

Preferred citation style

Axhausen, K.W. (2014) Travel Surveys – A Researcher's View, keynote presentation at the *10th International Conference on Transport Survey Methods*, Leura, November 2014.

Travel Surveys – A Researcher's View

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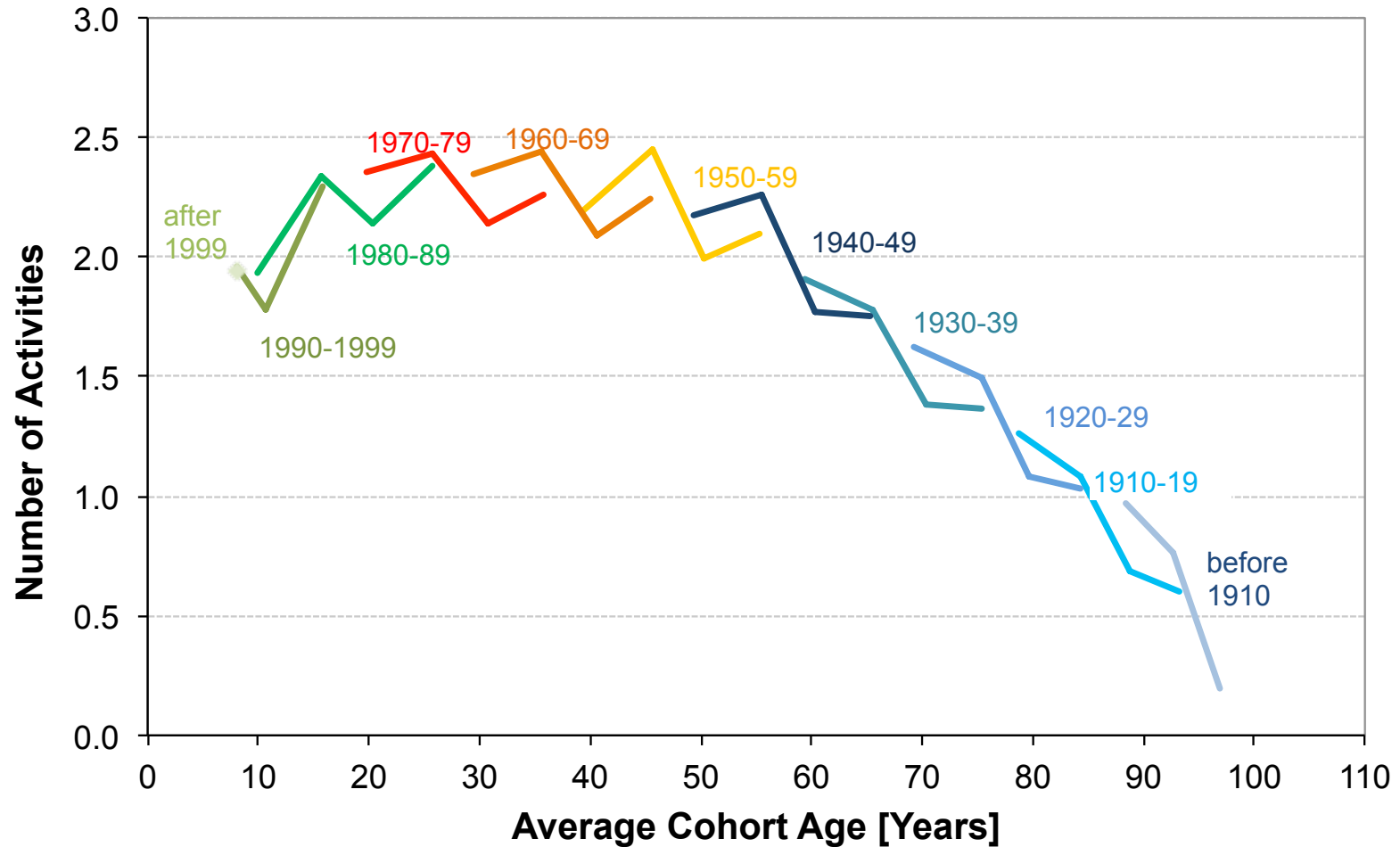
November 2014

 Institut für Verkehrsplanung und Transportsysteme
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Do we know the numbers? e.g. daily activities in Switzerland



What do we want to know?

