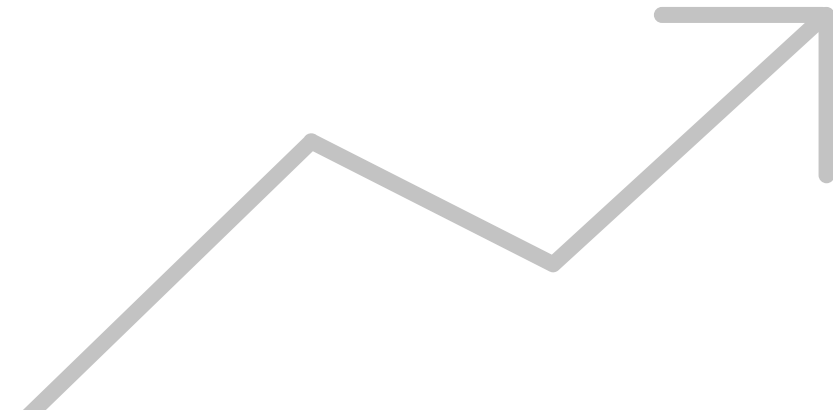


Census in Germany

A combined administrative and survey approach



Background of the Census Model

- Requirements from politics
 - Reduce burden on population
 - Reduce costs
 - Limitation to the compulsory EU variables
- 2011 Census based on a combined model using multiple data sources: complex model
- 2022 Census based on experiences 2011

EU compulsory programme

Topics to be covered in population and housing censuses

Demographic and geographical variables	Employment and education variables	Household and family variables	Buildings and housing variables
<ul style="list-style-type: none"> • sex • age • marital status • country of citizenship • country/place of birth • place of usual residence • previous place of usual residence and date of arrival, or place of usual residence one year prior to the census • ever resided abroad and year of arrival in Germany 	<ul style="list-style-type: none"> • current activity status • actual occupation • industry (branch of economic activity) • status in employment • location of place of work • educational attainment 	<ul style="list-style-type: none"> • type of household • size of household • household status • family status • type of family nucleus • size of family nucleus 	<ul style="list-style-type: none"> • type of living quarters • type of building • occupancy status • period of construction of the building • useful floor space and/or number of rooms • number of occupants • tenure status • dwelling equipment • type of heating

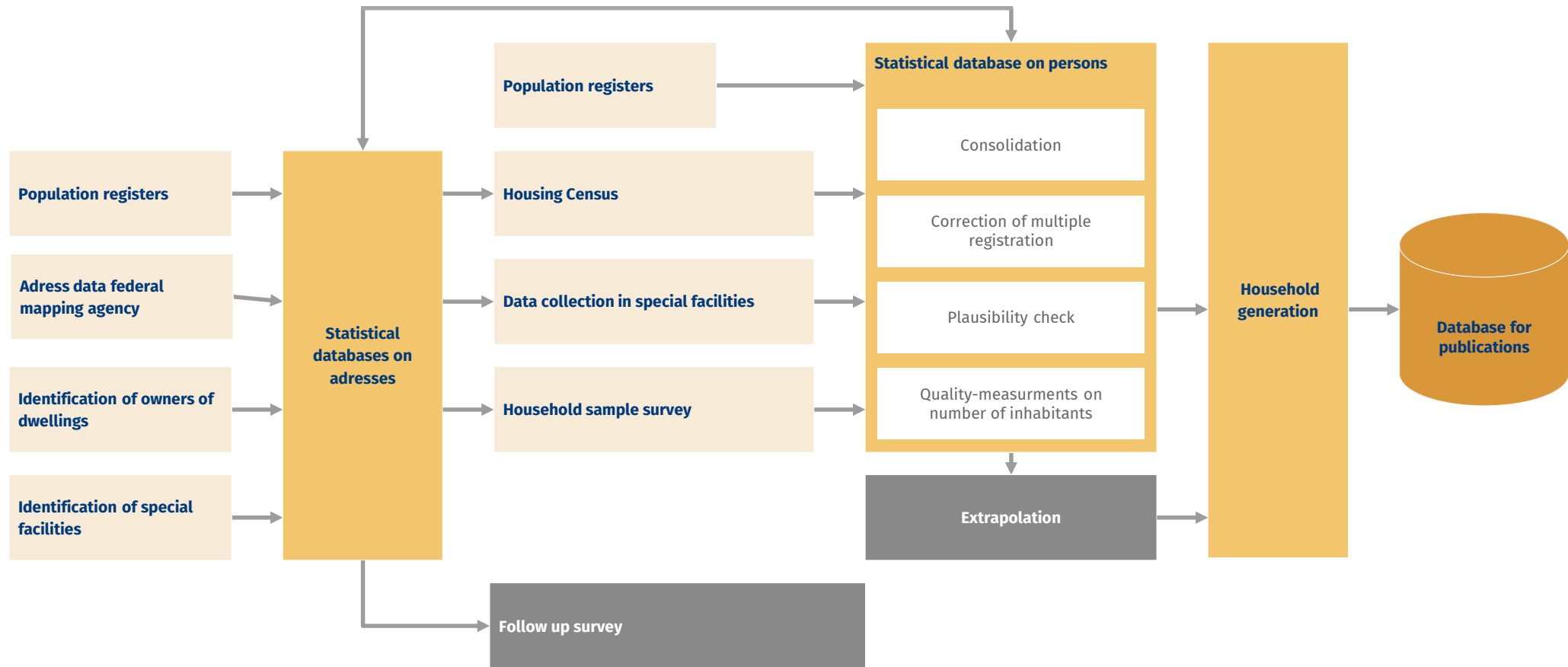
Key aspects of the 2022 Census Model (1)

