schedule – work plan

Kalendarz rachmistrza

Rachmistrz

Imię Jan

Nazwisko Kowalski

Identyfikator pracownika R027

Zmień...

Terminarz rachmistrza

< lipiec 2009 > Dzisiaj

☒ Plan pracy
 ☐ Stan spisu
 ☐ Efektywność

Pn	Wt	Śr	Cz	Pt	So	Nd
4h 29 0/0/0	4h 30 0/0/0	4h 1 5/5/5	4h 2 5/5/5	4h 3 7/7/7	4h 4	4h 5
4h 6 5/5/5	4h 7 8/8/8	4h 8 6/6/6	4h 9 7/7/7	4h 10 7/7/7	4h 11	4h 12
4h 13	4h 14	4h 15	4h 16	4h 17	4h 18	4h 19
4h 20 9/3/2	4h 21 8/4/2	4h 22 6/1/1	4h 23 6/1/1	4h 24 6/5/4	4h 25	4h 26
4h 27 7/0/0	4h 28 7/0/0	4h 29 7/0/0	4h 30 8/0/0	4h 31 6/0/0	4h 1	4h 2
4h 3 0/0/0	4h 4 0/0/0	4h 5 0/0/0	4h 6 0/0/0	4h 7 0/0/0	4h 8	4h 9

Legenda

Dzień wolny od pracy

Dzień wolny rachmistrza

W danym dniu nie przydzielono rachmistrzowi żadnych punktów adresowych

Rachmistrz odwiedził wszystkie przydzielone mu w danym dniu punkty adresowe

Rachmistrz odwiedził tylko część przydzielonych mu w danym dniu punktów adresowych

Rachmistrz nie odwiedził żadnego przydzielonego mu w danym dniu punktu adresowego

Kolejno:  
 - liczba punktów przydzielonych,  
 - liczba punktów odwiedzonych,  
 - liczba punktów zamkniętych.

Liczba godzin we wskazanym dniu

4

Przypisz godziny

Dzień wolny

Prawd. zak. zadań w terminie 73%

szac. data zak.

Wyślij wiadomość

Raporty

Monitorowanie

Plan dnia...

# Enumerator register

Nazwisko	Imię	Drugie imię	Identyfikator	PESEL
Kaczmarek	Marcin		MKACZMAREK	64011250653
Nowak	Jan	Andrzej	WG7C9	76110214382
Obuchowski	Piotr		POBUCHOWSKI	85091326643
Rybiński	Piotr	Adam	PRYBINSKI	69071673215
Walezy	Henryk	Gustaw	HWALEZY	75082615324

Status: Aktywny

**Obwód zamieszkania**

Kod gminy: 1210082    Gmina: Łabowa    Kod rejonu statystycznego: 123457    Kod obvodu spisowego: 3    Obszar spisu