Who travels

when ?

where ?

with whom ?

how ?

for how long (space and time) ?

for what purpose ?

and spends how much ?

Protocols and response

Surveys, observations are „talk“

Two speakers

managing their „image“

staying within the rules of talking

staying within their socially allocated/identified role

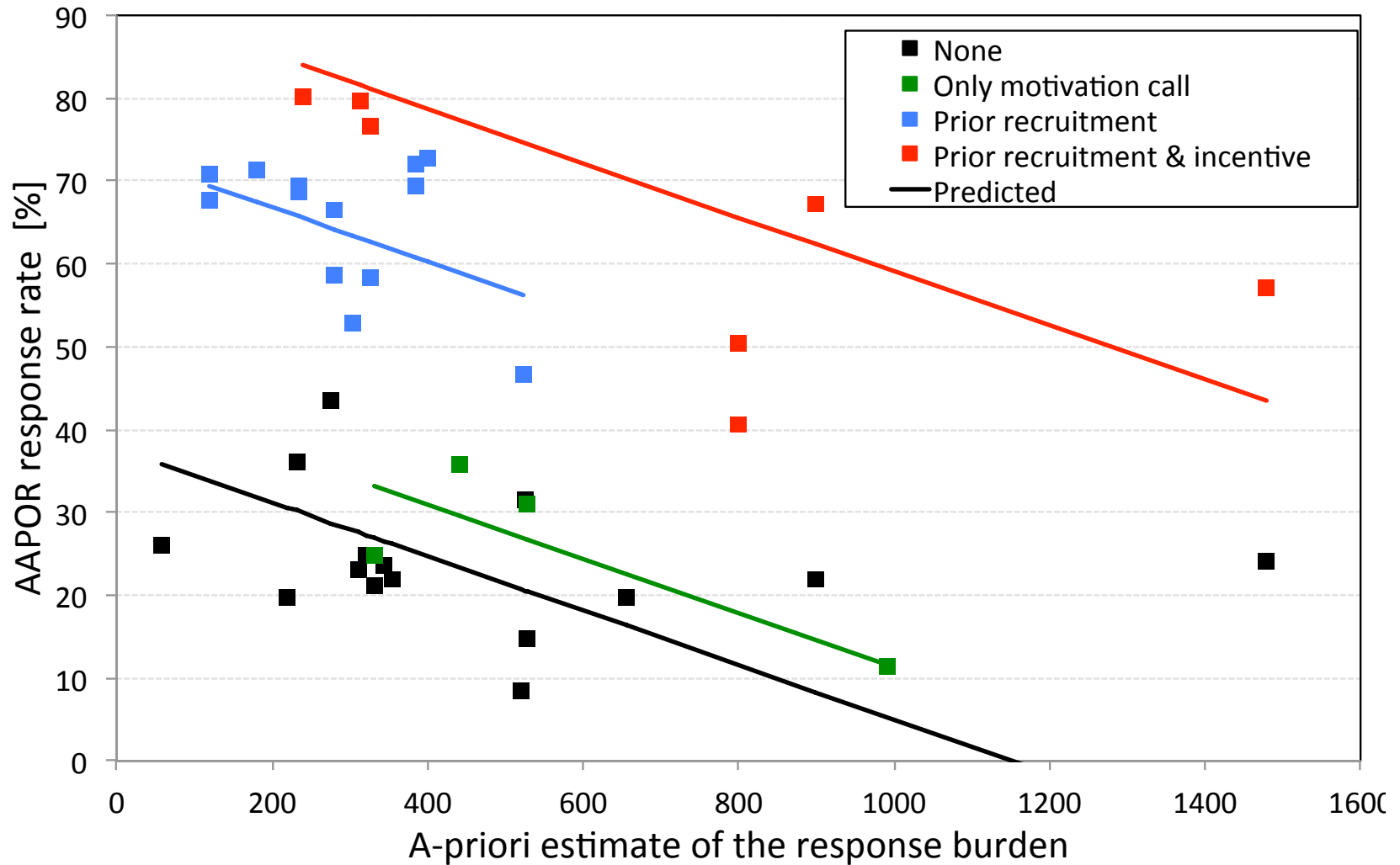
fulfilling social expectations

talk and report with/to each other

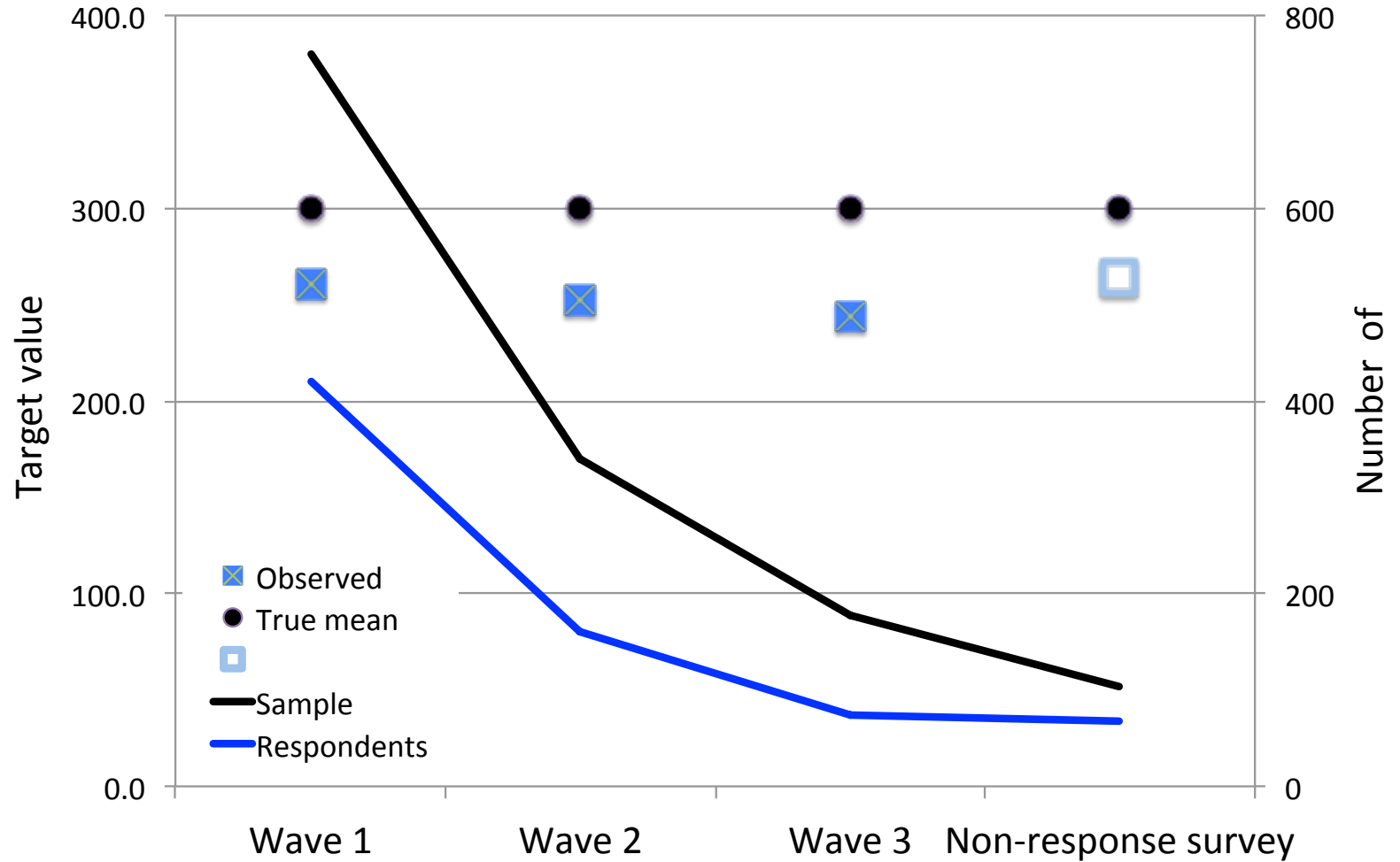
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„Maintaining the willingness of the respondent to report“

