Promoting sustainable mobility styles using eco-feedback and gamification elements. Introducing the GoEco! living lab experiment.

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Our Mobility Lifestyle

And yet... a number of alternative mobility options are available
Why not walking, going by bike or using public transport?
Changing our daily patterns is difficult
Comfort
Flexibility
Organization
Social distinction
And many other reasons.

Why not trying with a nudge?

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Can we stimulate a change in individual mobility lifestyles by providing information feedback, social comparisons and (intangible) rewards?
We are testing it involving common citizens in their everyday life.

Interdisciplinary approach, combining social sciences, transport and ICT competences.
Everything is based on a smartphone application
The app tracks users’ routes and gives them a feedback on how and how much they move.
It encourages users to choose a personal goal for change.
It encourages users to test personalized suggestions
It encourages users to take part in individual and collective challenges.

*Nights out by slow mobility:* walk or bike when you go out in the evening.

*No car in peak hour:* do not drive during morning and evening peak hours.

*The public transport and folding bike week:* do not use car for a whole week.

*Treasure hunt:* group quests across the city without cars.
It encourages users to compare their performances with friends and other participants.
It rewards users with virtual prizes if they achieve their own goal or make sustainable mobility choices.
The experiment involves 600 volunteers in Switzerland: Canton Ticino and City of Zürich
Two contexts differing in the available mobility options and in citizens' attitudes regarding mobility.

City of Zürich

Canton Ticino
To get a deeper insight on the users’ perceptions, attitudes and choices, some of them will be closely followed by focus groups and interviews.
The design of the experiment

Recruitment of 600 voluntary participants (intervention and control group)

The reference mobility styles
March 2016
GoEco Tracker

The «GoEco!» mobility styles
September – November 2016
GoEco Tracker + eco-feedback + goals + challenges + alternatives + social comparison

The future mobility styles
March 2017
GoEco Tracker

Identification of differences between the monitoring periods
Assessment of the differences between Canton Ticino and the City of Zürich

Recommendations for public authorities
Preliminary finding #1
Activity rates of the participants were definitely lower than expected

800 participants (target) → 602 applications → 576 eligible participants → 461 App downloads → 211 active users

Numbers are however larger than similar experiments
Preliminary finding #1
Activity rates of the participants were definitely lower than expected

- Lack of understanding of the living lab “terms and conditions”?
- Too busy daily routines?
- Lack of satisfaction with quality of data tracked by the App?
- ???

To be investigated with interviews
Preliminary finding #2

According to applicants’ prior declarations, many of them have already reduced car use.
Classification of the participants’ reference mobility styles

Average daily kilometers [km/day]

Percentage of Private Motorized Transport (PMT) kilometers (car, electric car, motorbike and scooter) [%]
Classification of the participants’ reference mobility styles

Six weeks tracking period (March-April 2016)
Classification of the participants’ reference mobility styles

- **«Soft Eco» users**
- **«Strong Eco» users**
- **«Strong private motorized» users**
- **«Soft private motorized» users**

2010 Swiss Mobility and Transport Census SMTC

- **Average daily kilometers [km/day]**
- **Percentage of Private Motorized Transport (PMT) kilometers (car, electric car, motorbike and scooter) [%]**
Classification of the participants’ reference mobility styles

Zurich

GoECo! active participants' reference mobility patterns - Tracking period A - Zurich

- Soft Eco
- 58% - Average Zurich agglomeration SMTC 2010
- Strong private motorized

Average kilometers per day [km/day]

Percentage of PMT kilometers (car, electric car, scooter or motorbike) [%]

35.6 - Average Zurich agglomeration SMTC 2010

Strong Eco

Soft private motorized
Classification of the participants’ reference mobility styles Zurich
Classification of the participants’ reference mobility styles
Canton Ticino

GoECO! active participants' reference mobility patterns - Tracking period A - Ticino

- Soft Eco
- Strong private motorized

Average kilometers per day [km/day]

Percentage of PMT kilometers (car, electric car, scooter or motorbike) [%]

- 29.1% - Average Canton Ticino SMTC 2010
- 75% - Average Canton Ticino SMTC 2010

Canton Ticino
Classification of the participants’ reference mobility styles
Canton Ticino
Preliminary finding #2
Participants’ reference mobility styles confirm many of them have already reduced car use

Weren’t we looking for car-dependent people? Does this mean that even playful, informal and interactive approaches are not enough to tempt people to change? Or is it a recruitment problem?

Zurich active participants

- Strong eco: 29%
- Soft eco: 47%
- Strong private motorized: 18%
- Soft private motorized: 6%

N = 108

Canton Ticino active participants

- Strong eco: 10%
- Soft eco: 44%
- Strong private motorized: 10%
- Soft private motorized: 9%

N = 103
Conclusions

In Autumn Tracking period B will start:

• intervention group will use the full *GoEco! App*
• control group will use the *GoEco! Tracker App*

Maintaining a total number of 200 participants would still allow us to produce innovative and generalizable results

Even if drop-off rates will further increase, however, results will tell us a lot regarding real life attractiveness of our approach