- Census reference date: 15th of May 2022
- Decentralised register data without existing personal identification numbers
 - Decentralised population registers
- Full enumeration surveys
 - Data collection in special facilities
 - Housing census
- Household sample survey (~ 10%)
 - Statistical correction of over-/under-coverage of the data from population registers
 - Collection of information not (sufficiently) available in registers

Key aspects of the 2022 Census Model (2)

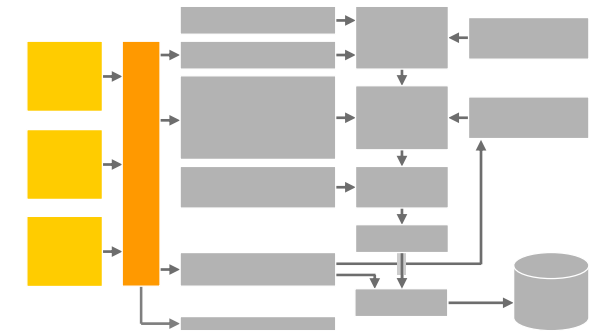
- Housing Census
- Household generating procedure
- Merging data from different sources in a central data stock without existing personal identification numbers

Census 2022: multiple source mixed model



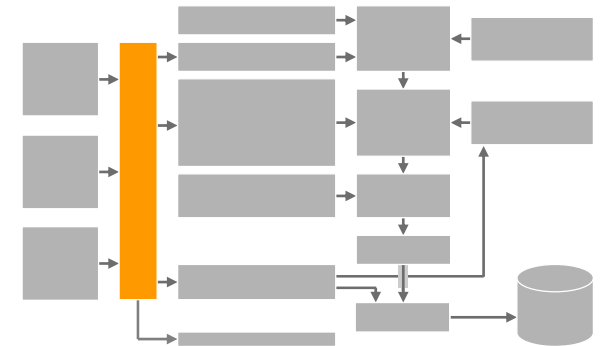
Statistical register of addresses and buildings (1)

- Covered all addresses with housing space and occupied living quarters
- Mainly 3 administrative data sources
 - Federal Mapping Agency
 - Population registers
 - Data of local dwelling registers
- Checking of addresses if only included in one data source
- Classification of addresses as "addresses with housing space"
- Integration of update deliveries and information from primary surveys, other sources



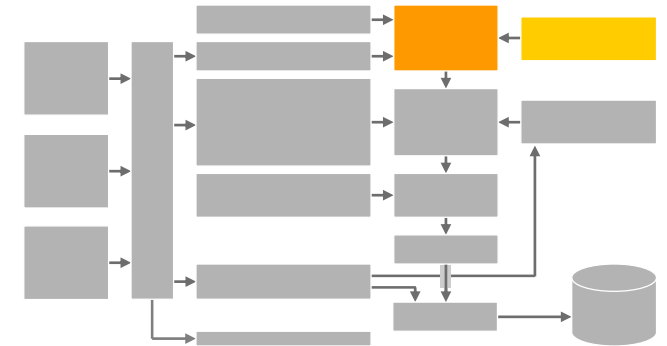
Statistical register of addresses and buildings (2)