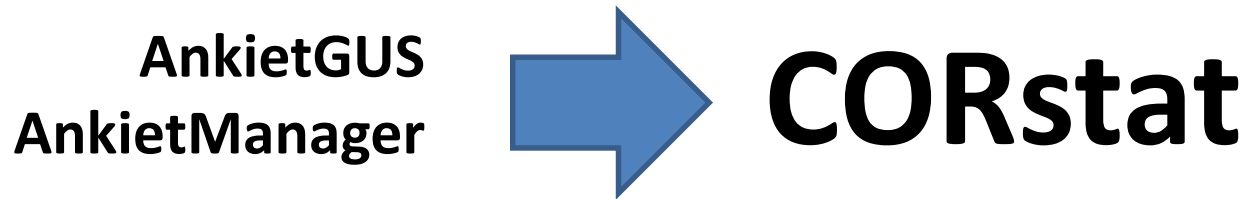
**Grupy rachmistrza**

Nazwa grupy	Przeznaczenie	Opis
rachmByczy	Zarządzanie	
rachmWroc	Powiadamanie	



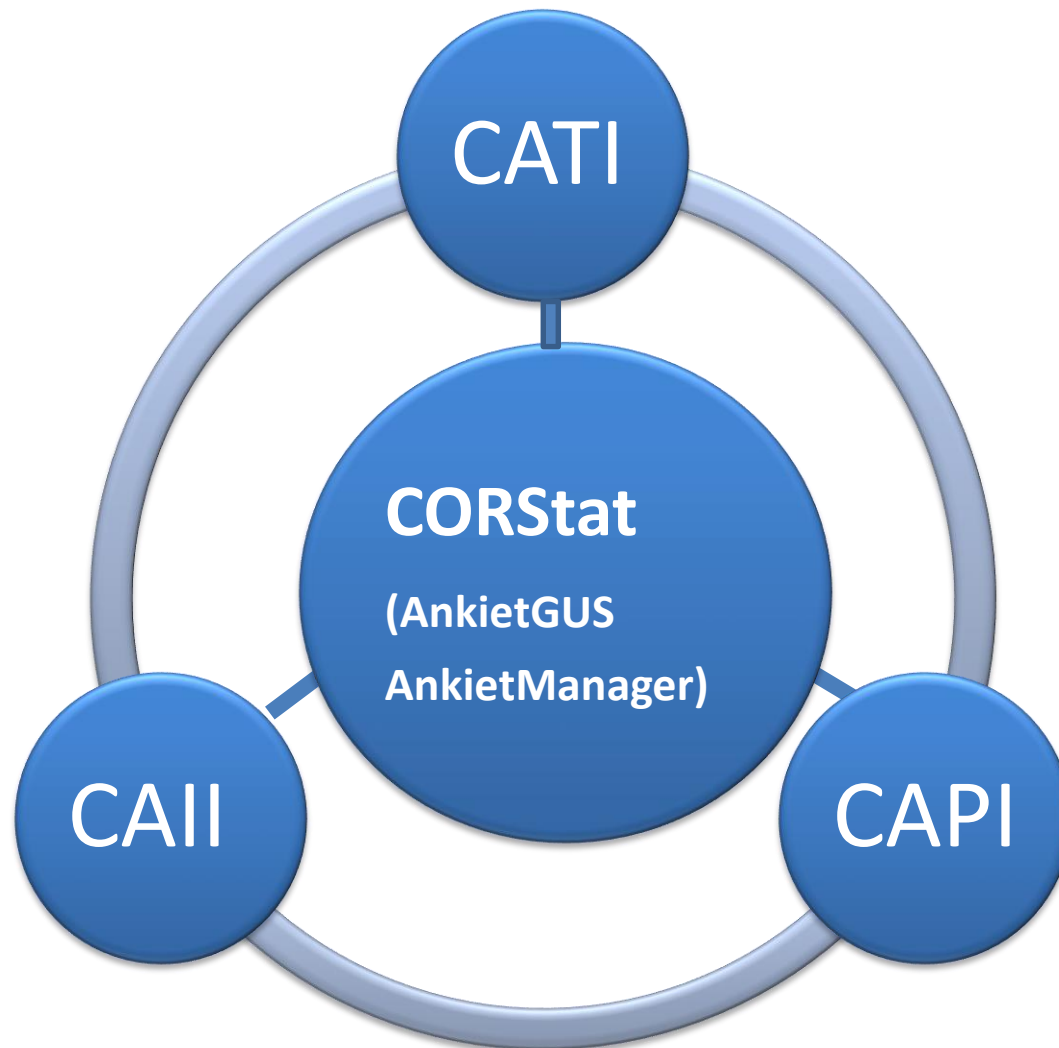
# **CORSTAT – A SYSTEM FOR SURVEY MANAGEMENT**

# **CORStat – a system for survey management**



The system collects information on surveys and participants, as well as activities performed by them.

