Sensus Penduduk 2020
#MencatatIndonesia

Introducing Administrative Data to the Census in Indonesia

BPS – Statistics Indonesia

Jakarta, 4 March 2022



PC2020 is the 7th Population Census



"Documenting Indonesia toward
ONE POPULATION DATA
for Advanced Indonesia"

LEGAL BASIS

- **Law No. 16 of 1997** on Statistics
- **Law No. 23 of 2006** on Population Administration
- **Law No. 52 of 2009** on Population Development and Family Development
- **Law No. 24 of 2013** on The Ammandement of Law No. 23 of 2006 on Population Administration
- **Government Regulation No. 51 of 1999** on Statistical Governance

United Nations Recommendation 2017
Population and Housing Census 2020

Presidential Decree No. 39 of 2019
One Data Indonesia

Presidential Decree No. 62 of 2019
National Strategies For The Acceleration of Population Administration For The Development of Vital Statistics

POPULATION CENSUS 2020

GOALS



Provides data on number, composition, distribution, and characteristics of Indonesian toward **ONE POPULATION DATA IN INDONESIA**

- Completed in 2020



Provides demographic parameters (fertility, mortality, and migration) as well as other individual characteristics for **population projection** and **SDGs indicators.**

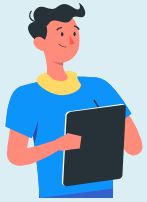
- Planned to be conducted in September 2021
- Postponed to 2022

BASIC IMPROVEMENTS



COMBINED METHOD

*The use of relevant **administrative data** (data managed by the Ministry of Home Affairs (MOHA)) completed by **sample survey***



DATA COLLECTION MODE

Online population census, Drop Off Pick Up (DOPU), and interview

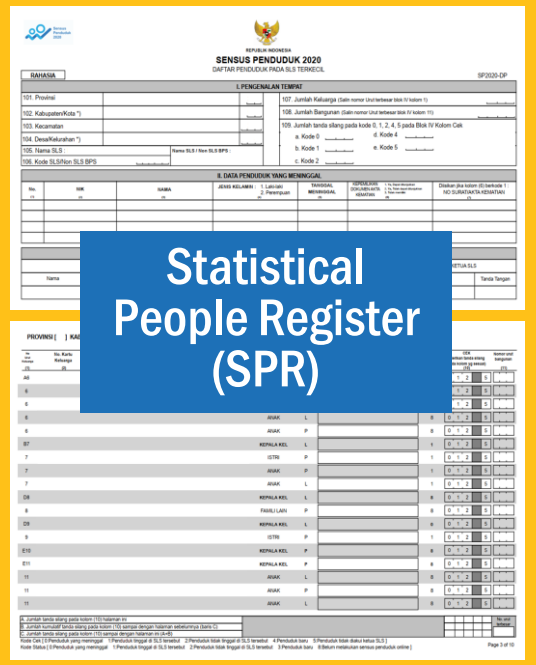
FIELD ACTIVITIES

September 2020

1 VERIFICATION OF SPR

2 GROUND CHECK

3 POPULATION DATA COLLECTION



Statistical People Register (SPR)

- **Confirm the existance** of residents
- Mapping residents **address**: by **domicile** and by **ID Card**
- Adding **new residents** (who are not in the pre-list yet)
- Knowing the **dead residents**



