



Katedra Rynku Transportowego

# **Gdynia public transport policy towards sustainability: trolleybus system, parking zones and cycling initiatives**

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# Evidence of transport matters in European cities

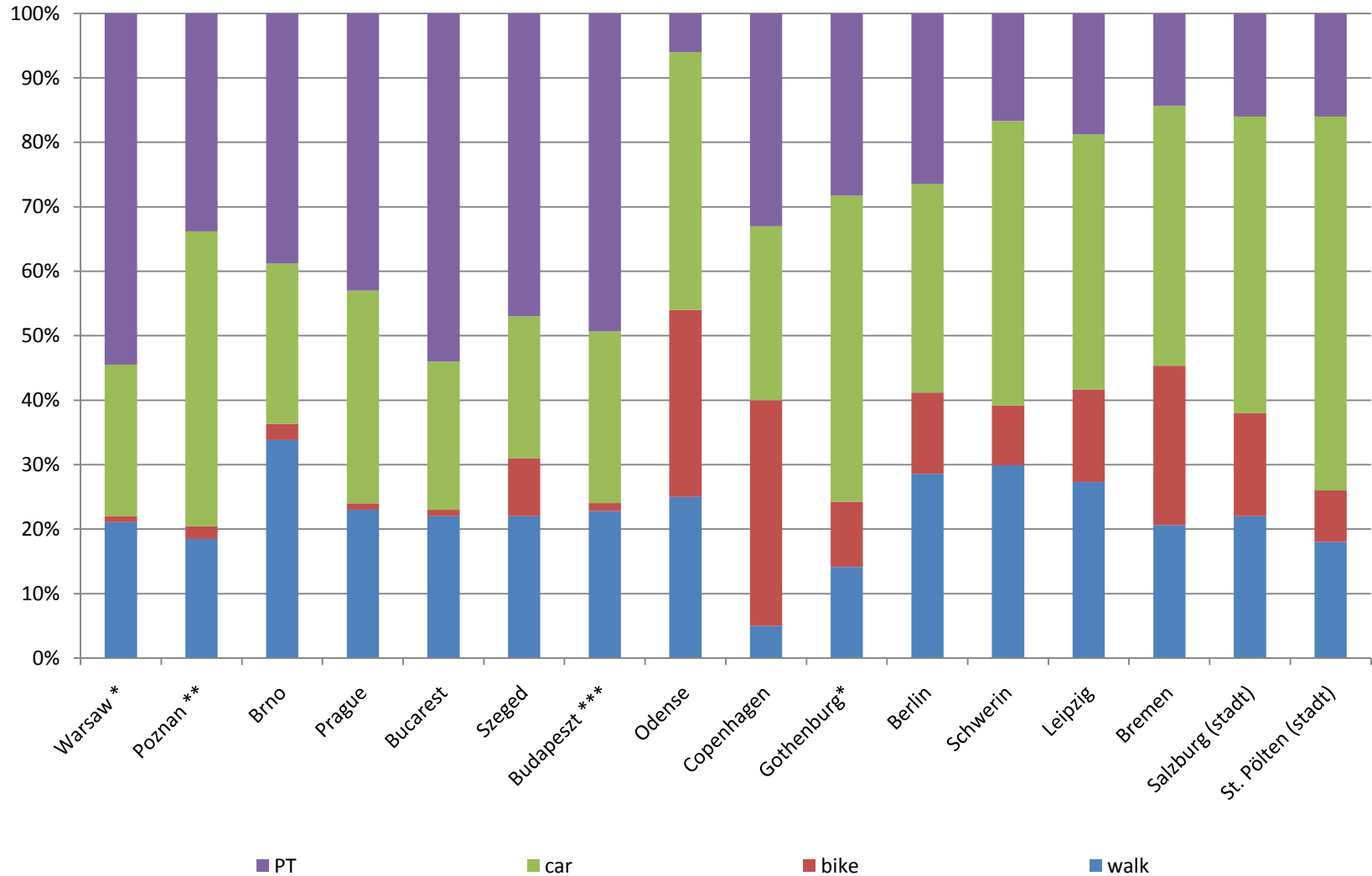
## NMS cities

- higher share of public transport;
- small share of cycling;
- dynamic growth of individual motorization.

## OMS cities

- higher share of cycling;
- high and stable share of car ;
- usually small (or medium) share of public transport.

