The organization of work on the surveys

Legal regulations

❑ **Act of 29 June 1995** on official statistics - lays out the rules and creates a foundation for reliable, objective, professional and independent performance of statistical surveys, the results of which have the status of official statistical data, and determines the organisation and mode of conducting such surveys and the range of responsibilities associated with them.

❑ Statistical surveys conducted in a given year are specified in the form of annual programmes of statistical surveys of official statistics and are determined by the **Council of Ministers by way of a regulation**.

Statistical confidentiality – a guarantee of data confidentiality

Art. 10. Identifiable microdata collected in statistical surveys are **subject to unconditional protection** This data might be used only for statistical studies, comparisons and analyses and for creating a sampling frame for statistical surveys by the President of the Central Statistical Office; making available and using this data for purposes other than specified in the Act is prohibited (statistical confidentiality)

From censuses to surveys
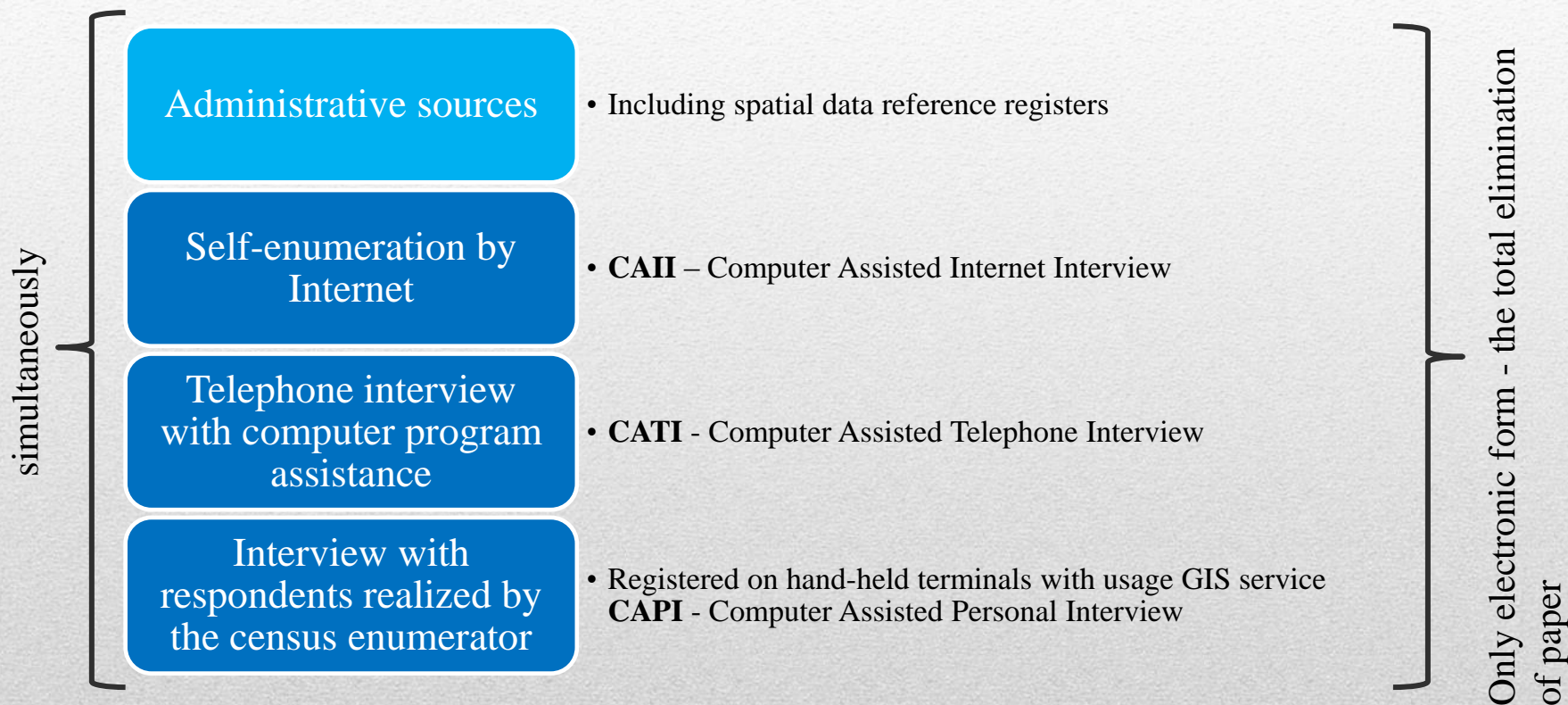
Modern data collection methods used in National Censuses PSR 2010 and NSP 2011 (CAII, CATI, CAPI) were introduced in **surveys**.

Data collection methods

simultaneously

Administrative sources
- Including spatial data reference registers

Self-enumeration by Internet
- **CAII** – Computer Assisted Internet Interview

Telephone interview with computer program assistance
- **CATI** - Computer Assisted Telephone Interview

Interview with respondents realized by the census enumerator
- Registered on hand-held terminals with usage GIS service **CAPI** - Computer Assisted Personal Interview

