



# EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS 2024 ESTORIL - PORTUGAL







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QUALITY IN OFFICIAL STATISTICS  
2024 ESTORIL - PORTUGAL

# Assuring quality in statistics in times of crises

*Polish experiences from the 2021 census*

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Department

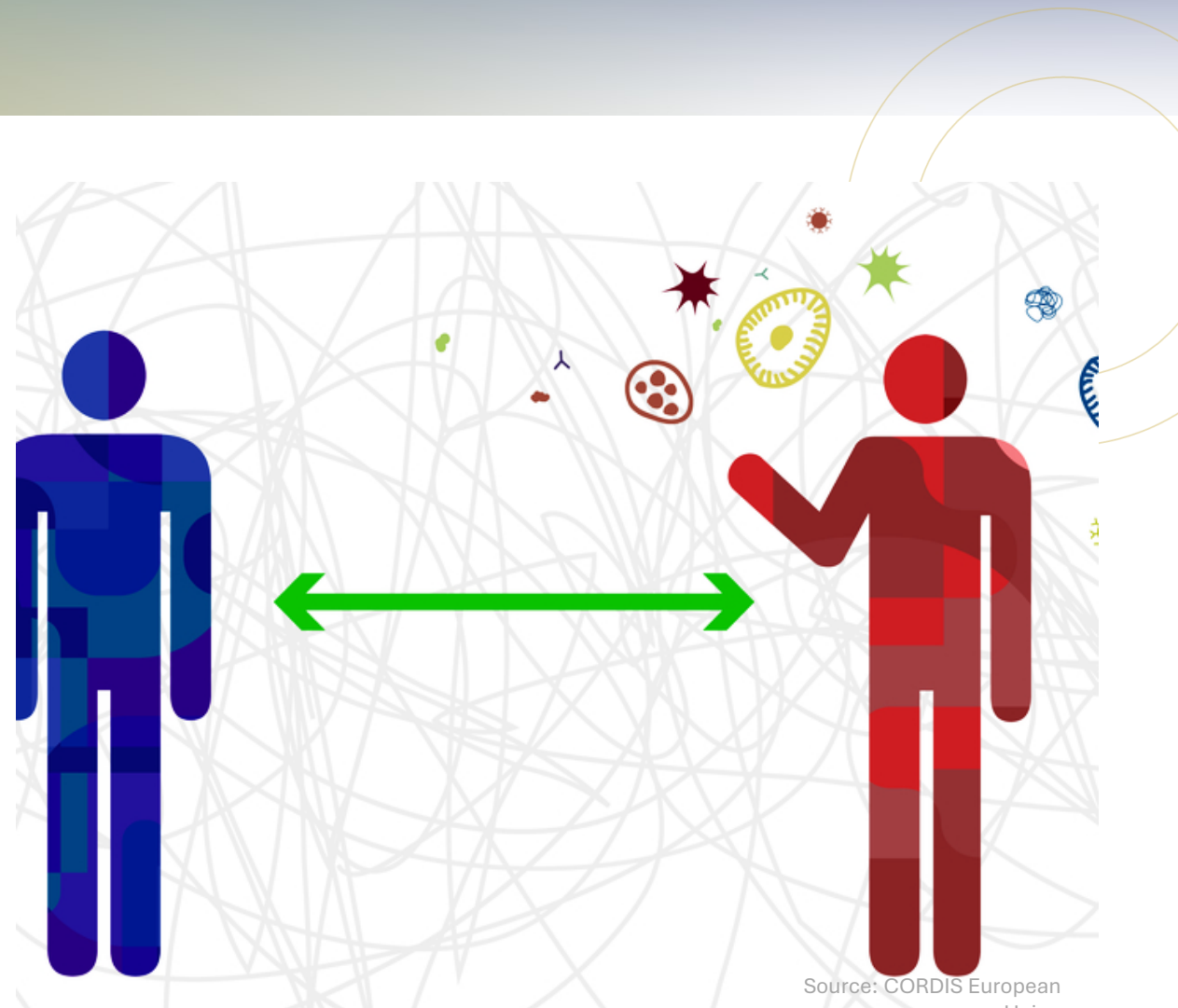




The 2020/2021 round census in Poland was marked by the COVID-19 pandemic, which spread worldwide.