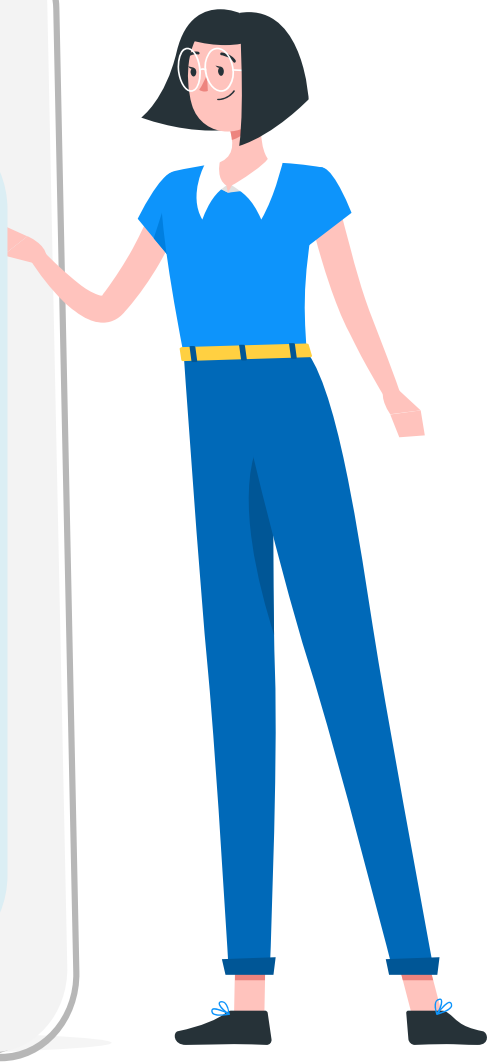
SP2020-C1 Questionnaire

- Updates **the population characteristics**

TOWARDS ONE POPULATION DATA OF INDONESIA

DATA PROCESSING PHASES:

1. PREPARATION OF POPULATION DATABASE FROM MOHA FOR ONLINE CENSUS PURPOSES
2. PREPARATION OF POPULATION DATABASE FOR FIELD ENUMERATION
3. RELEASE POPULATION DATABASE





PREPARATION OF POPULATION DATABASE FROM MOHA

- Coordination with MOHA
- Population data replication from MOHA
- Cleaning and region encoding to BPS standard
- Population database for Online Census

ABOUT PC2020 MATCHING PROCESS

What do needs to be matched?

- ✓ *Master of the region*
- ✓ *SLS*
- ✓ *Individual*

Why do we need region matching?

The region encoding of BPS Statistics and MOHA are different.

What is the focus problems of data matching?

- ✓ *The name of the SLS of MOHA and BPS are different.*
- ✓ *Inconsistent code and area names (from province to the village).*
- ✓ *No standard in writing answers for the same purpose (education, type of work, and relationship with the head of the family). So, BPS need to make standardization. For example, PC2020 can't use ISIC category of work but MOHA's.*

STEP IN STEPS DATA MATCHING

Matching area code

(province, district, sub-district, village)

1

Matching SLS

- *SLS from BPS is the 2019 mapping results*
- *SLS from MOHA is taken from the address in the registered family card (KK)*

2

Enter the information

from registered family card (KK) from MOHA into the BPS' SLS

3

Ground check

for the unmatched registered family card (KK) by BPS Regional

4

MOHA submits individual data

to BPS that used as a database in the Online Census (November 2019)

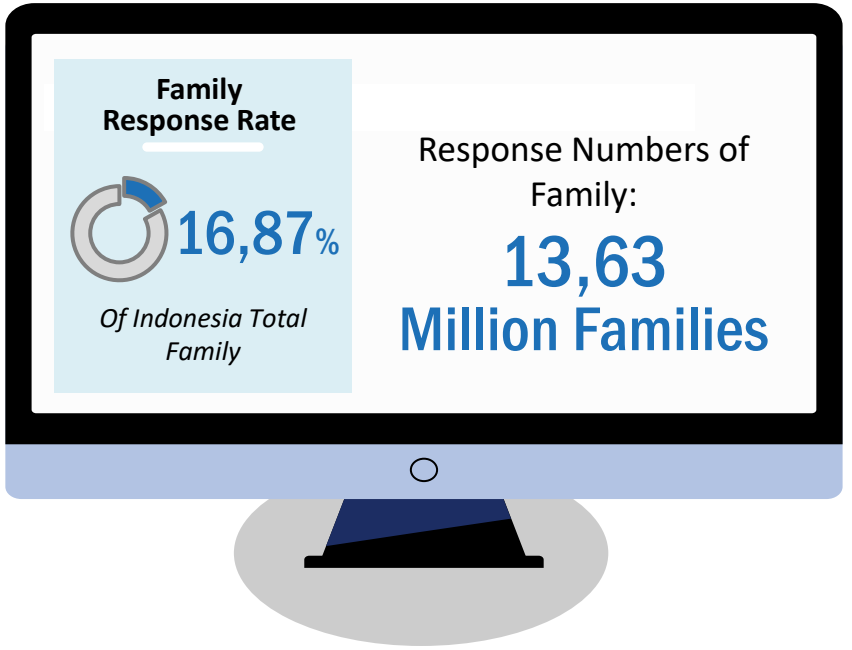
5

SLS (Local Neighbourhood Unit below the village)

PC2020 ONLINE CENSUS

February, 15th – May, 29th 2020





Error data is obtained by comparing data from The Online Census with MOHA data, such as different religions, etc.