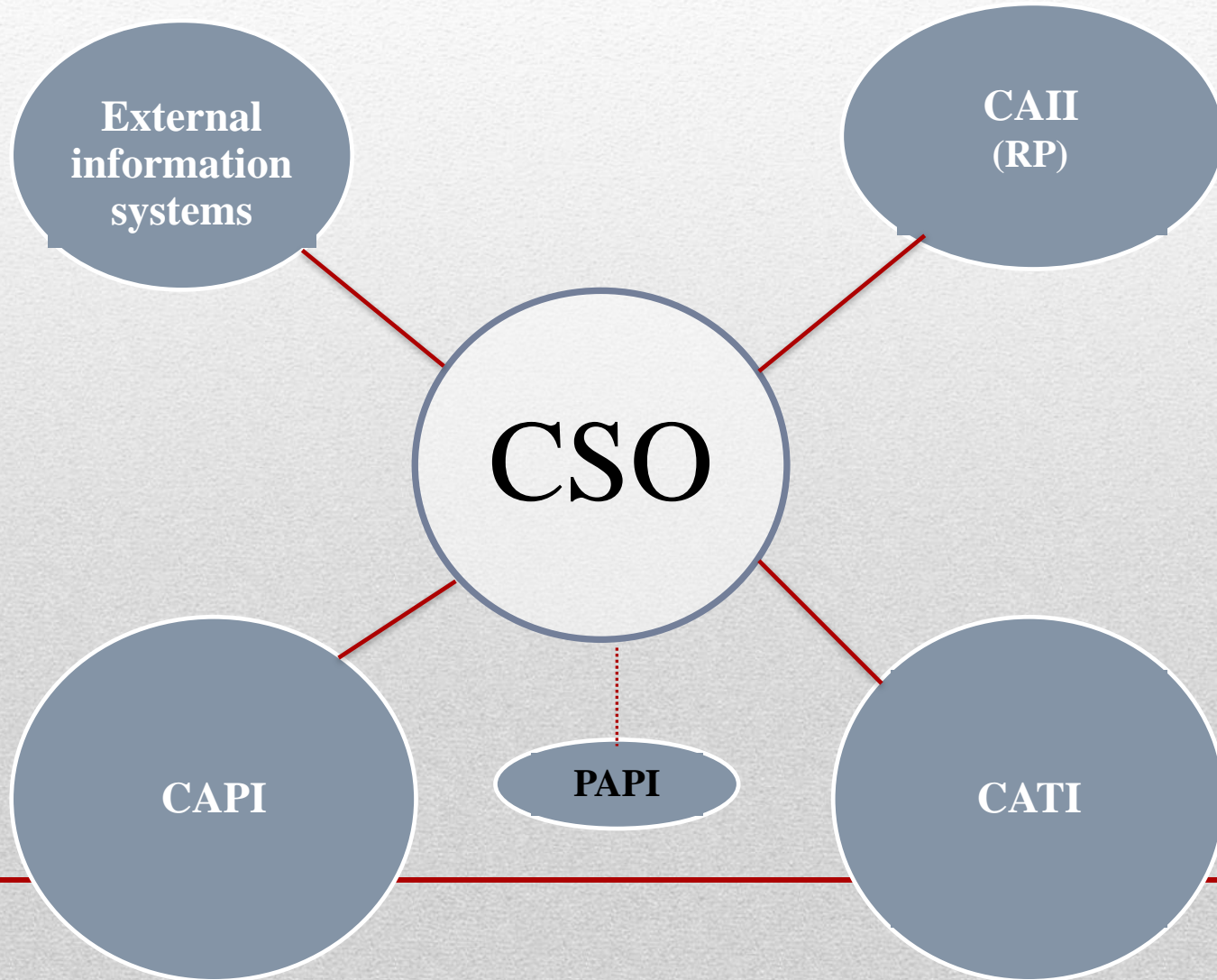Only electronic form - the total elimination of paper

CAxI

CAxI

- CAII - Computer Assisted Internet Interview,
- CAPI - Computer Assisted Personal Interview,
- CATI - Computer Assisted Telephone Interviewing.

6

Data acquisition methods

External information systems — CSO

CAII (RP) — CSO

CAPI — CSO

PAPI — CSO

CATI — CSO

7

Implementing CAxl methods for surveys

2012 r.

