STATISTICS INDONESIA

# The Use of Mobile Positioning Data Indonesia's Experiences

International Symposium on the Use of Big Data for Official Statistics
Hangzhou, China
16 -18 October 2019

More than **5 billion people** around the world subscribed to mobile services

-GSMA Intelligence-

# Mobile Positioning Data

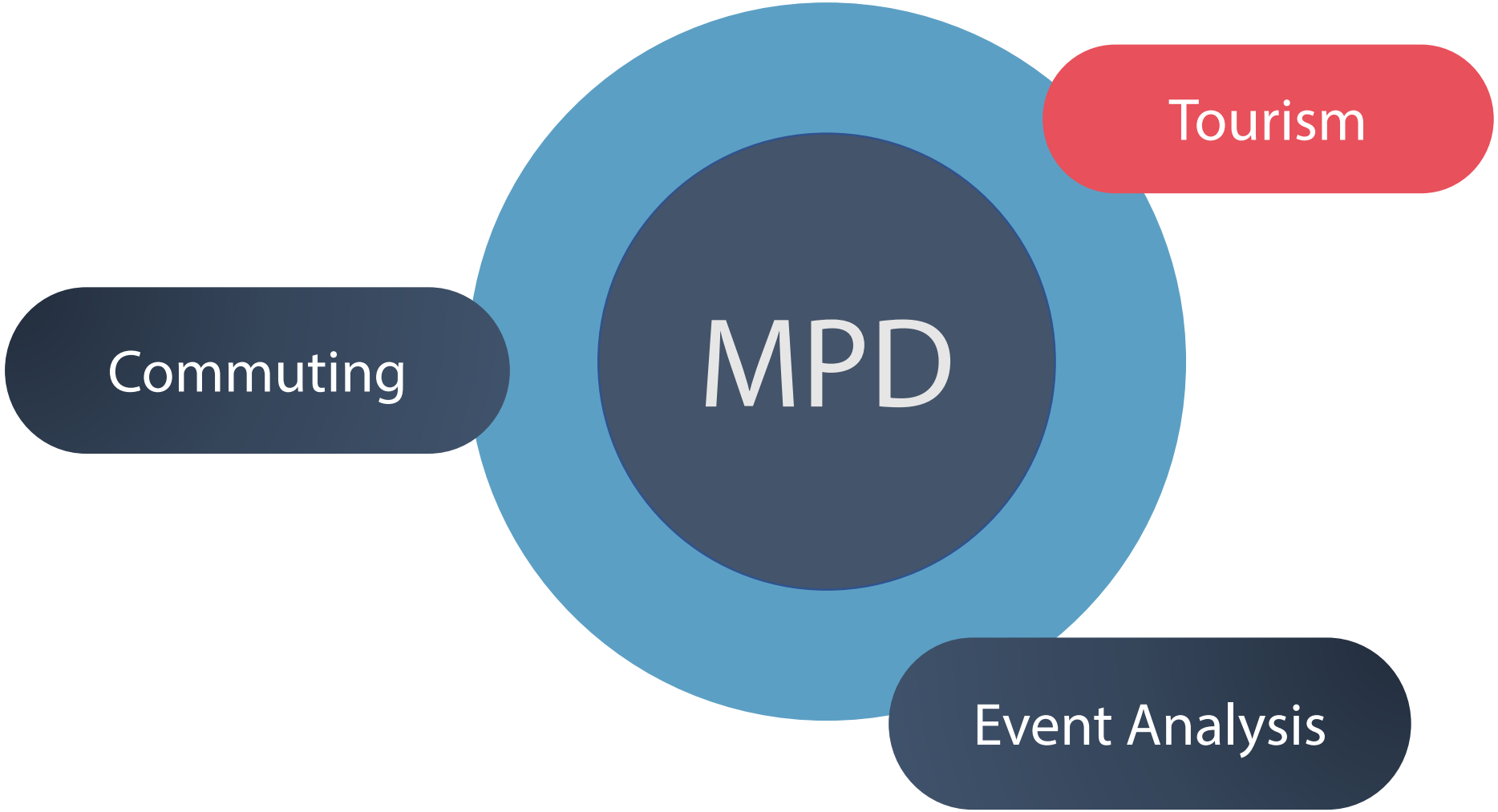