Some countries abandoned the census on time and postponed the survey to next years.

Poland faced this "challenge" and prepared solutions that enabled the census to be carried out successfully and with the necessary precautions





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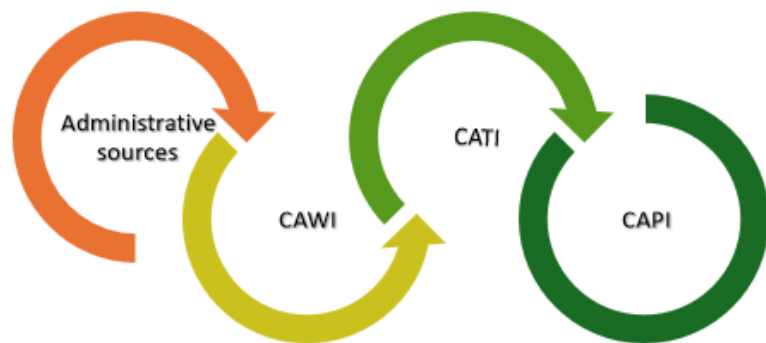
# How did we do?



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The 2021 population and housing census was carried out using a mixed method, i.e. using data from administrative sources and data collected from respondents (60/25/15%)

The main arguments for maximising the use of externally sourced data were **to reduce the burden on respondents** and **to increase the efficiency of data collection and compilation processes.**



An important aspect was to determine **the quality of the public registers** and **the quality of the data from these registers**, with a view to using them as source data in the production of future statistics.



# Testing the quality of registers for censuses

ANALYSIS OF THE  
INFORMATION  
SCOPE OF  
ADMINISTRATIVE  
REGISTERS AND  
INFORMATION  
SYSTEMS

Breakdown by  
subjects/variables  
of possible  
administrative  
data coverage in  
full or in part

ANALYSIS OF  
INDIVIDUAL  
CLASSIFICATION  
ITEMS



# Testing the quality of registers for censuses (next)

The assessment of the quality of the register covered 3 aspects:

1. information about the quality of the registry,
2. information about the quality of data from the register,
3. general assessment of the administrative register.





# Testing the quality of registers for censuses (next)

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## The criteria for assessing the quality of data sources:

**Accessibility and transparency** of the registry documentation (conditions and arrangements under which users can, inter alia, use and interpret the information resource of the register).

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**Usefulness** of the register (the extent to which the register meets the current and possible future needs of users).

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**Comparability** (measuring the impact of differences between the methodologies used in the registry, i.e. the concept definitions and classifications used).

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**Timeliness** (refers to the time lapse between the reference period and the availability of data).

