



# FLOW: Making active modes count in transport modelling

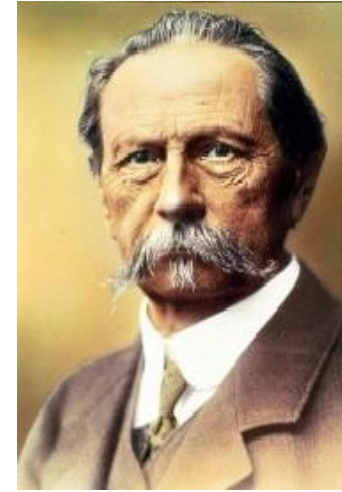
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4.C ICT & Active Mobility

Bernard Gyergyay, Rupprecht Consult



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# Little story to start with...



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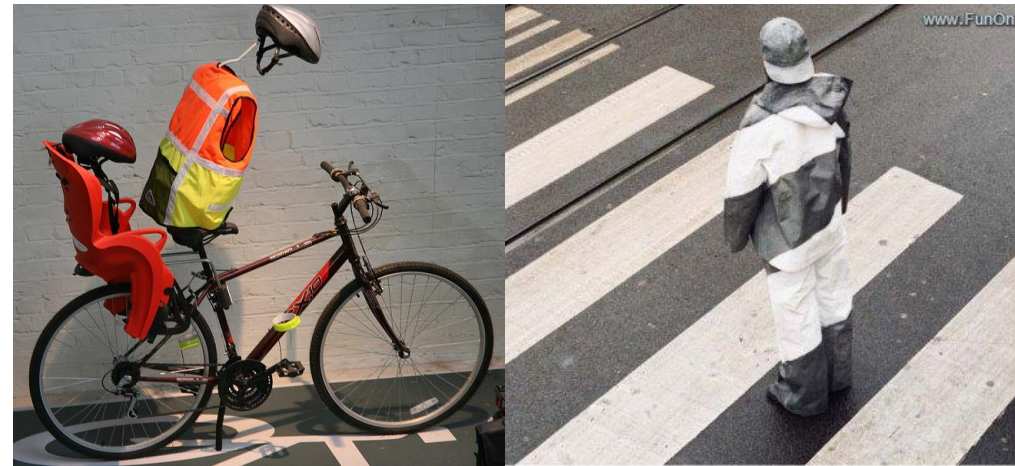
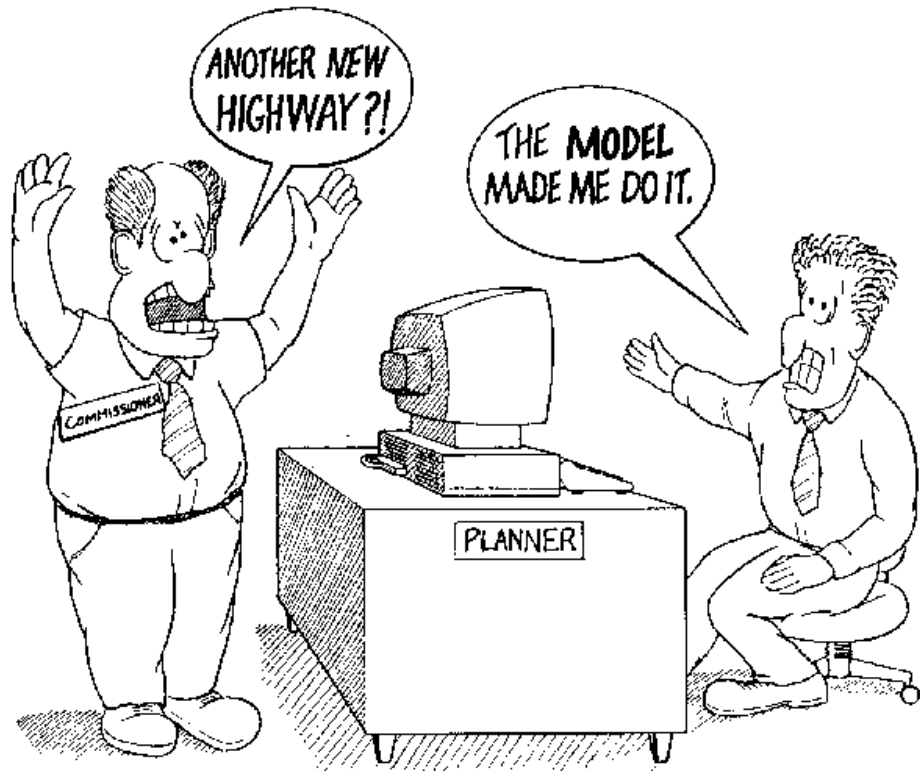




# The FLOW story

In the transport modelling world...