## Reduce

- Respondent burden
- Enumerator workload

## Increase

- Coverage
- Timeliness

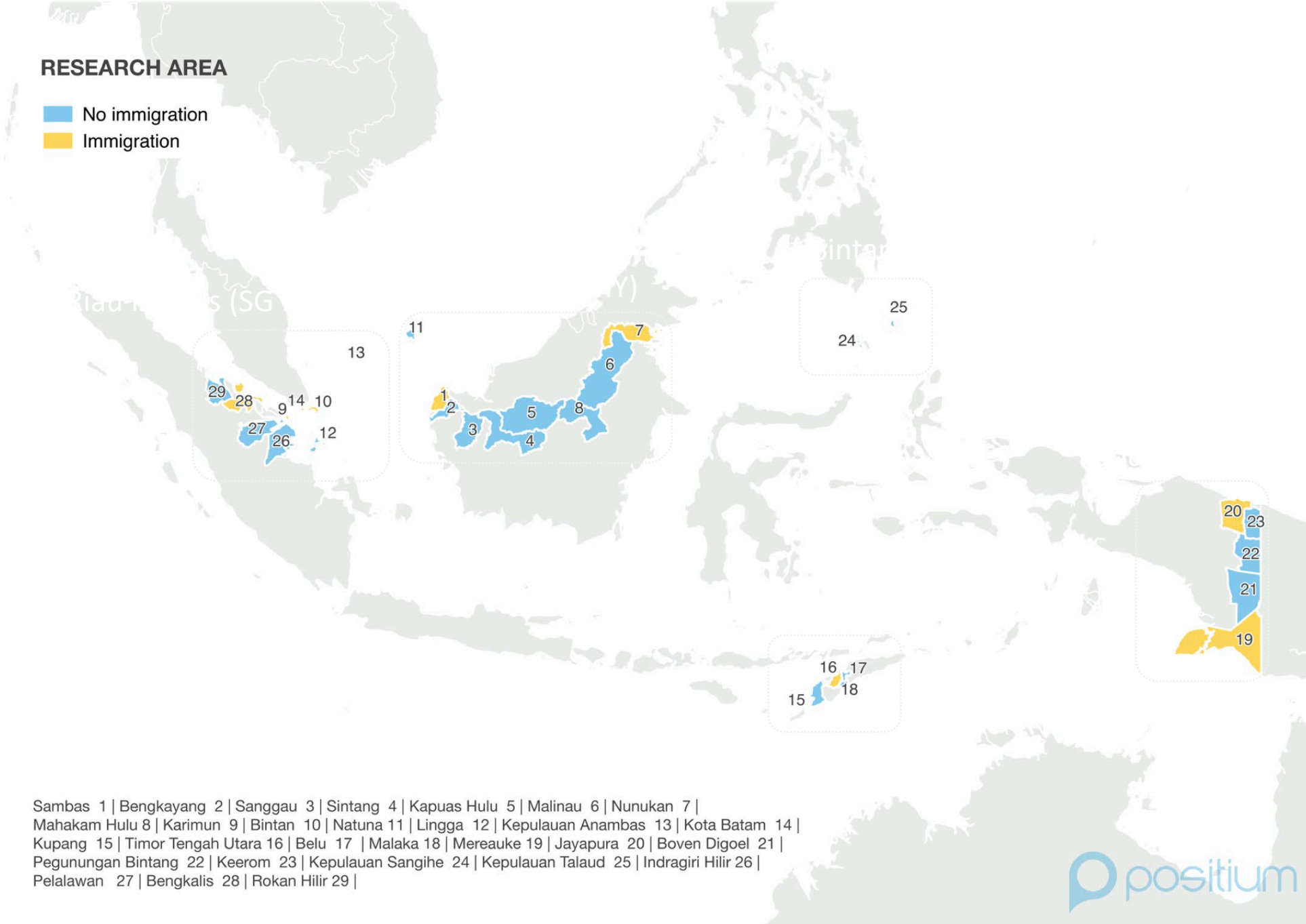
# The Use Of Mobile Positioning Data



# Inbound

October 2016
Cross border area

Problems:
Not All Borders have border gates
Not All Border Gates have 24/7 Immigration service
High cost of Border Survey




