

# The MOVE platform: monitoring urban travel

Dominique Gillis  
Ghent University (Belgium)



2012 POLIS conference



# MOVE

## *Crowd sourcing using mobile communication*

MOVE follows the activity of people using smartphone and bluetooth scanning.

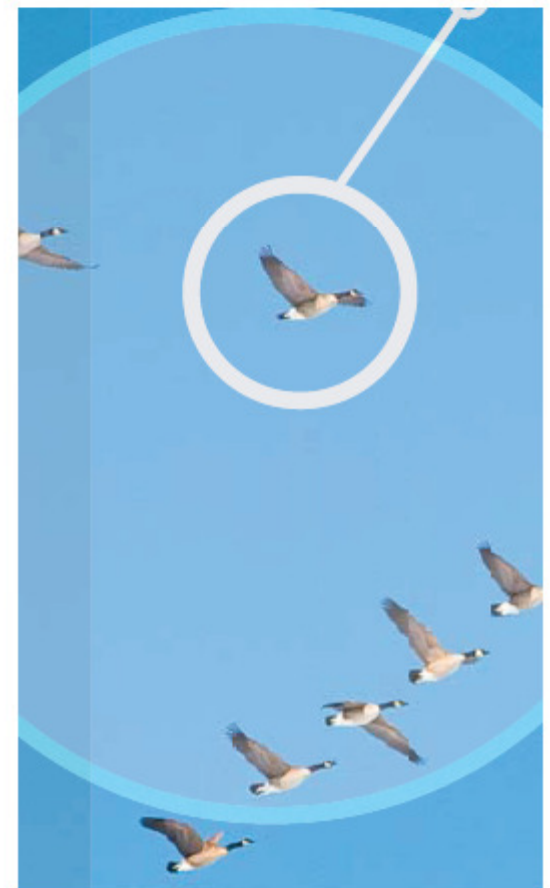
MOVE reports on the indoor and outdoor behaviour of user groups in domains like security, mobility and retail.



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Tracking crowds,  
Respecting personal space



# Importance of trip behaviour surveys

- Traffic is a result of people's trip decisions
  - For which purpose? When? Where to go?  
By which mode? By which route?
- When dealing with traffic issues, focus is on the last questions
  - Increase road capacity, make alternative modes more competitive
  - But this does not affect the underlying traffic behaviour...
- Understanding trip behaviour allows to tackle the actual problems
  - need to analyse and individual trip data



# Trip data collection

- Classic method: trip surveys with paper ‘trip diaries’
  - People report all trips during several days
    - Trip purpose, travel mode, travel time, trip distance, ...
    - Start and end time, commune of origin and destination
    - ...
  - But some drawbacks:
    - Inaccurateness of reported locations and times
    - No information about travel routes
    - Effort for participant and surveyor, effect of fatigue
    - Incompleteness (short trips)
    - Short survey period



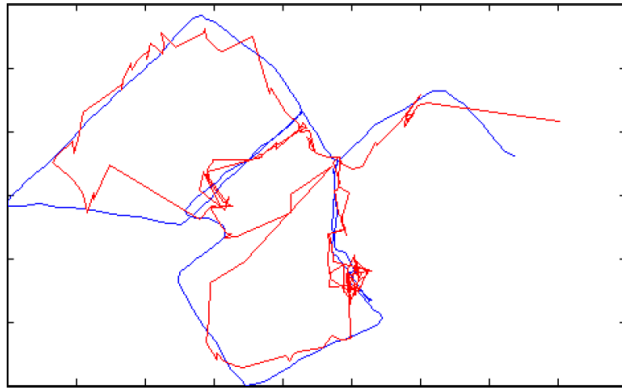
# Trip data collection

- Use of GPS for trip surveys solves a number of drawbacks:
  - Permanent tracking 24/7
  - Accurate detection of trip origin and destination, and the route between
  - Accurate detection of start and end times, delays, ...
- With smartphone: additional trip characteristics by manual reporting
  - Within the MOVE-project: several app's:
    - MOVE: simple trip reporting
    - CONNECT: more interactive, e.g. location-based surveys

