

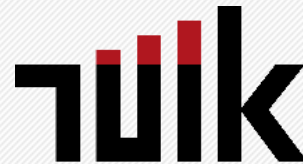


15th SESSION of the OIC-STATCOM

Country Presentation: Türkiye

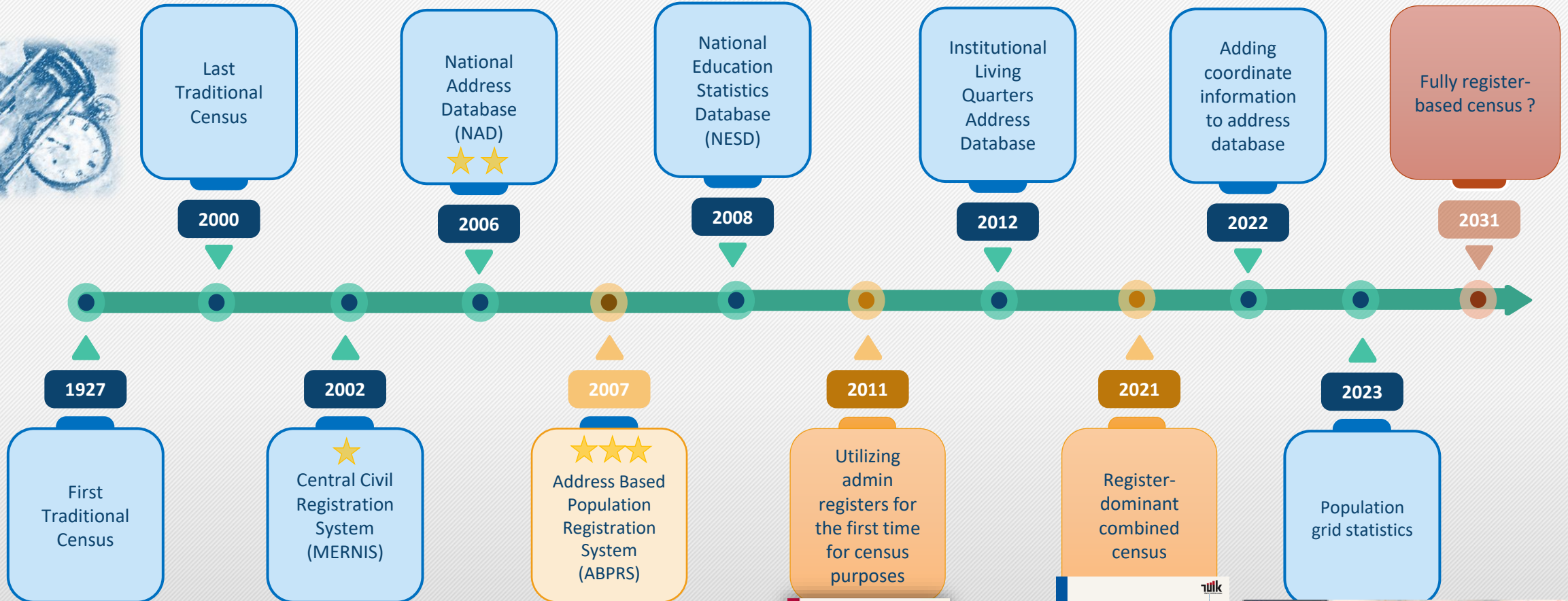
«Modernising Population and Housing Statistics through Digital and Interoperable Data Systems»

Jeddah, Kingdom of Saudi Arabia
29–30 September 2026



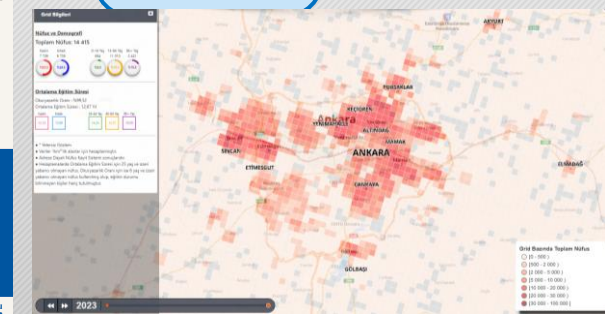
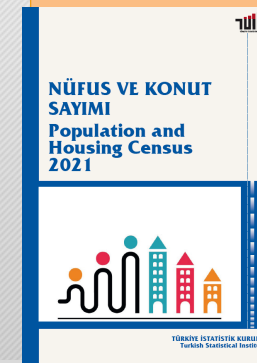
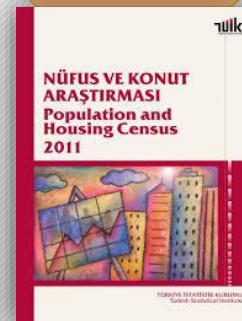
**Turkish Statistical Institute
(TurkStat)**

Demographic Statistics Department



Censuses from 1927 to 2000:

- Traditional census (face to face interview),
- Standard questionnaire (paper) (PAPI),
- «De facto» population definition,
- One day application with national curfew.



