Leave no one behind: measuring SDGs using **mobile phone big data**

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UN -CEBD Task Team on Mobile phone data – sub-groups

- Composed of around 50 individual members/ 30 entities - international and regional agencies, countries, academia, private agencies/companies.

- Explore the use of mobile phone big data for the different areas of statistics

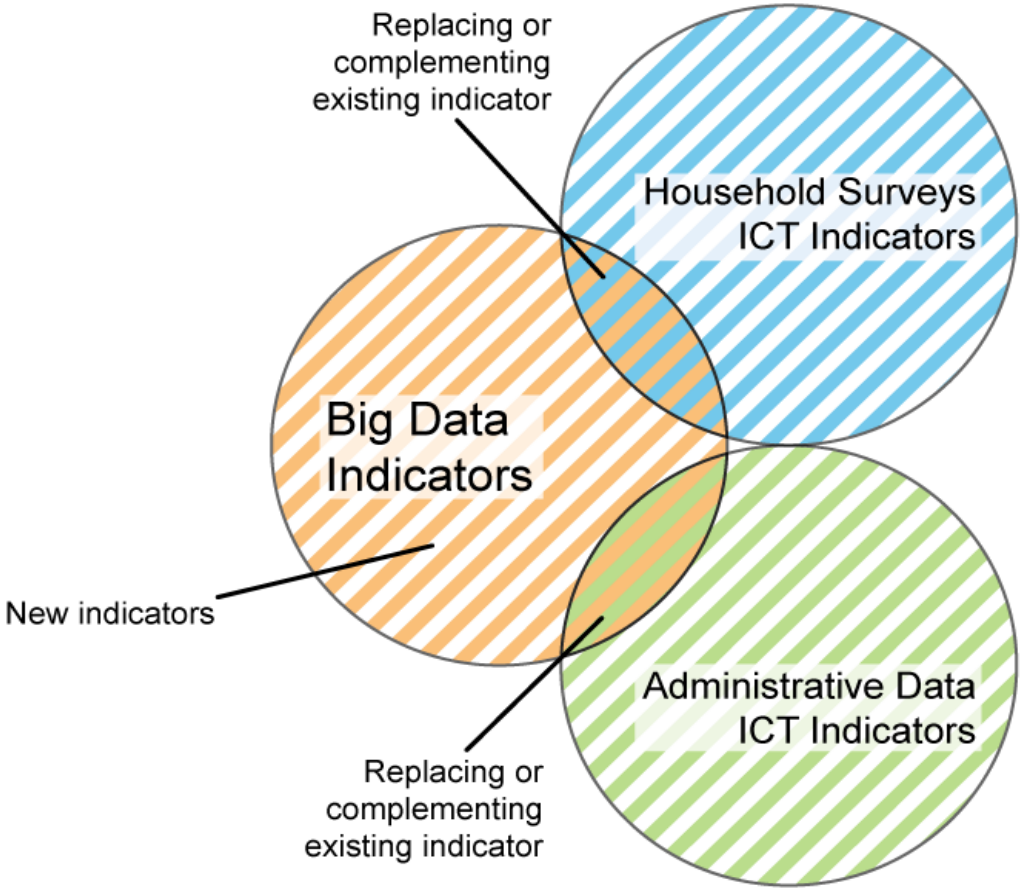
Areas of statistics where mobile phone data are used:

1) Tourism statistics (lead: BPS Indonesia)
2) Migration statistics (Lead: GeoStat, Georgia)
3) Census and dynamic population (lead: Positium)
4) Transport and commuting statistics (lead: World Bank)
5) Information society indicators (lead: ITU)
6) Displacement in disaster context (lead: University of Tokyo)

Information society indicators included in the SDG monitoring framework – collected by ITU

- Target 4.4: Proportion of youth/adults with ICT skills, by type of skills
- Target 5b: Proportion of individuals who own a mobile telephone, by sex
- **Target 9c: Percentage of the population covered by a mobile network, broken down by technology**
- Target 17.6: Fixed Internet broadband subscriptions, broken down by speed
- **Target 17.8: Proportion of individuals using the Internet**

ITU work on using mobile phone data - background



1st pilot: 2016-2018

- ✓ 6 countries (Colombia, Georgia, Kenya, Philippines, Sweden, UAE)
- ✓ 16 ICT indicators (administrative data)

2nd pilot: 2020-2021

- ✓ Brazil, Indonesia
- ✓ 2 SDG ICT indicators
  - ✓ 9.c.1 – Percentage of population covered by mobile network: 2G, 3G and 4G and above (administrative data)
  - ✓ 17.8.1 – Percentage of population using the Internet (household survey data)

Stakeholders:

- ✓ Telecommunication Regulator / ICT ministry
- ✓ National Statistics Office
- ✓ Mobile Phone Operators
- ✓ Data Protection Authority

