»**My ways**«

Mobile application for collecting data on daily trips

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Introduction

• Pilot application developed within the Eurostat project "Passenger mobility statistics and road traffic statistics"

• To test more modern methods of data collection
  – How to include the "modern" method of data collection in the statistical process?
  – How to prepare an application?
  – How to introduce the application to the public to use it?
  – Is it possible to supplement the classical data collection with this new mode of data collection?
  – Whether there is a potential to use an app for data collection instead of traditional data collection in the future?
Methodology

• Purpose of application: to collect data about trips that are made by a single user at a specific time
• Available for Android and iOS mobile operating systems
• Data collection: October–December 2017
• Anonymous recording of data (sex of the user, year of birth)
First results

- Number of users: **153**
- Total number of trips: **3,938**
- Total length of all trips: **26,606 km**

<table>
<thead>
<tr>
<th></th>
<th>Working day</th>
<th>Non-working day</th>
<th>All days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of trips per person per day</td>
<td>2.86</td>
<td>2.75</td>
<td>2.84</td>
</tr>
<tr>
<td>Travel distance per person per day (km)</td>
<td>42.79</td>
<td>38.32</td>
<td>41.92</td>
</tr>
<tr>
<td>Travel time per person per day (min)</td>
<td>79.75</td>
<td>81.06</td>
<td>80.00</td>
</tr>
</tbody>
</table>
Advantages of data collection with an app

• **Data capture**
  – providing accurate spatial and time data
  – "real-time" continuous measurement
  – time efficiency – a faster data collection process

• **Improved data quality**
  – "objective" rather than subjective measurement
  – less recall errors (esp. for short trips)
  – less data entry errors

• **Reduction of burden on respondents**

• **Cost-effectiveness** – reducing research costs
  – faster, less expensive data collection on a large number of units
Challenges of data collection with app

• **Choice of respondents**
  – sampling bias – Who owns the device or uses technology?
  – actual willingness to participate – How to motivate/encourage people to participate?

• **Consent, informing, compliance**
  – application installation – caution with access authorization
  – informing with General rules and Instructions for users
  – systematic bias – user can turn off the tracking

• **Problems with the measurement and technical capabilities of mobile phone**
  – missing data (technical errors, non-compliance)
  – quality (reliability) of measurement – accuracy of GPS
  – the consumption of a cell phone battery depending on the desired accuracy
Challenges of data collection with app

• **Analysis of data**
  – trust in the collected data
  – raw data are not directly usable
  – methodological challenges - finding appropriate observations in a large amount of data

• **User privacy, disclosure risk**
  – confidence of users in the privacy of data collection
Thank you for your attention.