

# Population statistics from administrative registers: ADDRESS BASED POPULATION REGISTRATION SYSTEM (ABPRS)

Online Training Course on 'Usage of Administrative Registries in Producing Demographic and Social Statistics'



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# History of Traditional Censuses in Türkiye

## ➤ Traditional population censuses:

- The first census in 1927,
- The second census in 1935,
- Every five years between 1935-1990,
- The last traditional census in 2000
- *Totally 14 traditional population censuses*



## ➤ Method:

- Traditional census method (face to face interview),
- Standard questionnaire (paper) (PAPI),
- «De facto» population definition,
- One day application with national curfew (no permission to go out)

## Problems of Traditional Censuses

- One day application with **national curfew**,
- No information on usual residence (**de jure**),
- **Over-counting** population,
- Need for **too many enumerators** (2000 PHC 1 million)
- **High cost**,
- **Limited number of questions** included in the census questionnaires because of the one-day application,
- **Very long duration** of data processing (around 3.5 years),
- **Outdated** information



# Data Sources for Population Statistics

## 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.



# Data Sources for Population Statistics

## TR Identity Number

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



\* The identity is fictional.

- **... provides:**
  - ✓ Registering **all vital events** occurred from the moment of birth,
  - ✓ More quickly and well-directed public services,
  - ✓ Fast and efficient identification,
  - ✓ **Linkage between population registers and other personal information.**

# Data Sources for Population Statistics

## 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 continuously by the **declarations of address changes**
  - **Up-to-dateness of address components** is ensured by the Ministry
- ... **text based** address registers. (No spatial/coordinate information)

## Target

Establishing **Address Based Population Registration System** and changing the census methodology from traditional to register based.







**ABPRS:**

# ADDRESS BASED POPULATION REGISTRATION SYSTEM



## Background of the ABPRS



**1927**  
First  
Traditional  
Census

**2000**  
Last  
Traditional  
Census

**2002**  
Central Civil  
Registration  
System (MERNIS)

**2006**  
National  
Address  
Database

**2007**  
Address Based  
Population  
Registration  
System (ABPRS)

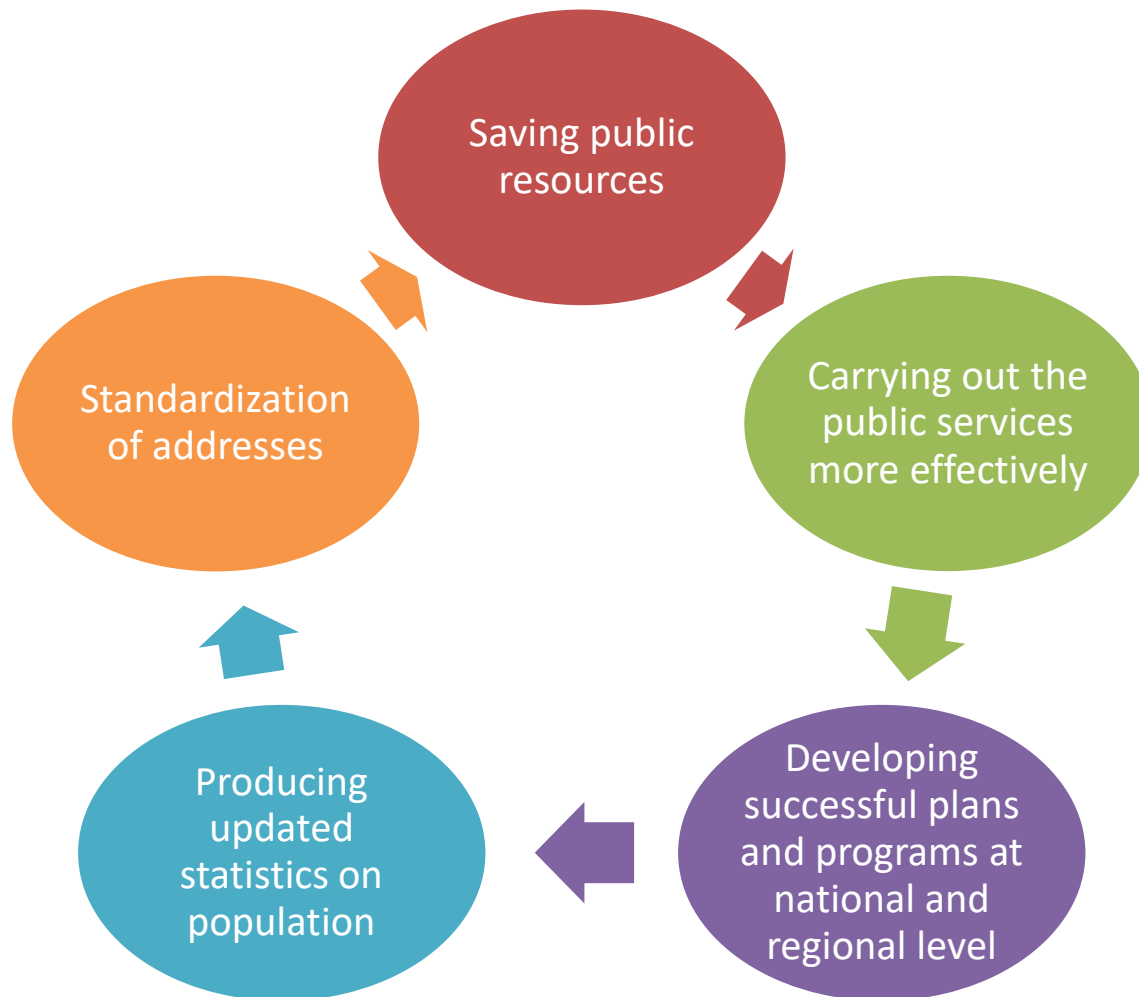
Negative features  
of the censuses  
with field  
operation

Unique  
personal ID  
numbers used  
nationwide

Unique address  
codes and  
address  
standardization



## Why ABPRS?



## Purposes of the ABPRS-1

- ❑ To define an **address standard** and prevent different descriptions of an address.
- ❑ To obtain a **standardized numbering and signboarding** for all over the country.
- ❑ To set up a **central address database** including all of the addresses in the country.



## Unstandardized Address Structure

NAME-SURNAME	POSTED DOCUMENT TYPE	ADDRESS ON THE DOCUMENT
Hüseyin YILDIRIM	Electric Bill	Anavatan Avenue, Besides Zirve Hotel Pelitli / TRABZON
Hüseyin YILDIRIM	Water Bill	Devlet Karayolu Avenue, Yıldırım Apartment Pelitli / TRABZON
Hüseyin YILDIRIM	Telephone Bill	Adnan Kahveci District, Rize Avenue, Besides Zirve Hotel, 61010 Pelitli / TRABZON
Hüseyin YILDIRIM	Social Security Document	Adnan Kahveci District, Rize Avenue, No:160 Pelitli / TRABZON
Hüseyin YILDIRIM	Mail	Hükümet Avenue, Besides Zirve Hotel 2nd Storey, Pelitli / TRABZON
Kenan YILDIRIM	Student Selection and Placement (Result of a Central Exam)	Hükümet Avenue, Adnan Kahveci District, No:160 Pelitli / TRABZON

## Purposes of the ABPRS-2

- ☐ To match the **personal data and addresses** by a field work.
- ☐ To construct a separate database for the **foreigners living in Türkiye**.
- ☐ To obtain up-to-date information on place of residence and the actual information on population size & structure.
- ☐ To be able to use **De-Jure definition** (*legal population definition*).
- ☐ To monitor **population movements** at any time.