The Central Civil Registration System (MERNİS):

- ... centrally administered system established in 2002.
- Any changes in civil status (births, deaths, marriages etc.) are registered electronically
 - in real time
 - over a network
 - by the civil registration offices
- ... based on family ledgers.
- ... has become the backbone of the e-Government infrastructure in Türkiye.
- Information on place of usual residence is not available.
- Maintenance of the system -> Ministry of Interior.
- Vital statistics are also produced from this database.



* The identity is fictional.

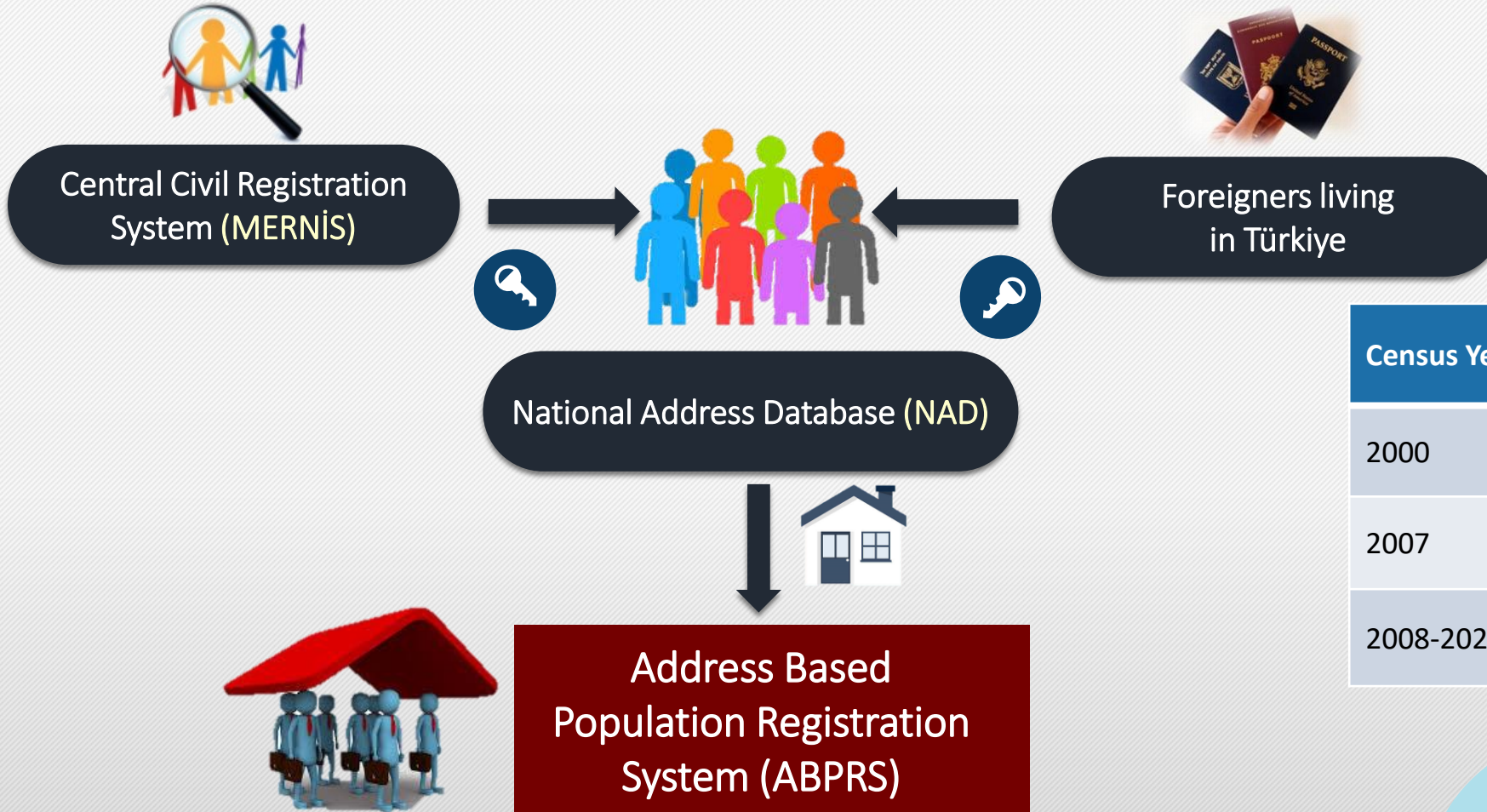
Turkish Republic Identity Number:

- Unique ID number in MERNİS,
- assigned to all Turkish Citizens,
- comprised of 11 digits (which do not contain personal information),
- Used nationwide by all government agencies in public services.