Sambas 1 | Bengkayang 2 | Sanggau 3 | Sintang 4 | Kapuas Hulu 5 | Malinau 6 | Nunukan 7 | Mahakam Hulu 8 | Karimun 9 | Bintan 10 | Natuna 11 | Lingga 12 | Kepulauan Anambas 13 | Kota Batam 14 | Kupang 15 | Timor Tengah Utara 16 | Belu 17 | Malaka 18 | Mereauke 19 | Jayapura 20 | Boven Digoel 21 | Pegunungan Bintang 22 | Keerom 23 | Kepulauan Sangihe 24 | Kepulauan Talaud 25 | Indragiri Hilir 26 | Pelalawan 27 | Bengkalis 28 | Rokan Hilir 29 |

positium

# Limitation of Mobile Positioning Data

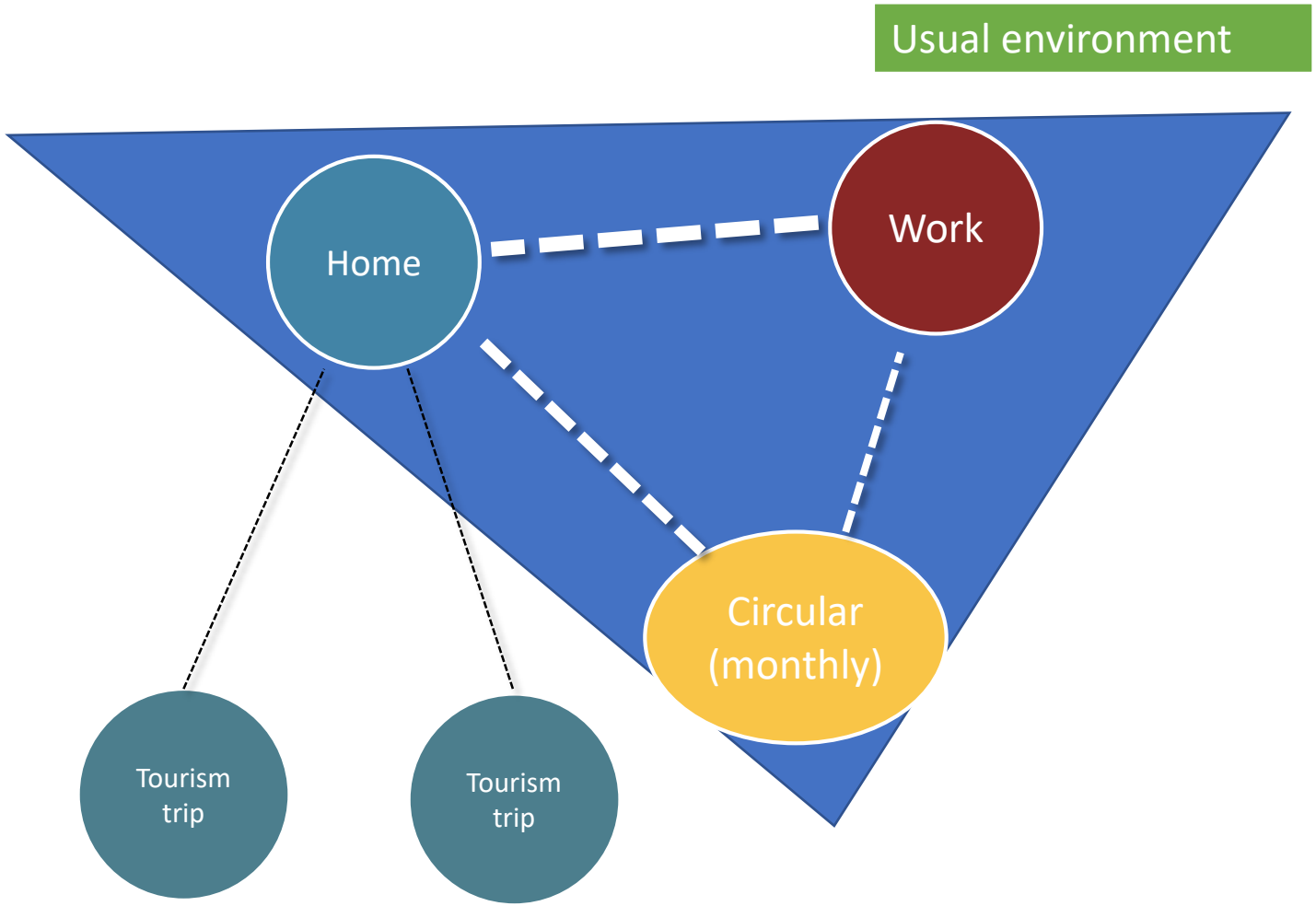
- Lack of Qualitative Data (such as purpose of visits, accommodation type).
- Expenditure.
- Mobile phone usage (mobile phone usage behaviour).