# **CORStat – a system for survey management**



# CORStat – a system for survey management

The CORStat system is used to:

- manage interviewers at the voivodship level
- monitor work progress at the central and voivodship levels
- manage data-collection levels (CAI, CATI, CAPI)
- facilitate communication between system users,
- facilitate reporting at the central and voivodship levels
- prepare reports on the implementation of tasks by the interviewers

# The selected functions of the CORstat system

- facilitating the assigning of address points to statistical interviewers,
- facilitating the planning of the surveying procedure, including the simulation of the interviewer network load at the central and voivodship levels,
- facilitating the management of units selected for surveying,
- facilitating the possibility of managing the work of interviewers and telephone interviewers,
- streamlining the flow of units between CAPI, CATI and CAPI channels,
- facilitating the monitoring and reporting of survey progress, through:
  - viewing enumerators' work (registration of the number of assigned and fulfilled duties)
  - sorting and filtering of duties by columns presented by the system,
  - analysing daily reports including the completeness status of surveys, according to the legal status of units conducting the survey and methods of their implementation.
- facilitating the receipt of information on events in the CATI and CAPI channels,
- facilitating e-mail communication between system users,
- facilitating the generation and analysis of reports on survey implementation
- facilitating the viewing of all system users, to verify the identify of interviewers and telephone interviewers (operating the helpline),

# Users and their permissions in the CORStat system

## *The central level*

- ***Survey author, survey organisational coordinator***
  - e-mail communication between system users,
  - the generation and analysis of reports on survey implementation.

## *The voivodship level*

- ***Organisational coordinator***
  - the management of users – interviewers and telephone interviewers (adding/removing, granting permissions to carry out surveys),
  - e-mail communication between system users,
  - the monitoring of survey progress, through:
    - viewing interviewers' work,
    - sorting and filtering of duties,
    - analysing daily report.
  - the management of duties, through:
    - assigning, removal, closure and editing of duties,
    - changing the channel for the fulfilment of duties (CAII, CATI, CAPI).

# Users and their permissions in the CORStat system

## *The voivodship level (continued)*

- ***Technical coordinator***
  - e-mail communication between system users,
  - closure of duties,
  - the generation and analysis of reports on survey implementation.
- ***Consultant***
  - facilitating the viewing of all CORstat users, to verify the identify of interviewers and telephone interviewers (operating the helpline),
- ***Interviewer***
  - downloading units assigned by the organisational controller to a mobile device to be implemented, sending back implemented units,
  - e-mail communication between system users.

# CORstat – report generation

CORstat 1.3.5

Plik Narzędzia Raporty Pomoc

▼ Badania

▼ Edycje

- Obowiązki
- Aplikacje
- Użytkownicy
- Wiadomości
- Logi

▼ Badania (10)

Symbol  Nazwa

Szukaj Wyczyść Wszystkie

Symbol	Nazwa
BAEL	Badanie Aktywności Ekonomicznej Ludności
BR	Badanie budżetów gospodarstw domowych
C-02	Badanie cen detalicznych
KGD	Badanie Kondycji Gospodarstw Domowych
PKZ	Uczestnictwo w podróżach krajowych i zagranicznych
R-CT	Rejestracja cen targowiskowych ważniejszych produktów
R-SGR	Zintegrowane badania rolnicze
R-ZW-S	Badanie pogłowia świń oraz produkcji żywca wieprzowego
SILC	Europejskie Badanie Warunków Życia Ludności
SSI-10	Wykorzystanie technologii informacyjno-telekomunikacyjnych

Raport transferu CAPI

Rok 2016

Miesiąc

Otwórz

Styczeń

Luty

Marzec

Kwiecień

Maj

Czerwiec

Lipiec

Sierpień

Wrzesień

Październik

Screen view

# CORstat – report generation

Raport dzienny

Badanie R-SGR Edycja 2016

Data	Nazwa pliku
2016-06-14	R-SGR_2016_2016-06-14.xls
2016-06-13	R-SGR_2016_2016-06-13.xls
2016-06-12	R-SGR_2016_2016-06-12.xls
2016-06-11	R-SGR_2016_2016-06-11.xls
2016-06-10	R-SGR_2016_2016-06-10.xls
2016-06-09	R-SGR_2016_2016-06-09.xls
2016-06-08	R-SGR_2016_2016-06-08.xls
2016-06-07	R-SGR_2016_2016-06-07.xls
2016-06-06	R-SGR_2016_2016-06-06.xls
2016-06-05	R-SGR_2016_2016-06-05.xls
2016-06-04	R-SGR_2016_2016-06-04.xls

