Mobile Positioning Data
Examples of Statistics Projects from Around the World

Siim Esko
Positium
UN Committee of Experts on Big Data and Data Science for Official Statistics
MPD Task Team
Questions you might have when starting out exploring MPD

1. Who has the potential to use MPD for statistics?

2. Is there an MPD project near me?

3. Where can you turn to for knowledge-sharing?
Is there anybody out there?
Countries using mobile phone data analytics to support the COVID-19 response

Source: GSMA

COVID-19 population mobility project by European Commission Joint Research Centre (JRC)

During the COVID-19 pandemic, mobile phone data analysis was conducted in several countries around the world to provide insight into adherence to mobility restrictions and change of residents (urban-rural movement).

COVID-19 population mobility project by European Commission Joint Research Centre (JRC)

The primary dataset used here is a combination of the data provided by the Mobile Network Operators (MNO) in 22 EU Member States plus Norway.

No data were made available for Cyprus, the Netherlands, Luxembourg, Malta and Poland.

The data definition and spatial resolution varies by operator, as does the time coverage of the data provided.

Average internal mobility by NUTS3 region, 1st wave of pandemic (March – April 2020); index: 100 = maximum mobility in NUTS3 region during year 2020.
Case Study countries covered by MPD Task Team
MPD Projects Analyzed in the UN Methodological Guides around the world

- Tourism
- Population
- ICT use
- Migration
- Disaster
- Transport & Commuting
MPD projects in MPD Methodological Guides cover 29% of land area of the world.
MPD projects in MPD Methodological Guides cover 50% of population of the world.
Biggest

**China**
9,596,960 km²
1,397,715,000 pop

**Indonesia**
1,904,569 km²
270,203,917 pop

Biggest in the World

Smallest

**Curacao**
444 km²
155,000 pop

Biggest in the Southern Hemisphere
15 years

longest-running MPD-based statistics time series in the World*
(and counting)

*In Estonia, by the central bank of Estonia in collaboration with Positium
40 projects

started in 2020 alone

*in relation with tracking mobility during the COVID-19 pandemic
2 degrees of separation

maximum from your country to the nearest country that has MPD experience

*if your neighbour has not had experience with MPD for statistics, their neighbour has probably had
UN CEBD MPD Task Team Members

Countries (NSOs)

Expert organizations
Benefits of MPD

CENTRAL BANK OF ESTONIA – MPD since 2008

4x faster
200x sample size
12x countries breakdown
2.5x more cost-efficient
100% less burden on tourists

Compared to surveys
Cost-Effectiveness

8,000 enumerators for domestic tourism survey

8 data scientists working on MPD

BPS STATISTICS INDONESIA – MPD since 2017
Summary

1. International community supports MPD adoption

2. There are MPD projects in every part of the world and in every topic

3. You can reach out to your neighbour or the international community for experience sharing

Siim Esko
siim.esko@positium.com