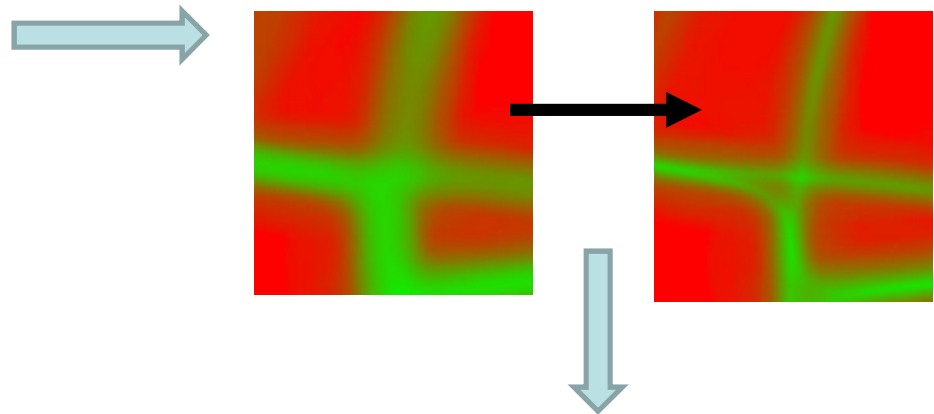


# Trip data collection

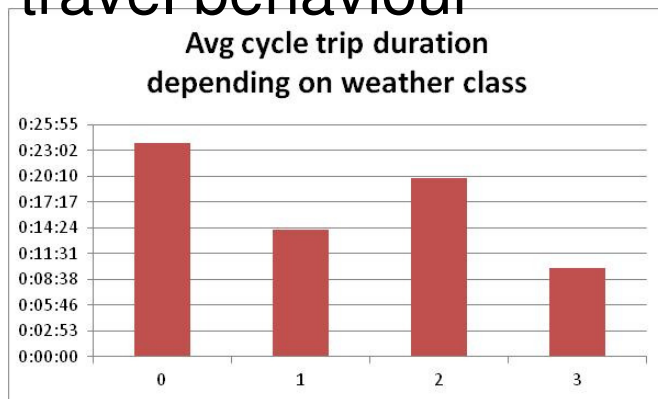
Raw data:



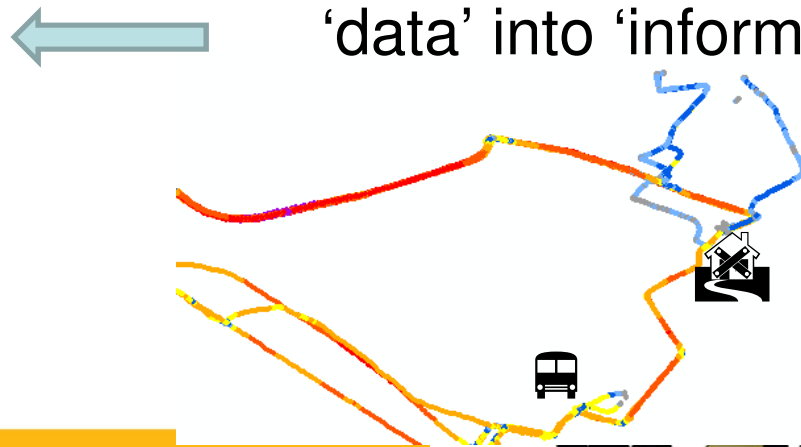
Data correction / enhancement



Analysing and reporting travel behaviour



Data processing:  
'data' into 'information':



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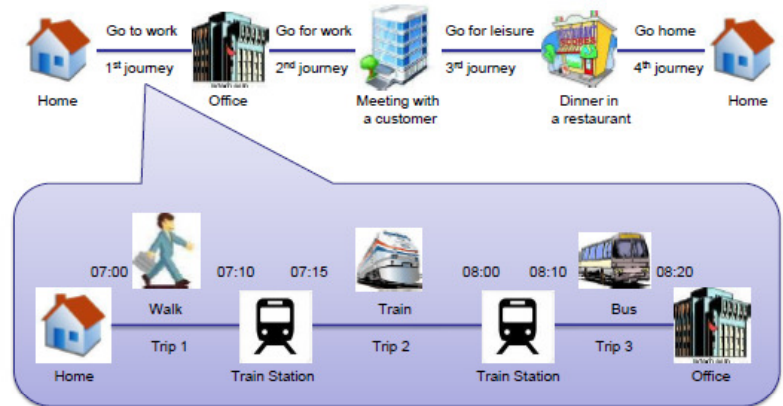