Zamknij

Screen view

# **ASSIGNING OF ADDRESS POINTS (DWELLINGS)**

**— JOINING SURVEYS/SAMPLES/ADDRESSES**

# Assigning of address points (dwellings) – joining surveys/samples/addresses

- benefits for the interviewers
  - reducing the number of visits to the respondents
  - reducing time needed to travel to the respondents
  - more time for the interviewers for self-education
- drawback for the respondents
  - extending time needed to complete the interview
  - participation in the survey does not end with one interview

# Activities and conditions that will facilitate survey/sample/address joining

- ❑ The harmonisation of the causes of failing to carry out a survey
  - the standardisation of the causes of failing to conduct an interview in all surveys
- ❑ the harmonisation of multiple-choice answers,
  - introducing uniform multiple-choice answers,
  - simple answer libraries
  - reducing the degree of specificity
- ❑ the integration of variables and broader use of registers
  - data standardisation and integration
  - harmonising similar variables
  - using data from administrative sources
- ❑ the harmonising of the principles and manner of mobile-application design
  - harmonising principles for applications, application environment, interfaces, ways of application operation and dictionary use, and also form control
- ❑ the reduction of questions in forms
  - resigning from additional questions unrelated to the topic of the survey
  - questions concerning the same issue in several surveys
  - eliminating additional interviews

# **CURRENT AND FINAL PROGRESS**

## **STATISTICS IN TABULAR FORM**

# A daily report on 2016 R-SGR survey

Report z realizacji badania R-SGR z dnia : 20.06.2016

Osoby fizyczne

Metoda CATI

Województwo	Liczba gospodarstw wylosowanych do badania	razem	w % wylosowanych gospodarstw	RA									
				01 (ankieta wypełniona)						15 (likwidacja gospodarstwa)	22 (odmowa udziału w badaniu)	24 (brak kontaktu)	25 (zdarzenie losowe (powódź, pożar itp.))
				razem	częściowo			poprawnie (status operacyjny 91)	w % wylosowanych gospodarstw				
					status operacyjny 97	status operacyjny 98 (brak kontaktu)	status operacyjny 99 (odmowa CATI)						
1	2	3	4	5	6	7	8	9	10	11	12	13	14
02 DOLNOŚLĄSKIE	3329	1359	40,82	1196	1	0	60	1135	34,09	37	42	141	4
04 KUJAWSKO - POMORSKIE	5532	2473	44,7	2216	0	0	84	2132	38,54	66	74	197	4
06 LUBELSKIE	6317	2640	41,79	2379	4	0	39	2336	36,98	69	63	170	2
08 LUBUSKIE	1763	806	45,72	689	0	0	3	686	38,91	13	25	81	1
10 ŁÓDZKIE	5806	3573	61,54	3274	4	0	38	3232	55,67	92	81	166	2
12 MAŁOPOLSKIE	6169	3683	59,7	3452	3	0	12	3437	55,71	84	95	61	6
14 MAZOWIECKIE	6996	2774	39,65	2655	4	0	13	2638	37,71	56	56	22	2
16 OPOLSKIE	3015	1185	39,3	1112	0	0	9	1103	36,58	25	38	19	0
18 PODKARPACKIE	6264	2884	46,04	2615	3	0	71	2541	40,57	53	52	235	3
20 PODLASKIE	5107	2016	39,48	1815	1	0	53	1761	34,48	51	43	159	2
22 POMORSKIE	4338	1710	39,42	1611	1	0	32	1578	36,38	26	28	74	4
24 ŚLĄSKIE	3707	1419	38,28	1310	0	0	33	1277	34,45	24	41	73	4
26 ŚWIĘTOKRZYSKIE	4779	1997	41,79	1669	0	0	33	1636	34,23	52	33	275	1
28 WARMIŃSKO - MAZURSKIE	3777	2223	58,86	2088	4	0	110	1974	52,26	67	67	114	1
30 WIELKOPOLSKIE	7400	2677	36,18	2482	1	0	10	2471	33,39	56	102	47	1
32 ZACHODNIOPOMORSKIE	3034	1195	39,39	1066	3	0	8	1055	34,77	53	38	49	0
Razem	77333	34614	44,76	31629	29	0	608	30992	40,08	824	878	1883	37