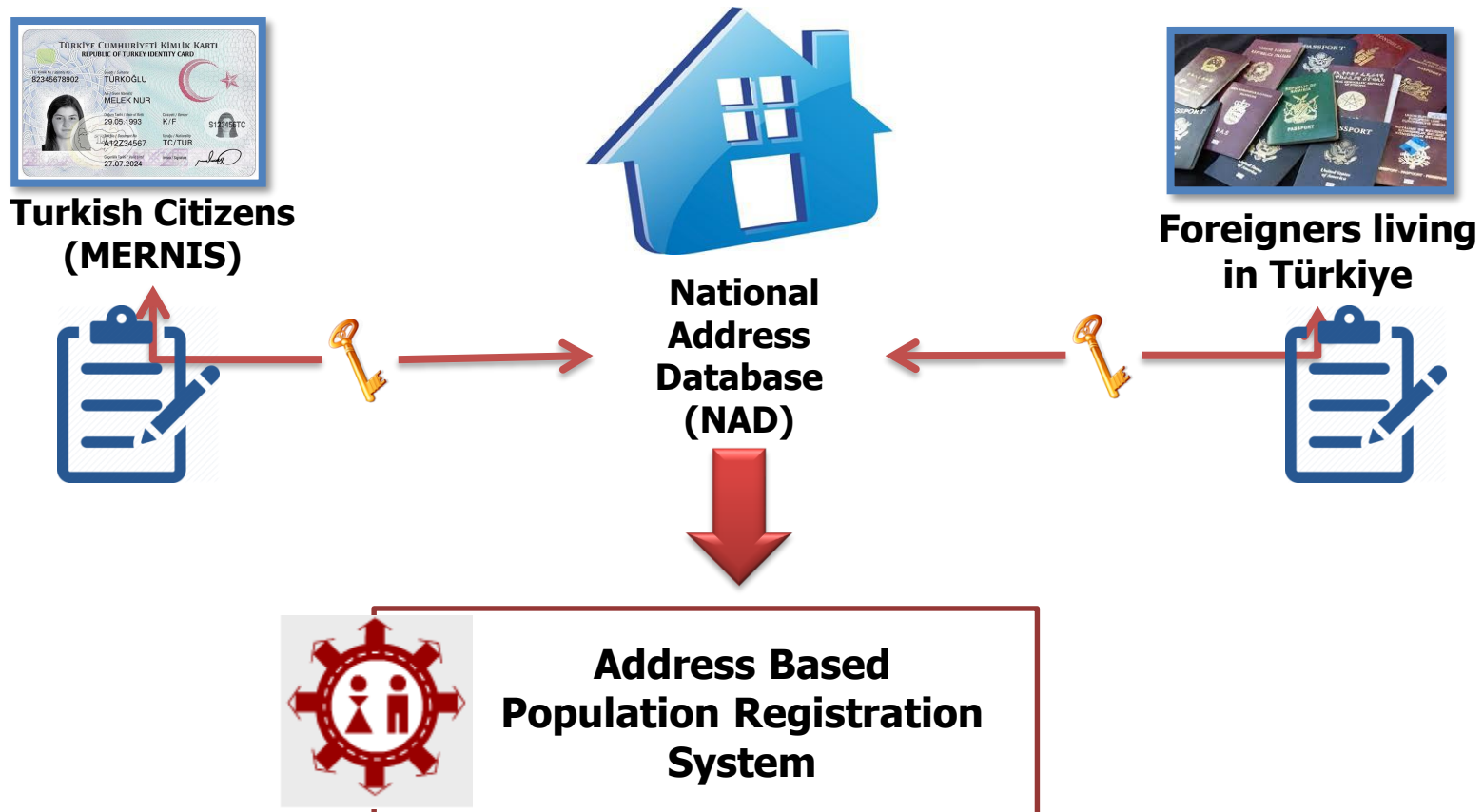
**De Jure**

"In Law"

**De Facto**

"In Fact"

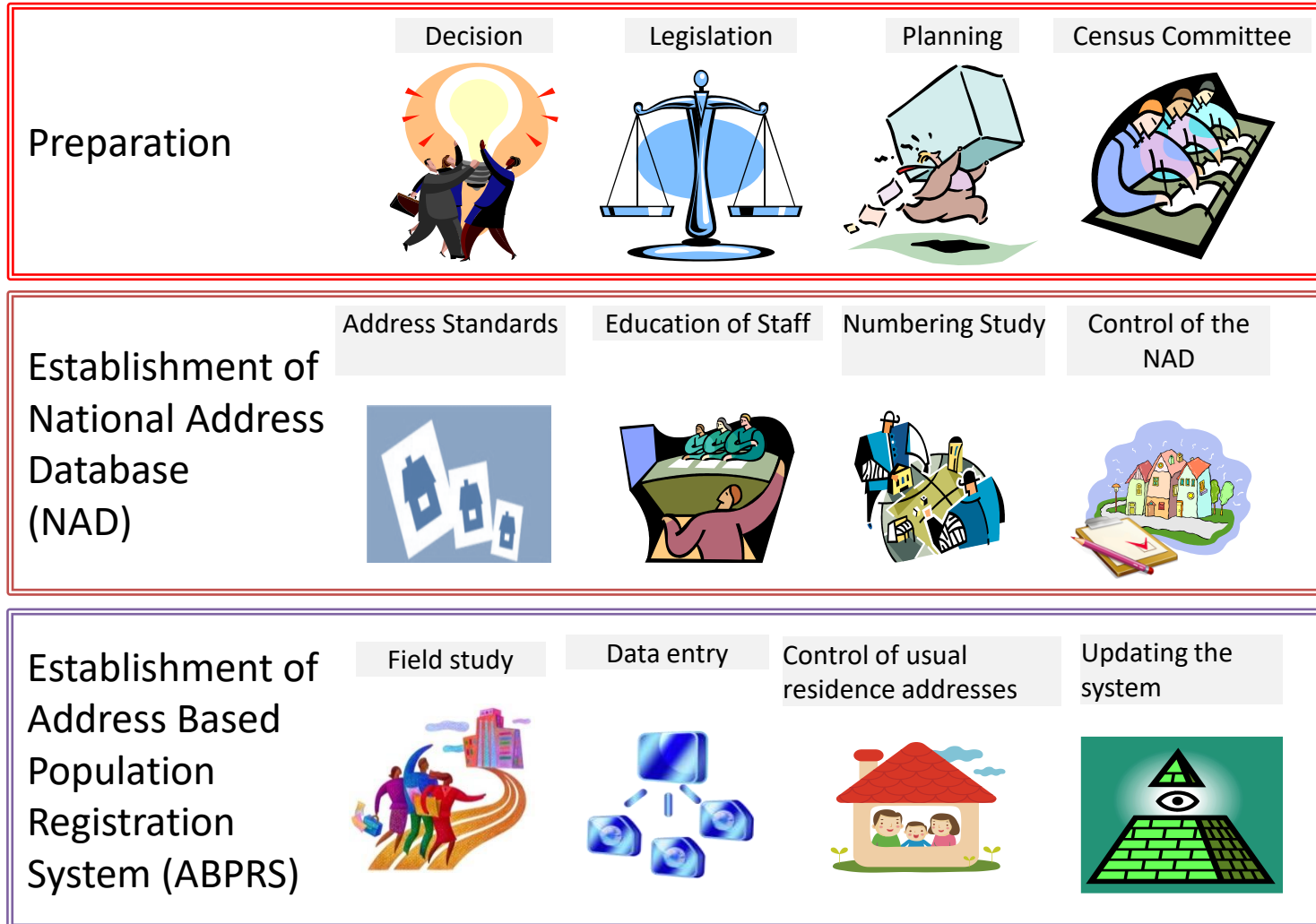
# What is Address Based Population Registration System?



Personal information in MERNIS was matched with address information in NAD by using unique personal identification numbers & address codes.



# General Stages of Establishing the ABPRS



LESS THAN 2 YEARS

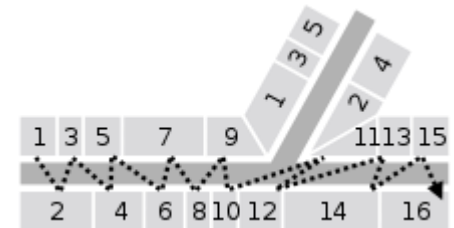
## Legal Base

1. **Civil Registration Services Law** No. 5490, dated 29.04.2006.
  - ❑ Civil Registration Services Law charged;
    - TurkStat for establishing the ABPRS.
    - Ministry of Interior for maintaining and updating the system.
2. **The Regulation on Address and Numbering Study.**  
(Prepared in accordance with Civil Registration Services Law)
3. The Turkish Statistical Law No. 5429, dated 10.11.2005  
(related articles on field application and data confidentiality).



## Address Standardization

- The Regulation on Address and Numbering defined:
- How the buildings should be numbered,
  - The rules to determine the name and the number of avenues, streets or group of buildings,
  - The direction of streets,
  - Content and structure of signboards,
  - Where the signboards will be put,
  - How to number the interior doors of the buildings,
  - How to control the numbering studies.