CAPI and CATI methods

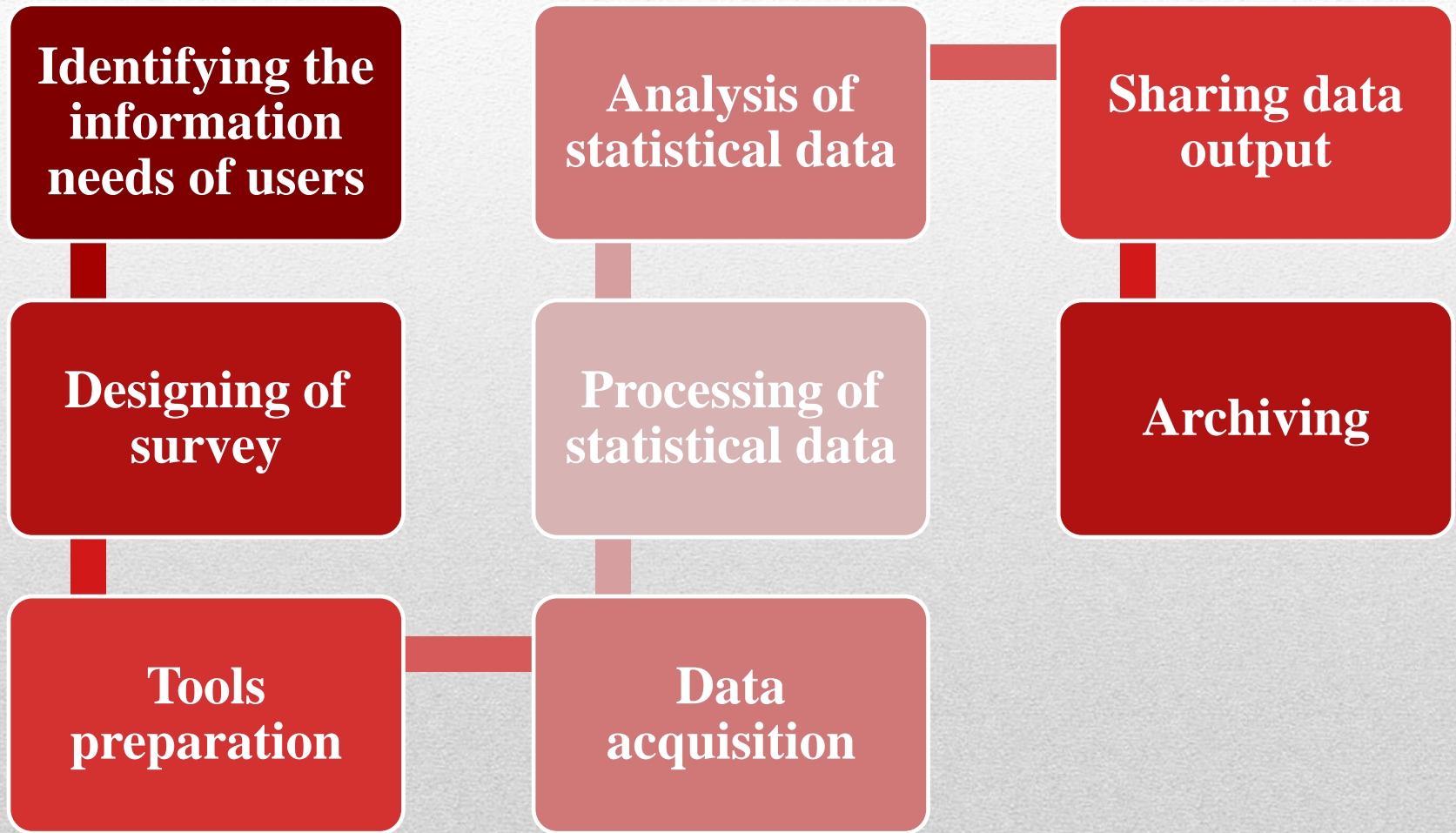**in agricultural surveys**

2013 r.

CAPI and CATI methods

in social surveys

2013 r.

CAII method

in FSS survey

2013 r.

CAPI method

in surveys of retail prices and in FSS survey

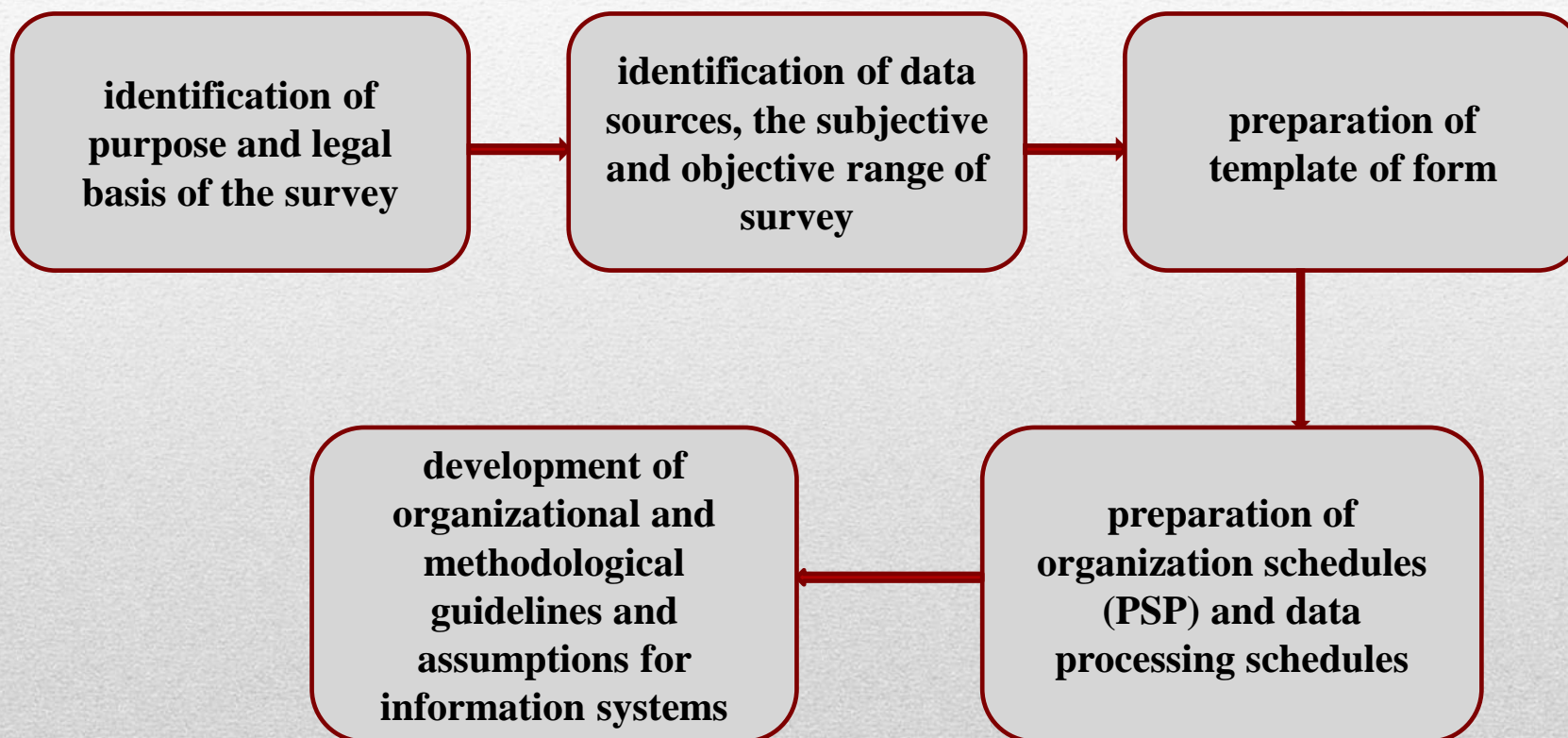# Statistical process

```
Identifying the
information
needs of users

Designing of
survey

Tools
preparation

Analysis of
statistical data

Processing of
statistical data

Data
acquisition

Sharing data
output

Archiving
```