Legenda:

kol.03 = kol.09+kol.11+kol.12+kol.13+kol.14

kol.04 = kol.03/kol.02 \* 100

kol.05 = kol.06+kol.07+kol.08+kol.09

kol.10 = kol.09/kol.02 \* 100

# A daily report on 2016 R-SGR survey

Report z realizacji badania R-SGR z dnia : 20.06.2016

Osoby fizyczne

Metoda CAPI\_F

Województwo	Liczba gospodarstw wylosowanych do badania	razem	w % wylosowanych gospodarstw	RA							
				01 (ankieta wypełniona)				15 (likwidacja gospodarstwa)	22 (odmowa udziału w badaniu)	24 (brak kontaktu)	25 (zdarzenie losowe (powódź, pożar itp.))
				razem	częściowo (status operacyjny 77)	poprawnie (status operacyjny 71)	w % wylosowanych gospodarstw				
1	2	3	4	5	6	7	8	9	10	11	12
02 DOLNOŚLĄSKIE	6313	517	8,19	457	0	457	7,24	35	6	17	2
04 KUJAWSKO - POMORSKIE	7382	369	5	341	0	341	4,62	24	4	0	0
06 LUBELSKIE	10841	1604	14,8	1329	0	1329	12,26	46	17	210	2
08 LUBUSKIE	4526	434	9,59	376	0	376	8,31	42	13	3	0
10 ŁÓDZKIE	10277	1747	17	1308	0	1308	12,73	84	39	316	0
12 MAŁOPOLSKIE	10513	1493	14,2	1179	0	1179	11,21	56	13	244	1
14 MAZOWIECKIE	15281	2393	15,66	1950	0	1950	12,76	163	16	260	4
16 OPOLSKIE	4049	772	19,07	643	0	643	15,88	72	17	40	0
18 PODKARPACKIE	8316	804	9,67	756	0	756	9,09	30	10	7	1
20 PODLASKIE	10134	1833	18,09	1676	0	1676	16,54	55	23	79	0
22 POMORSKIE	5749	600	10,44	513	0	513	8,92	30	16	41	0
24 ŚLĄSKIE	7402	1029	13,9	814	0	814	11	111	28	76	0
26 ŚWIĘTOKRZYSKIE	7660	751	9,8	699	0	699	9,13	36	6	10	0
28 WARMIŃSKO - MAZURSKIE	9402	1101	11,71	870	0	870	9,25	46	17	168	0
30 WIELKOPOLSKIE	15308	2609	17,04	2121	0	2121	13,86	206	67	215	0
32 ZACHODNIOPOMORSKIE	6161	508	8,25	405	0	405	6,57	24	6	73	0
<b>Razem</b>	<b>139314</b>	<b>18564</b>	<b>13,33</b>	<b>15437</b>	<b>0</b>	<b>15437</b>	<b>11,08</b>	<b>1060</b>	<b>298</b>	<b>1759</b>	<b>10</b>

Legenda:

kol.03 = kol.07+kol.09+kol.10+kol.11+kol.12

kol.04 = kol.03/kol.02 \* 100

kol.05 = kol.08+kol.07

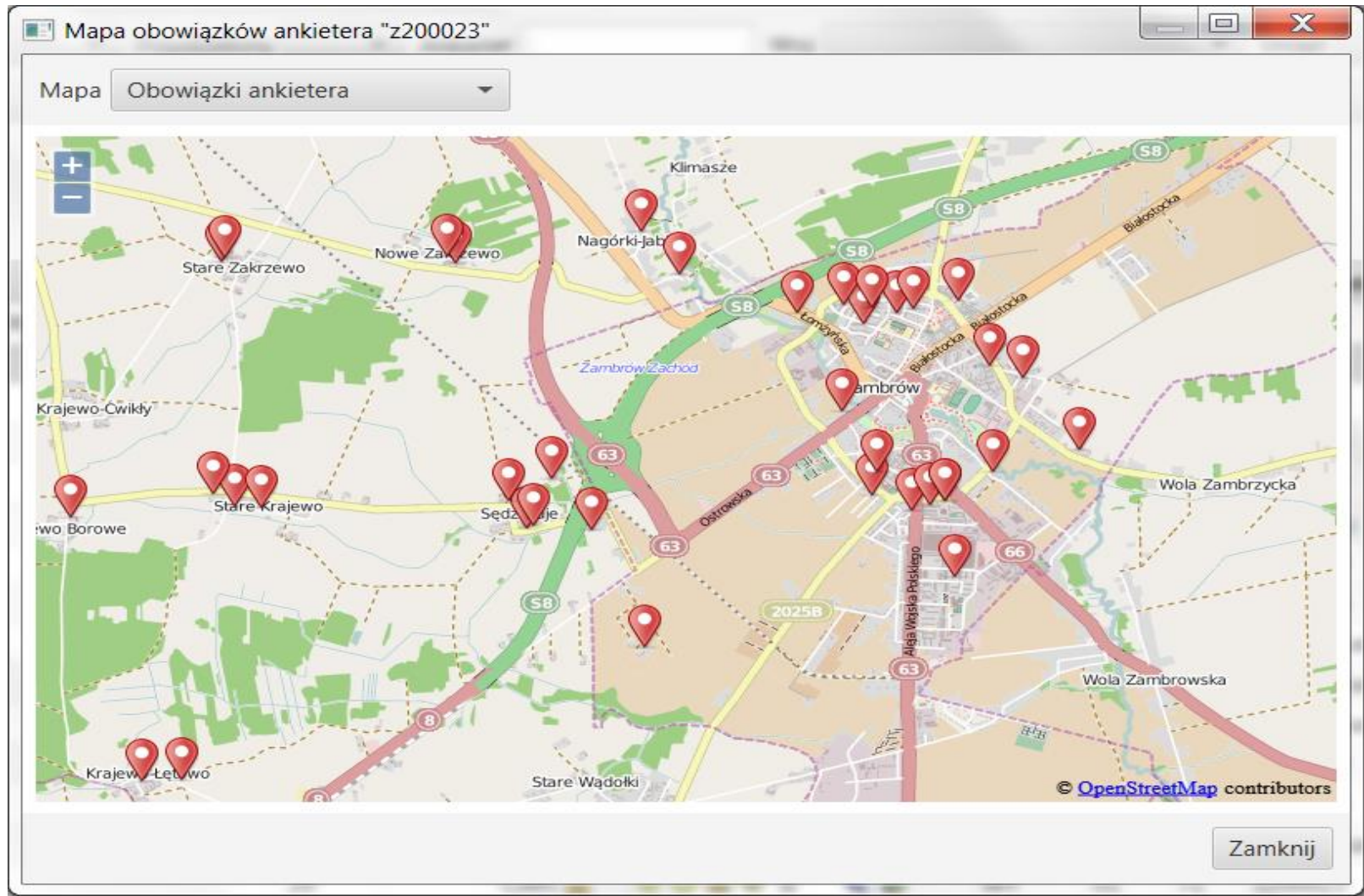
kol.08= kol.07/kol.02 \*100

# **GIS FUNCTIONS IN SURVEY**


**positioning of the data collection place**

# Interviewer's duty map

A list of duties is a specification of reporting units participating in a survey (these can include dwellings, farms, enterprises, price regions, field survey points, etc.) including a full description of the current surveying status of individual units.



# Interviewer's path proposition

  
ZAMKNIJ

OpenStreetMap

Edycja

Zmiany

Eksport

Ślady GPS

Dzienniczki


Prawa autorskie

Pomoc


Informacje

Zaloguj się

Zarejestruj się



51.5319, 21.1955



51.5662, 21.1582

Samochód (OSRM)

→

Opis trasy

Odległość: 6.3km. Czas: 0:12.