Response as a function of response burden @IVT, 2013

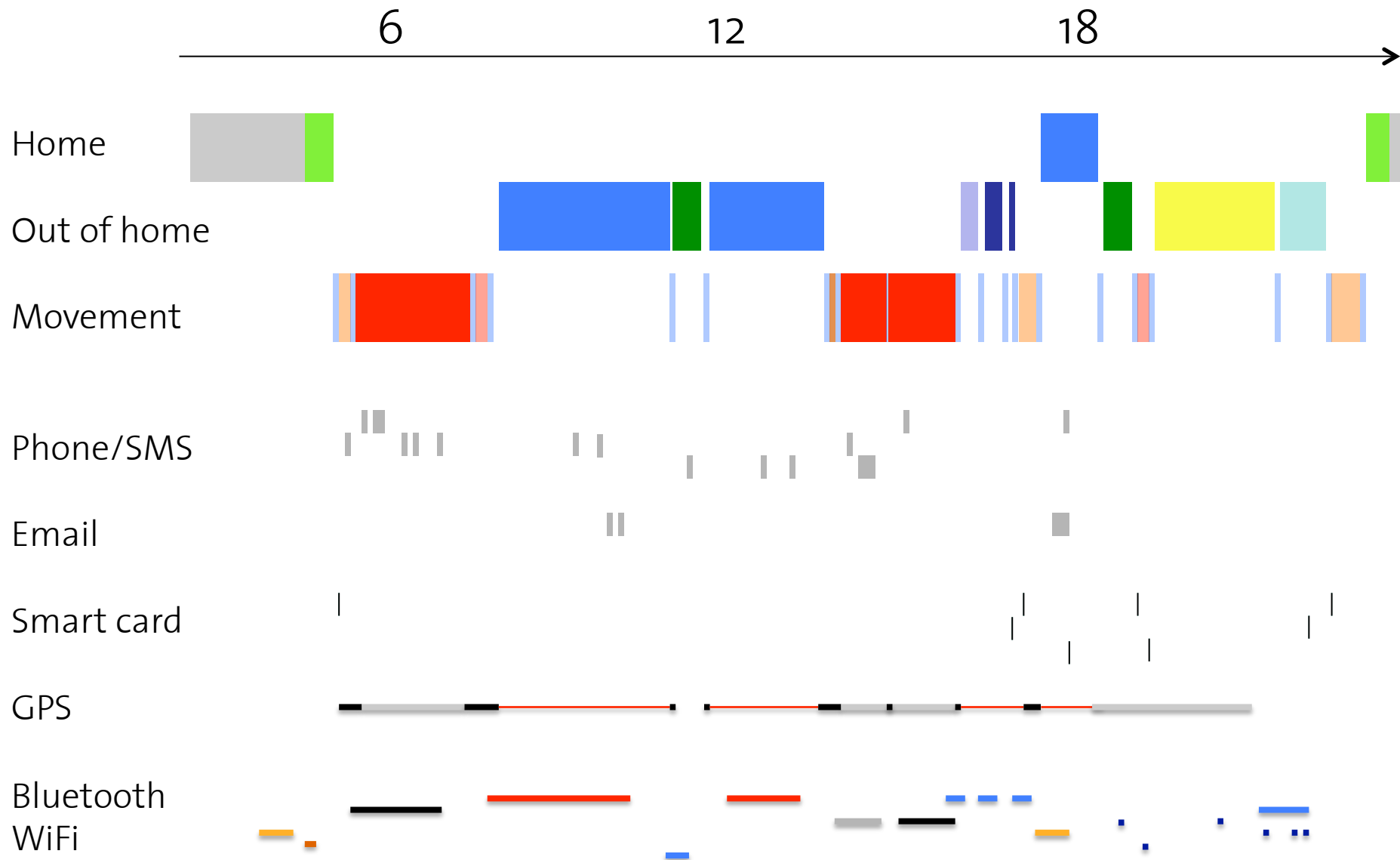


Response is a non-random process