## Address Components Standard

- ❑ Address components are geographical elements used for the description of an address.
- ❑ **Address Components Standard** was also defined by Turkish Standards Institute (with the code TSTEN14142-1) in 2006.
- ❑ According to the standard, an address must contain;
  - Province, district, municipality, town and village names.
  - Quarter, square, boulevard, road and street names.
  - Building and indoor numbers.
  - Address codes.
  - Post codes.



## Preparatory Studies

- ❑ Several pre-tests and pilot studies were conducted for both questionnaire and methodology.
- ❑ In this process;
  - Application by teachers
  - Application by health personnel



were also tested. But as a result, it is determined that the most effective method was **face to face interview by enumerators in a certain period.**

## Field Operation

- ❑ 26 Regional Offices of TurkStat organized the field operation.
- ❑ Field operation was conducted in two parts:
  - Defining Addresses and Establishment of the NAD
  - Collecting Information on Usual Residence Addresses
- ❑ It took approximately 1 year including numbering work.
- ❑ **Total Cost:** 49.7 million \$ (0,7 \$ per capita).
- ❑ 58.530 enumerators/month.





## Province/District Executive Committees

- ❑ For the organization and application of the study in the field, executive committees were established in the provinces and districts.

- In Türkiye, there were 81 provinces and 850 districts at the implementation date.



- ❑ The members of the **Province Executive Committee** are;

- Governor (Head of the Committee),
  - Mayor,
  - Director of Special Administration,
  - Population Registration Director of the District,
  - TurkStat Representative,
  - other persons charged by the governor of the district.

- ❑ The members of the **District Executive Committee** are;

- Governor (Head of the Committee),
  - Mayor,
  - Director of Special Administration,
  - Population Registration Director of the District,
  - TurkStat Representative,
  - other persons charged by the governor of the district.

## Registration and Data Entry Offices

### ❑ Responsibilities of **Registration Offices**:

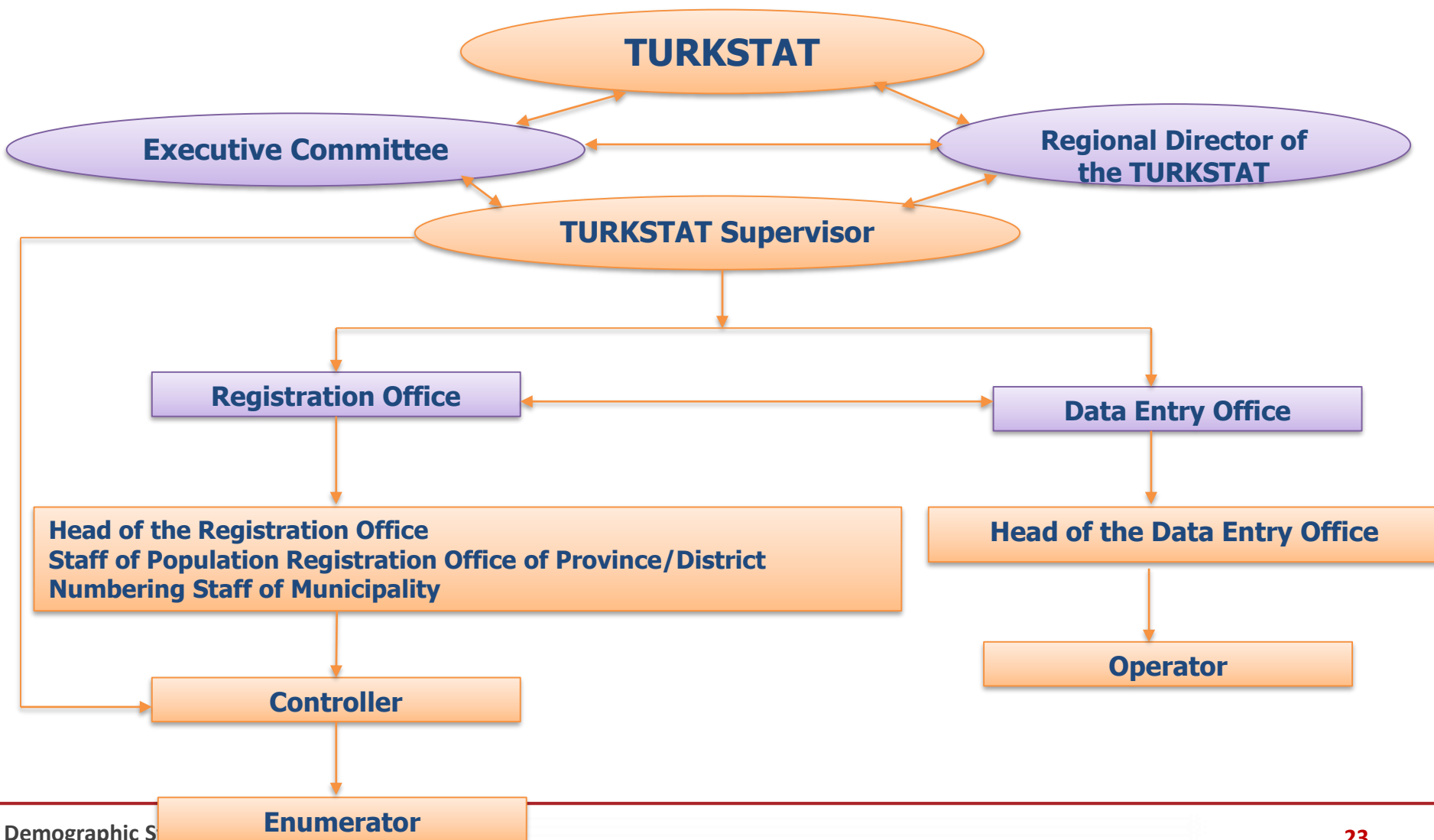
- Organization of the staff charged in the field,
- Following up the study,
- Checking the forms,
- Preparation of the forms for data entry,
- Solving problems related to addresses,
- Giving information about the Turkish Republic identification numbers of the persons who do not know his/her identification number,
- Answering the questions of the citizens about the study.

### ❑ Responsibilities of **Data Entry Offices**:

- Data entry offices were established in all province centers and in populous district centers.
- At these offices, data entry and matching processes were done by the operators.



# Organisation for Field Operation



## Defining Addresses and Establishment of the NAD

- ❑ Field work for defining addresses were carried out by
  - by the municipalities in the localities having municipal organizations and
  - by the Special Provincial Administrations in the villages.
- ❑ Infrastructural studies of the NAD were carried out by TurkStat. All information related to addresses was entered to the NAD by local organizations.
- ❑ Around **40 million addresses** were entered to the system.
- ❑ **Unique code** was given to each address.



## Control of the NAD

- ❑ Before the ABPRS field application, *10 percent of the addresses in the NAD were controlled* (mainly for systematic errors).
- ❑ The municipal staff in the registration offices were informed about the addresses which were wrong or could not be found in the field or were not present in the NAD.
- ❑ Problems were solved in the field, and corrections were done on the database.
- ❑ Following this process, field application for the ABPRS was started.

# Field Application for Usual Residence Addresses

## Coverage of the study:

- ✓ Persons living in dwellings or other housing units,
- ✓ Persons residing in institutional places,
- ✓ Nomads,
- ✓ Foreigners living in Türkiye.
- ✗ Turkish Citizens residing abroad were not included.