# Modal split of chosen European cities



# Car ownership: national perspective

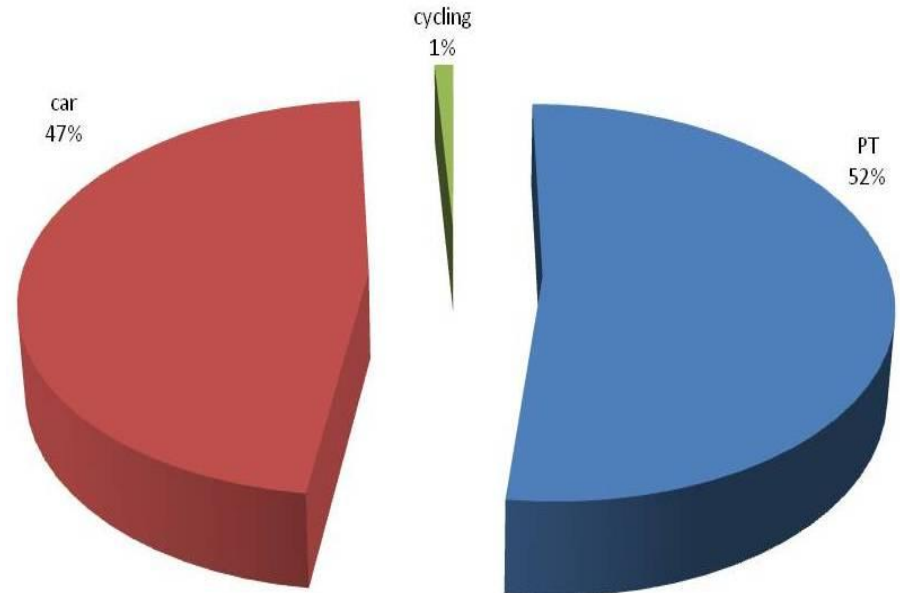
- 54% of Romanian households;
- 38% in Hungary;
- 35% in Slovakia;
- 32% in Poland;
- 22% in Czech Republic;

haven't possessed a private car (EU27 average was 19%).

- Data presented are consistent with motorization status observed in NMS and OMS.

# Perspective from Gdynia

- Share of public transport (calculation includes cycling, PT and car) was 52% in 2008;
- Share of trolleys in urban modal split in Gdynia was 15%;
- Individual motorisation index was 586 cars / 1000 citizens in 2008 (309 in 2000).



# Chosen determinants of PT development in Gdynia – transport policy 1998

- integration of PT system, including urban railway;
- reduction of individual car traffic, especially in central zone of the city;
- development of forms of transport which might be an alternative to individual car;
- development of trolley subsystem.

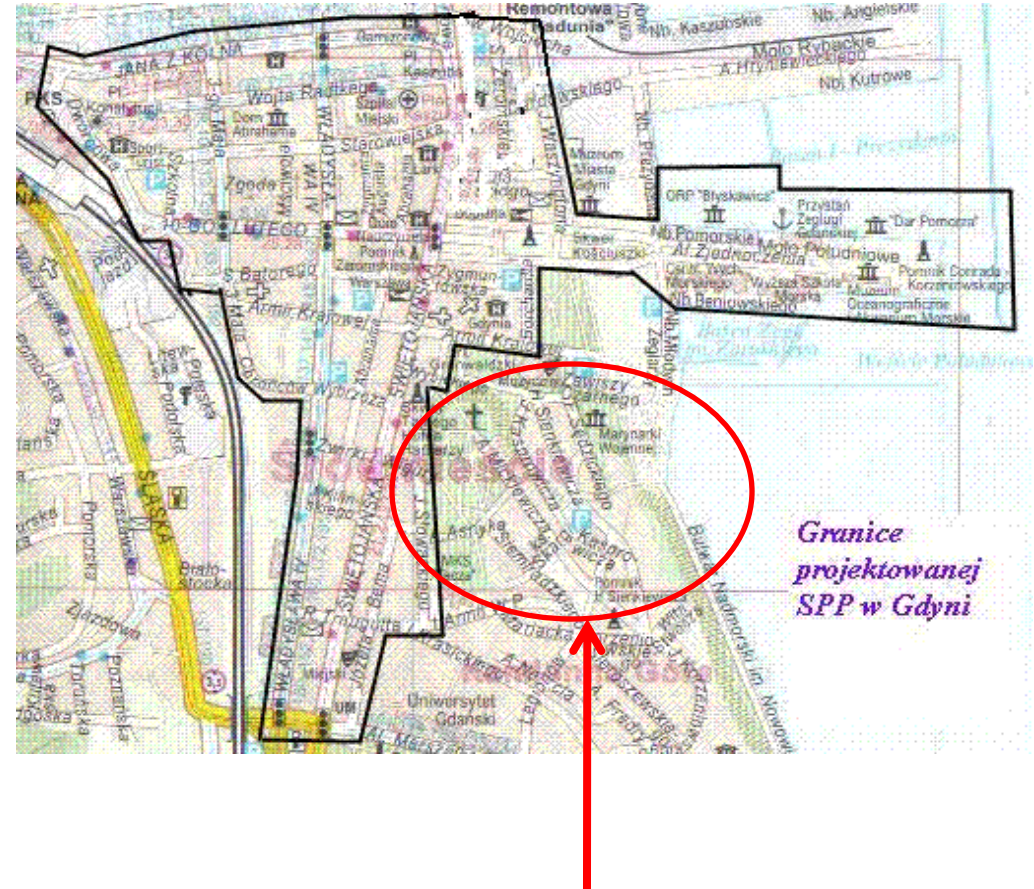
## Citizens attitudes towards restrictive sustainable solutions [„pros” in %]