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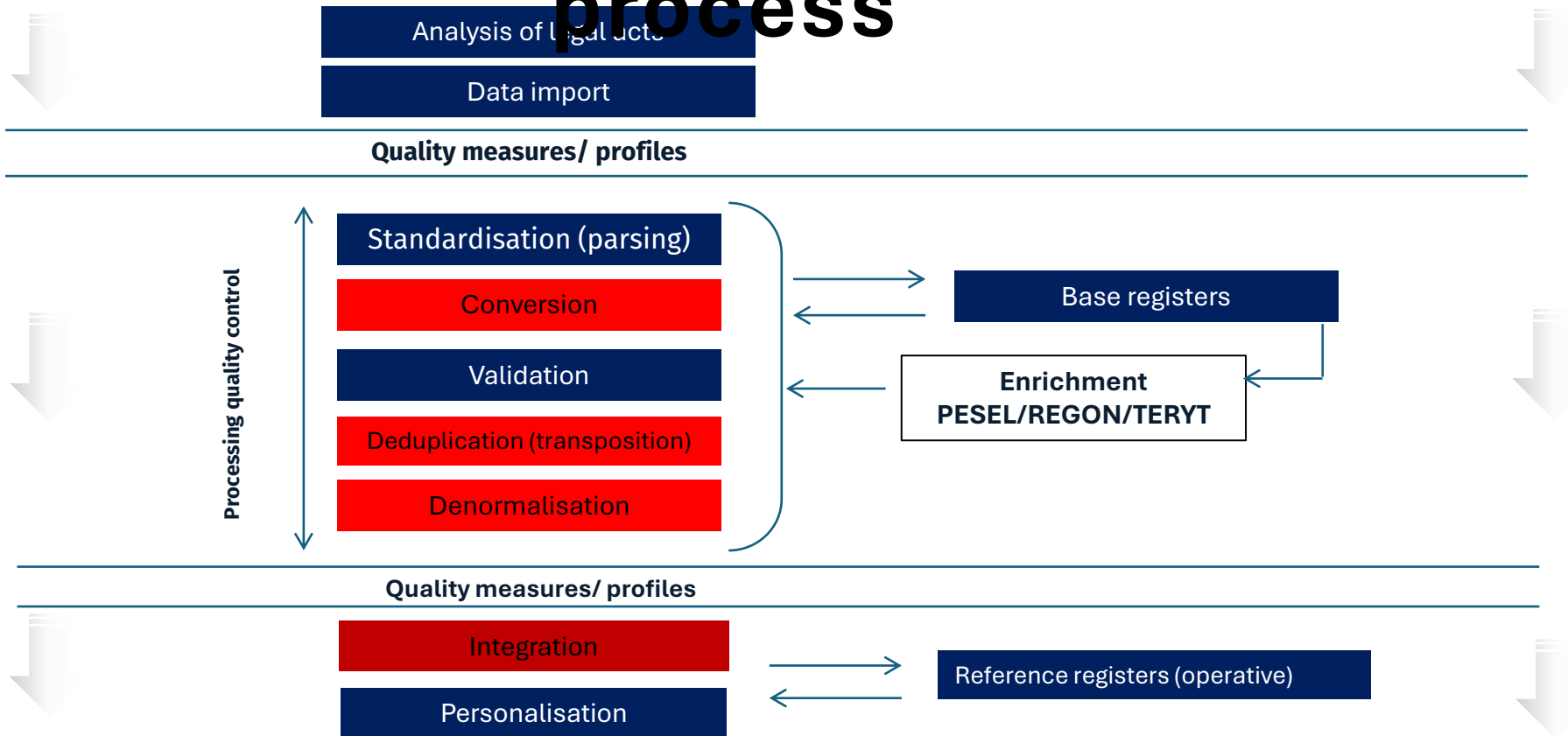
**Coherence** (refers to the ability to link data from different registers).

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# Data sources transformation process





# Selection of registers vs. census data needs

As a result of the analyses, 47 administrative and non-administrative data sets were selected as potential data sources for the census variables

**Finally 35 major registers and information systems were used in the Census 2021**



# Admin data

Good quality registers are used in 3 main aspects:

1. Direct source of data,
2. source of information for creating a list of entities to be enumerated in the census or resarches (personal and housing list integrated with addresses and x,y coordinates),
3. source of information for imputation, data estimation, comparision and **data quality determination**.

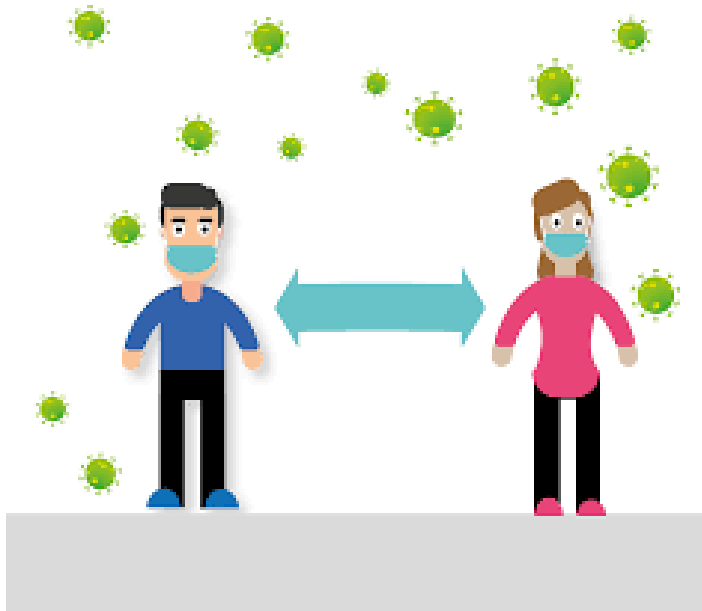


Adaptation to pandemic conditions included:

- organisation of data collection
- technology
- flexibility in the use of census methods