> ***51,36 Million Residents*** *or about* ***13,63 Million Families*** *of Indonesia have been participated in the PC2020 Online Census*

PREPARATION POPULATION DATABASE FOR FIELD ENUMERATION



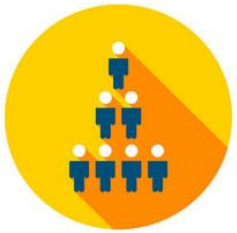
VARIABLE IMPUTATION

Online PC Variable Imputation based on filled variable and MOHA Variable



GRADING

- *To determine the household visited or verified in later field enumeration*
- *Confirm the difference between census and MOHA variables value*



POPULATION DATABASE FOR FIELD ENUMERATION



GENERATING STATISTICAL PEOPLE REGISTER (SPR)

Preparation of data from the result of the Online Census

- Compiled from the result of the online census and those who are not online census but their data is registered in MOHA
- Several Online Census status will state in SPR, such as:
  - ✓ Not Online Census yet
  - ✓ Already, but needs to be re-entered
  - ✓ Already, move out
  - ✓ Already, live in this SLS
  - ✓ Already, declared dead
  - ✓ Already, need confirmation (date of birth, sex, or ID number)

SPR Printing

- SPR made on SLS level
- We also made village level of SPR as the list of names of residents who live in the Village area but whose SLS area is not known
- Digital SPR was built to facilitate census enumerator in searching resident's name/address

RELEASE POPULATION DATABASE

Data Integration

Population data from field enumeration, Task Force, and overseas population census

1

Deduplication

By using deterministic and probabilistic approach

2

Consolidation

Consolidation of processing results with MOHA

3

Integration

of processed data with MOHA based on consolidation

4

Release Population Database

5

DATA SOURCES AND PROFILES



ADMINISTRATIVE DATA

292.979.718

records/distinct ID Number

Attributes:

- ID number
- Family card number
- Full name
- Sex
- Date of birth
- Place of birth
- Family relationship
- Marital status
- Profession



ONLINE POPULATION CENSUS

48.266.123 *records*

Attributes:

- ID number
- Family card number
- Full name
- Sex
- Date of birth
- Family relationship
- Marital status
- Profession
- etc (activity, housing)