National Address Database (NAD)

- Established in 2006.
- Around 40 million addresses were entered to the system with **unique address codes**.
- Field work were carried out by local administrations (municipalities and others) and infrastructural studies were carried out by TurkStat.
- Maintenance of the system -> **Ministry of Interior** -> updated by three ways in general:
 - Updating the **addresses components** in the NAD by municipalities/special province administrations,
 - Updating the **changes in administrative units** by the Ministry,
- ... **text based** address registers. (No spatial/coordinate information)





Personal information was matched with address information by using:
Identification Numbers & Address Codes.

Census Year	Method	~Cost*
2000	Traditional	43.7 million \$
2007	Establishment of the ABPRS	35.9 million \$
2008-2025	Production from the ABPRS	0 \$

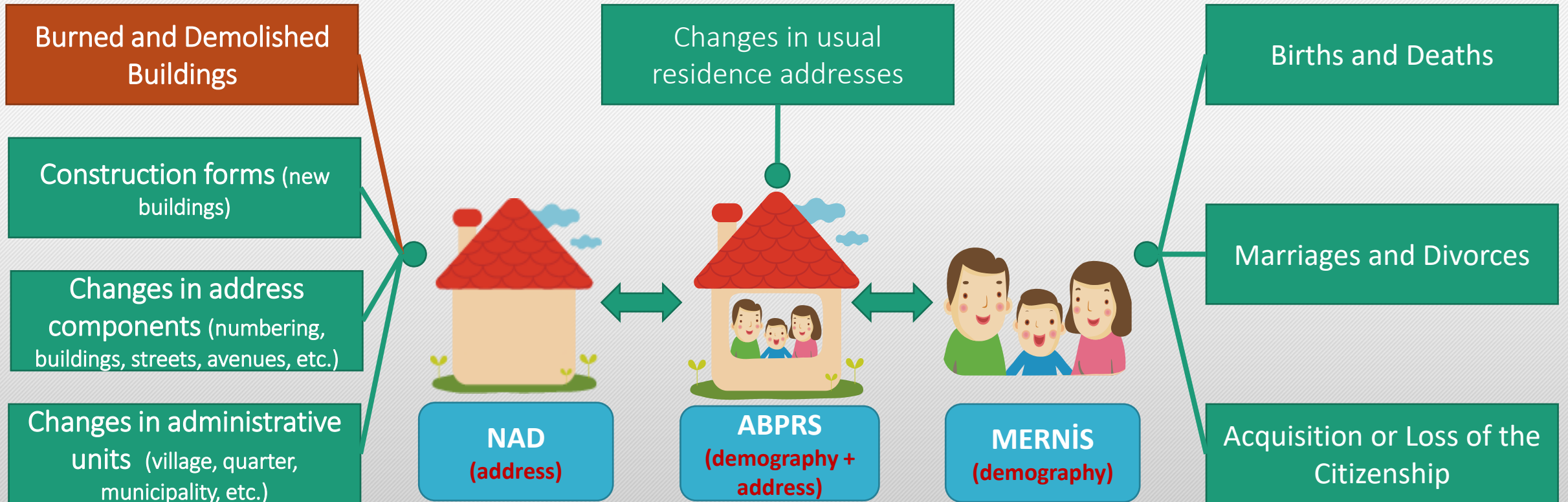
ABPRS 18 years old.
Alternative
perspective:
Cost per year
(reducing): ~2 million \$