↑

1. Jedź wzdłuż bez nazwy

700m

↙

2. Skręć w lewo w bez nazwy

800m

↘

3. Skręć w prawo w bez nazwy

400m

↙

4. Skręć w lewo w bez nazwy

30m

↘

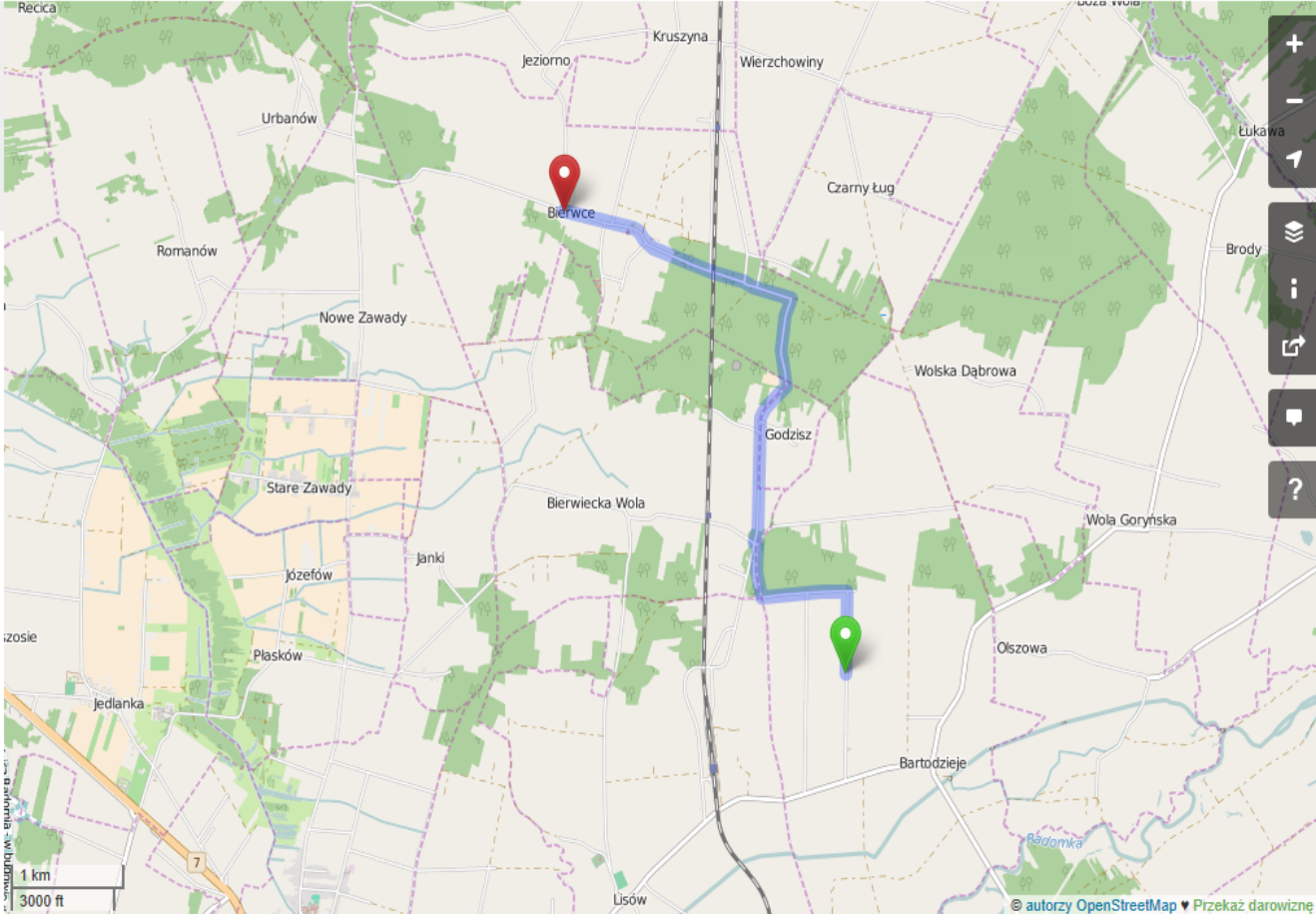
5. Skręć w prawo w bez nazwy

4.4km

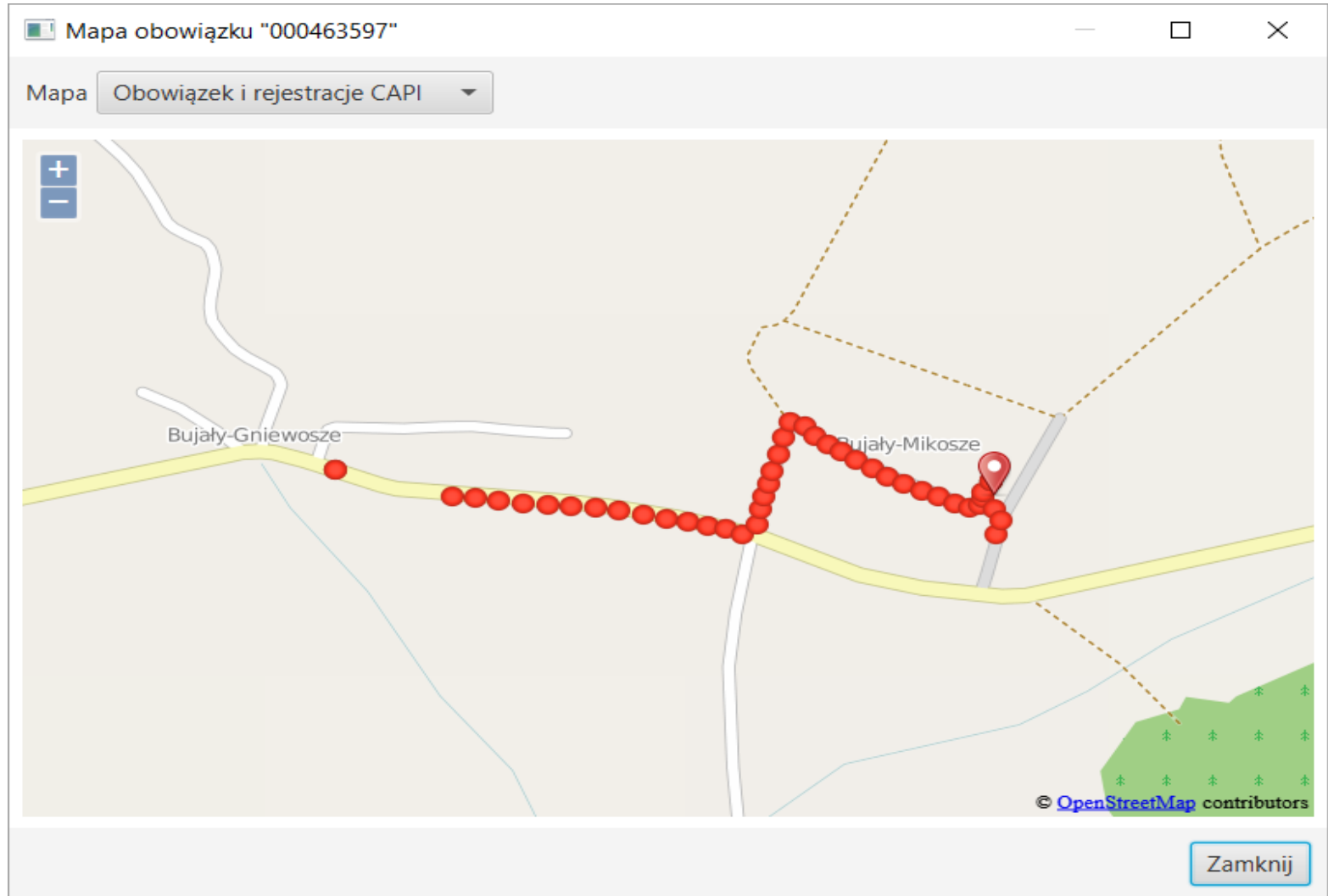
●

6. Dojechałeś do celu

Wyznaczanie trasy dzięki uprzejmości [OSRM](#)



# An example of interviewer's travel with an open application



# **The background recording of information on surveyed locations**

To obtain information which will facilitate the assessment of whether the survey was carried out in the location of the surveyed unit, data determining the position of the interviewer are registered in the following events:

- ✓ the opening of a data-recording form
- ✓ the closing of the form
- ✓ giving a negative status (that no interview was carried out, due to e.g. the liquidation of the unit)
- ✓ a change of the interviewer's location with an open application ready for completion (every 25 metres or every 3 min.)