- Check of completeness for buildings, dwellings and persons
- Steering function for primary data sources
- Sampling frame for household sample survey
- Statistical population for the housing census
- Linking of different data sources
- Creating a basis for spatial analyses of census results



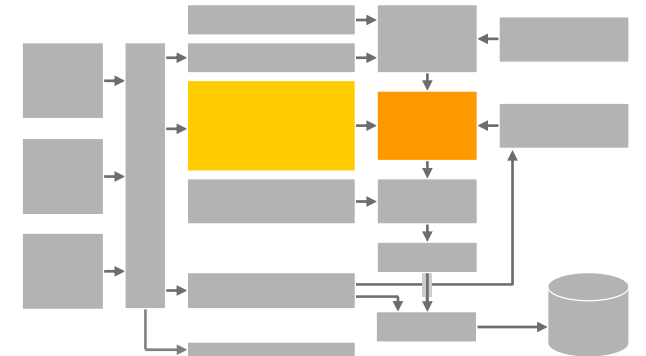
Correction of multiple registration

- Fully automatical correction of multiple registration
 - Cluster analysis after standardisation
 - Sex, data and place of birth, likeness of names
 - Data from decentralised population registers
 - Data collection in special facilities



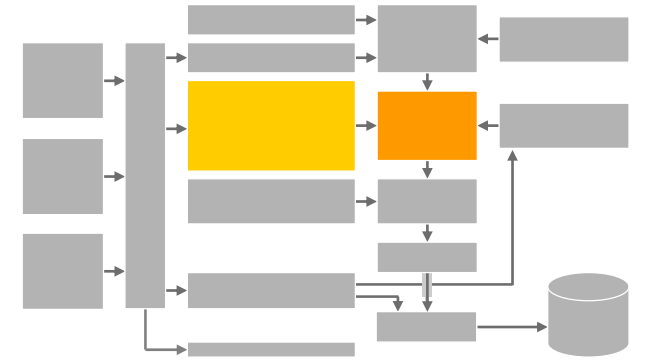
Household sample survey (1)

- 2 purposes
 - Identification of over-/under-coverage in population register data
 - Collection of additional information not or not sufficiently available in registers (educational attainment, additional employment information)
- Sampling unit: Addresses
- Identification of over-/under-coverage by linking personal data sets from sample survey with the respective register information

