



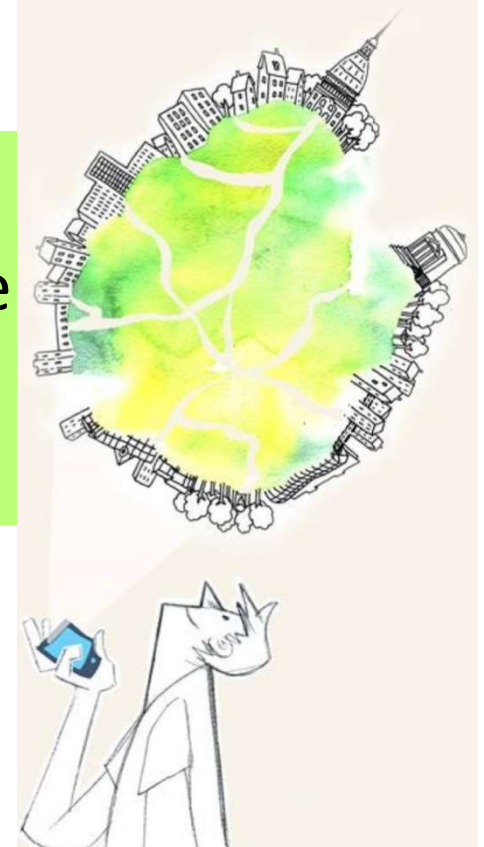
# Intelligent Transport Systems: a Tool or a Toy ?

## Viewpoint on ITS

22-23 November 2016  
Zilina – Slovakia

The multimodal real time  
information and the travel behaviour change  
paradigm or an utopia ?

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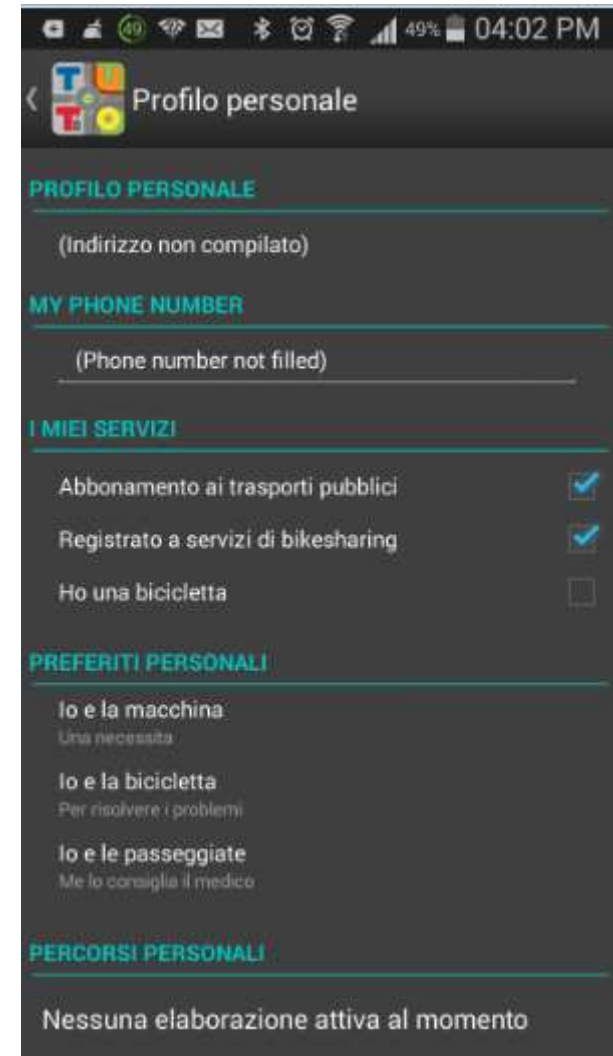