## Forms Used in the Field Application:

- ✓ Information were compiled by using 2 types of forms in the field:
  1. Household Form
  2. Form for Institutional Places

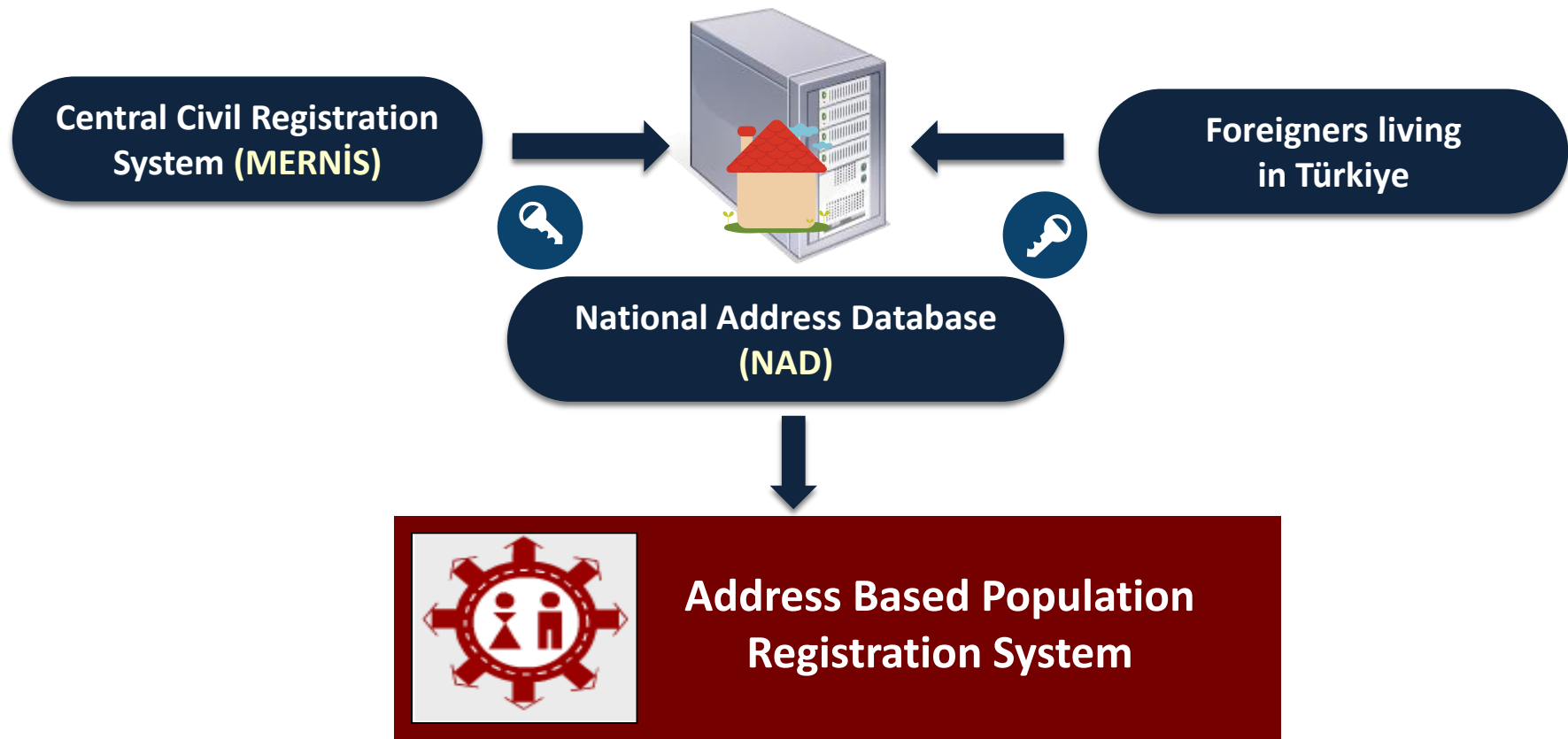




## Field Application for Usual Residence Addresses

- ❑ The field application was carried out by TurkStat in order to collect the **usual residence addresses** of Turkish citizens and foreigners residing in Türkiye,
- ❑ ***Usual Residence (Domicile) Address:***  
*Usual residence address of a person is the place where that person live or intend to live more than 6 months in a year. A person may not have more than one usual residence address.*
- ❑ **All of the addresses recorded in the NAD were visited** and information of the residents was collected by enumerators during the interviews.

## ABPRS: Main Structure



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

## Checking the Usual Residence Addresses from the Address Lists

- ❑ After the matching process, the address lists that include personal information by usual residence addresses were sent to the offices of the head of the quarters (muhtars)/ head of the villages for controlling by persons.
- ❑ **In two-month process, persons went to the offices and confirm their personal information and their usual residence addresses.** This confirmation could be done via TurkStat's web page.
- ❑ In the case of changing/correcting the usual residence address, persons applied to the Registration Offices and filled in the "Address Declaration Form".

## Controlling the System for Under-coverage

- ❑ Studies were carried out in order to:
  - **Control the system for under-coverage,**
  - Include the persons who had not been currently in the ABPRS.
- ❑ The ABPRS registers were compared with the records of students and academicians of the universities, the records of employees of governmental organizations, banks, some companies, etc.
- ❑ **TurkStat informed the universities and working places about persons who are not included in the ABPRS to register in the system.**



## Controlling the System for Under-coverage

- ❑ TurkStat tried to reach the **persons who are included in MERNIS registers but not included in the ABPRS** by using the **computer assisted telephone interviewing (CATI)** technology.
- ❑ CATI Study is done by the central and regional offices of TurkStat.
- ❑ Information (telephone number or address) about the non-registered person in the ABPRS is obtained by **calling the relatives of that person.**

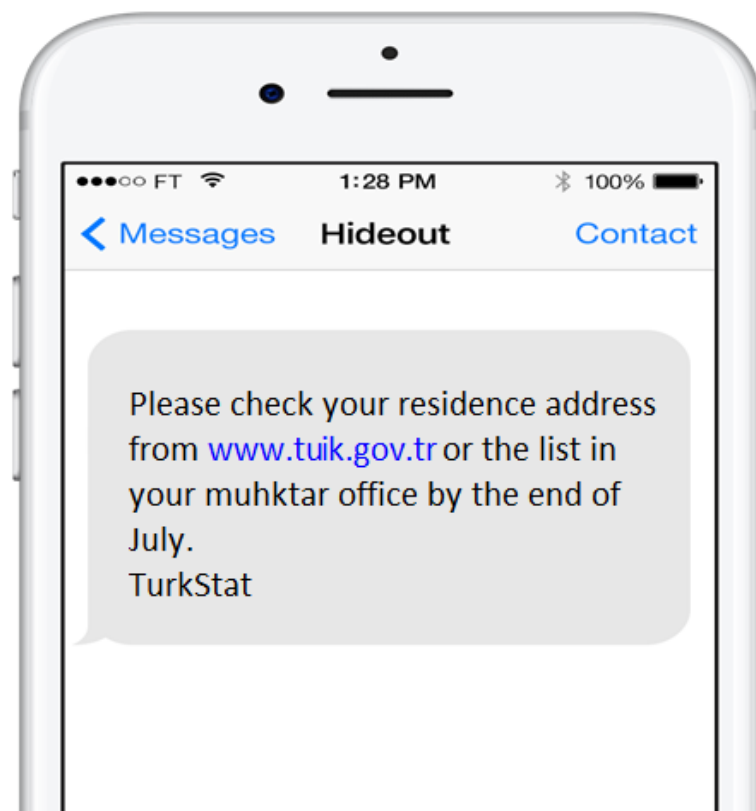


## Controlling the System for Under-coverage

And also,

- ❑ For including the persons who had not been currently registered in the ABPRS, **media (TV/radio programs, newspapers, etc.)** was used **effectively**.
- ❑ **SMS messages** were sent to people.
- ❑ **Informative letters** were sent to public institutions and private establishments (which have more than 250 workers).

### ❑ *SMS Message*





## ABPRS Publicity Activities

- ❑ *"Be aware of your future. Register to the Address Based Population Registration System."*
- ❑ *"Don't be indifferent. Take your own place in the future's modern Türkiye."*



- ❖ *In order to raise awareness and attract attention, one of the most famous theater /voice actors in the country vocalized these slogans in radio stations and TV programmes.*

# ABPRS Publicity Activities

## Household Letter

Sayın Hanehalkı Sorumlusu,

5490 Sayılı **Nüfus Hizmetleri Kanunu** gereği ülkemizde **Adrese Dayalı Nüfus Kayıt Sistemi** kurma çalışmalarına başlanmıştır. Bu sistem için ülke genelinde tüm adres bilgilerinin kaydedildiği Ulusal Adres Veri Tabanı oluşturulacak, Türkiye Cumhuriyeti vatandaşları ile ülkemizde ikamet eden yabancı uyruklu kişilerin ikamet adresleri tespit edilecek ve Türkiye Cumhuriyeti vatandaşları için bu adreslerin T.C. kimlik numaraları yardımıyla MERNİS veri tabanındaki nüfus kütükleri ile eşleştirilmesi sağlanacaktır.