Solution	„pros” 2004	„pros” 2008
no parking in chosen places	60,82%	58%
limitations for individual car traffic	41,54%	43,6%
pedestrian zones	71%	68,5%
parking fees	26,5%	42%

*Source: self study based on reports from marketing research conducted by ZKM Gdynia in 2004 and 2008 (n=ca. 1500 of personal interviews carried out in households)*

# Parking zone in Gdynia

- Introduced in 2009;
- Modern IT solutions;
- Centre of the city;
- Over 3500 parking places;
- Low short-time fare;
- Expensive monthly abonamnets for citizens living outside of the zone.



Zone was enlarged recently



# General environment

- Limitations resulting from linear spatial layout of the city;
- Districts located on hills;
- ambitious investment plan of technical infrastructure results in necessity of coordination of different actions;
- Agreement on common technical standards between Gdansk, Gdynia and Sopot;
- Environmental and technical challenges resulting from proximity of protected areas and sea;
- Necessity of parallel support for PT;
- Support from ERDF money for development of few cycling lanes up to 2013.



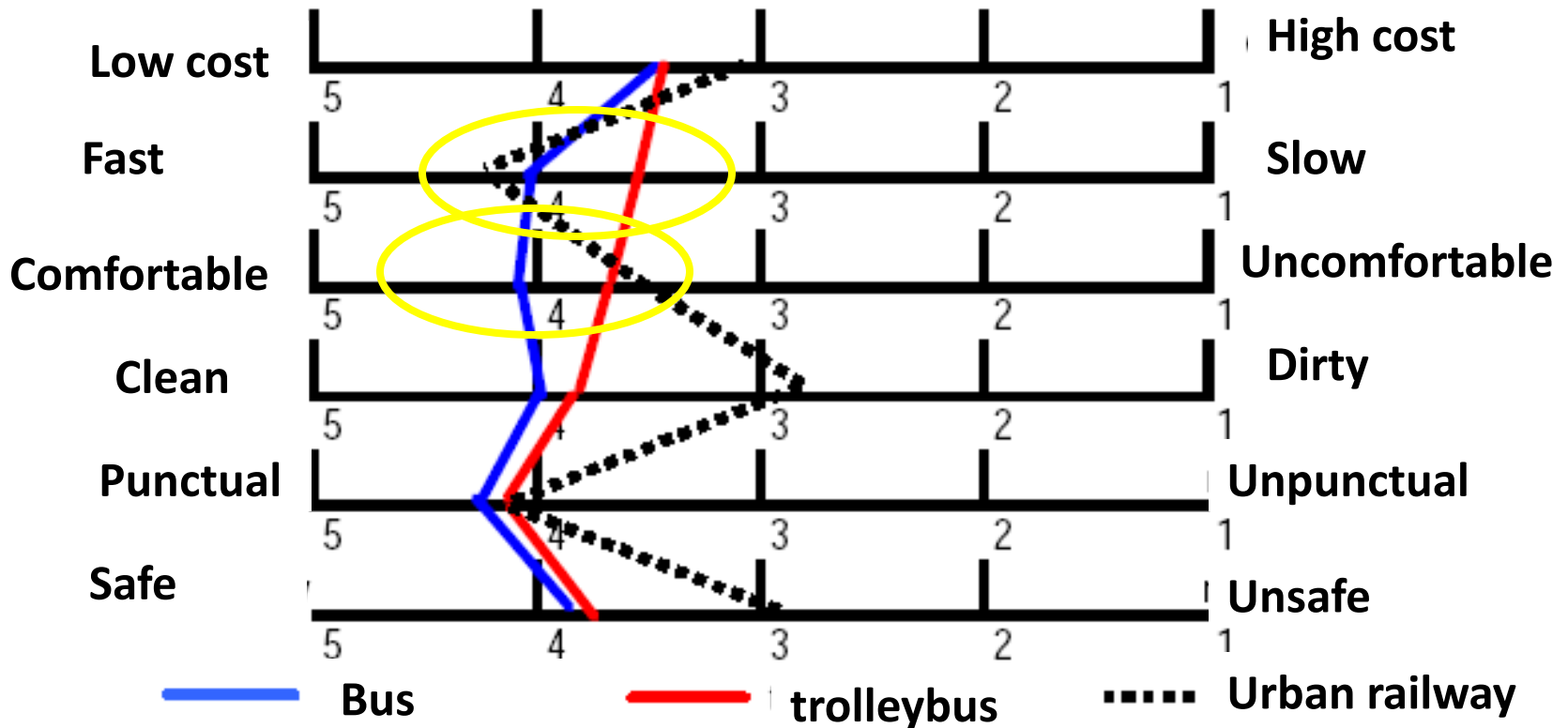
# Development of alternatives to individual cars: cycling