# OPTICITIES

ENHANCING SMART MOBILITY



# TUeTO



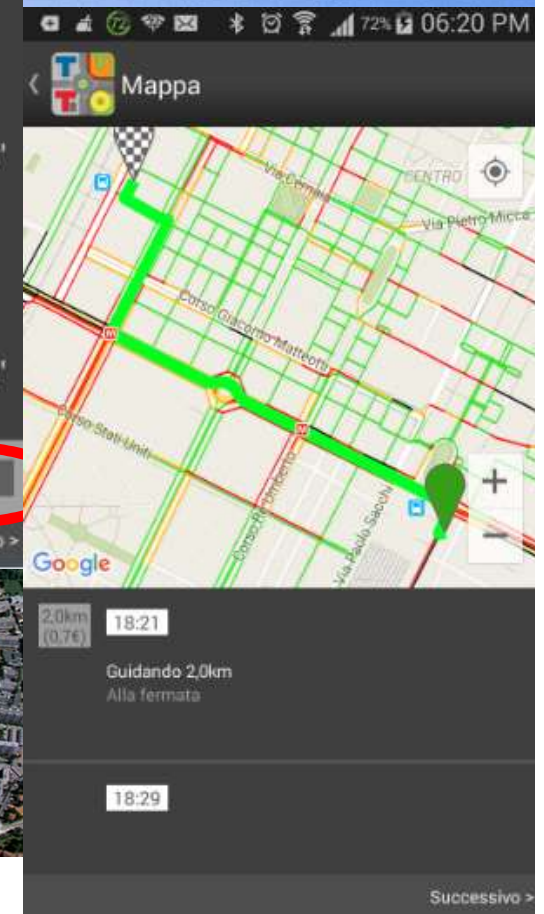


# TUeTO

## MULTIMODAL CALCULATOR



## MULTIMODAL GPS



# Methodology

## Questionnaires

Oct-Dec 2014

## Feb-June 2016 Focus group

July-Sept 2016

### Phase I: ex-ante

#### Ex-ante survey

**Mixed method:**  
quantitative  
questionnaire +  
focus group



Users' needs  
Expectations  
Potential for  
behavioural  
change

#### Selection of the sample

150 participants

### Phase II: experiment

#### In-itinere survey

**Questionnaire**  
each month



Technical problems  
with the app  
Ergonomic  
problems  
Users' reactions  
Behavioural  
reactions

A Smartphone  
Grand Prime  
Galaxy and one  
year free pass has  
been given to  
participants