**in order to reduce face-to-face contacts  
with respondents and to obtain the  
highest quality data**







# Key changes resulting from the COVID-19 pandemic (1)

- **The list of information system operators providing data in the census was expanded,** to include providers of publicly available telecommunications services, in order **to feed the list with current telephone numbers of respondents.** This change minimised face-to-face interviews in favour of telephone interviews.
- **Flexibility in the use of data collection methods** was introduced, by allowing methods to be combined or replaced, depending on the needs.
- Census applications and systems were adapted and provided with additional functionality **to enable census enumerators to conduct both telephone and face-to-face interviews using the same mobile device.**



# Key changes resulting from the COVID-19 pandemic (2)

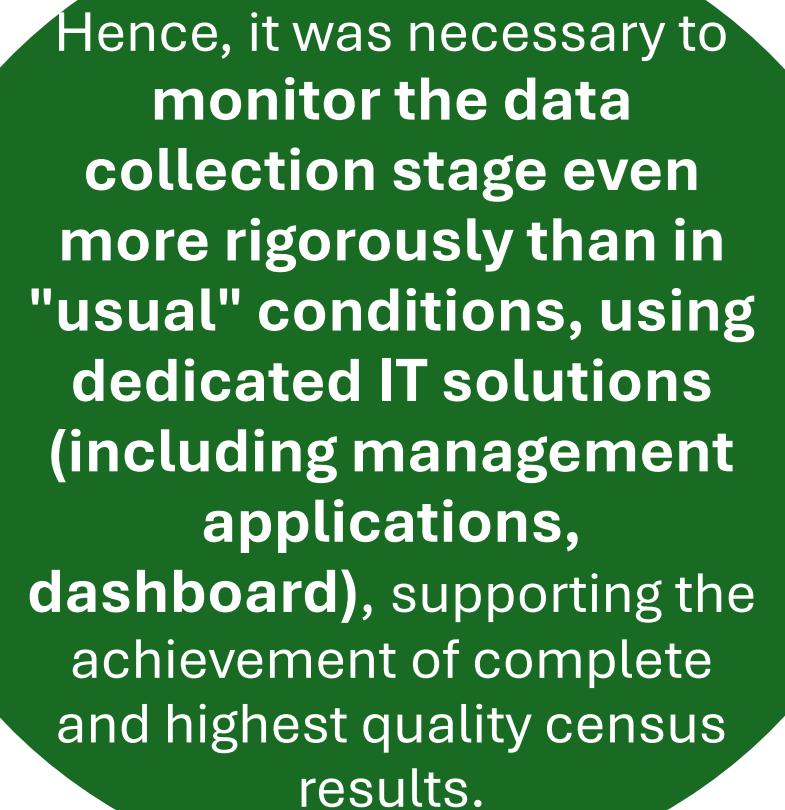
- **The organization of the work of census enumerators was adapted to the changing pandemic conditions**, depending on the local pandemic situation:
  - they were given the option of working remotely or face-to-face,
  - their areas of operation were extended from the municipality to the voivodship,
  - they were provided with appropriate equipment to support both telephone and face-to-face interviews,
  - they were provided with personal protective equipment,
  - regional dispatchers assigned them interviews to be carried out for a given period using the CATI or CAPI method, depending on the level of COVID-19 threat present in the region served by the enumerator.



## The behavioural and psychological behaviour

of the population due to health risks and  
restrictions on basic freedoms

**also affected the implementation  
and quality of the census**



Hence, it was necessary to  
**monitor the data  
collection stage even  
more rigorously than in  
"usual" conditions, using  
dedicated IT solutions  
(including management  
applications,  
dashboard)**, supporting the  
achievement of complete  
and highest quality census  
results.



# The most important functions of CORstat\_census system

- 1) Monitor the status of the census and report on the progress of the census.  
*In the CORstat\_census system, a set of reports presenting the progress of the population and housing census was provided, taking into account census methods and with the possibility of generating them for various territorial divisions.*
- 2) Control the workflow between different data collection channels (CAPI or CATI).
- 3) Limiting the possibility of multiple census of the same persons.
- 4) Daily allocating work to the enumerators.
- 5) Providing data on the progress of the census.
- 6) User database management (e.g. dispatchers, helpline employees, coordinators).

