Mobile Big Data for Human Mobility and Official Statistics

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Positium
Positium is a spin-off company of University of Tartu (Estonia) that produces methodology and technology for processing mobile positioning data for human mobility monitoring because there’s got to be a better way to measure mobility…
Mobile Positioning Data (MPD)

Insights about visitors and residents

People mobility data: collective location & movement flows

Mobile devices are used constantly

Geographical footprints in databases of Mobile Network Operators (MNOs)

Processing the data produces collective anonymous statistics

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National level mobility data

Correlation of commuting flows in census and MPD:

Pearson $r = 0.89$

Difference is in density of data – MPD shows more commuting activity in more detail and over a long time period.

2017: Administrative reform prepared with MPD* – detecting functionally connected regions

2018: Reform from 200 --> 79 municipalities

User: Estonian Ministry of Regional Development
Local Level Mobility Data

Origin-Destination Matrices

Tartu City
Population: 100 000
Combination of movements: 6 000 000
Use case: Public Transportation Planning

New Bus Network

- Data-driven
- Then consultative
- 1.5 years from data collection to starting the new bus line network

User: City of Tartu, Estonia

Use case: Vaccination Planning in India

Cooperation with Airtel in India:
- Comparing mobility data (from CDRs)
- With tuberculosis prevalence data
- Target locations at risk of exposure
- More efficient TB vaccination

User: Ministry of Health, Government of India

https://bigdatatoolkit.gsma.com/resources/Bi...Airtel-INDIA_TB_Case_Study.pdf
Positium delivers software and services to analyse mobile positioning data for official statistics

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