In the walking and cycling world...



Désirée Palmen / Zebra / C-print / 2002 / 30 x 59 inches

## The FLOW story – What is multimodal-congestion?



## FLOW objectives

- **Define the role** of walking and cycling in congestion reduction
- Develop and apply tools (modelling and impact assessment) for **assessing the congestion-reducing potential** of walking and cycling measures
- **Increase awareness** of the congestion reduction potential of walking and cycling
- **Foster the market up take** of FLOW tools in cities and transport planning consultancies



# FLOW partnership

## Support partners

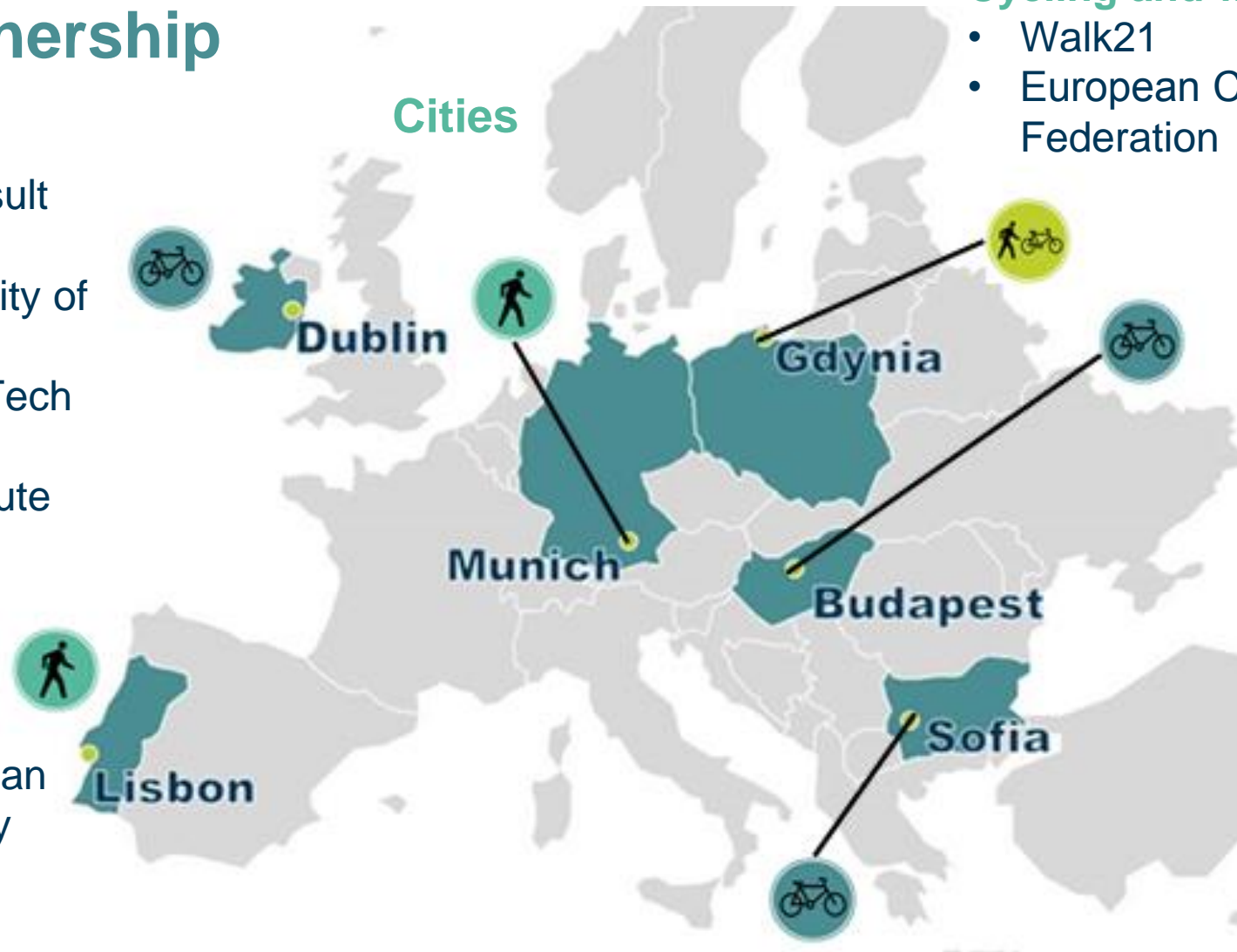
- Rupperecht Consult (coordinator)
- Gdansk University of Technology
- Budapest U of Tech and Economics.
- Wuppertal Institute
- Traject
- Polis

