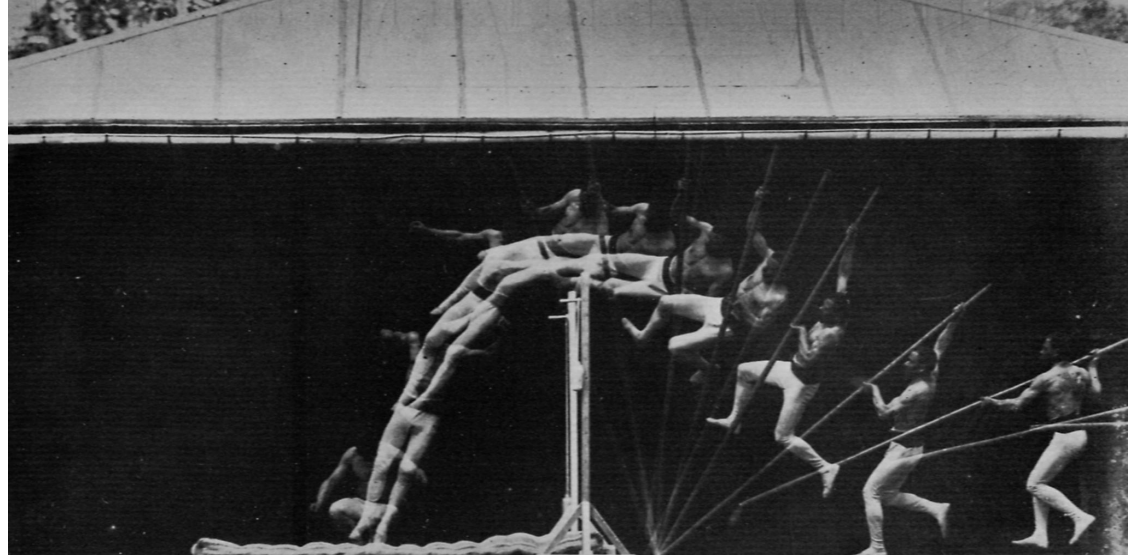




Roger Tallon, Corail project, 1970



Etienne Jules-Marey, 1898

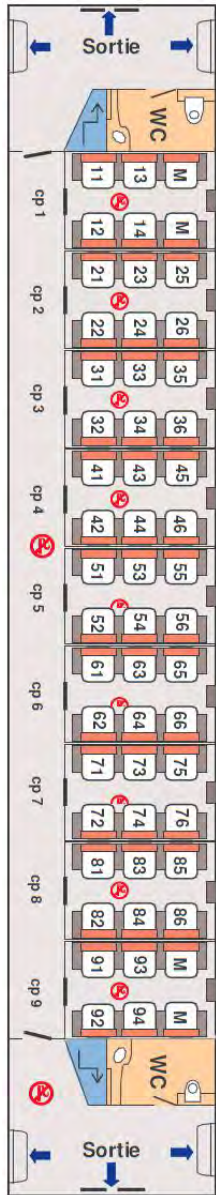
In situ smartphone questionnaire: a paradigm shift for the origin-destination survey

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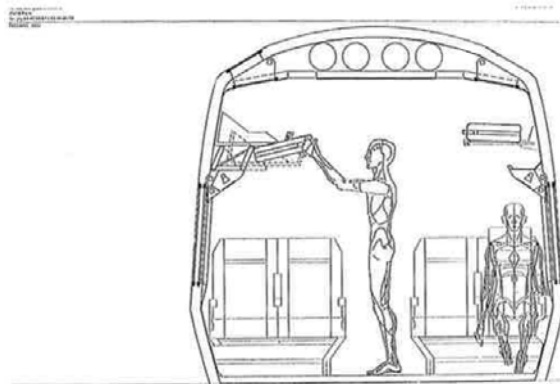
Current situation	New methods	Field of Research	Expected results	Mobile Survey 1
History Origin Destination Survey	GPS tracking In situ questionnaire	Brazil Europe	Means of transportation Transportation modes	Fernando Simas Swiss Mobility Conference



Voitures standards européennes, 1970



TGV EUROSTAR



"à vous de jouer"