Small data (survey data) is required to obtain data that can not be provided by mobile positioning data

# Domestic

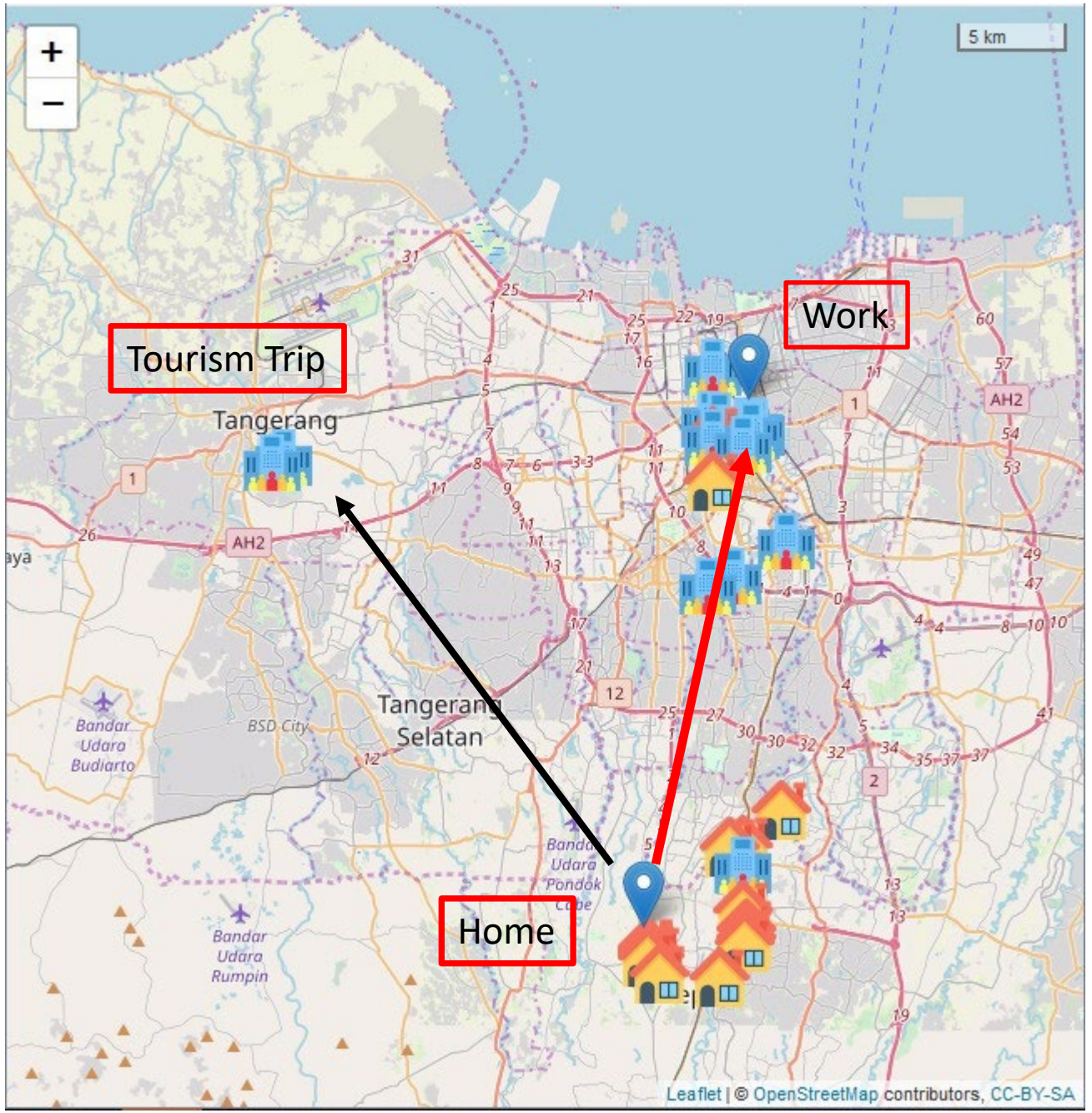
Pilot in
2018 and 2019

# O-D MODEL




Source: Saluveer, E 2018

# One subscriber Tourism Trip



# DOMESTIC