## Technical

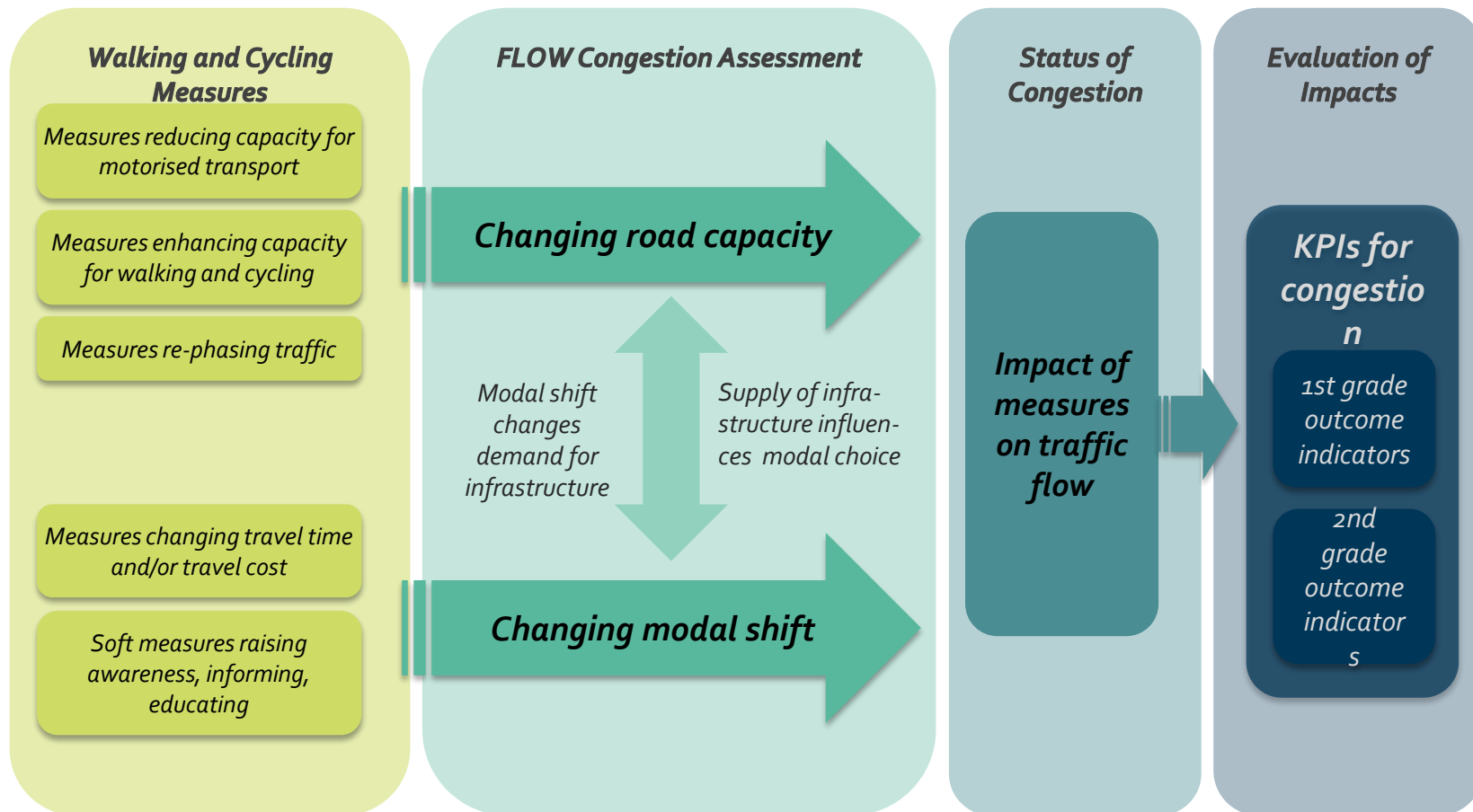
- PTV
- Forum of European National Highway Research Laboratories