Bu sistem ile yerleşim yeri bazında nüfusun büyüklüğü ve nitelikleri hakkında güncel bilgiler elde edilecek, adres ve nüfusun tek bir merkezden takibi sağlanacak, ulusal düzeyde adreslerde standart geliştirilerek kaynak israfı önlenecek ve böylece insan gücü ve zaman tasarrufu ile kamu kaynaklarının daha etkin kullanımı sağlanacaktır.

**Adrese Dayalı Nüfus Kayıt Sisteminin** oluşturulması için ...../..../200.... tarihinde hanenize gelinmiş, ancak adresinizde kimse bulunamamıştır. Bu nedenle, hanehalkı sorumlusu veya diğer bir hanehalkı üyesi tarafından doldurulması gereken bilgi formu yöneticiniz/muhtarınız ..... 'ya bırakılmıştır. Bu formun doldurulması Nüfus Hizmetleri Kanunu gereği **zorunludur**. Bilgi formunu, hanenizde ikamet eden tüm kişilerin nüfus cüzdanı bilgilerini esas alarak en geç 3 gün içinde doldurmanız ve formu yöneticinize/muhtarınıza teslim etmeniz gerekmektedir. Bu çalışmaya ilişkin herhangi bir sorunuz olduğunda, aşağıda açık adresi ve telefon numarası verilen kayıt bürosu ile irtibata geçebilirsiniz.

Katılmanız ve işbirliğiniz için şimdiden teşekkür ederim.

Adrese Dayalı Nüfus Kayıt Sistemi  
Yürütme Komitesi Başkanı

Kayıt Bürosunun  
Adresi: .....  
Telefon numarası: .....

## Announcement of mukhtar area lists

T.C. BAŞBAKANLIK  
TÜRKİYE İSTATİSTİK KURUMU



### ADRES BİLGİLERİNİZİ KONTROL EDİNİZ.

- 5490 sayılı Nüfus Hizmetleri Kanunu gereği yürütülen Adrese Dayalı Nüfus Kayıt Sistemi çalışması kapsamında yapılan hane ziyaretleri sonucunda belirlenen ikamet adreslerine ilişkin listeler muhtarlıklarda askıya çıkarılmıştır.
- Türkiye sınırları içerisinde ikamet eden her fert, kendisinin ve aynı hanede birlikte yaşadığı kişilerin ikamet adresini Muhtarlık Askı Listesinden veya [www.tuik.gov.tr](http://www.tuik.gov.tr) internet adresinden kontrol etmek ve eksiklik veya hata tespit ettiğinde kayıt bürolarına başvurarak adres bilgilerinin düzeltilmesini sağlamakla yükümlüdür.
- Artık resmi işlemlerde ve kamu hizmetlerinde bu adresler esas alınacağından, gelecekte mağdur olunmaması için adres bilgilerinin kontrol edilmesi çok önemlidir.
- Askı listelerindeki haneye ilgili adres ve fert bilgilerindeki düzeltme talepleri, muhtarlıklarda ilan edilen yerlere, Adres Beyan Formu veya Hatalı Adres Bildirim Formu doldurularak yapılacaktır.
- Askı listeleri hane ziyaretleri sırasında en son beyan edilen ikamet adreslerine göre hazırlanmıştır. Resmi kayıtlara göre yurtdışında ikamet ettiği tespit edilen kişiler askı listelerinde yer almamaktadır.
- Başvurularda hanede ikamet eden tüm fertlerin T.C. kimlik numaraları ve nüfus cüzdanı bilgileri hazır bulundurulacaktır.
- Askı listelerindeki kayıt sayısının toplamı, otuz binin altında olan ilçe merkezi, belde ve köylerde adres değişikliği beyan edenlerden, daha önce başka bir yerleşim yerinde kaydı olanların başvuruları, ancak 1 Ekim 2006 tarihinden sonra ikamet adresinin değiştiğini gösterir aşağıdaki belgelerden en az birini getirilmeleri halinde işleme konulacaktır.
  - Doğum, ölüm, evlenme, boşanma veya evlat edinmeye ilişkin belge,
  - Vergi levhası, SSK bildirgesi, tavin veya emeklilik belgesi,
  - Kazanılan veya bitirilen eğitim kurumunu gösterir belge,
  - Yurtdışından kesin dönüş yapıldığını gösterir belge,
  - 1 Ekim 2006 tarihinden sonra önceki ikamet adresinden ayrıldığını gösterir mahalle muhtarlığı, jandarma veya polis karakollarından alınmış onaylı belge.
- Askı sürecinde;
  - ADNKS veritabanına ilk defa kayıt yaptırılanlar,
  - Aynı yerleşim yeri (il merkezi, ilçe merkezi, belde veya köy) içinde adres değişikliği yaptığını beyan edenler,
  - Hanesinden fert eksiklikleri
 sadece Adres Beyan Formu dolduracak, bu beyan sahiplerinden ilave belge istenmeyecektir.
- Başvurular, sadece daimi ikamet adresi için yapılacak, yazlık, kışlık veya yayla evi gibi, yıl içinde toplam altı aydan az kalınan yerler için yapılan başvurular kabul edilmeyecektir.
- Gerçekleştiren aykırı ikamet adresi beyanında bulunduğu tespit edilenlere, 5429 sayılı Türkiye İstatistik Kanunu hükümleri gereği 2.367.- YTL idari para cezası uygulanacaktır.

[www.tuik.gov.tr](http://www.tuik.gov.tr)

## Maintenance and up-to-dateness of the System

- ❑ After establishment of the system by TurkStat, the system was transferred to the Ministry of Interior by the end of 2007.
- ❑ Ministry of Interior is responsible for maintaining and updating the system.
- ❑ ABPRS is 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 General Directorate of Civil Registration and Nationality,
  - Updating the **usual residence addresses** by address declarations of persons to the civil registration offices.

## Up-to-dateness of the System

- ❑ **Persons are under the obligation of notifying changes of usual residence address within 20 working days** to the civil registration offices (or agencies providing address-based services). Persons who fail to fulfill their address notification obligation are subjected to penalty.
- ❑ **A person can have only one address of usual residence.** But other addresses such as summer houses, winter houses, second or third houses may be entered to the system (without obligation).
- ❑ Agencies/institutions shall use address information stored in the system when carrying out their acts and procedures.

# Up-to-dateness of the System

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

→ Ensuring up-to-dateness automatically.

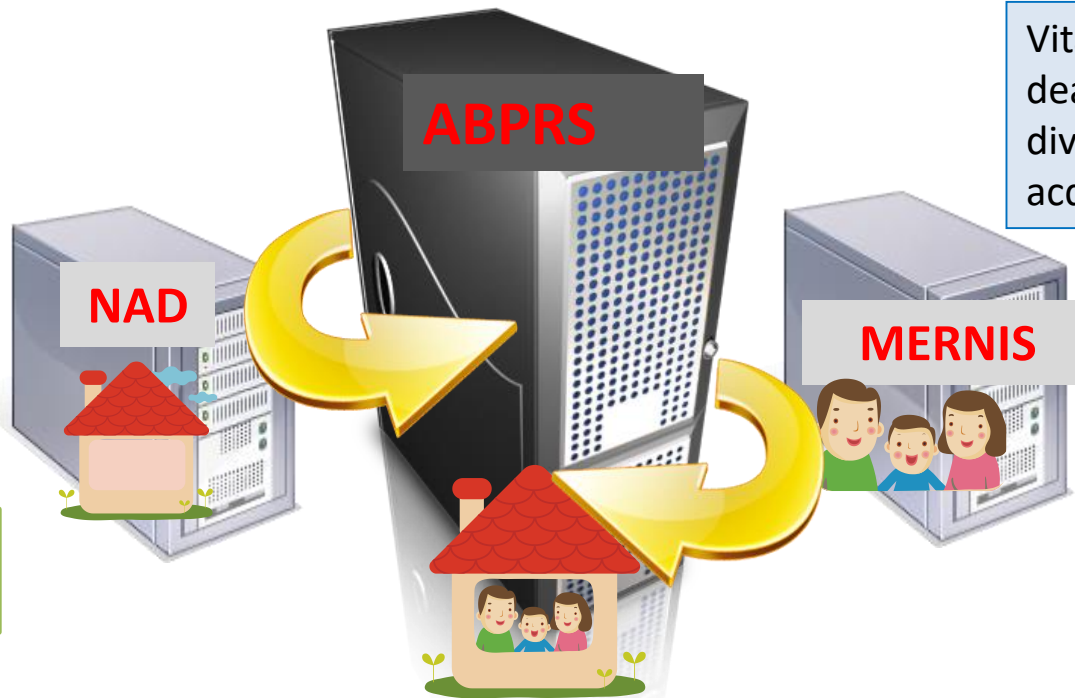
Changes in usual  
residence addresses

Burned and  
Demolished Buildings

Construction Forms  
(new buildings)