FIELD ENUMERATION

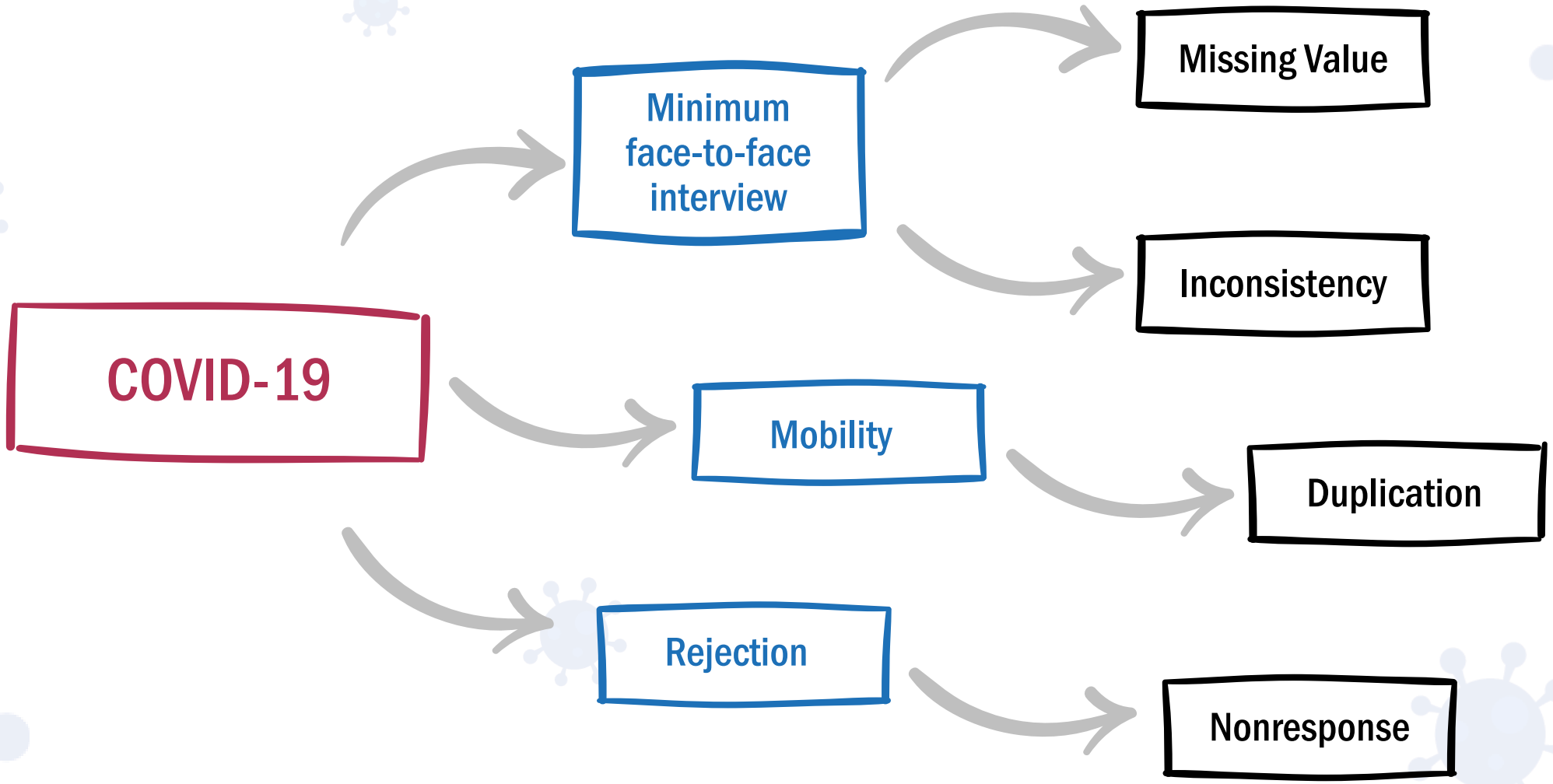
363.478.036

records

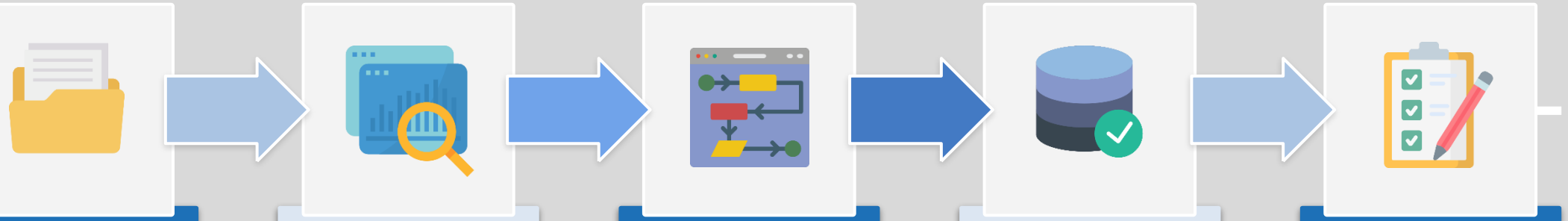
Attributes:

- ID number
- Family card number
- Full name
- Sex
- Family relationship
- Address

COVID-19 PANDEMIC



WHAT DO WE DO?