Designing of survey

```
┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│  identification of  │      │ identification of   │      │                     │
│  purpose and legal  │ ───▶ │ data sources, the   │ ───▶ │  preparation of     │
│  basis of the survey│      │ subjective and      │      │  template of form   │
│                     │      │ objective range of  │      │                     │
│                     │      │ survey              │      │                     │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘
                                                                      │
                                                                      ▼
┌─────────────────────┐      ┌─────────────────────┐
│  development of     │      │  preparation of     │
│  organizational and │      │  organization       │
│  methodological     │ ◀─── │  schedules (PSP) and│
│  guidelines and     │      │  data processing    │
│  assumptions for    │      │  schedules          │
│  information systems │      │                     │
└─────────────────────┘      └─────────────────────┘
```

10

Tools preparation

❏ developed by the design - programming centers based on assumptions prepared by the authors of the surveys:

- ▪ electronic forms / applications for data collection,

- ▪ surveys information systems (allowing the control, analysis, explanation errors and correction of individual data in logical-accounting control application)

Data collection tools

- Form applications for tablets/laptops
- Call center infrastructure, equipped with the appropriate form application to carry out the interview,
- Reporting portal allows respondents to share form applications and transmit data using CAII,
- Paper forms (vanishing method)

Surveys conducted by the interviewer network

❑ surveys provided for in the programme of statistical surveys of official statistics are conducted in the following scope:

- price statistics

- social statistics

- agricultural statistics

❑ surveys implemented by order pursuant to Art. 21 of the Act of 29 June 1995 on official statistics for the whole country or for a given voivodship

Surveys conducted by interviewers in 2017 within programme of statistical surveys of official statistics (PBSSP)

- *A survey of household budgets (BR),*
- *Health protection in households (DS. -50G, Ds. – 50I)*
- *The condition of households (KGD),*
- *Adults education (KD-2G, KD-2I),*
- *Labour Force Survey BAEL (ZD, ZD-I),*
- *Self-employed (ZD-R),*
- *Retail price quotes of consumer goods, consumption and nonconsumption services (C-02),*
- *European Union Statistics on Income and Living Conditions (EU-SILC),*
- *Information and communication technology usage in households (SSI),*
- *Non-residents travels to Poland. The movement of vehicles and people on the Polish border with the countries of the European Union (PDP, BRG),*
- *The participation of Polish residents in travels (PKZ),*
- *A survey of prices of goods and consumer services for purchasing power parity (Eurostat forms) – this survey is conducted by interviewers from RSO in Warsaw (E17-1, E17-2),*
- *Marketplace price quotes for major agricultural products (R-CT),*
- *A survey of cereal, rape and agrimony yields (R-r-zb),*
- *A survey of certain crop yields (R-r-pw),*
- *A survey of the economic situation in farms (AK-R),*
- *Integreted survey in June (R-SGR, R-ZW-B, R-ZW-S),*
- *Integreted survey in December (R-ZW-B, R-ZW-S),*
- *A survey of the pig population and the production of pork (R-ZW-S),*
- *A survey of orchards by species and varieties (R-r-s).*

A list of surveys conducted in 2017

	January	February	March	April	May	June	July	August	September	October	November	December
BBGD	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow
BAEL	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow
KGD	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow
PKZ	red			red			red			red		
A-KR	red						red					
DS.-50	red											
KD-2	red	red										
R-ZW-S			red			red	red					red
EU-SILC				red	red	red						
SSI				red	red							
ZD-R				red		red	red					
R-ZW-B						red	red					red
R-CzBR						red	red					
R-r-zb								red				
R-r-pw										red	red	
R-r-s											red	
Price surveys	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow
Marketplace price surveys	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow
PDP;BRG,BRGp	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow