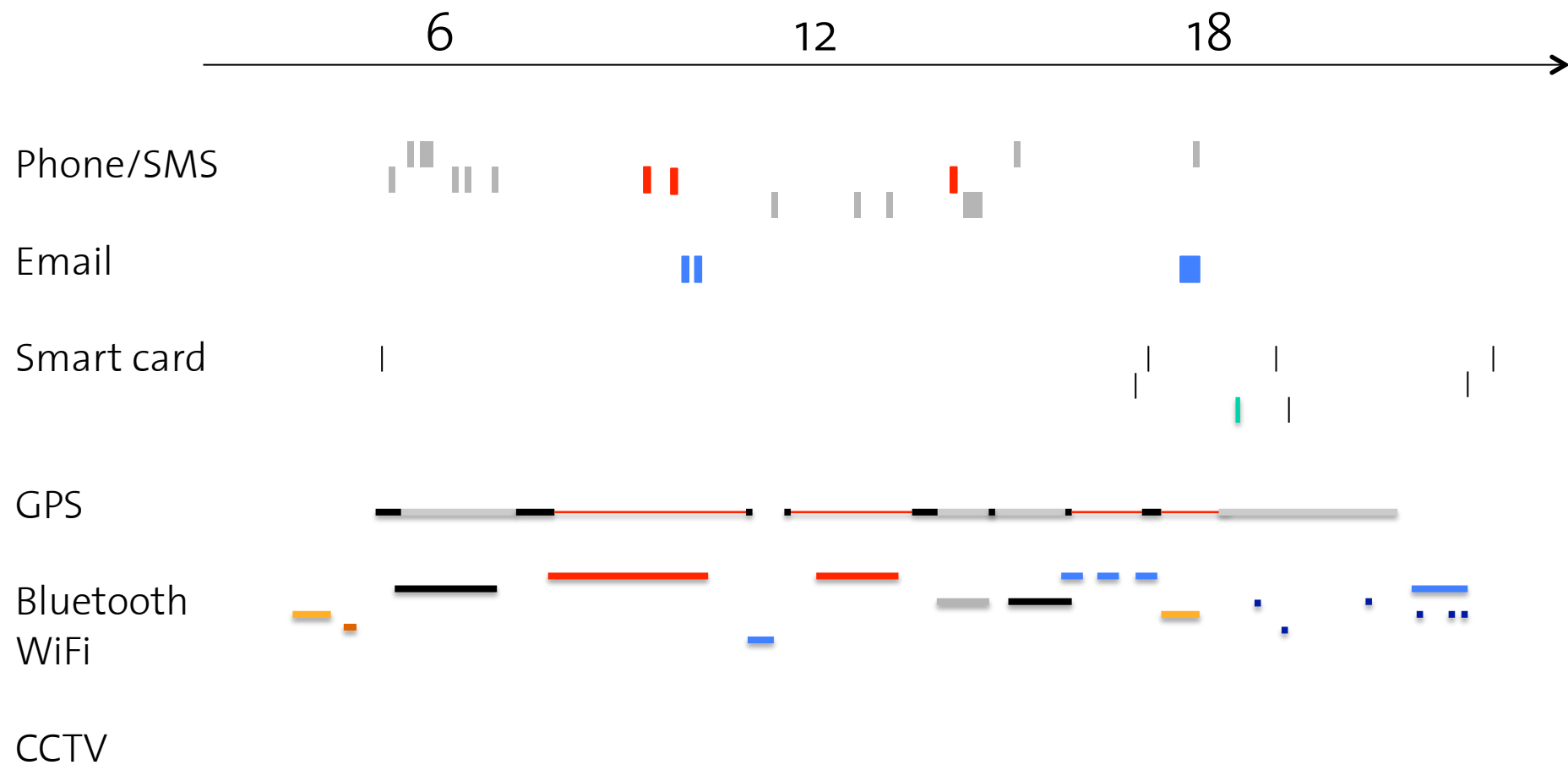


Known „error“ generating processes

Activities, movement and traces: A full example record