Roger Tallon



Vitres Giruno, 2016



Current situation
History
Origen Destination Survey

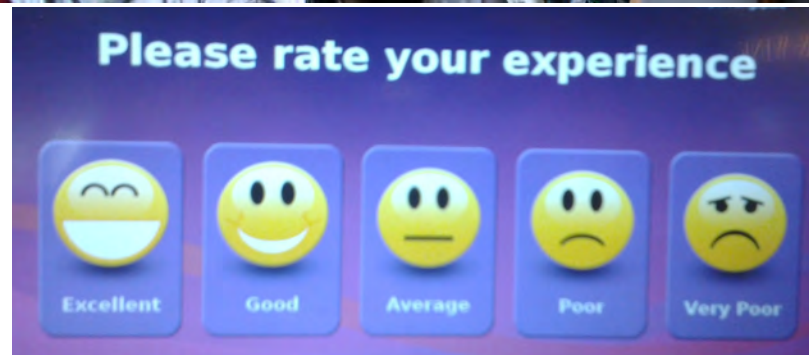
Mobile Survey 2
Fernando Simas
Swiss Mobility Conference

What does this picture tell you?

Are they making the best use of their time while transiting?

Do the passengers seem to be happy?

What they have to say?



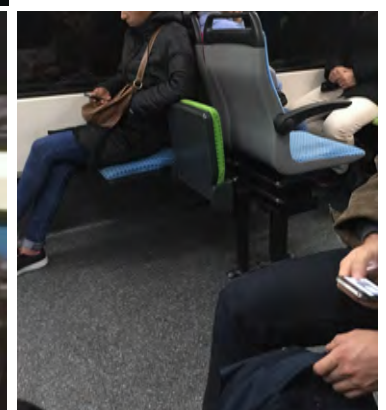
©http://www.brasil247.com



Current situation
History
Origin Destination Survey

Mobile Survey 3
Fernando Simas
Swiss Mobility Conference

Images analysis



Fernando Simas
Swiss Mobility Conference



Current situation
History
Origin Destination Survey

Traditional OD survey

How many surveys people answer by year?



What kind of questions?

- How many times do you use public transportation?

Example of answers: 3 times, everyday, sometimes...

Is it precise?

- How did you feel during your journey?

Good, bad, not so good...

Can it describe the comfort of traveling?

- Did anything disturb you during the commuting?

Everything was ok, I can remember, etc...

Did temporal distance affect accurate answers?

safe user 1 winter too hot METRO

this is not comfortable

I like this new seat

BUS winter summer
rude user user 2



New ways of interactions - crowdsourcing

Traditional OD survey

For public transport users:

- Complaints done through social networks
- No connection with transport providers
- Not geo-located and specific (transport mode, routes)

Transportation researchers:

- Traditional Origin-Destination surveys
- Not done on a regular basis
- Some imprecise data

LEB -> La ligne "verte" de tous le...

Groupe public

Membre Partager Notifications

Discussion Membres Événements Vidéos More

Chercher dans groupe

AJOUTER DES MEMBRES

+ Entrez un nom ou une adresse e-mail...

MEMBRES 1 478 membres (49 nouveaux)

DA JE NATASA NATASA NATASA NATASA

DESCRIPTION

Un groupe pour les voyageurs du LEB lésés! Venez partager votre frustration, votre impuissance, vos revendications. Échangeons pour faire bouger les choses!

Reshma Panchaud 14 octobre, 08:07

Le conducteur de ce matin 7h03 ! Il était parfait 😊 si on pouvait ! avoir plus souvent ça serait bien volontier
Une bonne journée à tous 😊

