



Methodological challenges of smart surveys – three case studies.

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Session 4: Multimode and integration of data sources

Smart surveys combine primary and secondary data collection.



Smart surveys

Smart surveys have at least on of the following smart features:

1. Device intelligence
2. Internal sensors
3. External sensors
4. Public online data
5. Personal online data
6. Linkage consent

Why smart surveys?

- Ease the response task
- Decrease respondent burden
- Improve data quality

New error sources

- Representation
 - Willingness
 - Ability
 - Sensor signal error
- Measurement
 - Sensor inaccuracy
 - Processing error



New error sources

- Representation
 - Willingness
 - Ability
 - Sensor signal error

-> recruitment and motivation strategies
- Measurement
 - Sensor inaccuracy
 - Processing error

-> combine passive and active data collection



Burning questions

- Active-passive trade-off
- User interface and experience
- Effective recruitment and motivation strategies
- Data quality and usability

- IT infrastructure
- Business case



Case Study 1: Household Budget Survey

Variables of interest:

- Daily purchases
- Recurrent expenditures

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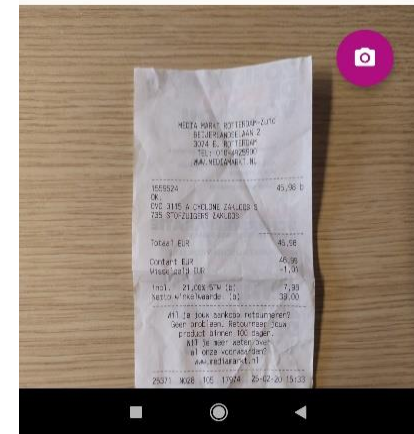
✕ Add receipt Done

Shop
Enter shop

Date
Today

Total price
Enter total price

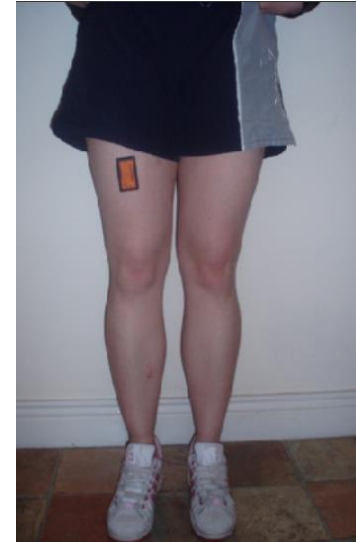
Product type
Enter the type of products ..



Case Study 2: Physical Activity Tracker

Variables of interest:

- Type of physical activity
- Intensity of physical activity





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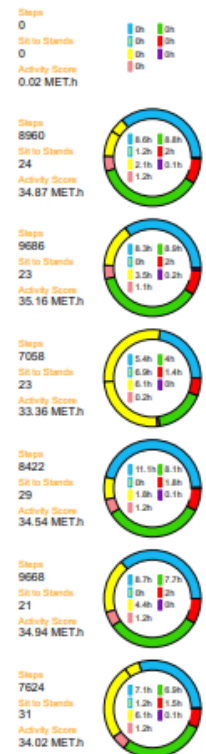
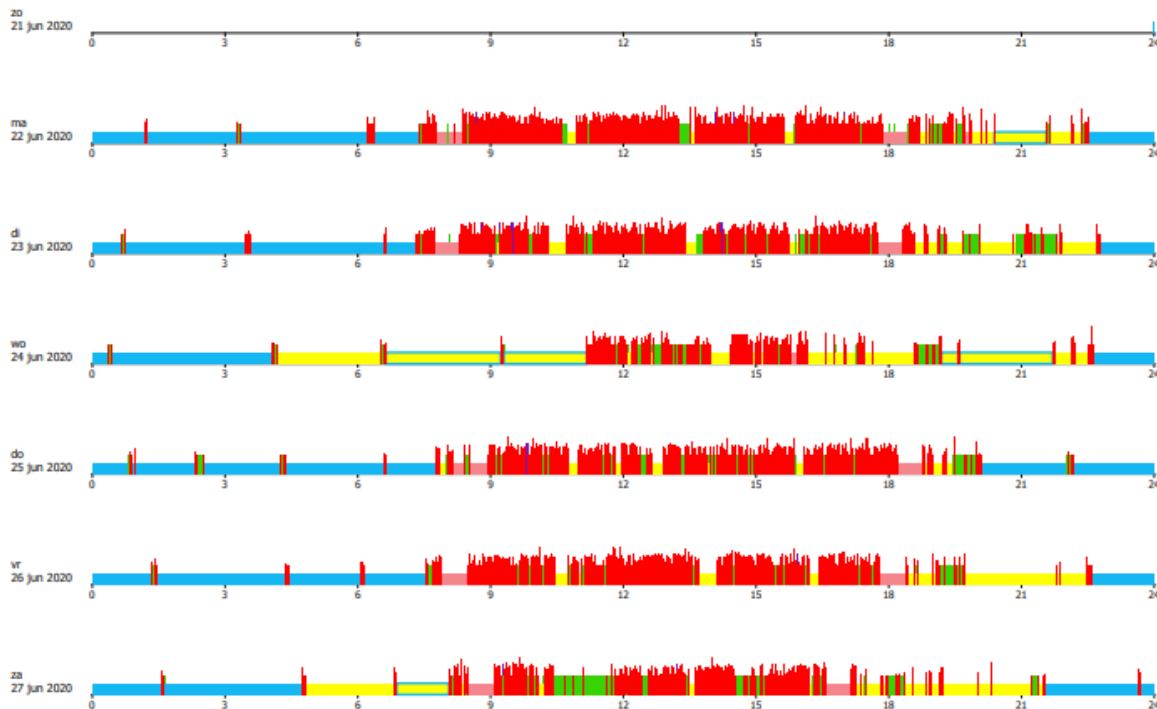
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7 valid days (7 days recording)

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15th Jun							
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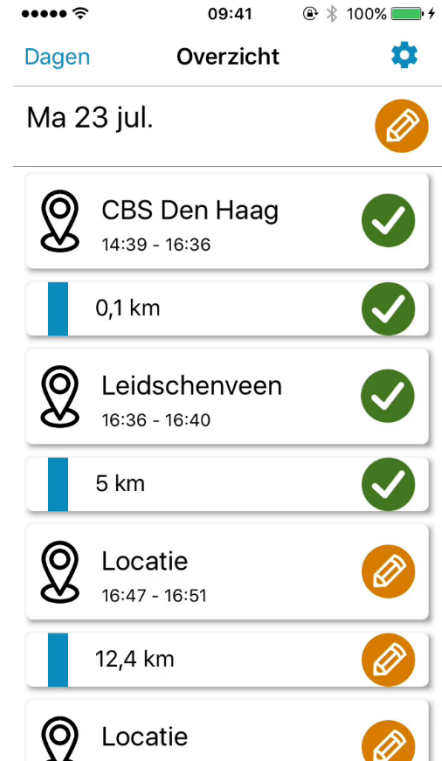
Sun 21st Jun 2020 to Sat 27th Jun 2020 (Days 1 to 7)



Case Study 3: Travel Survey

Variables of interest:

- Distance travelled and stops
- Prediction of travel mode
- Prediction of travel purpose





Welcome To
The Future



Discussion

- How to handle GDPR/legislation?
- How can we empirically test the boundaries between respondent burden, respondent engagement and data quality.
- In settings with conditional incentives, how to decide what respondent engagement is minimally requested?



Thank you!

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