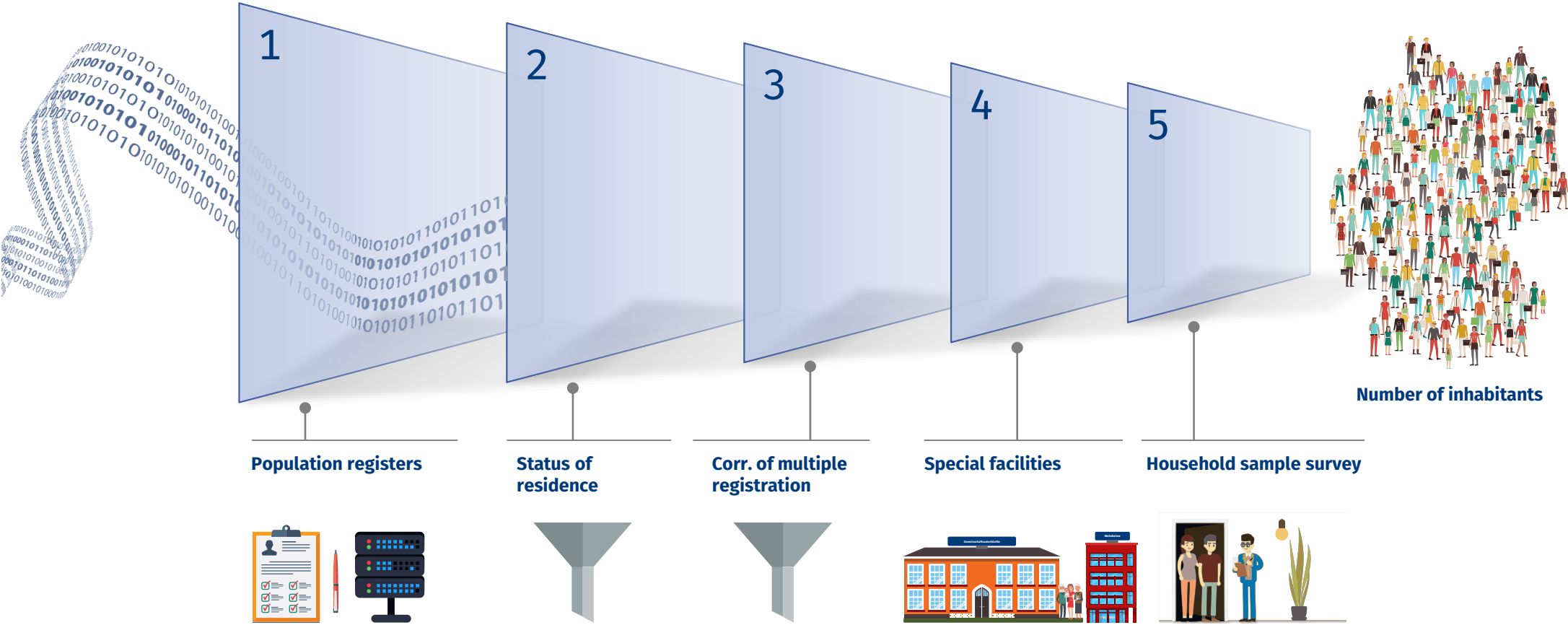


Household sample survey (2)

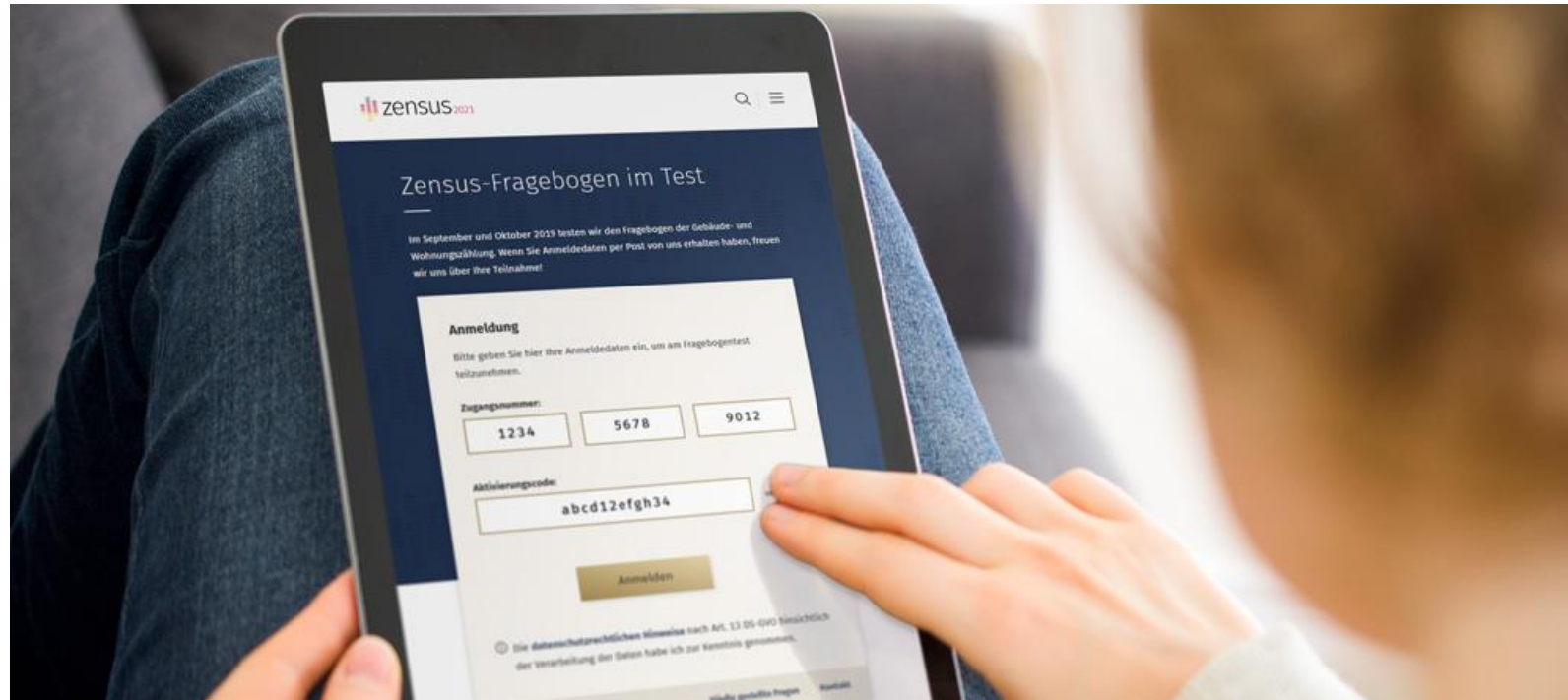
- Sample design based on information from a census test held in 2001
- Random sample of addresses, stratified by
 - type of region and
 - size of address
- Precision target for estimated population figure for each large municipality: 1% error margin, 95% confidence level
 - Sample size 9.6% for Germany
 - Sample size for individual municipalities ranged from 2.1% to 45.6%