Active/passive tracing: Many owners, locations, quality levels

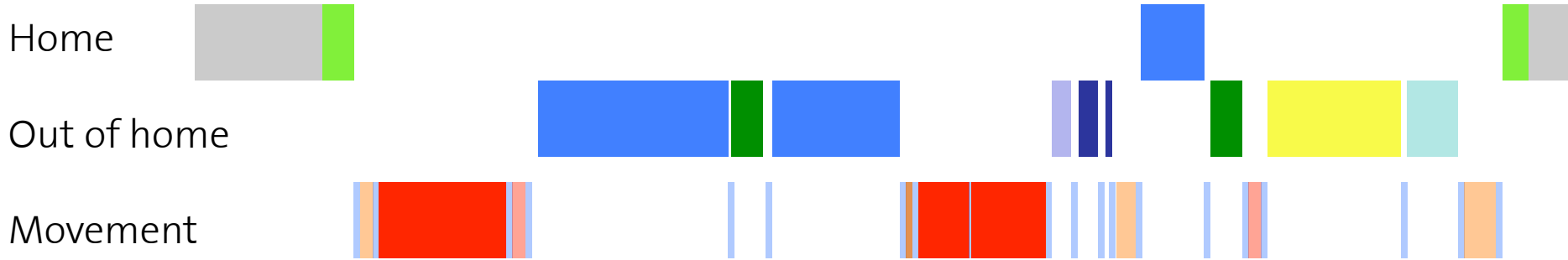


Filters imposed/suggested by the study: „Trips“