Objectives of the 2nd pilot

1. **Methodological guide** outlining standardized methodologies and processes for the production of the two SDG information society indicators using mobile phone big data, for replication in other countries.
   - SDG indicator 9.c.1 Proportion of population covered by a mobile network
   - SDG indicator 17.8.1 Proportion of individuals using the Internet

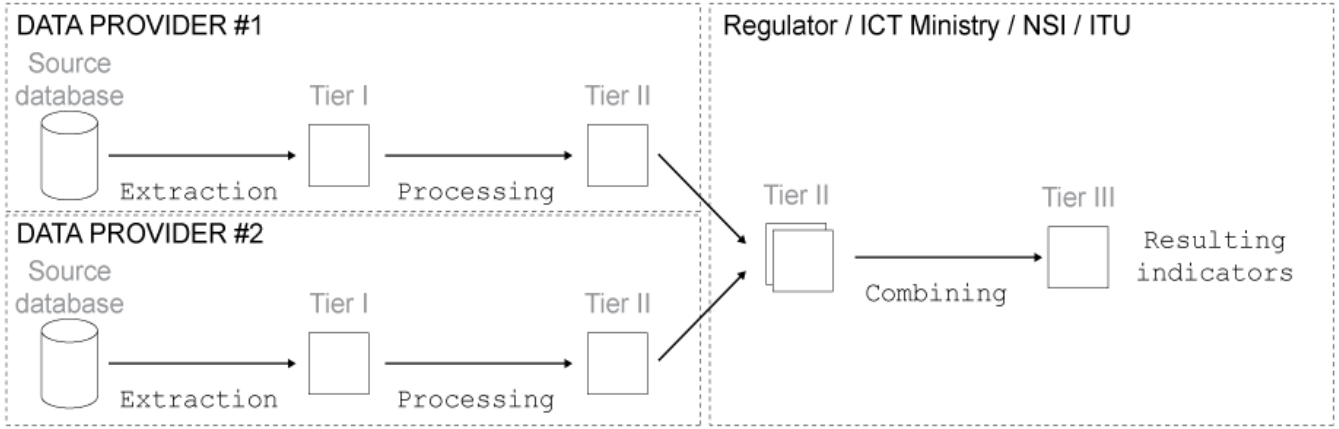
2. **Enhance capacities** on the use of big data to produce the information society indicators included in the SDG monitoring framework in the countries selected

3. **Data and reports** from the selected countries to showcase best practices.

Mobile phone data - Data processing models

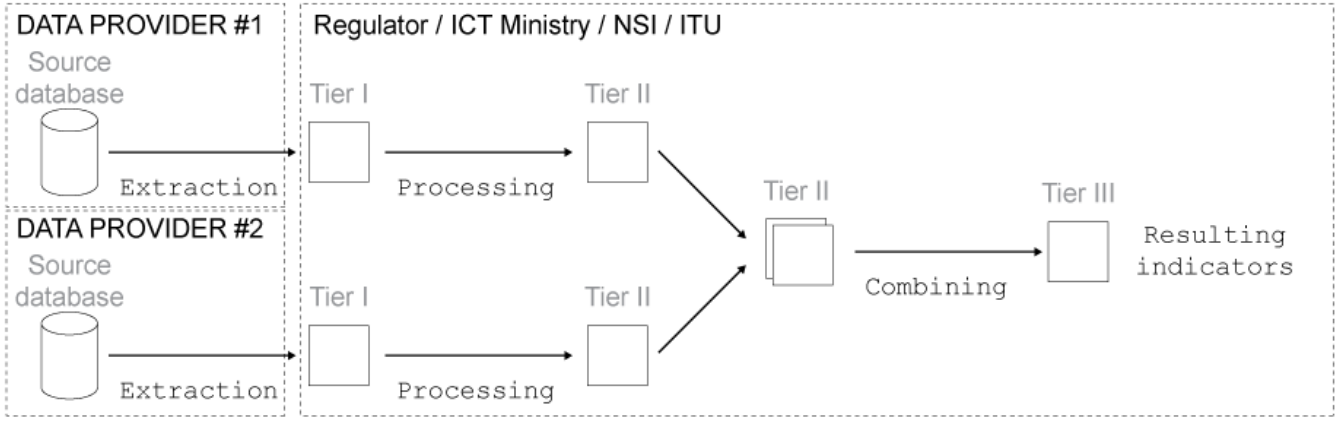
Option 1:

Indicators calculated by mobile operators, then aggregated to resulting indicators



Option 2:

Raw data extracted by data providers, indicators calculated by NSO



ITU Handbook on Big Data for measuring the Information society

1. Introduction
2. Background
3. Access and preparations
4. Data sources (description of mobile operator data, quality assurance of raw data)
5. Reference data (local admin units, world population, cell data, digital elevation, household survey data)
6. Data processing (models, data protection guidelines)
7. Calculating the indicators (rationale, definition, indicators calculation, quality assurance)
8. Quality assurance
9. Conclusions

- with experiences and examples from country pilots

Thank you!

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https://www.itu.int/en/ITU-D/Statistics/Pages/bigdata/default.aspx