* According to
TurkStat's
Monetary
Value
Converting for
June, 2025

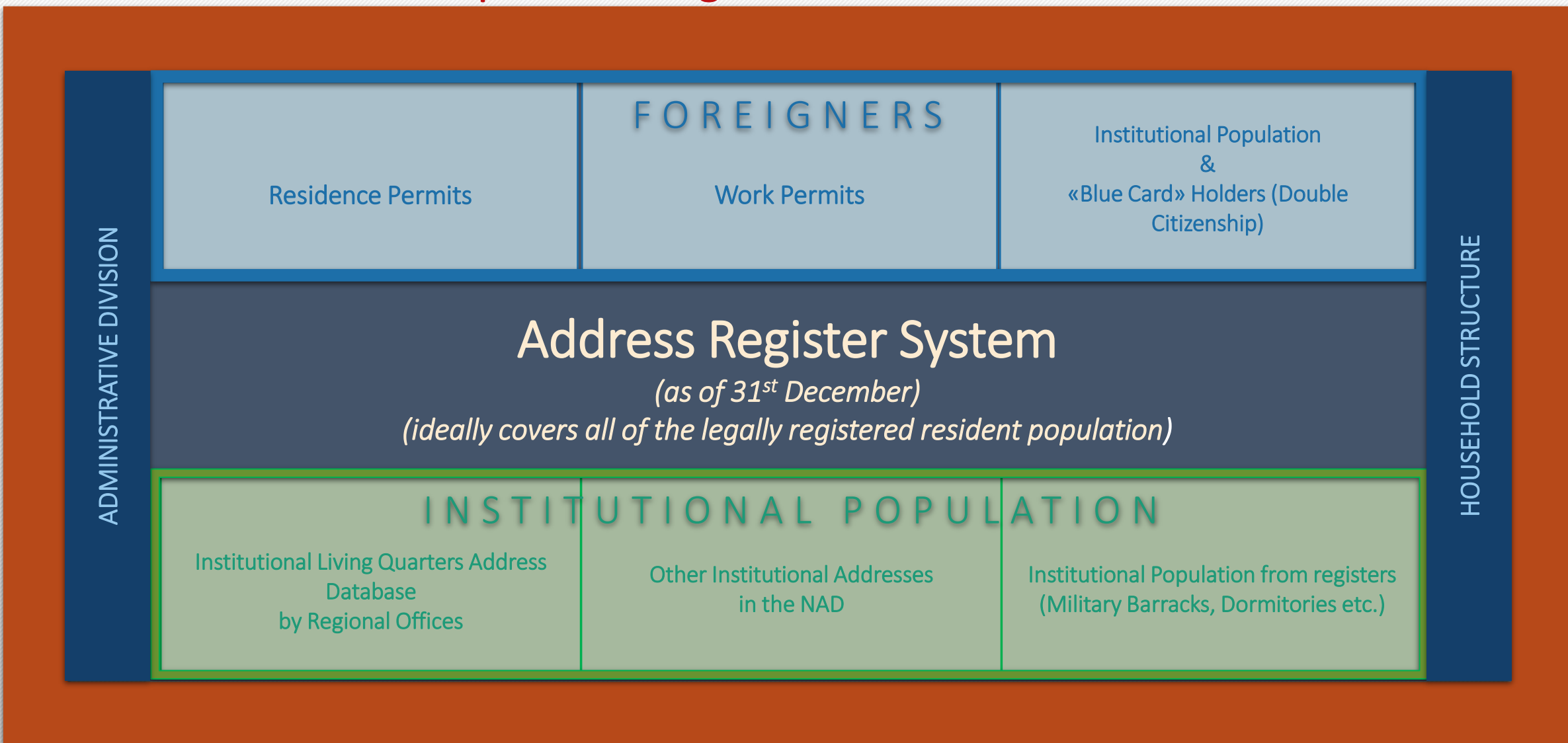
Up-to-dateness of the ABPRS

Agencies/institutions shall use NAD, MERNIS and ABPRS when carrying out their relevant acts and procedures.
Public services (health, education, voting, judicial process, utility subscriptions, etc.) are provided based on the ABPRS.

→ Ensuring up-to-dateness automatically.



ABPRS as a Statistical Population Register



Statistics produced annually (since 31 December 2007) :

- ✓ Population size by localities/regions
- ✓ Age and sex structure
- ✓ Literacy and completed level of education
- ✓ Marital status
- ✓ Place of civil registration
- ✓ Mean household size
- ✓ Internal migration (since 2008)
- ✓ Nationality (country of citizenship) (since 2012)
- ✓ Place of birth (since 2014)
- ✓ Type of households (since 2014)
- ✓ Immigration and emigration (since 2016)
- ✓ Reason for internal migration (since 2018)
- ✓ Basic figures at grid/1 km² field level (since 2022)



ABPRS is also base for:

- Life tables
- Population projections

Also serves as a sampling frame of household surveys.



❑ TurkStat has been implementing all statistical activities (including census) according to the **Official Statistics Programme**, based on the **Statistics Law of Türkiye**.