### Phase III: ex-post

#### Ex-post survey

**Mixed method:**  
quantitative  
questionnaire +  
focus group



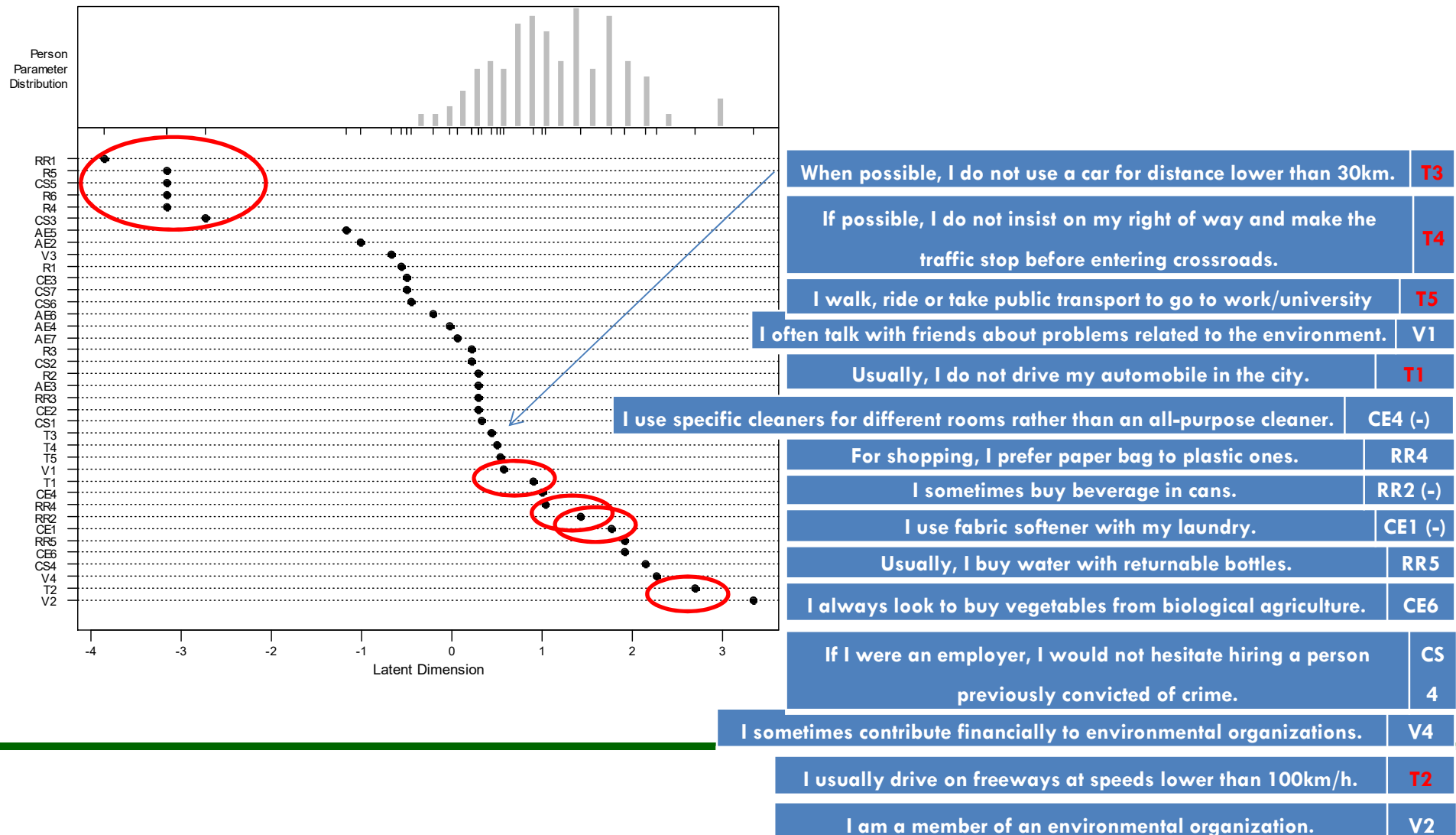
Potential  
behavioural  
changes

Sample of 140  
participants

# Results

From the easier-to-engage item to the most difficult one

The eight easiest items are too easy, not targeting anyone, and so they are not very useful for the GEB measurement



# Results



**Personal norms (PN)** **Problem Awareness (PA)** **Adverse Consequences (AC)**  
**Ascription of Responsibility (AR)** **Subjective Norms (SN)** **Affect (AFF)**  
**Perceived Accessibility (PAC)** **Perceived Behavioural Control toward bicycle use (PBCb)** **Perceived Behavioural Control toward public transport use (PBCpt)**

psycho-social factors

## Transport related Values (Exploratory Factor Analysis)

5-point Likert scale → the level of importance of choosing their mode of transport for their most frequent trip, according to:

*“Cost”, “Speed”, “Comfort”, “Pleasure (I like this mode of transport)”, “Flexibility and independence”, “Respect towards the environment” and “Reliability of travel time”.*



## Two factors

**Utilitarian (U)** (Speed, Flexibility and independence, Reliability of the travel time, Comfort)

**Convenience (C)** (Cost, Pleasure [I like this mode of transport], Respect towards the environment)



**Home localisation (Home)**, divided into: Urban (U), SubUrban (SU), Rural (R)

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# Results

## THREE CLUSTERS

### Neo-Luddites Opportunists:

they value whatever they can benefit from

Neo-Luddism identifies people that follows a desire for a simple life where technological tools are restrained to their minimum → *No use of TUE TO*



### Hedonic Techy Ecologists

in favour of technological use

higher score on the Convenience than on the Utilitarian transport value  
they prefer cheap and pleasant trips than fast and efficient ones



*They expect that technology will solve many problems, including transport-related ones, and are aware of the need to pay to benefit from a service such as the multimodal navigator.*

*They can represent the main source of revenue in a business model assessment*

### Neoclassical Agents

Higher score on the utilitarian over the convenience transport related value  
low score on the measure of attitude toward the environment →

*homo economicus*: an agent who will tend to maximize its own short-term utility without consideration for the others or the environment



*Even if they may benefit from the multimodal navigator, it is unlikely that they'll shift from their most favoured mode until economical constraints will force them to do so*



# THANKS FOR YOUR ATTENTION



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