Data Source Profiling

Data structure, data type, data summary, interrelationship

Data Quality Assessment

Validity, consistency, completeness, uniqueness, integrity, etc

Define Algorithm & Cleansing Rule

Data matching, data pairing

Data Cleaning

Remove duplicate, finding individual, etc

Evaluation

Data checking

DATA QUALITY ASSESSMENT

DATA QUALITY DIMENSIONS



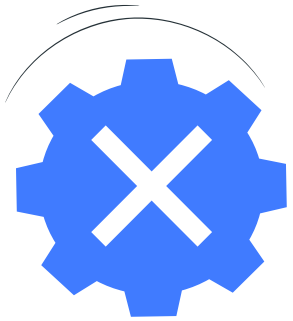
Completeness	- *Completeness of record total* - *NULL value*
Validity	- *Range value of each variable* - *ID number validity (compared to administrative data*
Consistency	- *Different name with same ID Number* - *Variable consistency between data source*
Integrity	- *Is every ID number in field result based on administrative area?*
Uniqueness	- *No individual duplication between regions*
Timeliness	- *The latest information has a higher confidence level*

DATA ASSESSMENT

MAIN PROBLEMS

Data Duplication



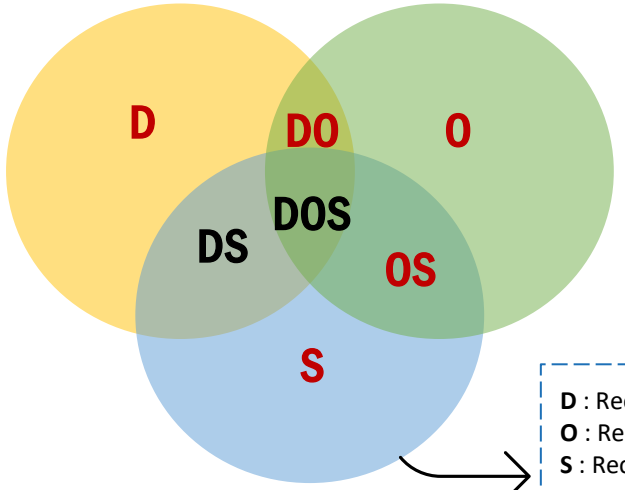


Invalid ID Number

Unidentified



FINAL RESULT



D : Record that only exist in **Administrative Data**
O : Record that only exist in **Online Population Census**
S : Record that only exist in **Field Enumeration**

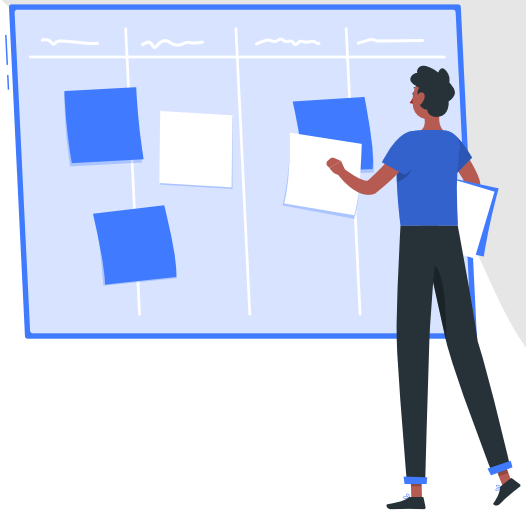
DO : Record that only exist in **Administrative Data** and **Online Population Census**
DS : Record that only exist in **Administrative Data** and **Field Enumeration**
OS : Record that only exist in **Online Population Census** and **Field Enumeration**

DOS : Record that exist in **all data source**



ONE POPULATION DATA PLATFORM

Lesson Learned [1]



Planning Process

- ✓ Careful and detailed planning, not easily changed
- ✓ Instrument identification with fast and accurate decision

Mitigation

- ✓ Preparing mitigation and backup plans in every stages
- ✓ Explore the latest data collection methods, including methods of delivering material to prospective census/survey officers, which are adapted to the development of scientific and technological advances accompanied by strengthening risk mitigation for these modes

Lesson Learned [2]



Implementation

- ✓ Detailing the implementation of activities in accordance with the output to be achieved
- ✓ **Strengthen the cooperation and collaboration with ministries and agencies in building statistics within the framework of strengthening the National Statistical System (SSN)**
- ✓ **Optimizing the use of administrative data for census and survey activities with the main objective of building One Data Indonesia**
- ✓ Strengthening community participation to participate in BPS census and survey activities, through statistical education from an early age

BADAN PUSAT STATISTIK

THANK YOU!

Sensus Penduduk 2020

#MencatatIndonesia



Pictures from: https://www.pexels.com/photo/asian-children-bridge-children-clouds-2132062/