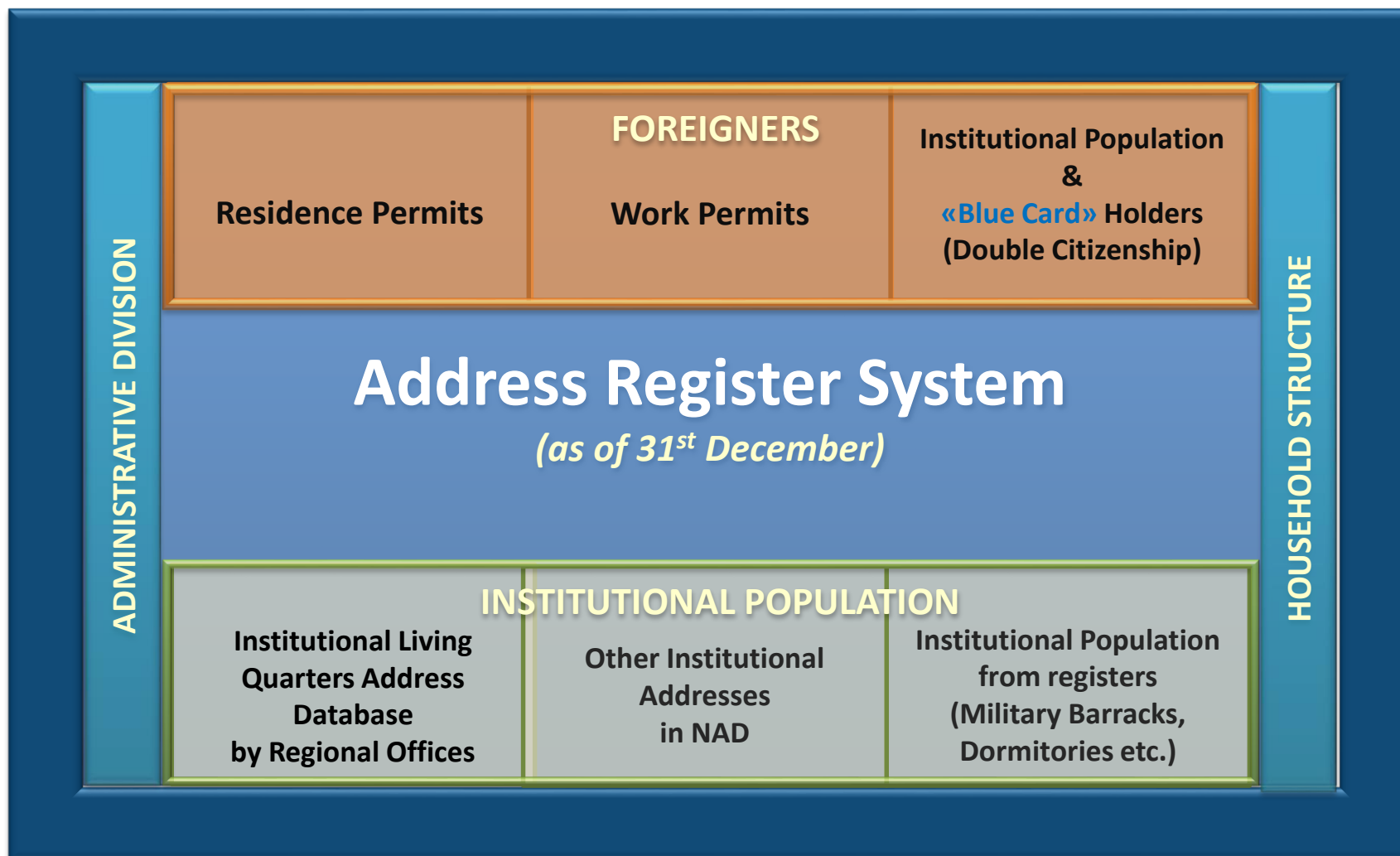
Changes in address  
components

Changes in  
administrative units



Vital events (Births,  
deaths, marriages and  
divorces) and citizenship  
acquisition/loss

## ABPRS as a Statistical Register



# Which statistics produced from ABPRS?

## Statistics produced annually (since 31 December 2007) :

- ✓ Population size by localities
- ✓ Age and sex structure
- ✓ Literacy and completed level of education
- ✓ Nationality (country of citizenship)
- ✓ Marital status
- ✓ Place of civil registration
- ✓ Mean household size
- ✓ Internal migration (since 2008)
- ✓ Place of birth (since 2014)
- ✓ Type of households (since 2016)
- ✓ Immigration and emigration (since 2016)
- ✓ Reason for internal migration (ongoing)



ABPRS is also base for:

- Life tables
- Population projections

Also serves as a sampling frame of household surveys





## Outputs of the System

*Effective use  
of the  
public  
resources*

- Standardization of the addresses,
- Human resource and time saving,
- Preventing from extravagance of resources,
- Up-to-date information by localities.

*Planning of  
the public  
services*

Determining target population for studies which will be done at local level;  
Planning issues like

- Health services,
- Education services,
- Social services,
- Dwelling, transportation, communication, water, electricity, etc.
- Construction of infrastructure of City Information Systems,
- Planning of regional investments.

*Up-to-date  
information for  
execution of  
administrative  
operations*

Executing some laws related to population size;

- establishment of a municipality,
- distribution of parliamentarians by provinces,
- receiving funds of municipalities from the National Provincial Bank according to their share of population.

*Producing  
timely,  
reliable and  
comparable  
statistics*

Production of short term statistics on

- Population size,
- Age and sex,
- Other characteristics of population by localities,

Production of statistics for plans and policies at local level.



## ABPRS: Cost? or Investment?

Census Year	Method	Cost (According to August 2022)
2000	Traditional	39.7 million Euro
2007	Establishment of the ABPRS	32.5 million Euro
2008-2021	Production from the ABPRS	<b>0 Euro</b>