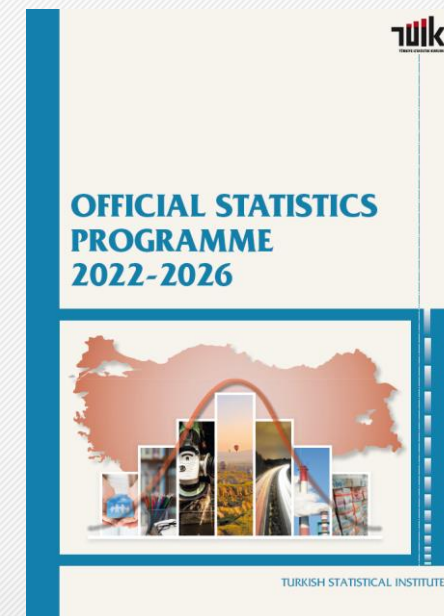
- Thus, **TurkStat does not need a special census law**.
- 2021 PHC and related issues took place in the 2022-2026 term Official Statistics Programme.

❑ According to the mentioned Law:

In order to be used for the production of official statistics, the **institutions and organizations are obliged to submit or open to use of the TurkStat the records and other data files** they compile, process and store...

In return, administrative registers which were obtained only for statistical purposes by TurkStat **cannot be shared with any institution or organization at microdata or record level**.

According to the **Personal Data Protection Law** in Türkiye, production of official statistics is accepted as an **“exception”**.



- ❑ Quality assurance checks and quality controls in terms of «**source**», «**input data**», «**process**» and «**output data**» are conducted.

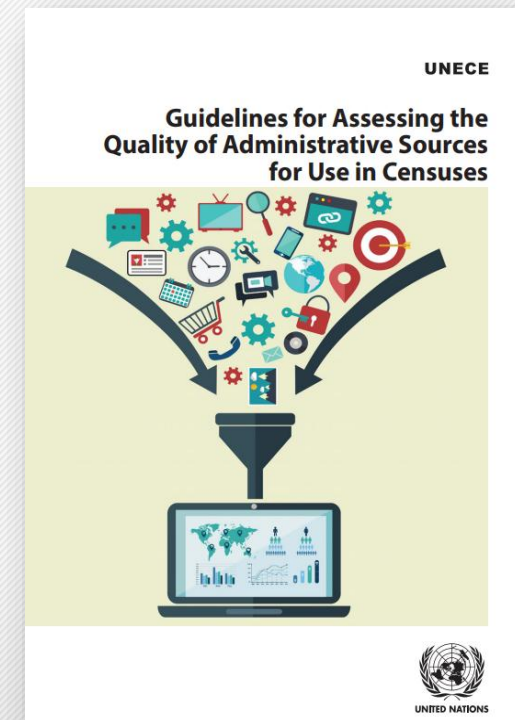
Control of Data Source

- Content control
- Target population control
- Updating periods and procedures
- Definitions of variables
- Inclusion of unique ID
- Availability of data history
- Metadata control
- Missing data control
- Over coverage
- Under coverage
- Plausibility
- Missing values



❑ Official Statistics Programme (OSP):

- states the objectives, coverage, methods, frequency, work plan and dissemination principles.
- defines the duties of the institutions and organizations regarding the compilation, evaluation and publication of data.
- by means of regular OSP working group meetings (consists of data holders and TurkStat), **improvement of the quality of registers is ensured.**



Advantages

- ✓ Cost efficiency
- ✓ Labor-saving statistical production
- ✓ More up-to-date and frequent statistics
- ✓ Linkage with various registers via unique keys

(Personal ID Number / Address ID Code)



Recommended solutions:

- ❖ Strong legal base (access to registers),
- ❖ Sound coordination with data holders (regular meetings),
- ❖ Control of process (input data, output data, communication strategy),
- ❖ Ensuring data confidentiality, quality and up-to-dateness,
- ❖ Competency in administrative data management and analysis.

Challenges in input data and process:

- ↓ Information collected for solely administrative purposes
- ↓ Lack of metadata
- ↓ Different classifications/definitions used by data holders
- ↓ Coverage issues and missing values in registers
- ↓ Reference date discrepancies
- ↓ Multiple records – deduplication – data loss
- ↓ IT infrastructure

Challenges in output data:

- ↓ Quality management and accuracy.
- ↓ Communication strategy for register-based statistics.
- ↓ Ensuring the sustainability and maintenance of the system.
- ↓ Data confidentiality.
- ↓ Deviation from regular household surveys (such as LFS, SILC)



2021 PHC:

❑ In Türkiye, almost half of census-type variables:

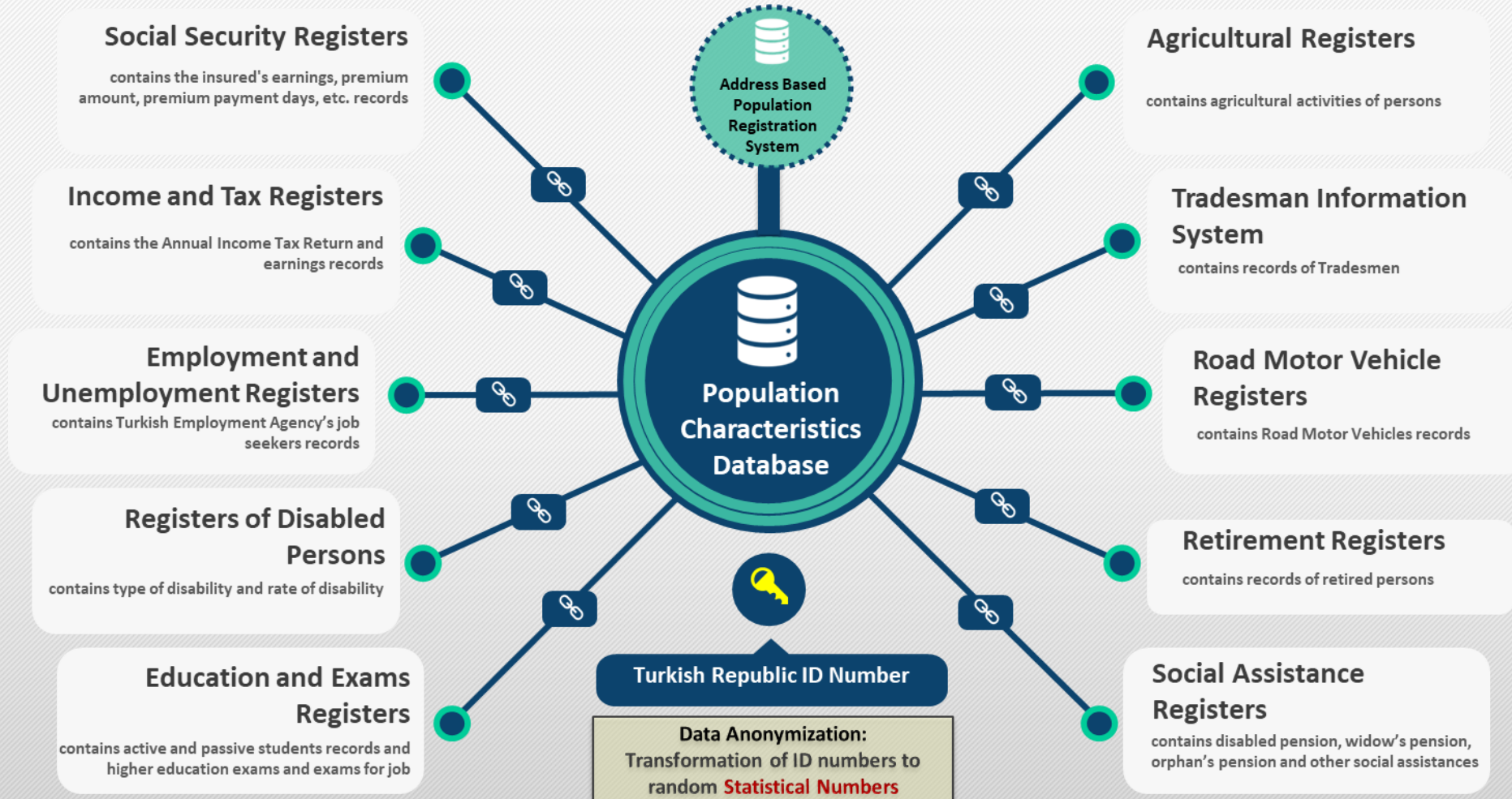
✓ Information on population size, age and sex structure, legal marital status, education level, migration, country of citizenship, place of birth, type and structure of households

are already obtained annually from the ABPRS (almost half of the census core variables).

❑ 2021 PHC was actually planned to be fully register-based and studies were carried out in this direction.

❑ Along with this motivation, TurkStat defined that the ultimate goal in terms of register-based statistics is to set up an integrated “**Population Characteristics Database (PCDB)**”.





30 administrative registers (76 data sets) obtained from 14 different public institutions were integrated with the ABPRS.

- ❑ For census-type labour force characteristics (current activity status, industry, status in employment, occupation) the target in the first step was to utilize “**Population Characteristics Database (PCDB)**”.
- ❑ However, due to **considerable unregistered employment** in Türkiye, there was **considerable divergence between the results of Household Labour Force Survey (LFS) and the PCDB by nature** (i.e. expected differences between sampling surveys and registers).
- ❑ That’s why it was decided to use the **LFS** for census.
 - Indicators were obtained by recalculating the LFS data. LFS data from the 6 months before the census reference date and the 6 months after the reference date were combined. This combined LFS data has been harmonized to the reference date of the census.
 - PCDB could only be partially utilized for census purposes.
(for the institutional population which is not covered in the LFS)
 - *Information on «occupation» could not be produced.*



❑ For housing characteristics, **setting up a registration system for buildings and dwellings** has been one of the institutional targets of TurkStat.