J'aime Commenter Partager

Alexandre Zbinden 15 octobre, 19:44

C'est technologiques les années 1970 😎

JEUDI 01 JANVIER 1970
02:34 MINUTES

J'aime Commenter Partager

Loris Capraro 14 octobre, 11:50

Est-ce que la ligne du LEB est rétablie ? 😊

J'aime Commenter Partager

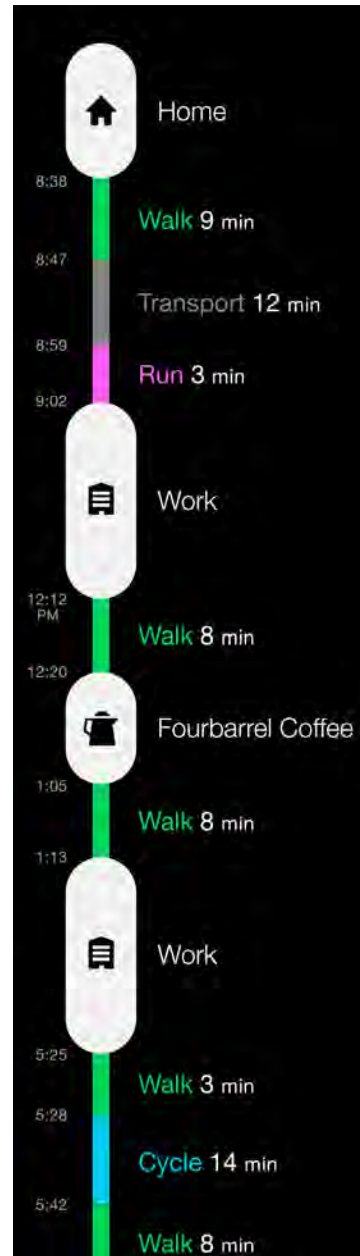
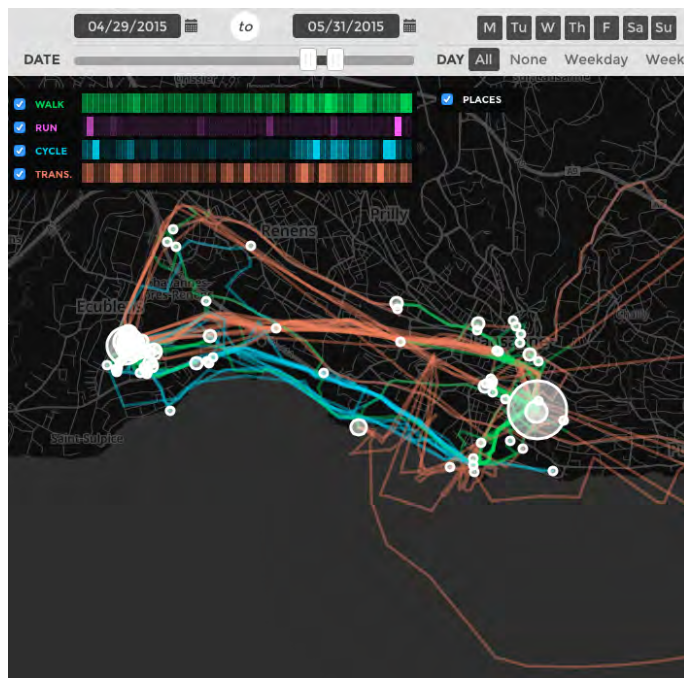
Julien Favre Non elle est toujours malade 😞

J'aime Répondre 1 · 14 octobre, 12:13

Loris Capraro a répondu · 1 réponse

Smartphones and mobile app OD 2.0

- Combine geolocation, routines and surveys
- Interactive conceptual frame



For public transport users: App

- Communication channel
- A fun way to interact with transit providers
- Special offers

Transportation researchers

- New method for Origin-Destination Survey
- Enhanced information
- More precise, complete and useful

Invert the process

Surveys will track your activity and will do the right question:



- How many times do you use public transportation?

The application answers it based on your commute routine

It is automatic, efficient and precise.

- Are you sitting? yes / no

Why not? No space, I don't want

Yes. Is it comfortably? No.

It is right away, clear and accurate.

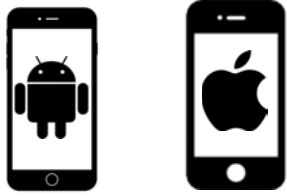
- Does anything disturb you now? yes / no

Yes.

What? Noisy passengers.

Questions are answered in an interactive way.

Winter	
user 1	BUS Sion #454
	I like this new seat
user 2	METRO Lausanne M2
	this is not comfortable
Summer	
user 1	BUS Bussigny #7240
	nice view
	safe
user 2	METRO Lausanne M1
	too hot
	rude user

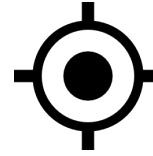
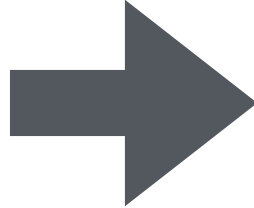


A mobile app



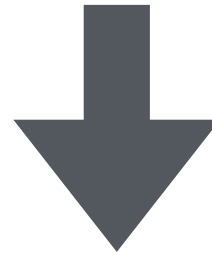
Passengers

- Feedback



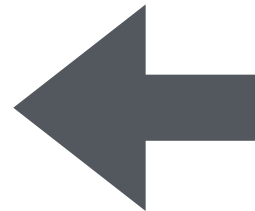
Captures and measures

- Behaviour and perception of time
- Quality of service in situ



Outputs:

- Quantitative data
- Qualitative data

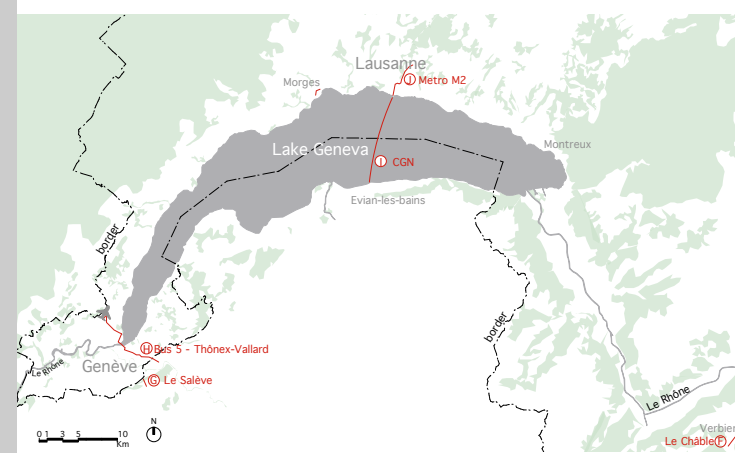


A paradigm shift from the Origin-Destination Survey Methodology

Underdeveloped country







Developed country



Field of Research
Brazil
Europe

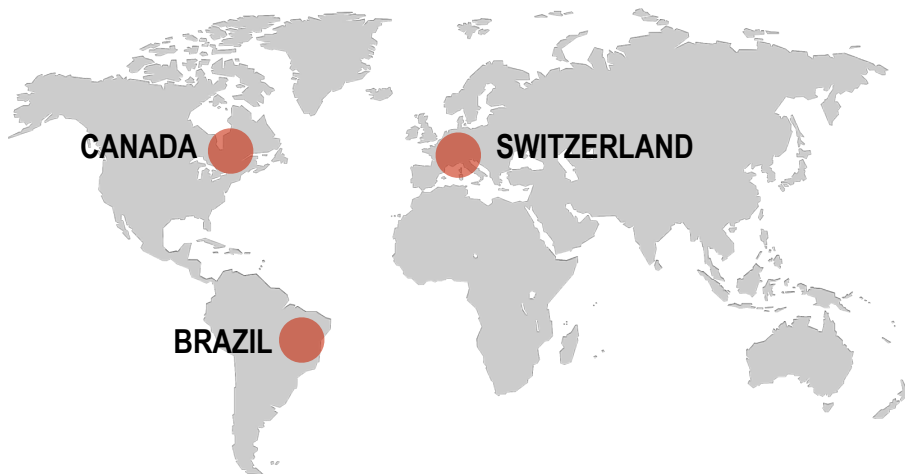
Mobile Survey 10
Fernando Simas
Swiss Mobility Conference

Brazil - Rio de Janeiro		Switzerland - métropole lémanique
Cable cars of Morro do Alemão	 Aerial	Cable cars of Le Châble - Verbier
Cable cars of Morro da Providência		Cable cars of Salève
Bus 2101 – International airport of RJ (AIRJ) – Santos Dumont airport	 Terrestrial	Bus Geneva International airport – Thonex-Vallard (Line 5)
CCR Rio de Janeiro - Niterói	 Maritime	CGN Lausanne – Evian
Metro line 1 (Uruguai – Ipanema / Gel. Osório)	 Sub	Lausanne - metro Ligne 2 (Ouchy/Croisette)



Switzerland - Working progress

- Initial testing grounds
- EPFL local sphere of influence



Worldwide

- Brazil, Switzerland and Canada
- Every public transportation system worldwide

New scenarios

Modernize transport scenarios

Limits and Constrains

Interference in long term established economies

- As verified with innovation technologies

Keep independent and scientific freedom

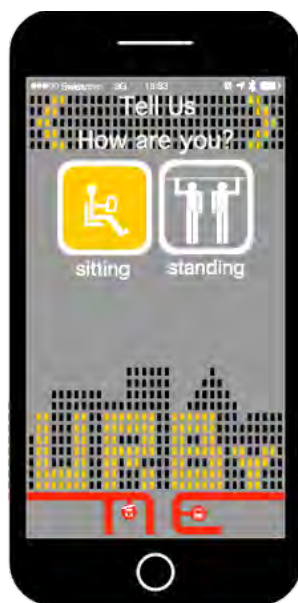
- Reliability

Introduce academic knowledges about urbanization

- Transportation public policy
- Sustainable mobility
- Non-motorized households
- Automobile dependence
- Urban slums
- Public space



Notification



Basic questions



Confirmation



Overall



Specific



Gamification

Thank you

fernando.simas@epfl.ch



Current situation

History
Origin Destination Survey

New methods

GPS tracking
In situ questionnaire

Field of Research

Brazil
Europe

Expected results

Means of transportation
Transportation modes

Mobile Survey 15

Fernando Simas
Swiss Mobility Conference