**ABPRS 15  
years old.**  
Alternative  
perspective:  
**Cost per year:  
2.2 million  
Euro**



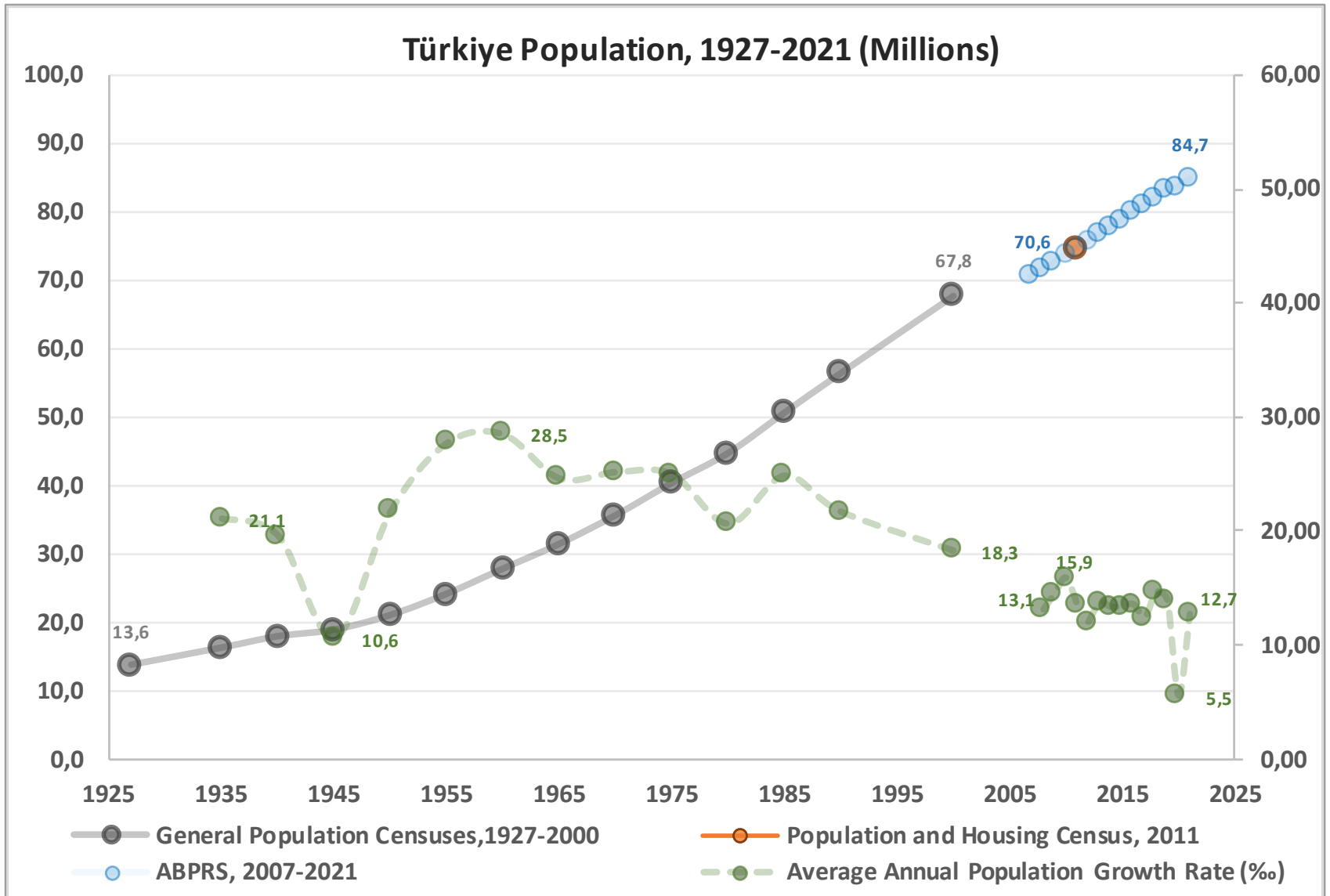
# BASIC HISTORICAL POPULATION FIGURES

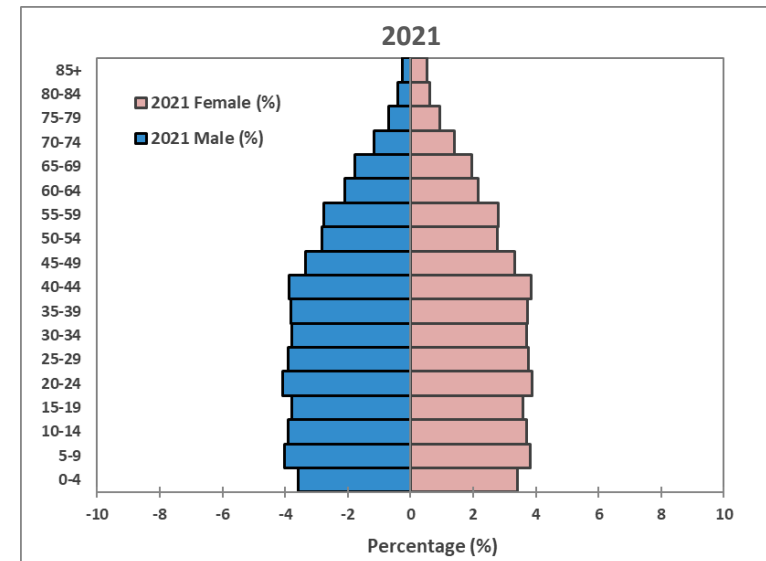
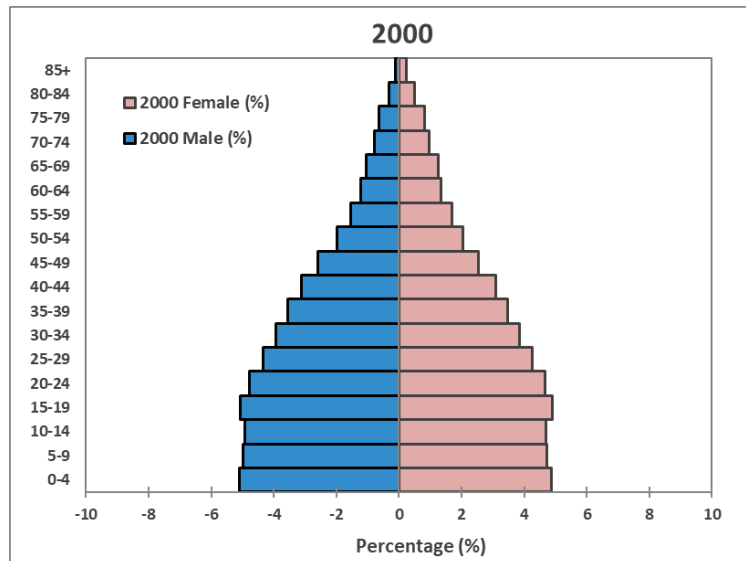
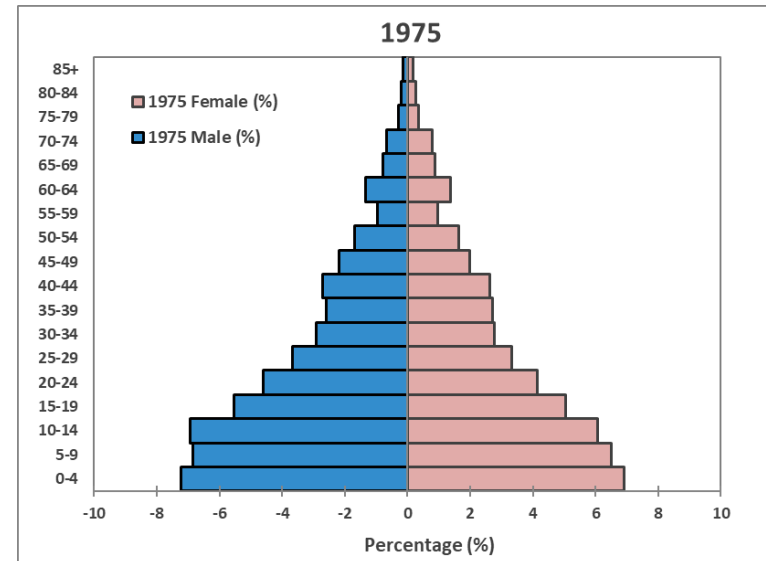
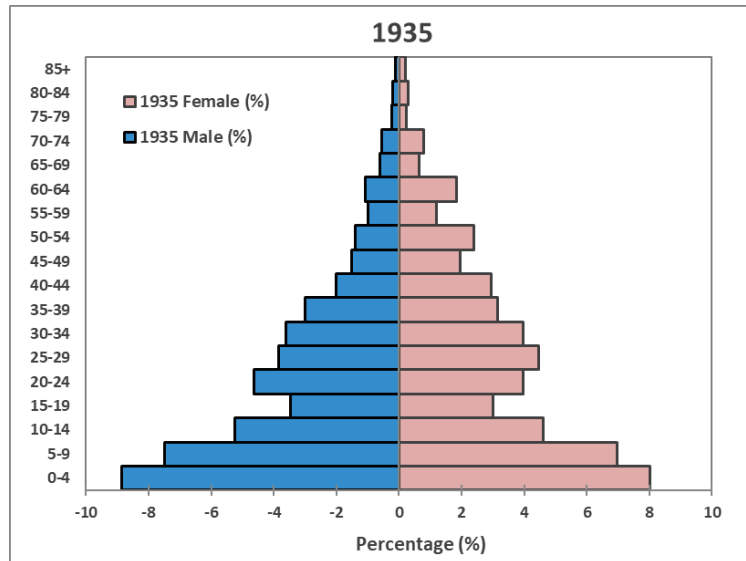


