MPD & Indonesia
Projects overview
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Agenda

- Background

- Ministry of Tourism cross-border tourism project 2016-2018

- Ministry of Tourism / BPS domestic tourism project 2018-2019

- Population Census 2020
Background

- Indonesia has decided to use MPD for several domains to improve the quality and fill the gaps
- Initial projects focusing on inbound tourism – since October 2016
- Next steps domestic tourism, population census, mobility, etc. – 2018 and onwards

- Digital methods – MPD and digital surveys have already lessened the burden on the statistical office in terms of tourism surveys – BPS expects to substitute surveys with timely and more accurate digital data collection in the future
Ministry of Tourism cross-border tourism project

MPD to fill the gap for cross-border statistics from neighboring countries
Border areas with and w/o immigration statistics
Cross-Border Tourism in Indonesia

300,000 km² of border area
MPD from Telkomsel

- Analyse data quality
- Apply methods
- Measure cross-border
Summary

- Cross-border tourism (from neighbouring countries):
  - Before (Timor-Leste, Malaysia, Singapore): 7%
  - With MPD 30%
- Timor-Leste became TOP 3 country of origin (before TOP10++)
- 2017:
  - no MPD: 12,480,492
  - + MPD: 14,039,799 (increase 12.5%)
- Regular updates starting from 2017, improved methodology in 2018
Ministry of Tourism / BPS
domestic tourism project

MPD for calculating domestic tourism trips
## Overview

<table>
<thead>
<tr>
<th>Objective</th>
<th>Implement the methodology and technological platform to produce domestic tourism statistics from MPD</th>
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</table>
| Key Outcomes | • Prepare methodology and technology to fully engage MPD in domestic tourism statistics, anchor points, usual environment, domestic tourism trips  
• Two pilots  
• Compare results to traditional domestic tourism survey  
• Increase the quality (level of disaggregation and accuracy)  
• Build the technological platform for regular updates |
## Scope of Work

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
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<tbody>
<tr>
<td>Developing the methodology for quality processing of MPD for domestic tourism</td>
<td>Propose methodology</td>
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<tr>
<td>Piloting and analysis of the methodology</td>
<td>Conduct pilots</td>
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<tr>
<td>Produce domestic tourism data for official publication regularly</td>
<td>Deploy platform (PDM)</td>
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Summary

- Monthly data of Domestic Tourism up to Kabupaten Level (even Kecamatan/District level) can be published monthly.
- Reduce respondent and work burden.
- Number of trips will be more accurate (no recalling problems).
- Household survey can only be published up to provincial level (sampling issue) and annually. Number of trips possible under (recalling problems), the survey asked number of trips during six months.
Volunteers

65 orang volunteers, all BPS staffs.

Form Consent

Material
Pa 6000

Nama & TTD Pemohon

Nomor Telekomsel: ____________________
**HOME Validation (Verification)**

- Home is correct?
**WORK Validation/Verification**

- **Work is correct?**

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Accuracy of Home Detection of the Volunteers

- Accuracy of home detection is 85.83% (rank 1)
- Accuracy of home candidate rank
  - 2 : 58.92 %
  - 3 : 58.02 %
  - 4 : 51.50 %
Accuracy of Work Detection of the Volunteers

- Accuracy of Work detection is 85.71%
- Accuracy of Work candidates rank
  - 2: 60.16%
  - 3: 48.51%
  - 4: 50.44%
Example of mobility of one subscriber
Example of trips of 1 subscriber
Population Census 2020

Using MPD for population estimates as input for field strategy and prediction of population census results
Population Census 2020 Indonesia

Innovations planned for this round of census:

- Use of geospatial technology for mainframe and on-the-ground data collection
- **Explore the utilization of BIG DATA in the population census**
- Development of a command center
Some options for MPD in Population Census

- Estimation of population counts by census tract for enumerator planning
- Validation of pop-registry home via MPD home anchor point
- Smart identification of home from several potential locations
Test case: All anchor points
Test case: Home / home-work anchor points
Test case: Real homes
Test case: Difference
Lessons Learned from Indonesian experience

- Initial projects in inbound tourism
  - Less data, less processing
  - Simpler methodology
  - Feasibility and pilots
  - More administrative and legal aspects

- Move towards larger projects
  - More data, more processing
  - More complex methodology (anchors, census block level)
  - Domestic tourism, population census, mobility, etc.
  - Administrative agreements in place, mode of operations clear

- BPS is enacting on its big data strategy step-by-step, hoping to reduce the burden on surveys with timely and accurate digital methods by 2020 – MPD is one of those methods
Thank You!

Questions?

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