GUS

The number of surveys in individual months
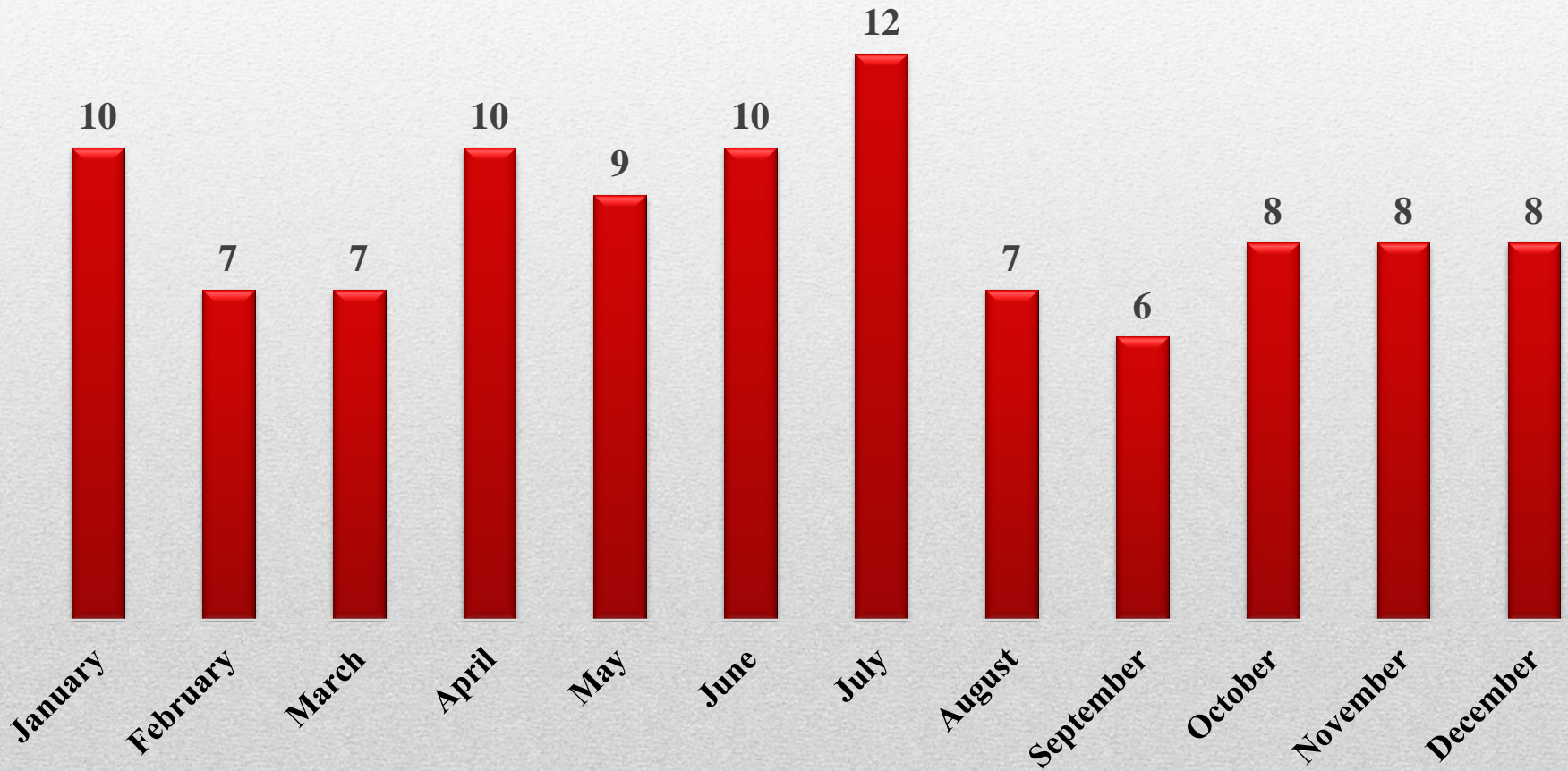
Interviewer network

The division of interviewers

Interviewers – persons employed by statistical offices outside civil service, who conduct field surveys using the CAPI/PAPI methods

TELEPHONE INTERVIEWERS – temporarily engaged employees of statistical offices who conduct surveys using the CATI method

COMPLEMENTARY INTERVIEWERS – employees of statistical offices who are engaged at times of the greatest load of surveying work, when there are not enough interviewers to conduct the surveys

The tasks of interviewers and telephone interviewers

The tasks of interviewers

- conducting field surveys,
- compliance with statistical confidentiality rules and those on protection of personal data,
- transferring data from interviews to the dedicated IT systems, in line with the specified procedure,
- taking care of the quality and completeness of the collected data and the timely execution of entrusted tasks,
- improving one's qualifications in the field of operation of interview-assisting tools and technical knowledge of conducted surveys, through independent learning or participation in training courses,
- taking care of the public image of official statistics.

The tasks of telephone interviewers

- conducting telephone interviews,
- providing respondents with information on the conducted survey and operating the helpline,
- arraigning surveys on the respondents' premises (if necessary),
- participating in training courses in the technical field of the surveys, techniques of phone interviewing and the operation of telephone interviewing equipment,
- independent improving of their qualifications (e-learning, m-learning).

Work tools for interviewers

hand-held mobile devices used in PSR 2010 and NSP 2011

tablets and laptops currently used in surveys

desktop computers/laptops with Internet access and appropriate application, in the case of conducting CAII surveys with interviewer view (illustrated with an example of an e-book for households budgets survey)

Work tools for telephone interviewers

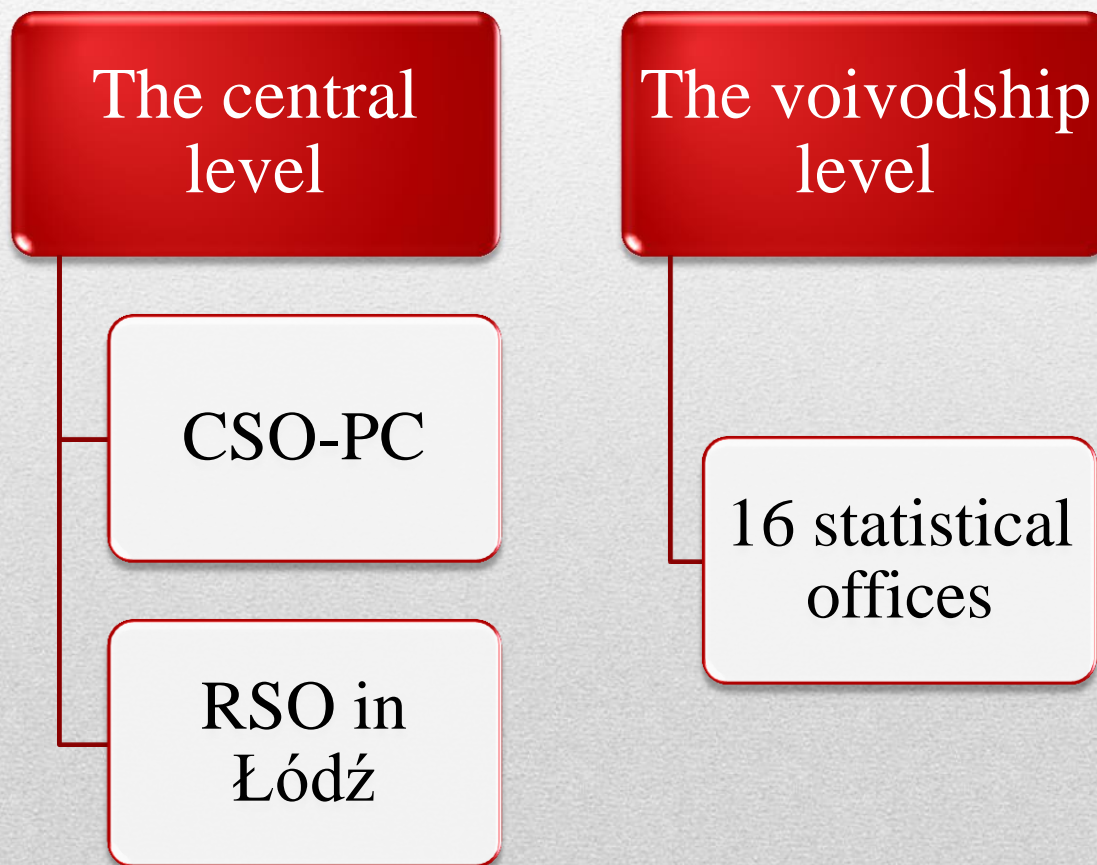Workstations with a form application for conducting interviews