## Population Size and Annual Growth Rate

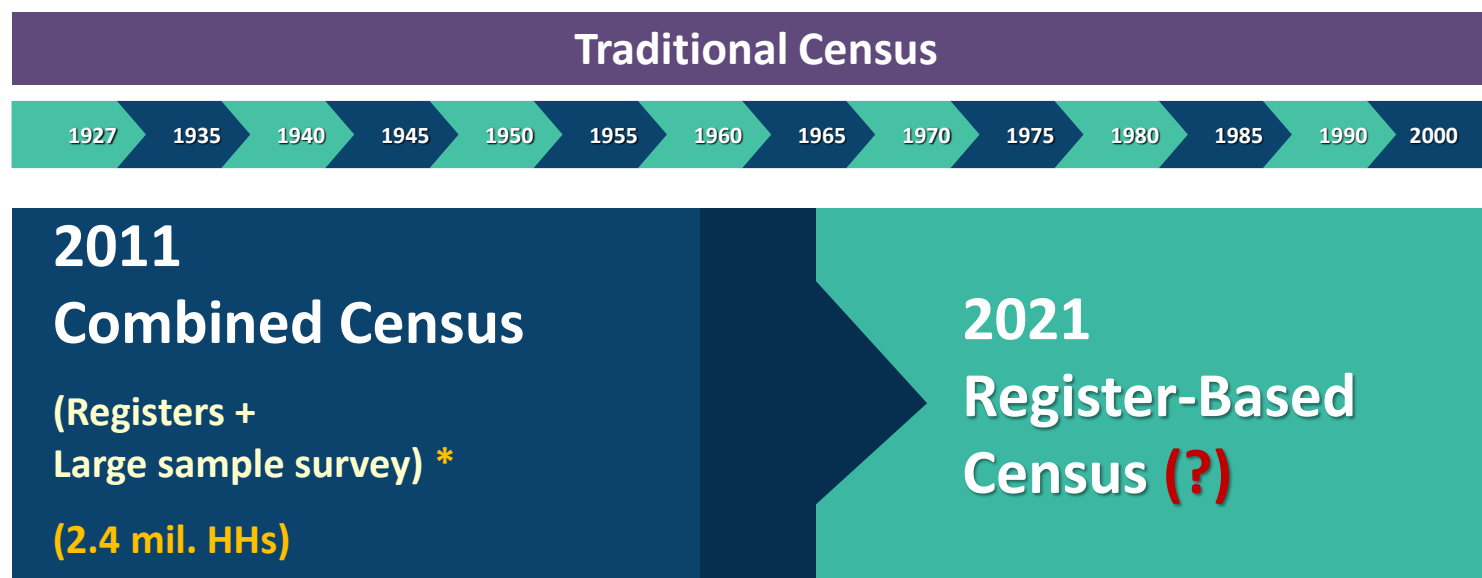
Year	Population	APGR‰
<b>1927</b>	<b>13 640 270</b>	-
1935	16 158 018	21,10
1940	17 820 950	17,03
1945	18 790 174	10,59
1950	20 947 188	21,73
1955	24 064 763	27,75
1960	27 754 820	28,53
1965	31 391 421	24,63
1970	35 605 176	25,19
1975	40 347 719	25,01
1980	44 736 957	20,65
1985	50 664 458	24,88
1990	56 473 035	21,71
<b>2000</b>	<b>67 803 927</b>	<b>18,28</b>

Year	Population	APGR‰
2007	70.586.256	-
2008	71.517.100	13,1
2009	72.561.312	14,5
2010	73.722.988	15,9
2011	74.724.269	13,5
2012	75.627.384	12,0
2013	76.667.864	13,7
2014	77.695.904	13,3
2015	78.741.053	13,4
2016	79.814.871	13,5
2017	80.810.525	12,4
2018	82.003.882	14,7
2019	83.154.997	13,9
2020	83.614.362	5,5
<b>2021</b>	<b>84.680.273</b>	<b>12,7</b>





# Population and Housing Census Methodology



Main census types:

**traditional census:** full field enumeration, whether in person or online; registers and administrative sources may be used to support the enumeration but not directly to obtain census data.

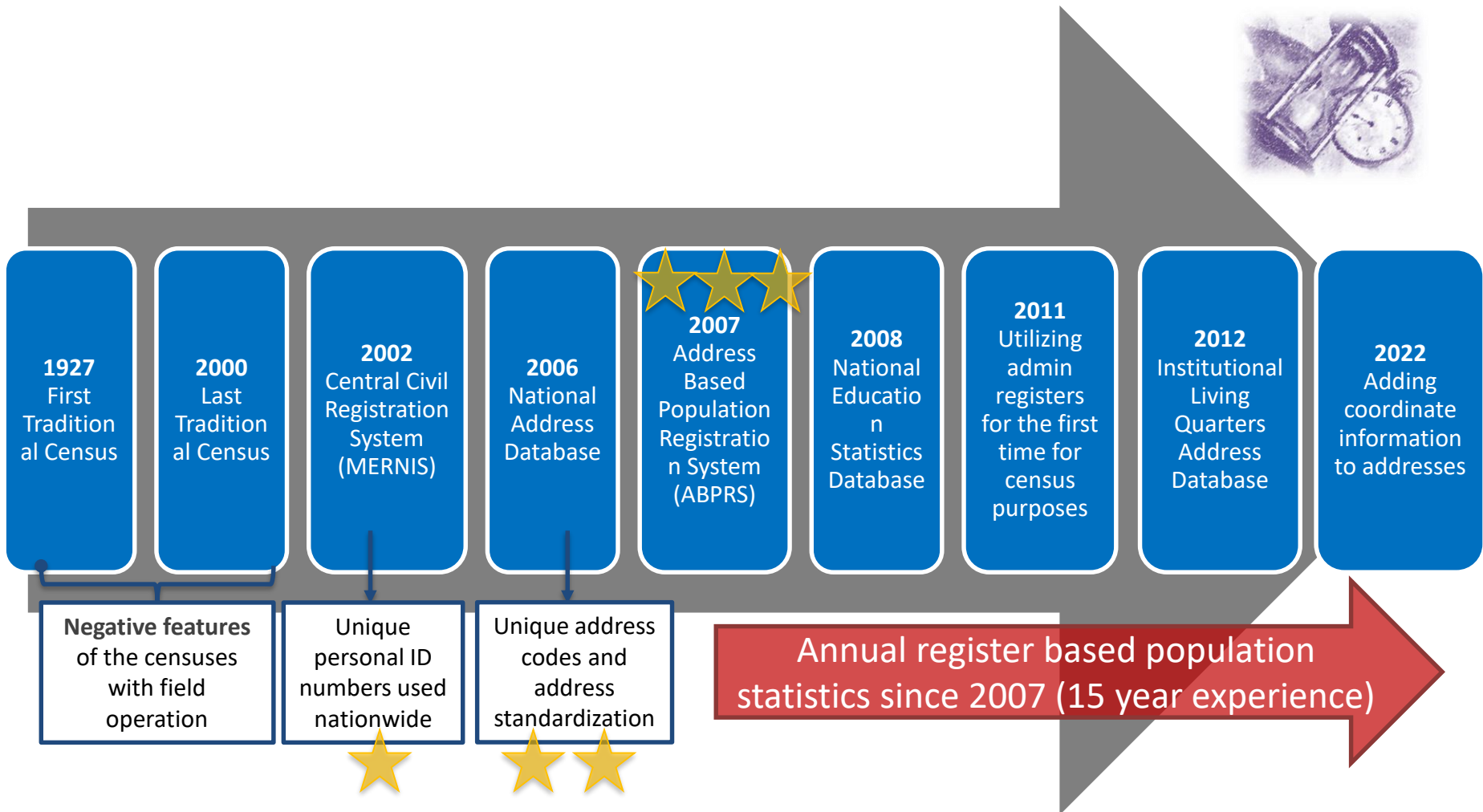
**register-based census:** census based on data from registers and administrative sources, with no field data collection; may also include data from existing surveys not conducted for census purposes.

**combined census:** some data obtained directly from registers or administrative sources, while other data are collected through field data collection conducted specifically for census purposes, covering the whole population or only a sample.

**rolling census:** based on cumulative continuous sample survey covering whole country over an extended period.

Source: <https://statswiki.unece.org/display/censuses/Censuses+of+the+2020+round>

# Driving Forces for a Register Based Census



# Population and Housing Census Methodology



## 2011 Combined Census

(Registers +  
Large sample survey) \*

(2.2 mil. HHs)

## 2021 **Register-Dominant** (!) Combined Census

(Appr. 50 % from ABPRS +  
More registers +  
Ad-Hoc survey) \*

\*(306 000 HHs)

**Ultimate target:** Changing the system from combined method to  
**fully (100 %) register-based census** (*ongoing efforts*)





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