# Further challenges

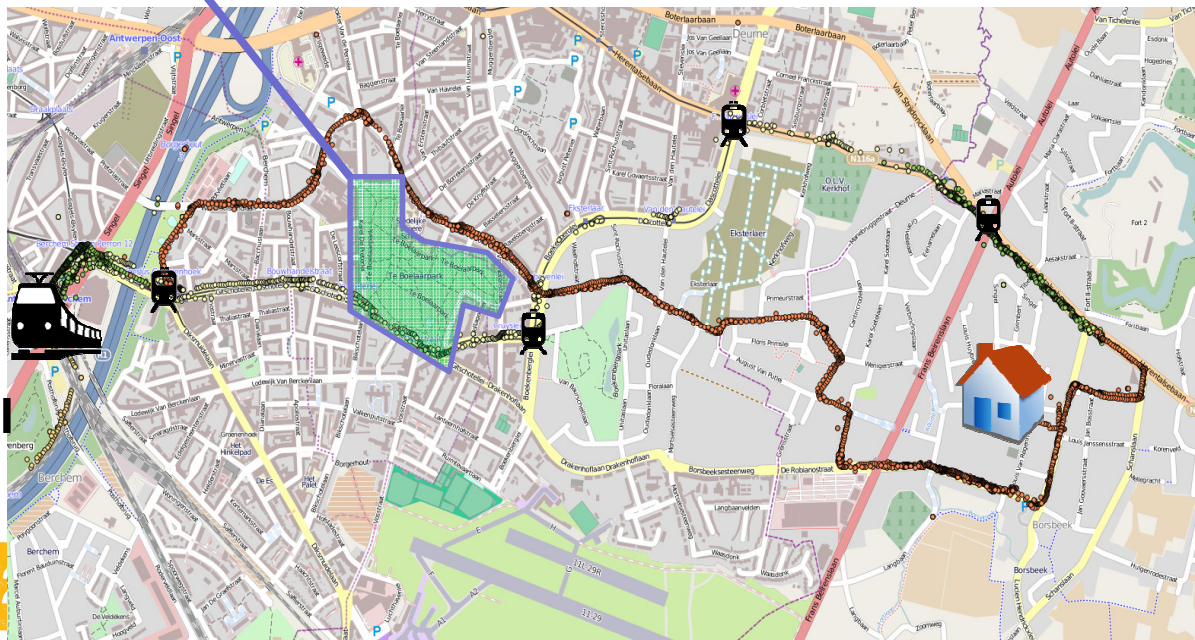
- How to reduce manual intervention by the user?  
(passive tracking)
  - E.g. Automatic trip mode detection
- How to motivate people to use app's?  
(and to continue using them...)
  - What's in for the user?
  - Win-win applications, e.g. Bike To Work
    - reports cycle trips to work: facilitate bicycle fee
    - reports cycle quality to government
    - collects trip behaviour data



# MOVE is *Urban (traffic) Monitor*



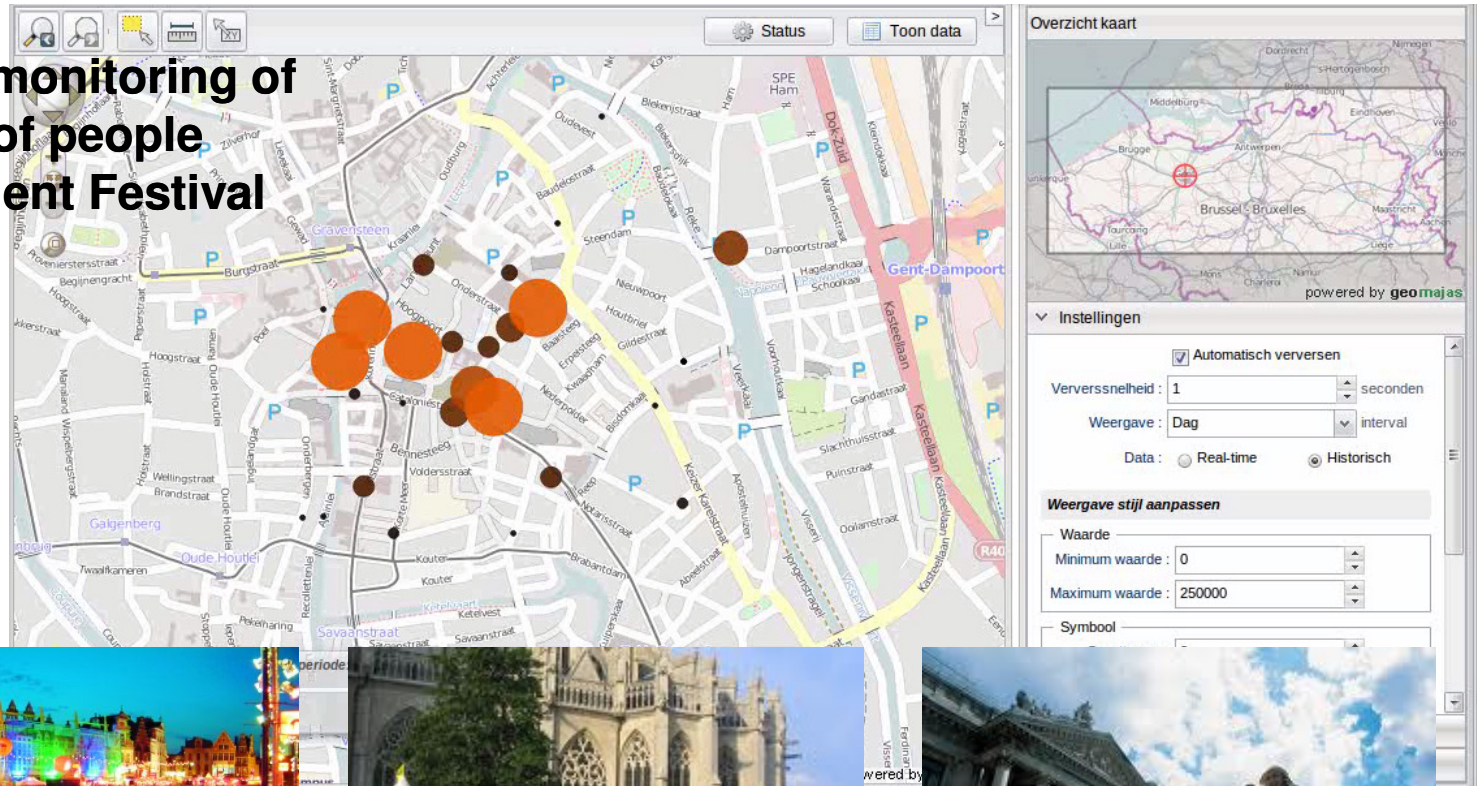
**MOVE integrates with Location Based Services and Social Networking apps... Offering additional insights in multimodal user behaviour.**