- **First phase:** acquisition of existing space on pavements – low quality, lack of full separation;
- **Second phase:** preparation and realisation of investments leading to creation of an integrated system linking majority of districts with city centre;
- **Third phase:** accompanying solutions (intermodal nodes, public bikes) and overpassing „barrier effects” (demanding serious investments).

# General overview of trolley system

- Clean traction;
- Best **ready-to-use** technology;
- Lower noise;
- Flexible capacity depending on demand;
- Innovative solutions increasing potential of trolleys;
- Longer and easy exploitation period;
- Unique image.

# Semantic profile of PT subsystems in Gdynia in 2004



Source: Travelling habits and preferences of Gdynia citizens in 2004. ZKM (Public Transport Authority) of Gdynia. Gdynia, January 2005.

# Development of trolley system in Gdynia

- Typical element of PT landscape of NMS;
- In Poland only 3 trolley cities remained;
- Lack of funding resulted in worse assessment of trolleys in comparison to buses;
- Strategic decisions taken by city since 2000 led to substantial improvement of trolley position.



Preparation led us through few soft projects which produced additional knowledge and experience (CIVITAS TELLUS, BUSTRIP).

# Development of trolley system in Gdynia: successful mixture of hard and soft measures

## 2004 - 2007

- Modern depot for 90 vehicles;
- Development of trolley network;
- Acquisition of 10 new low-floored trolleybuses;

TOTAL VALUE: 10 MIO  
EUR, 50% gained from  
ERDF;



# Development of trolley system in Gdynia: successful mixture of hard and soft measures

## 2008 – 2013

- Modernisation of network between Gdynia and Sopot;
- Acquisition of 25 trolleys with accumulators;
- Promotion targeted to youngsters;
- Value: ca. 25 mio EUR (of which 56% ERDF money)



# Development of trolley system in Gdynia: successful mixture of hard and soft measures

## 2010 – 2013: TROLLEY

- Central Europe programme;
- Project partners are Salzburg AG (Lead Partner), City of Brno, Barnim Bus GmbH Eberswalde, TEP S.p.A in Parma, Leipzig Transport Services, City of Gdynia, University of Gdansk, Szeged Transport Company and TrolleyMotion International Action Group and a lot of associated institutions;
- Budget: 4,74 mio EUR (of which 78% is ERDF money).

Structure of project includes:

- WP 3 Optimised Energy Use;
- WP4 Increased Public Transport Efficiency;
- WP5 Improved Image and Patronage.



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# Development of trolley system in Gdynia: successful mixture of hard and soft measures

## **TROLLEY: main results**

- Three e-learning modules;
- Transnational manual on advanced energy storage;
- Guide on shared trolleybus-tram network use;
- Trolleybus intermodality compendium;
- Guide on diesel bus conversion into trolleys;
- CE trolleybus knowledge centre.

## **Additional benefits:**

- Strengthening the network of trolley partners;
- Exchange between public administration, operators and science sector;
- Promotion of clean and innovative solutions;
- Sharing knowledge with Eastern partners (Ukraine).



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# Summary

- Planning and developing of sustainable transport needs an integrated approach including individual features of the city;
- Base for sustainable transport development is public transport, which has still dominant position in cities of NMS;
- PT needs innovative but **ready-to-use** solutions to increase its attractiveness for citizens – trolleys are prepared now;
- Interception of passengers between PT and bikes should be avoided.

# Thank you very much!

- dr Katarzyna Hebel,
- dr Marcin Wolek.

For any questions:

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