TOURISM WITH MOBILE POSITIONING DATA (MPD) AND DIGITAL SURVEY (PILOT)

**Coverage** : 190 million subscribers, all Indonesia

**Time reference** : Monthly

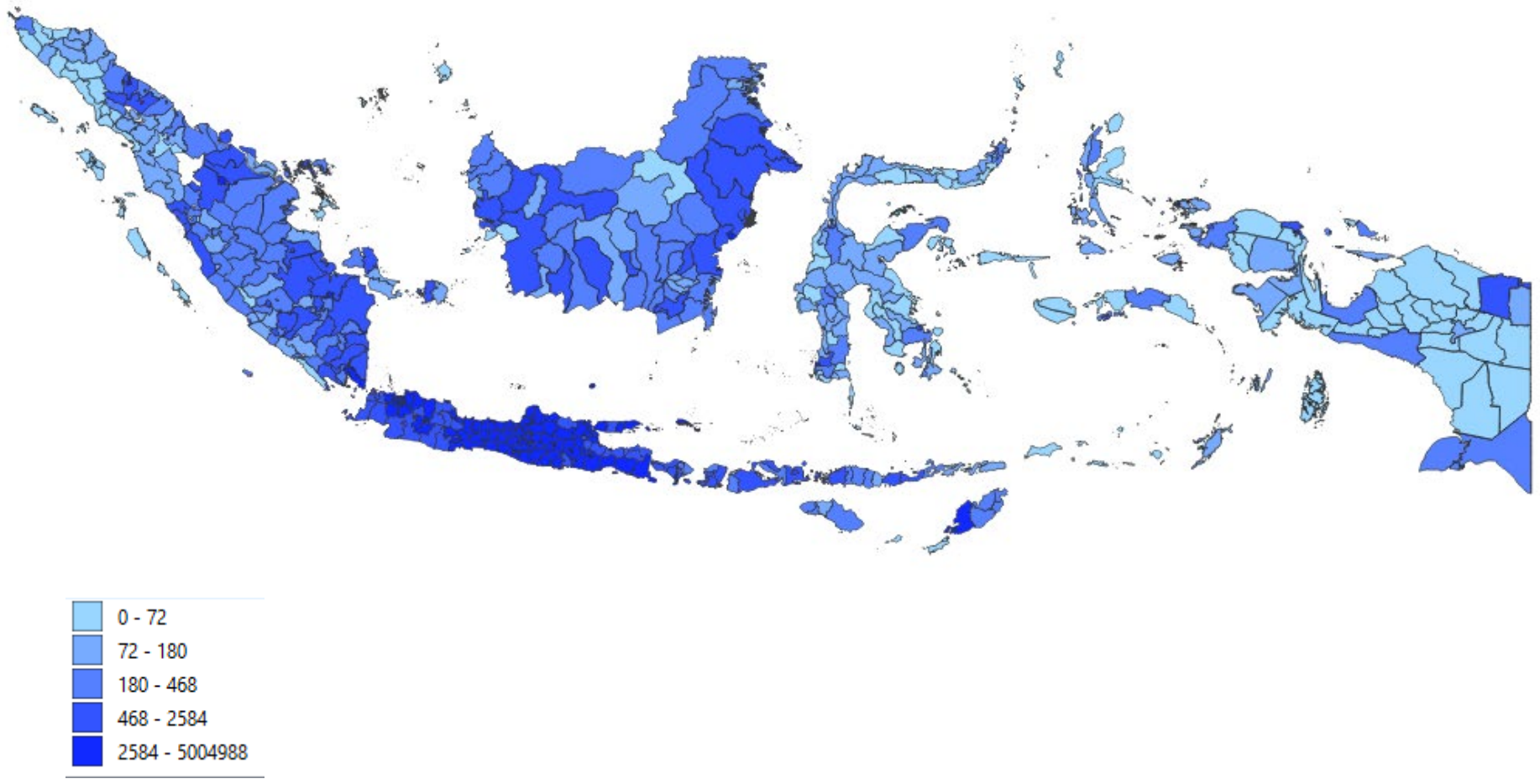
**Output** : Number of trips, O-D Matrix of 514 kabupaten/city