# MOVE is *City Event Management*

Realtime monitoring of hotspots of people during Ghent Festival



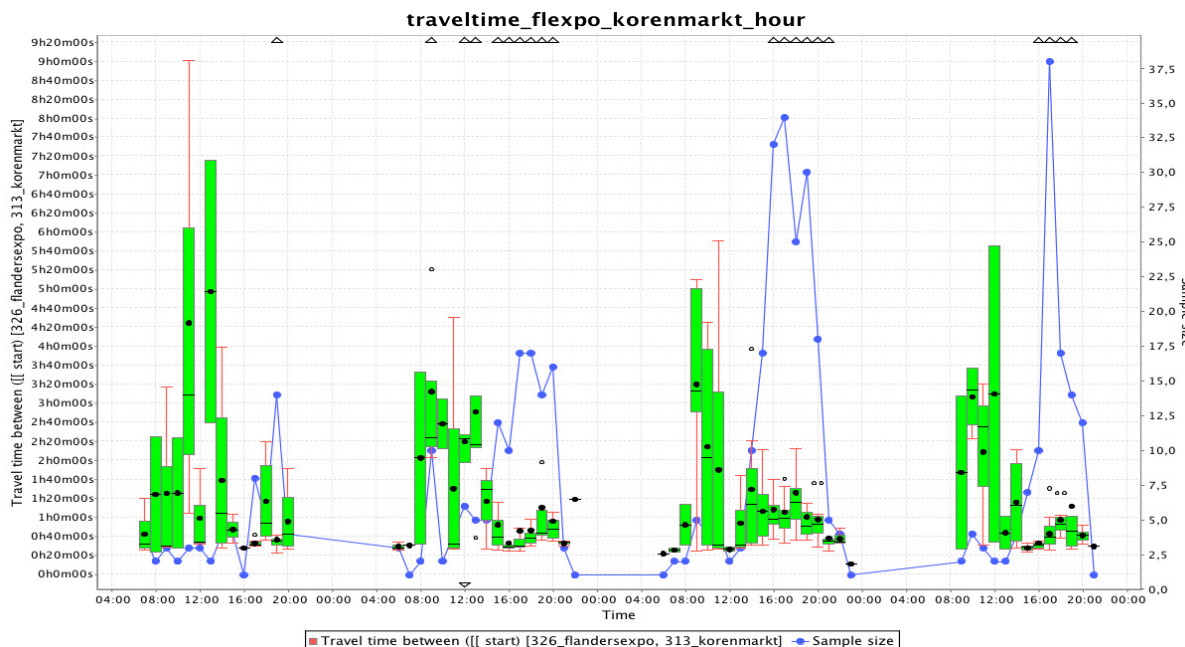
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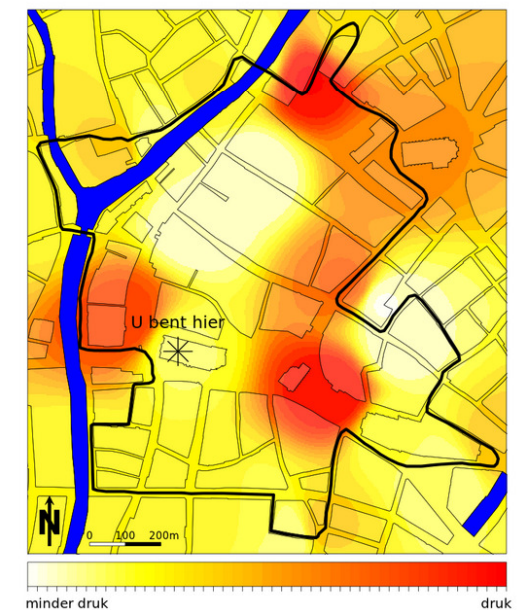
# MOVE is *City Event Management*