6

12

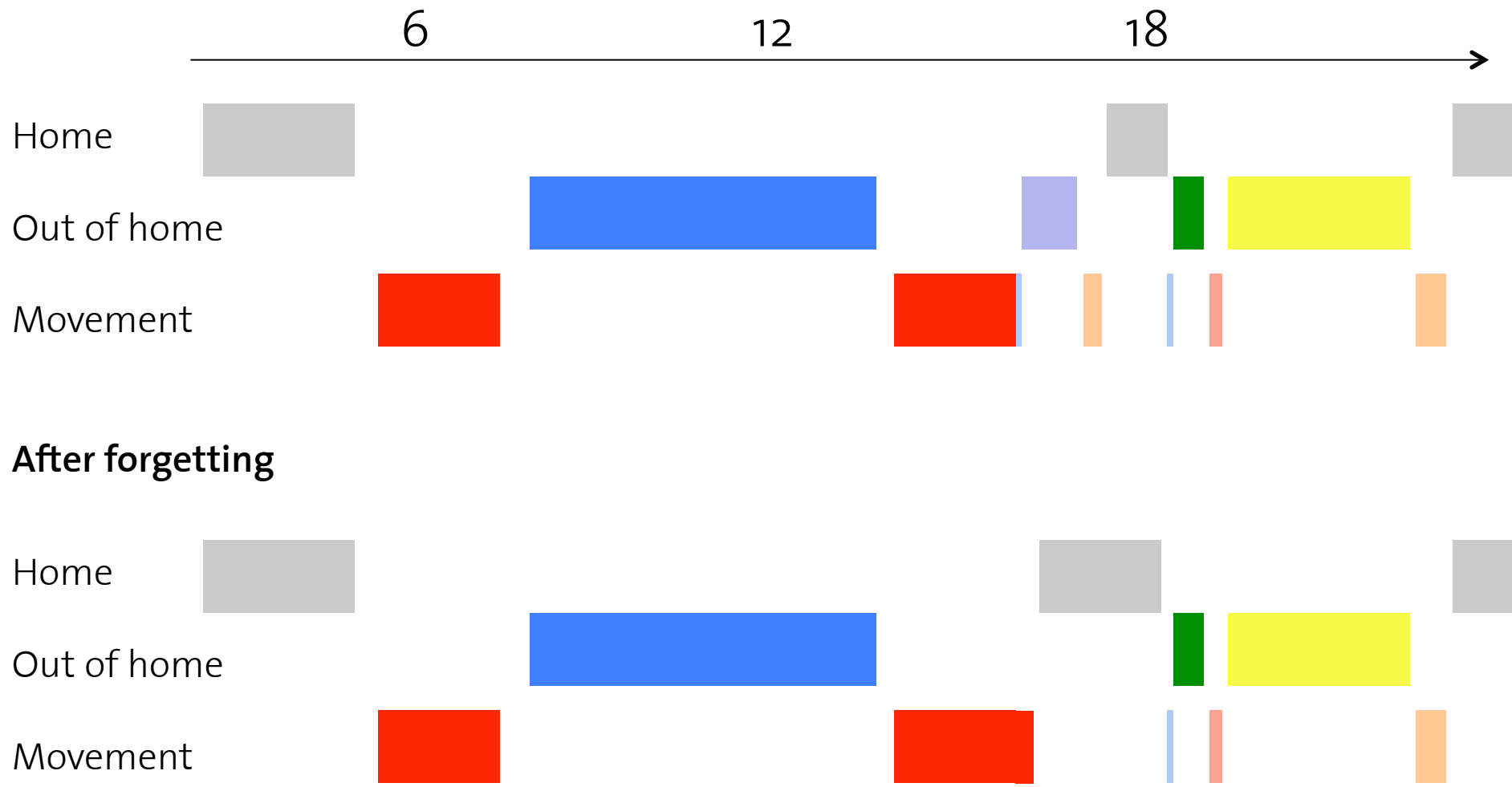
18



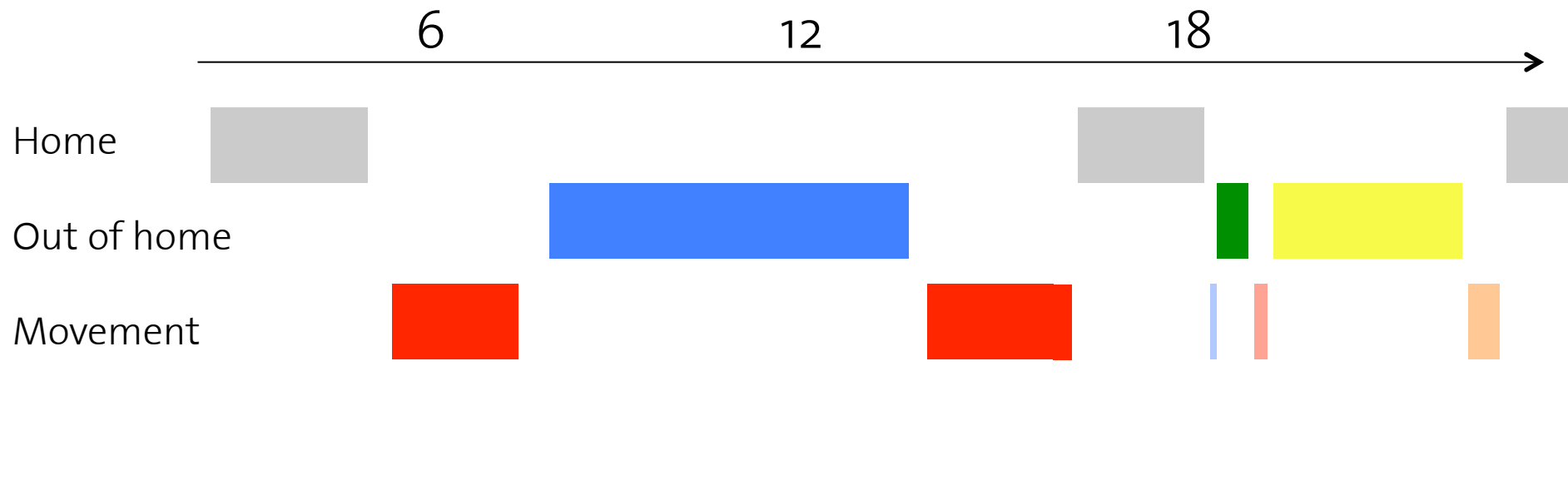
After “trip” filter:



Filters due to the respondent: Forgetting



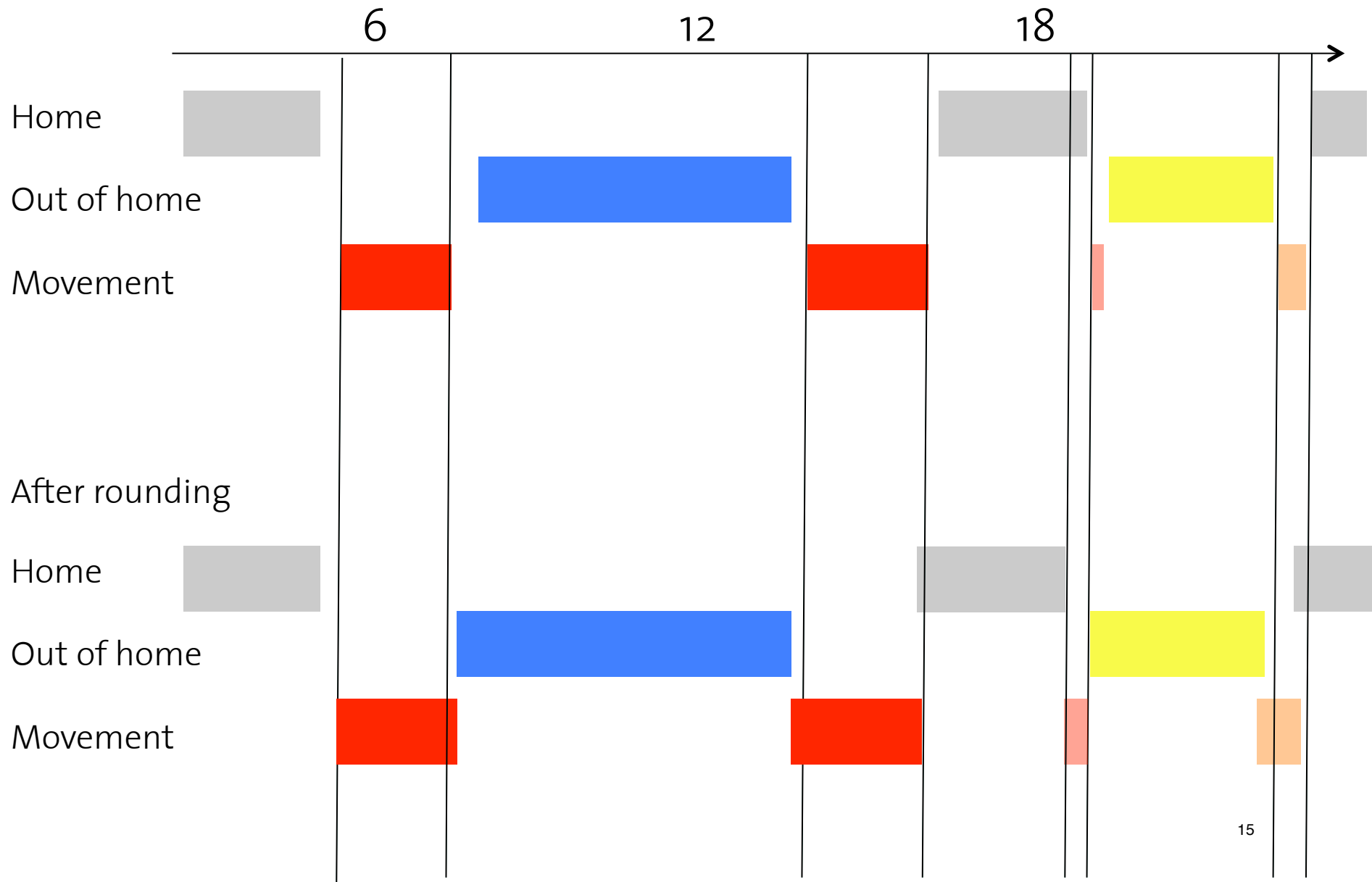
Filters imposed by the respondent: Soft non-response



After soft non-response



Filters due to the respondent: Rounding



What is left ?

True

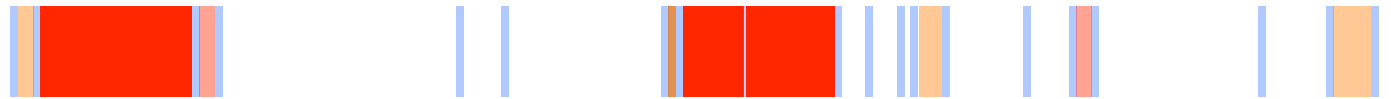
5 at home



9 Out of home



26 Stages,
11 trips,
1 subtour,
2 tours



After all processes

3 at home



2 Out of home



4 trips,
2 tours



What happens next ?

Geocoding addresses

Ideal	Street addresses identifying the entry to the network
Best-case	Unambiguous street addresses
State of the art	Street address
State of practice	Street address/mid-street block/street corners; missing conversion of facility names
Still seen in practice	Arbitrary zonal centroid, e,g post offices

Calculating distances & travel time

Ideal	Complete GPS track for distance and times with pedestrian-networks added
Best-case	Minimal gaps, and state-of-the-art imputation of GPS tracks and modes
State of the art	SUE derived travel times and distances (navigation network)
State of practice	DUE derived travel times and distances (planning networks)
Still seen in practice	Shortest path on empty planning networks

What should we do ?

Next steps

- Query what we really need for
 - Cost-benefit analysis
 - Planning of prices and services
 - Planning for the slow modes
 - Social accounting
- High-quality multi-modal surveys to establish the measurement errors (add bluetooth and wifi senders, noise profile)
- Error correction models
- Treat survey data as indicators in a measurement model
- Treat traces as indicators in a measurement model

Questions ?

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