SIP (Session Initiation Protocol) Stations

Headset

The levels of interviewer network management

The central level
- CSO-PC
- RSO in Łódź

The voivodship level
- 16 statistical offices

Interviewer network management

The central level

- planning the interviewer network load based on the programme of the statistical surveys of official statistics,
- estimating the interviewer network load with surveys, after sampling,
- annual determination of the recommended number of interviewer FTEs for individual statistical offices, and telephone interviewer positions at the national level,
- determining the needs in terms of equipping the interviewers and telephone interviewers with data-collection tools,
- coordinating the use of individual data-collection methods in surveys,

- devising, in collaboration with the relevant department of the CSO, a development programme for interviewer and telephone interviewer networks, including the preparation of training programmes,
- cooperation with CSO-PC in terms of preparing the estimation of interviewer network load with surveys as an auxiliary material for PC to determine the number of interviewers and telephone interviewer positions,
- studies and analysis of the participation of interviewers, valuers and coordinators in surveys,
- the identification and satisfaction of needs concerning equipping interviewers with service cards,
- conducting training in the application of social engineering in interviews, for all statistical offices.

CSO-PC

RSO in Łódź

Interviewer network management

The voivodship level

- employing interviewers, allocating interviews and interviewing areas
- allocating work to telephone interviewers
- organising and conducting technical training in the field of operating interviewing/telephone-interviewing devices and applications, at the voivodship level
- monitoring and accounting for the work of interviewers and telephone interviewers, including work-quality control
- financial settlements with interviewers
- engaging, if necessary, complementary interviewers, external interviewers and agricultural valuers

16 statistical offices

Assumptions for the calculation of the number of interviewers and telephone interviewer positions

The following data are used for the purposes of determining the recommended number of FTEs of permanent interviewers:

- the number of interviews in surveys referred to the CAPI and PAPI methods in individual months and offices; in price surveys, the number of regions and representatives in the survey were assumed,

- the average time of conducting the interview in minutes for every survey – specified by the survey authors,

- the number of productive working days in individual months,

- the daily productive hours of the interviewer's work.

The sheet of survey description to estimate the interviewer network load in 2017.

No				
1	Authorial unit			

2	Contact person	Name	Phone	E-mail
		Joanna Grzeszczak	(22)6083172	

3	The name of the survey	**Adults education**

4	Date of filling (dd-mm-yyyy)	31-05-2016

Form 1

5	Form name	**Adults form, household questionnaire**
6	Form symbol	KD-2G
7	Subject of form	Household
8	The frequency of form	once every five years

Estimated share of surveys methods in %					The duration of survey (in minutes) - to be completed by the authorial unit			The duration of survey (in minutes) - sent by the CIS		
CAPI	PAPI	CATI	CAII/RP	Detailed information regarding the share of surveys methods	CAPI	PAPI	CATI	CAPI	PAPI	CATI
80%	20% x	x	x	possible to estimate after the pilot (after 08.2016)		2				x

Form 2

10	Form name	**Adults education, indyvidual questionnaire**
11	Form symbol	KD-2I
12	Subject of form	all the people from the household at the age of 18-69
13	The frequency of form	once every five years

Estimated share of surveys methods in %					The duration of survey (in minutes) - to be completed by the authorial unit			The duration of survey (in minutes) - sent by the CIS		
CAPI	PAPI	CATI	CAII/RP	Detailed information regarding the share of surveys methods	CAPI	PAPI	CATI	CAPI	PAPI	CATI
80%	20% x	x	x	possible to estimate after the pilot (after 08.2016)		24				x

Form 3

15	Form name	x
16	Form symbol	x
17	Subject of form	x
18	The frequency of form	x

Estimated share of surveys methods in %					The duration of survey (in minutes) - to be completed by the authorial unit			The duration of survey (in minutes) - sent by the CIS		
CAPI	PAPI	CATI	CAII/RP	Detailed information regarding the share of surveys methods	CAPI	PAPI	CATI	CAPI	PAPI	CATI
x	x	x	x	x	x	x	x	x	x	x

20	Does sample from the previous years enter?	NIE

Determining the recommended number of permanent interviewers

Month	The effective number of working days in a month	Effective number of hours devoted to surveying using CAPI / PAPI in a month
January	21	84
February	20	80
March	23	92
April	19	76
May	21	84
June	21	84
July	21	84
August	22	88
September	21	84
October	22	88
November	20	80
December	19	76

Determining the recommended number of permanent interviewers

		Sample size				The duration of the survey by CAPI method (in min)	The duration of the survey by PAPI method (in min)	The duration of the survey by CATI method (in min)	Time to carry out the interviews (in h):		The number of FTEs needed to complete surveys	
JANUARY												
Surveys	Form symbol	The number of dwellings / regions / markets	The number of surveys	Surveys conducted by CAPI method	Surveys conducted by PAPI method				By CAPI method	By PAPI method	By CAPI method - 4h x 20 days	By PAPI method - 4h x 20 days
Adults education	sKD-2I	561	=561*1,08*1,774=1075	1075*80%=860	1075*20%=215	24	24		(860*24)/60=344	(215*24)/60=86	344/80=4,3	86/80=1,07