*To ensure confidentiality and data security, access to the system was strictly limited.*





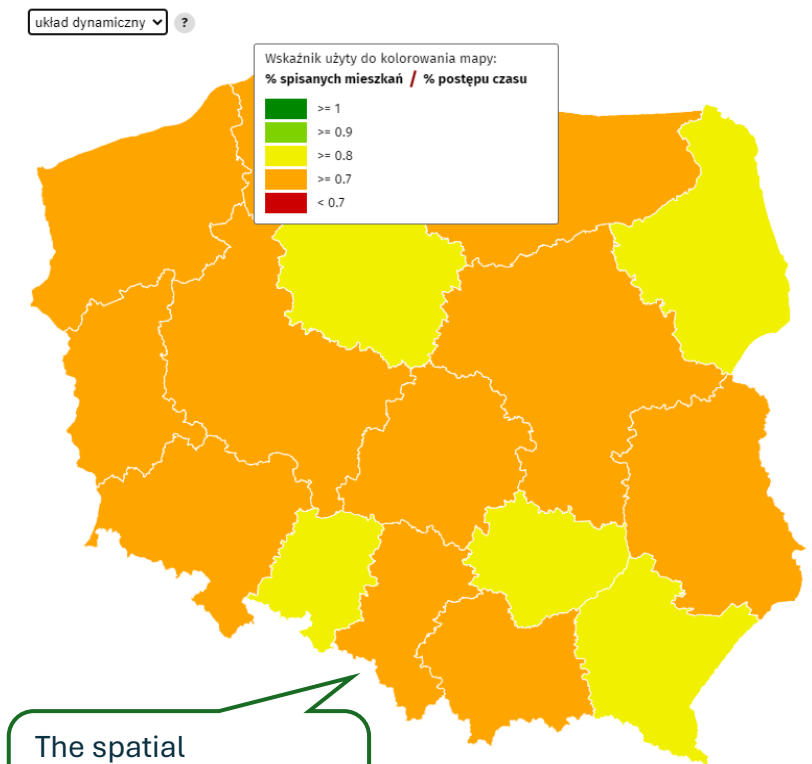
# Information dashboard (1)

- 1) It provided statistics, charts and maps - at the national level, as well as divided into NUTS 2, NUTS 3, LAU 1, LAU 2.
- 2) Points on the map were displayed in a colour indicating the stage of census completion (e.g. green represented locations where the census had been completed).
- 3) Within the dashboard, **daily targets** were also calculated and made available, i.e. the number of dwellings and persons who should be registered on consecutive days in order to achieve the assumed completeness of the census.
- 4) Targets were calculated on the nationwide and voivodship level on a daily basis and were the key tool for planning future actions on particular levels of the organization. This resulted in a **high census implementation rate and the collection of complete and high-quality data, including result data.**