▪ However, establishing a such a registration system would take time. **It was obvious that the planned registration system would not be available during census period.**

❑ In order to eliminate the lack of administrative registers in this area, a **Survey on Building and Dwelling Characteristics, 2021** was carried out by TurkStat in October 2021-March 2022 period.

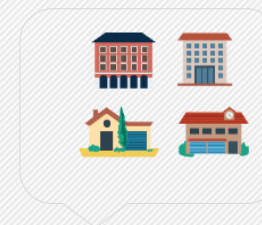
Building Variables	Dwelling Variables
Number of floors	Ownership status
Number of dwellings and workplaces	Number of rooms
Availability of a lift*	Availability and number of kitchens*
Availability of car parking	Water supply system
Construction year	Toilet facilities
	Bathing facilities
	Main type of heating system
	Main type of energy used for heating*

* Non-core variables.



Survey on Building and Dwelling Characteristics, 2021

Sampling unit	Household
Method	CATI
Sampling Frame	Addresses registered in the ABPRS, where households reside.
Sampling Size	306 thousand and 615 addresses
Estimation Level	Province (NUTS 3)
Length of Questionnaire	11 questions in two parts (Part 1: Building, Part 2: Dwelling)
Average duration of interview	~10 minutes
Field Application	4 October 2021 – 1 April 2022
Usage of registers	Spatial Address Registration System (SARS) was utilized for the statistical adjustments and controls for the data. Particularly for: number of floors, construction year of the building, type of living quarters (whether it is a residential dwelling or a workplace) and availability of lift.





Address Based Population Registration System, 2021

4th February 2022



Population and Housing Census, 2021

19th December 2022



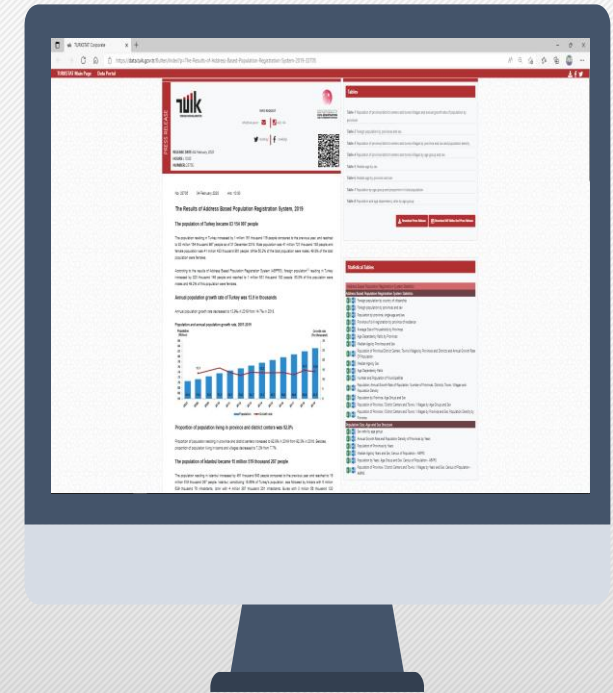
Survey on Building and Dwelling Characteristics, 2021

27th December 2022



Internal Migration Statistics, 2021

28th December 2022



Traditional Censuses

1927 1935 1940 1945 1950 1955 1960 1965 1970 1975 1980 1985 1990 2000

Combined Censuses

2011 Combined Census

(Registers +
Large sample survey*)
(*2.2 mil. HHs)

2021 Register-Dominant Combined Census

(ABPRS + LFS + SBDC*)
(* 306 000 HHs)



Registers

ABPRS &
LFS-based
Estimations



Survey

on Building and Dwelling Characteristics
with CATI Method

NÜFUS VE KONUT
SAYIMI
Population and
Housing Census
2021



TÜRKİYE İSTATİSTİK KURUMU
Turkish Statistical Institute

Ultimate target: Changing the system from combined method to
fully (100 %) register-based census in 2030 round.

❑ Determination of the final census methodology in 2020 round was a significant challenge for TurkStat. Together with increased use of registers compared to the previous census round, 2021 PHC is referred as a “**register-dominant combined census**” by TurkStat.