Realtime reporting of travel times between stages during Ghent Festival, Pukkelpop, ... (→ police, security, visitors)

Monitoring of travel time between the Park&Ride and the festival (→ public transport company)



Hoe druk is het?



Laatste update: 27/1/2012 om 21:25



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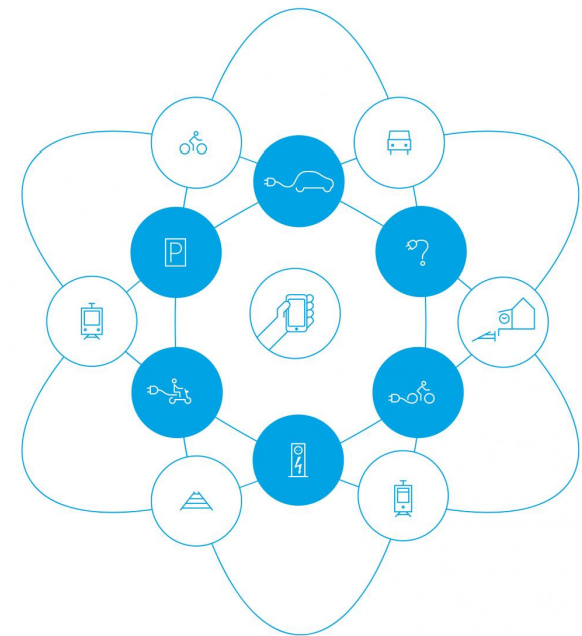
# Related projects

## OLYMPUS Living Lab Electrical Vehicles

OLYMPUS investigates multimodal electric mobility and is coordinated by NMBS. The Living Lab deploys a fleet of 130 e-bikes, 20 e-scooters and 20 EV vehicles over 4 cities and organizes B2B-transactions between providers.

MOVE is used as core data platform to monitor the movement and usage behavior of multimodal e-mobility and integrates with the B2B-service platform of OLYMPUS.

**OLYMPUS**  
Proeftuin elektrische voertuigen



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# Related projects

## EVA Living Lab Electrical Vehicles

EVA investigates electric mobility and its impact on the electric grid and is coordinated by Eandis. The Living Lab deploys over 200 charging poles and 160 electrical vehicles in 35 cities and towns.

MOVE is used as core data platform to monitor the movement and usage behavior of e-mobility and integrates with the charging infrastructure.

JAN 2012



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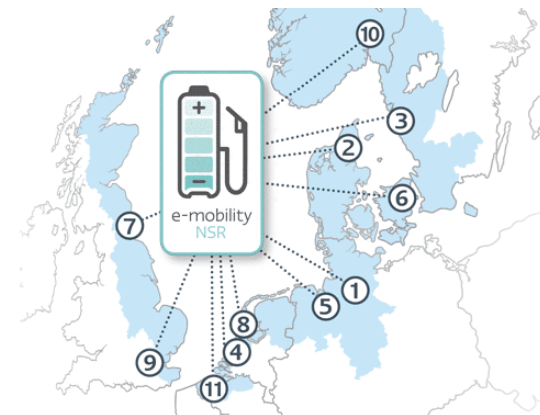
# Related projects

## Interreg IVB e-MOBILITY

E-MOBILITY aims to increase accessibility by fostering the diffusion of e-mobility and stimulating the use of public and private electric cars as well as freight across the North Sea Region.

MOVE is used as core data platform to monitor the movement and technical behavior of e-mobility.

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# Related projects

## Bike to Work

Bike to Work uses MOVE to monitor the daily commute per bike using a smartphone app. Users are able to give feedback on the quality of their bike route.

MOVE reports on the usage and quality assessment of bike routes for government and industry.

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Thank you for your attention!

Dominique Gillis (Ghent University)  
dominique.gillis@ugent.be



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