1,08 - the number of households in apartment

1,774 – the numer of people in the households

The number of FTEs interviewers resulting from the monthly burden (according to estimates) compared with the number of FTEs resulting from the annual average, standardized load

the number of interviewers by structure   the number of interviewers by loads
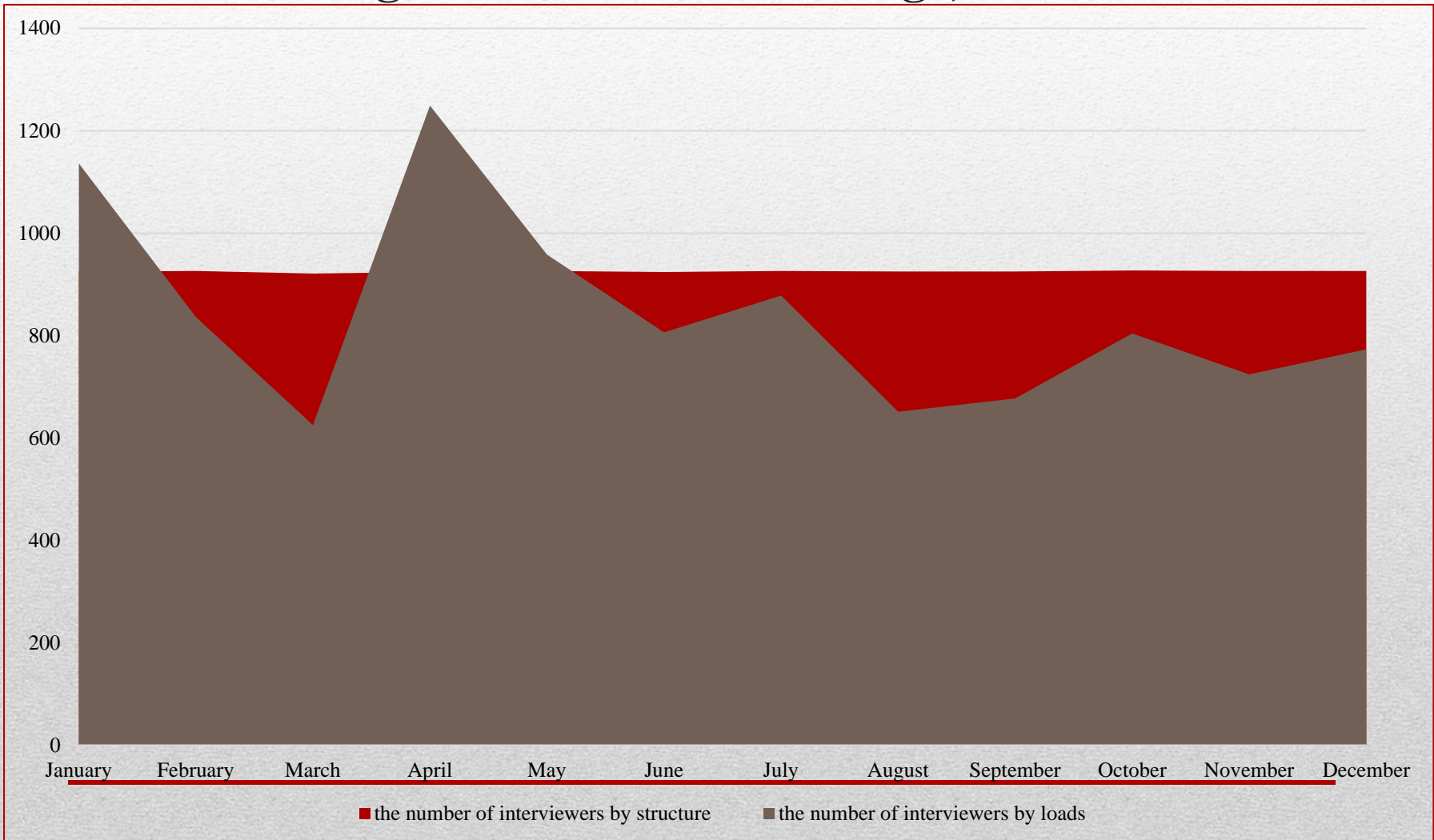
Trainings

The substantive contents of trainings

The training system includes trainings in the area of:

- Subject matter, methodology and methods and surveys organization,
- legal aspects related to the implementation of surveys,
- functionality and tools operation for data collection,
- social engineering of interviews implementation (direct and telephone), including verbal and nonverbal communication, and work in the field safety aspects,
- the practical use of the knowledge acquired during the theoretical trainings.

Forms of trainings

Trainings take place in the following forms:

- workshops and tutorials in the stationary form
- supplementary trainings – for interviewers carrying out surveys in the field and telephone interviewers that need to supplement the knowledge,
- self-education using e-learning and m-learning systems and the materials provided to the interviewer who operates survey in the field / telephone interviewers in the form agreed with him,
- self-education through access to Knowledge Base and Reporting System, constant raising of qualifications is a particular responsibility of every interviewer conducting surveys in the field and telephone interviewer that should, for their own learning, allocate approx. 10 hours per month

Organization of trainings

„Traditional" trainings on methodology and organizational changes in surveys are carried out in a cascade model as follows:

- trainings at the central level for coordinators and, if necessary for inspectors:
  - in terms of methodology and organization of surveys - carried out by representatives of the authorial departments CSO
  - in terms of the operation and application functionality and tools to data collection - carried out by representatives of Statistical Computing Center with the participation of employees from authorial departments
- at the voivodship level for inspectors, interviewers and telephone interviewers:
  - in terms of methodology and organization of surveys,
  - in terms of the operation and application functionality and tools to data collection - carried out by the coordinators as mandatory for statistical interviewers.