❑ For the 2030 census round:

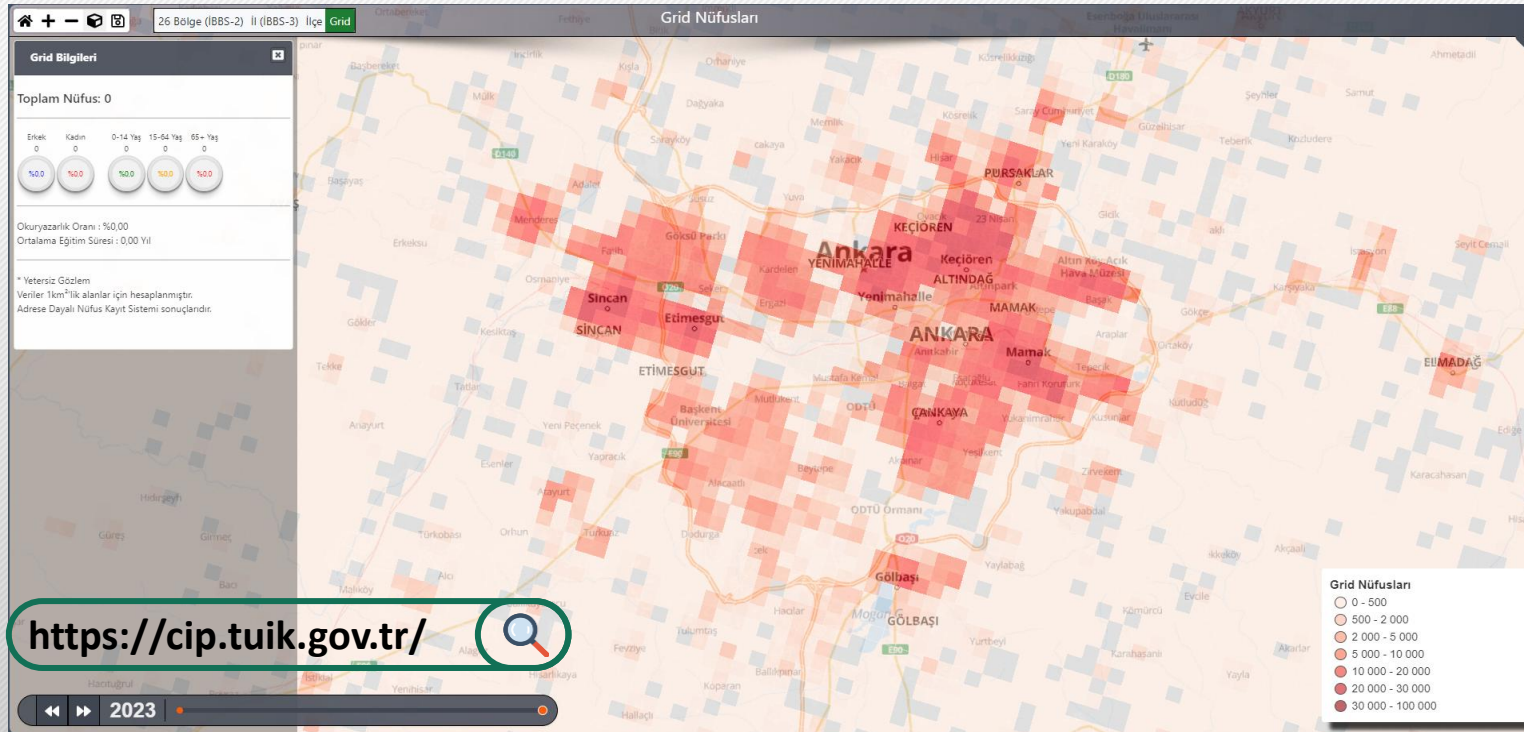
- **Setting up a registration system for buildings and dwellings** will be one of the institutional targets of TurkStat.
- **Improvement of the Population Characteristics Database (PCDB)** in terms of coverage, content and quality.
- **Ultimate target:** Changing the system from combined method to **fully (100 %)** register-based census in 2030 round.



- ❑ **Spatial Address Registration System (SARS)** was operationalized nationwide in 2023. The system is basically the extension of the text-based address registers with **coordinate information**.
- ❑ However, **TurkStat could not use the SARS directly for 2021 PHC due to the time lap** between the census operation and the introduction of the SARS.



Spatial Address Registration System



- ❑ With the introduction of the SARS, **population grid (1 km² field level) statistics** were produced for the first time in 2023. TurkStat also developed a new urban-rural typology (**based on the Degree of Urbanisation (DEGURBA)**) by using the population density over 1 km² population grids.

- ❑ **Grid statistics in 2030 census round!**

Thank you for your attention!