# DOMESTIC TOURISM

## Origin Yogyakarta Province & Province Level Destination January 2018

# DOMESTIC TOURISM

## Origin Yogyakarta Province & Regency Level Destination January 2018

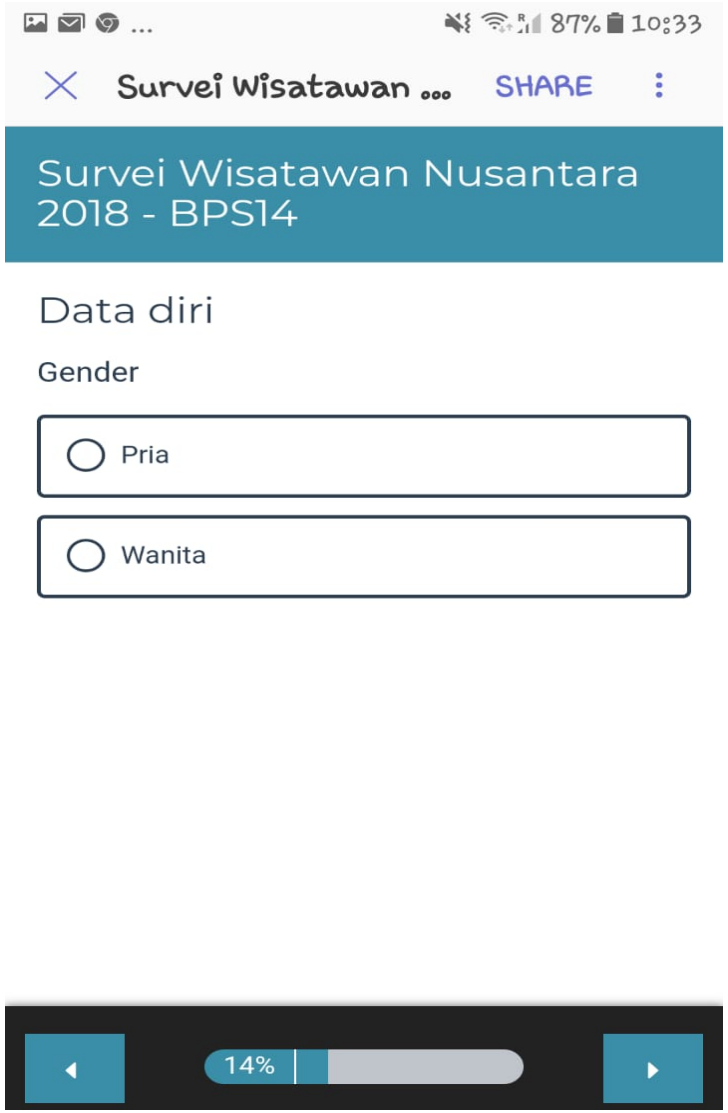


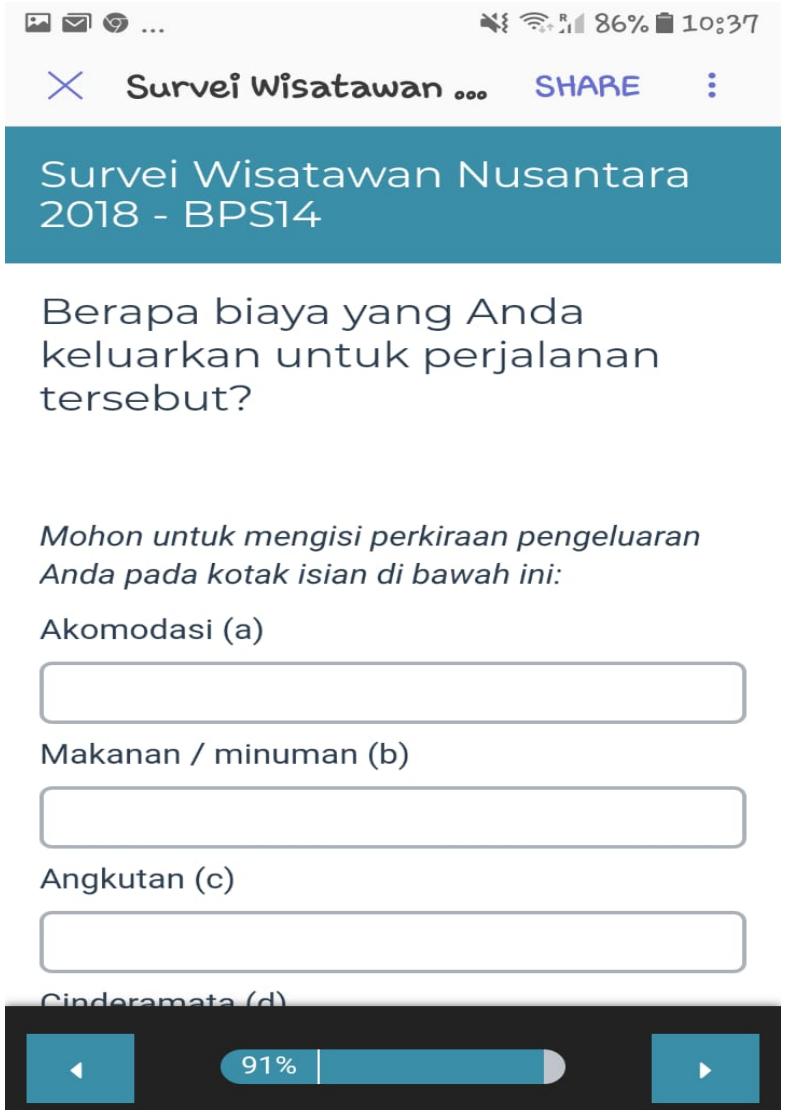
# DOMESTIC TOURISM WITH MOBILE POSITIONING DATA (MPD) AND DIGITAL SURVEY (PILOT)