„general" trainings in the field of:

- the mission of statistics,
- the legal basis of the surveys,
- representative method,
- social engineering with elements of interviewers work safety

are developed and implemented by the Statistical Office in Łódź in the form of workshops.
Training is conducted periodically as mandatory.
Training materials in this area are available in the form of e-learning and m-learning.

Methods of reducing load on interviewers (CAxI)

Methods of reducing load on interviewers (CAxI)

- CAxI methods
- Diagnosing and solving problems in surveys
- The integration of surveys and variables
- Sampling optimisation
- Effective popularization
- Applying to the authors of the surveys on changes in surveys deadlines

Methods of reducing load on interviewers (CAxI)

In data collection organisation the sequence rules shall be introduced, in the following order: CAII, CATI, CAPI – while the CATI and CAPI methods may be parallelised.

CAII

CAPI

CATI
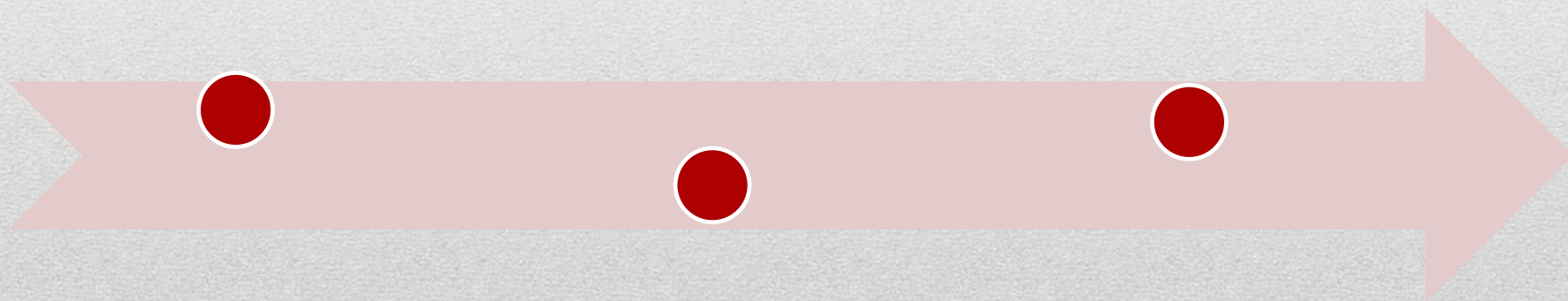
The share of CAII/CAWI in coverage improvement

The CAII/CAWI method consisting of self-enumeration can significantly impact on the better completeness of survey results, due to:

- respondents' comfort – they can complete the questionnaire at convenient time, regardless time of the day
- respondents do not have to receive the interviewers at their homes – interaction with a stranger is eliminated
- respondents do not have to answer questions from the questionnaire over the phone – also interaction with a stranger is eliminated
- respondents have full control over their answers.

The CAII/CAWI methods are very desirable from statistical point of view, as they eliminate interviewer-related costs and reduce interviewer load; however, they require extensive dissemination among respondents and making them accustomed to such a form of participation in surveys.

Filling surveys, quality improvement, updating the sampling frame

- The use of CAxI methods allows for rapid diagnosis of the situation and decision to:
  - eliminate uninhabited dwellings
  - eliminate dwellings that are changed the destiny

- The use of statistical and mathematical methods
- Developing estimates
- Data imputation

In the case of respondent unavailability

Methods of reducing load on interviewers – sample optimisation

Sample optimisation is carried out to reduce interviewer load, while maintaining the methodological compliance of the survey and possibly the highest accuracy of the results.

Lower interviewer load can be achieved through:

- reducing the time of interviewers' travel to the sampled addresses by accumulating addresses in a given area, especially if the interviewer is conducting several surveys at the same time
- sampling addresses near the interviewer's place of residence (if it is methodologically consistent)
- eliminating nonexistent or uninhabited addresses from the sampling frame
- eliminating regions/areas that are not easily accessible, have small population density or a significant number of uninhabited addresses, from the sampling frame
- using information on the possible availability of the respondent at working hours at a given address.

Allocation of address points (dwellings) - linking surveys / samples / addresses

Methods of reducing load on interviewers – Sample combination

- reducing the number of surveys, and thereby the number of visits paid to respondents,

- reducing load on interviewers,

- reducing the number of non-responses,

- feeding the information base for several surveys with information from a single interview,

- sampling one respondent for several surveys.

Allocation of address points (dwellings) - linking surveys / samples / addresses

- advantages for the interviewer
  - reducing the number of visits to the respondents
  - reducing the time of interviewers' travel to the respondents
  - more time for interviewers to self-education

- disadvantages for the respondent
  - extending the time of the interview
  - participation in the survey do not end up on one interview

Activities that will allow linking surveys / samples / addresses

❑ unifying the causes of survey non-implementation
- standardization of the causes of interview non-implenentation in all surveys

❑ unifying the cafeteria answers,
- developing the homogeneous cafeteria answers,
- simple libraries of answers
- reducing the level of detailing

❑ integration of variables and wider usage of registers
- data standardization and integration ,
- unifying the similar variables
- the use of data from administrative sources

❑ unifying the assumptions and methods of designing mobile applications
- unifying the assumptions for applications, environments for applications, interfaces, methods of operation and use of dictionaries, and control forms

❑ reduction of the questions on the form
- resignation from redundant questions not related to the subject of survey
- questions regarding the same issues in several surveys
- reduction of additional surveys

Thank you for your attention

Magdalena Janczur – Knapek
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