## Cycling and walking

- Walk21
- European Cyclists' Federation



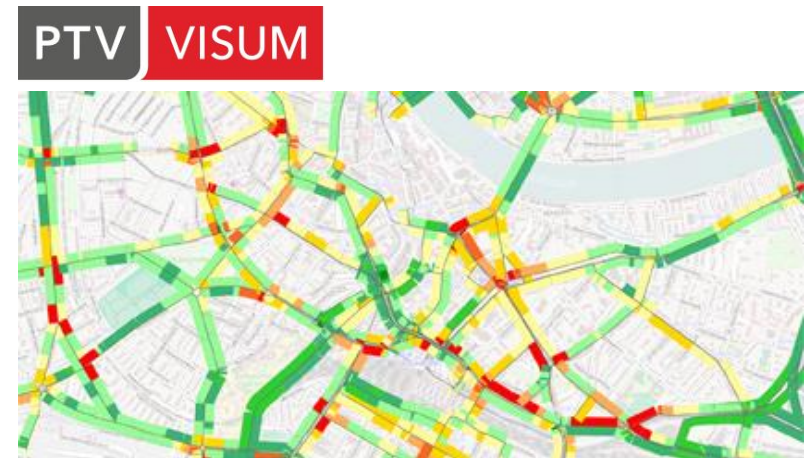
## flow conceptual framework T1.3





## Active modes in macroscopic models

1. Bike assignment: Path-level attributes in stochastic assignment (e.g. slope or attractiveness attributes)
2. Park & Ride modelling: Actually a modelling platform for combination of two path legs - can also be used e.g. for Walk & Ride
3. Bike sharing: enhanced mobility sharing in PuT assignment



# Operation and extension of the MOL Bubi system

## Launched in September 2014:

- Budapest downtown area 15 km<sup>2</sup>
- 76 docking stations (1500 stands)
- 1100 bicycles
- **1 000 000 trips** since opening (2 rents/bike/day, 2200 rents/day)



## Application of FLOW Assessment tools:

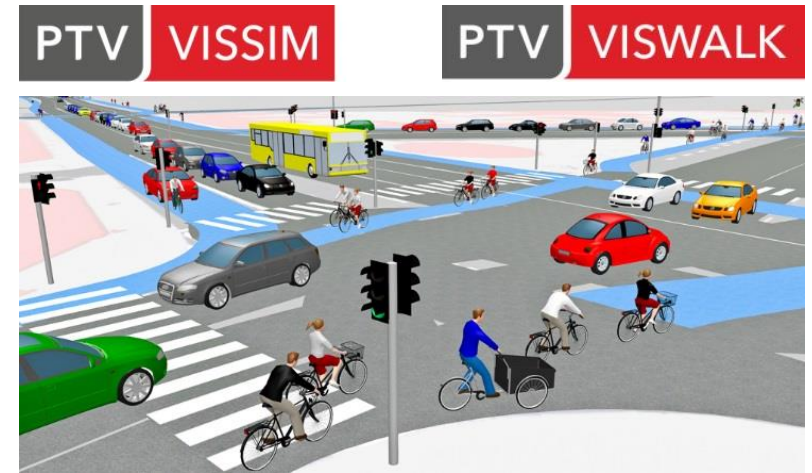
- Marcoscopic Analysis
- Include bike sharing in assignment model
- Congestion impact
- Impact on traffic flow



# Active modes in microscopic modelling

## VISSIM – Urban Mobility Package

1. Enhanced modelling of conflict zones between cars & pedestrians
2. Behavioural parameters for cyclists:  $\frac{1}{2}$  car?
3. Interaction of bikes and pedestrians
4. Shared Space



# Removing pedestrian overpass - Lisbon

- Pedestrian overpass hardly used
- Fear of congestion



## Application of FLOW Assessment tools:

- Microscopic analysis of level crossing
- Congestion impact





# Challenges

Lack of political understanding and support

Defining pedestrian/cyclist congestion

Always a simplification of the world!

“Proving” that congestion reduction is caused by walking or cycling measures

Modelling human behaviour isn't easy

Based on assumptions

Lack of data



## Involvement opportunities

- [h2020-flow.eu](http://h2020-flow.eu)
- FLOW newsletter
- Twitter feed

### Cities:

- 9 Exchange Cities
- 25 Follower Cities

### Businesses

- Marketplace

### Learning and exchange:

- face-to-face workshops and site visits
- online courses
- webinars



**Thank you for your attention.**



Bernard Gyergyay – [b.gyergyay@rupprecht-consult.eu](mailto:b.gyergyay@rupprecht-consult.eu)