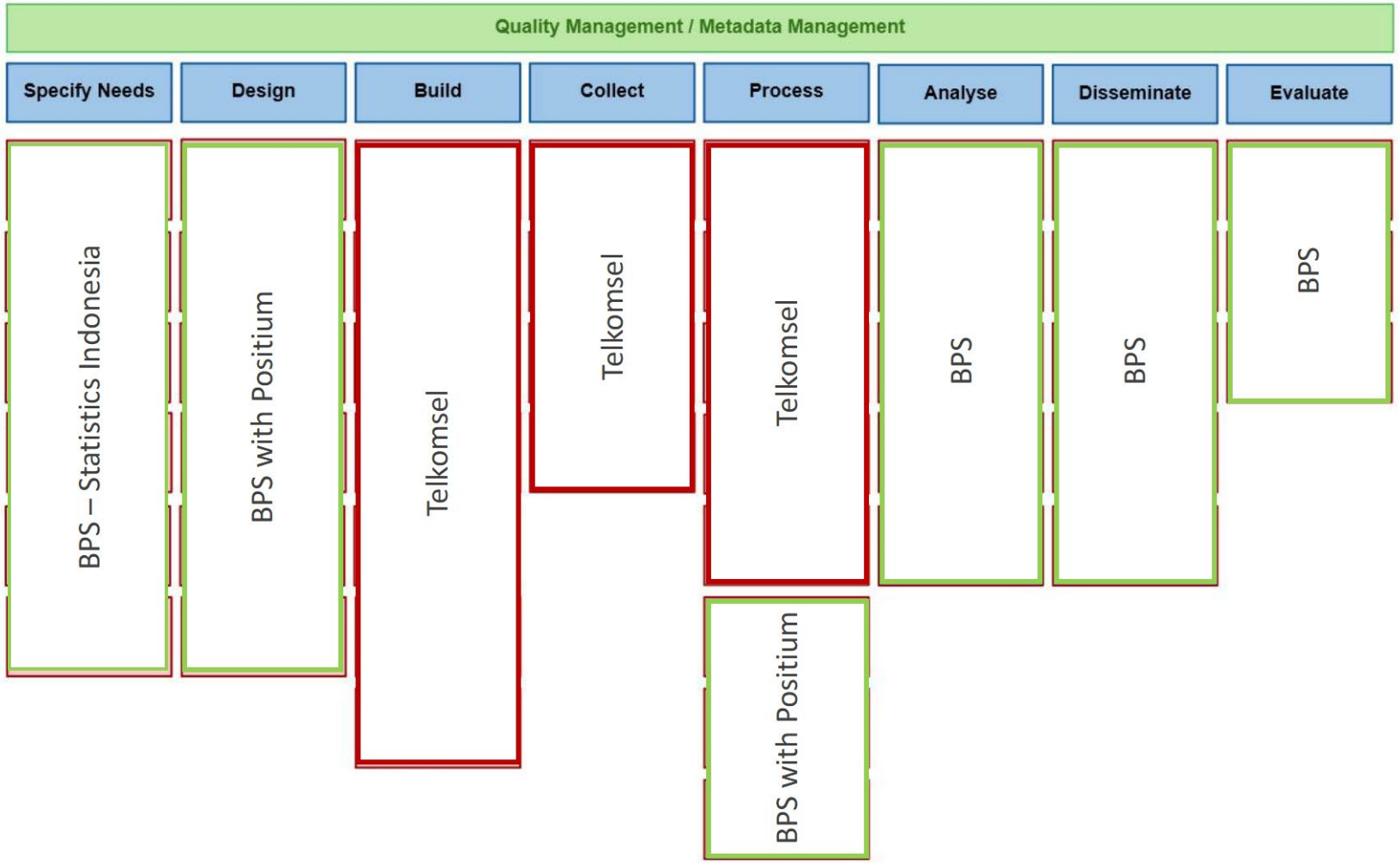
Digital survey is conducted to overcome limitation of MPD such as no expenditure data, no motivation. Digital survey was conducted using selected sample indicated by Mobile Position Data

Expenditure data : Digital survey 50.000 travellers
Estimation : Other MNO subscribers & non cellular user from conventional household survey