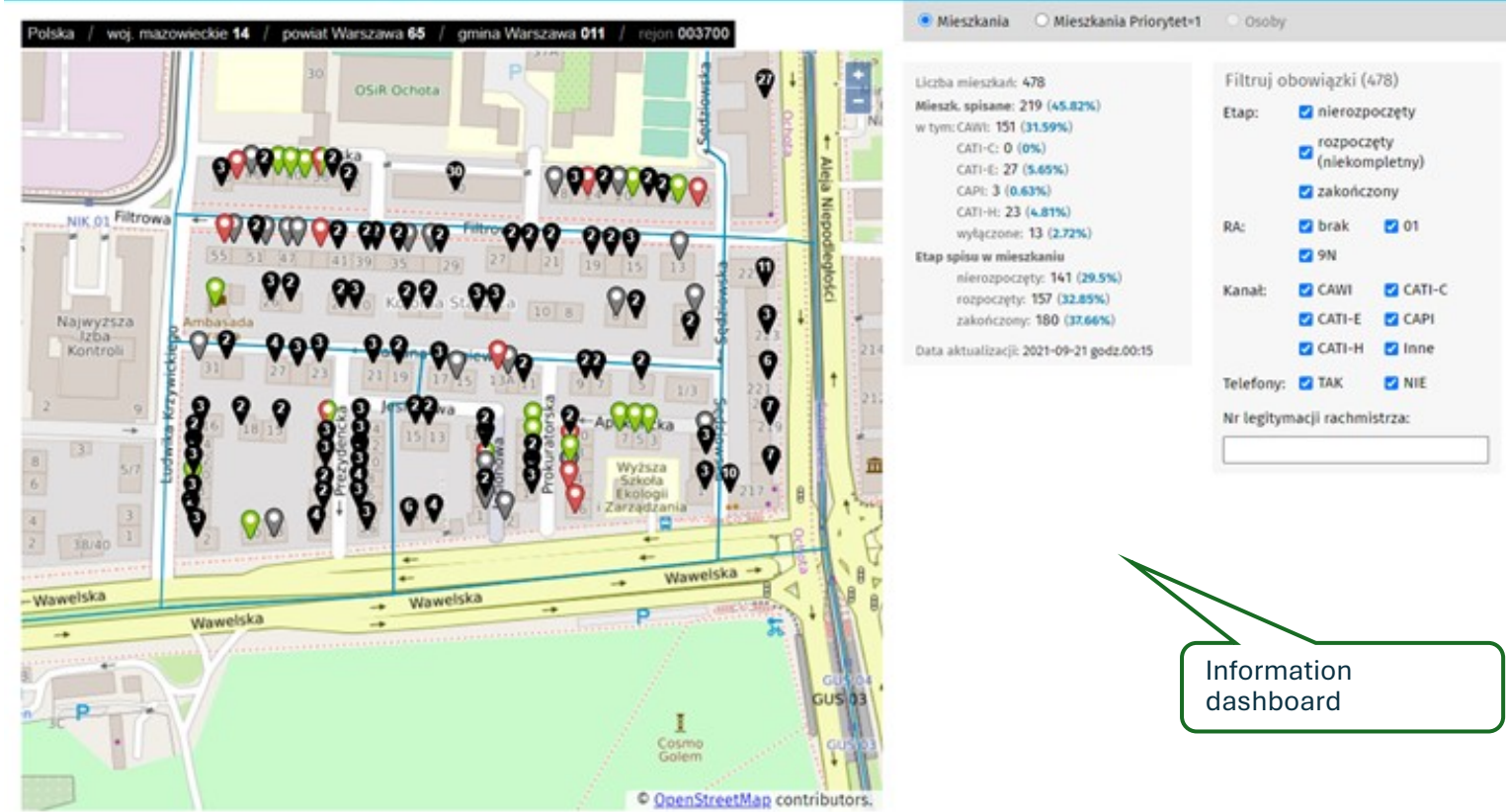
# Information dashboard (2)