5 steps to calculate the number of inhabitants

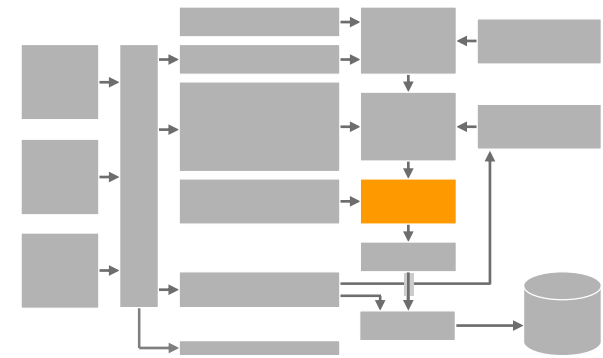


New: online first approach



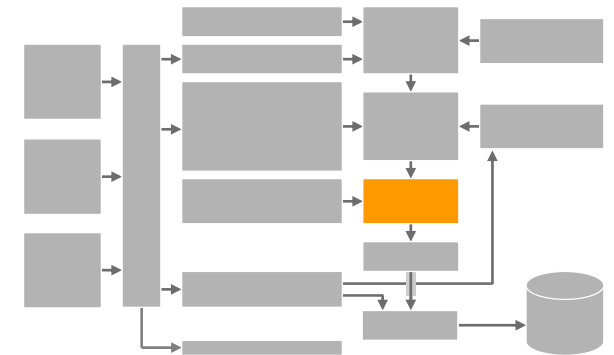
Reference data stock (1)

- Merging data from
 - Statistical register of addresses and buildings
 - decentralised population registers
 - Data collection in special facilities
 - Household sample survey
 - Checks of multiple registration and over-/under-coverage build the reference data stock
- All individual records were assigned to geographical references
 - administrative unit
 - countrywide geographical grid of 100 x 100 m²



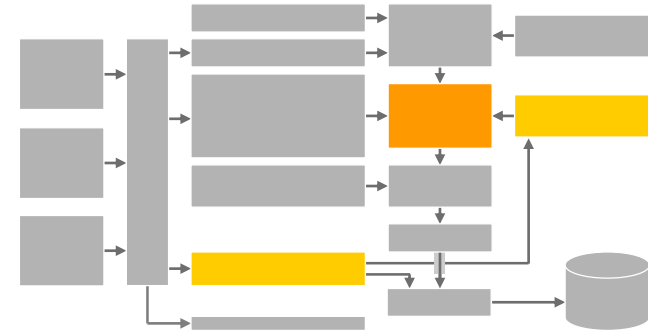
Reference data stock (2)

- Merging datasets from different sources without existing person identification numbers
- Merging information:
 - family name at birth and first name(s),
 - sex,
 - date of birth,
 - municipal code,
 - post code,
 - street name,
 - house number



Housing census

- Self-administered questionnaire by property owners
- Online first
- Paper on demand



Preperation for Post 2022 Census

- Annual data collection from population registers
- Annual data will be available for
 - detailed administrative units
 - geo-referenced grid
- Annual automatic correction of multiple registration
- No survey-based correction of register data
- Alternative method of correction of over-/under-coverage by multiple register use

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