# Domestic Visitor – Digital Survey to complete Big Data




Quality Management / Metadata Management
Specify Needs
Design
Build
Collect
Process
Analyse
Disseminate
Evaluate
BPS – Statistics Indonesia
BPS with Positium
Telkomsel
Telkomsel
Telkomsel
BPS with Positium
BPS
BPS
BPS

# Outbound

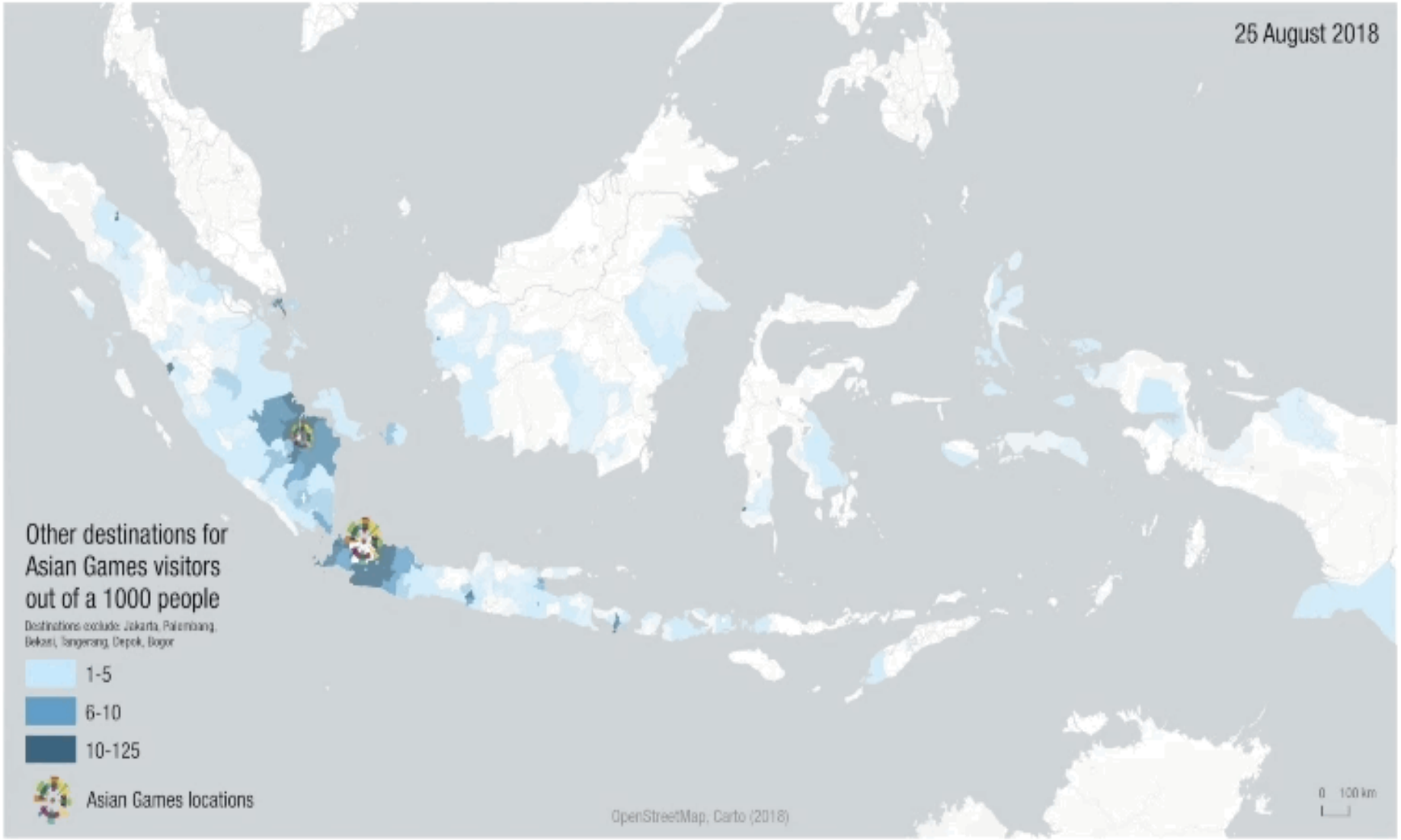
Pilot in 2019

# EVENT ANALYSIS

18th ASIAN GAMES
Jakarta Palembang | 2018

ANNUAL MEETINGS
2018 | indonesia
INTERNATIONAL MONETARY FUND
WORLD BANK GROUP

# EVENT ANALYSIS




18th ASIAN GAMES Jakarta Palembang 2018

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# THANK YOU