NSP 2021 - Dashboard | Dzień: 173 | Postęp czasu: 94%



The spatial  
presentation of data  
– *dynamic layout*

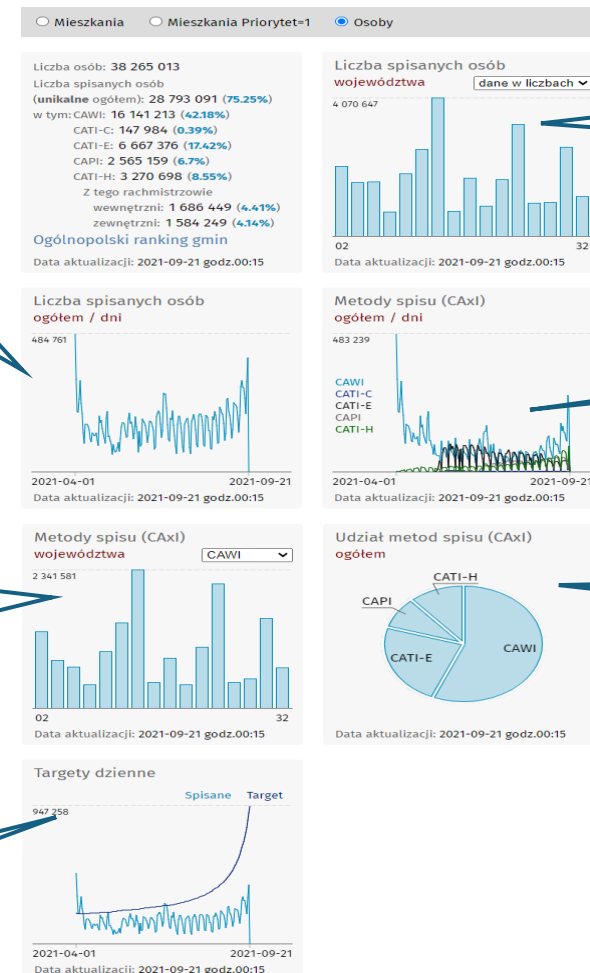
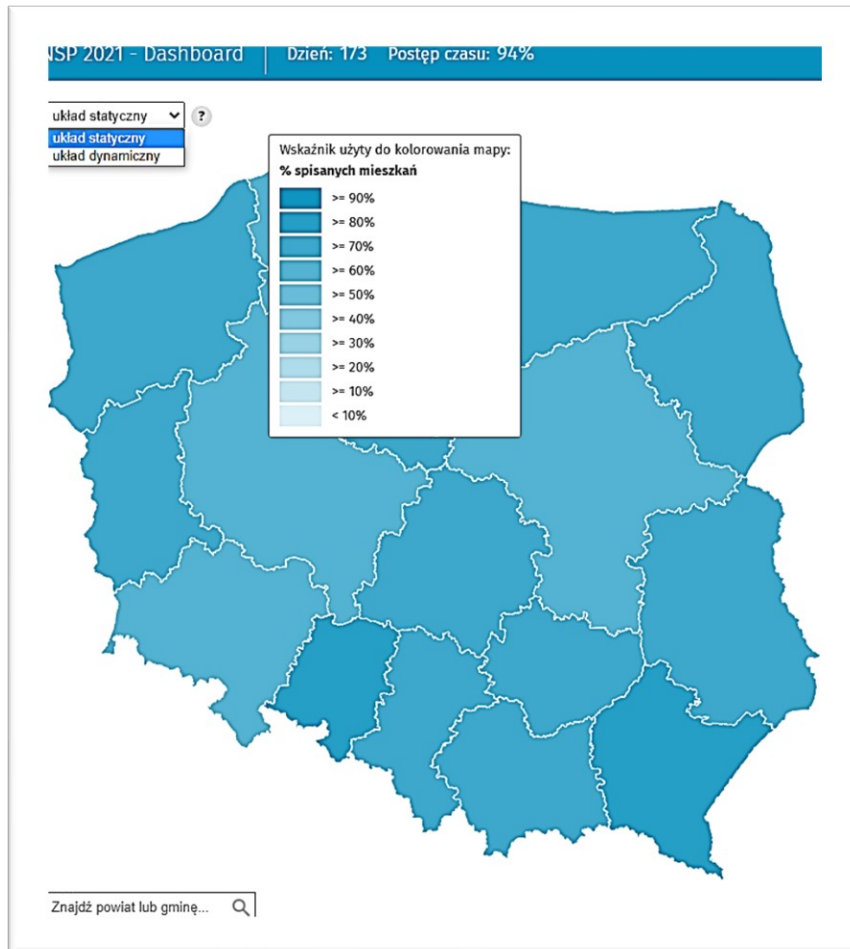
NSP 2021 - Dashboard | Dzień: 174 | Postęp czasu: 94.5%



Information  
dashboard



# Information dashboard (3)



Number of people enumerated (days)

Number of people enumerated (voivodeships)

Methods of census (days)

Methods of census (voivodeships)

Share of census methods

Daily targets



# Conclusions

The electronification of the Polish census and the extensive use of administrative registers, initiated in 2011 and extended during the 2021 census, have proved to be an excellent ‘cure’ for unforeseen situations, but have also permanently established the pragmatics of obtaining the highest quality data for ongoing statistical research, also under crisis conditions.

Thanks to the precautionary actions taken and the extensive use of quality-controlled administrative records, the 2020/2021 census round was successfully conducted despite the difficult pandemic conditions in the country.

The consequence of these experiences and the trend of the Statistics Poland to widely use official registers and information systems is the need **to expand the work to include consistent use of data from registers** - not only for the needs of censuses, but also for current statistical surveys, because statistics in the coming years will be based mainly on administrative sources.

It is also necessary to continue development efforts in the use of alternative sources, including administrative registers securing statistical surveys to obtain high-quality data in the event of a renewed threat of a COVID-19 pandemic or other crisis events.





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# Thank you for your attention

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