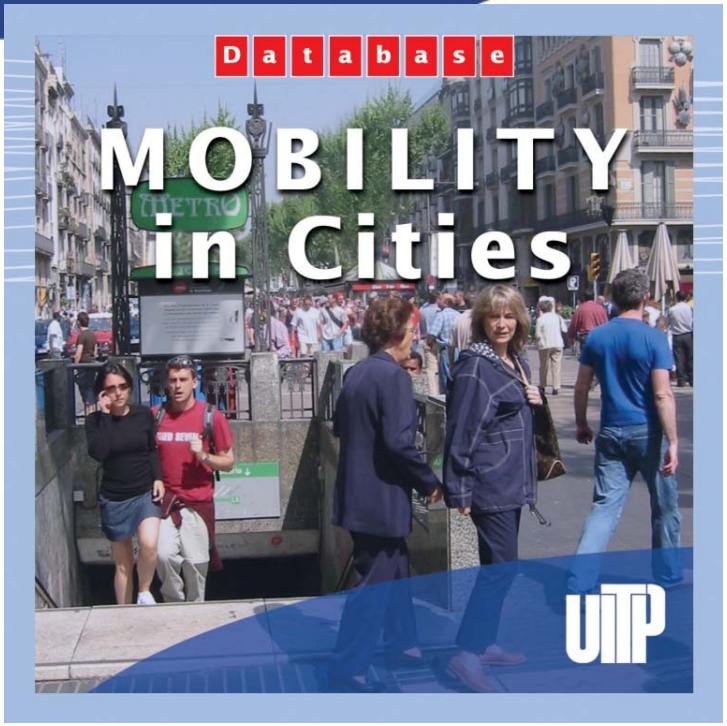
International Association of Public Transport
Union Internationale des Transports Publics
Internationaler Verband für öffentliches Verkehrswesen
Unión Internacional de Transporte Público



Urban Transport Policy

Facts, Figures, Recommendations.

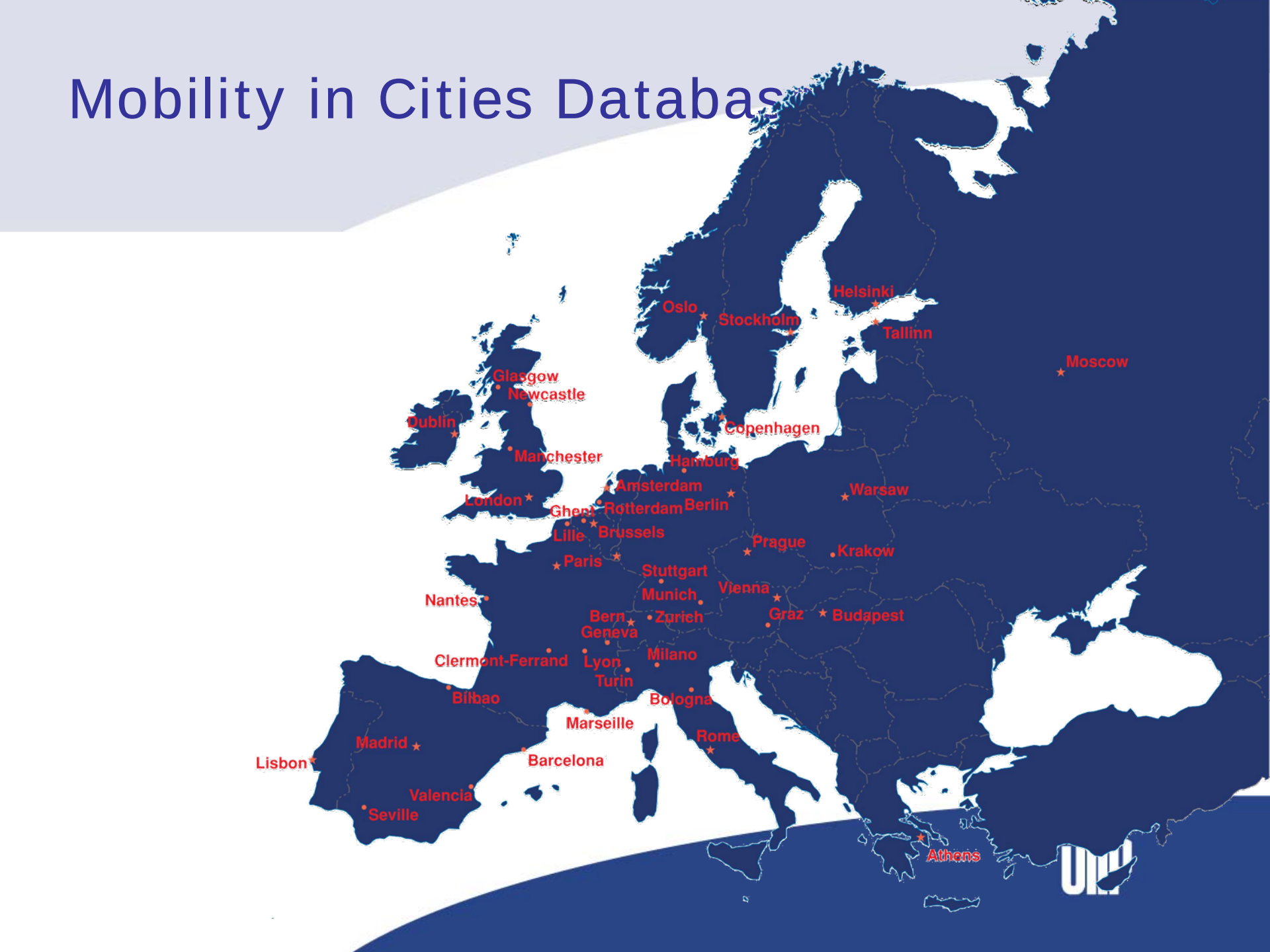
Jérôme Pourbaix
Manager, UITP

Better mobility for people worldwide

Mobility in Cities Database

- 120 urban mobility indicators, collected in 50 cities worldwide, including five Spanish cities.

Mobility in Cities Database



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- Key source of information for urban transport planners and decision-makers.

1. Urban Mobility in Context

Urban sprawl

Motorisation rate

Modal split and productivity

- Urban density decreased from 50 to 47 inhabitants per hectare (-6%) in European cities between 1995 and 2001.

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- Development of low density neighbourhoods in the suburbs and long distance commuting.
- Few cities controlled sprawl, through land use and transport integration

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- Average motorisation rate in MCD's Spanish cities: 423 cars per 1000 persons (2001).

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- Average motorisation rate in MCD's Spanish cities: 423 cars per 1000 persons (2001).
- Variation across cities is a combination of economic, cultural and policy related factors.
- Challenge for public transport but no automatic effect.

1. Urban Mobility in Context

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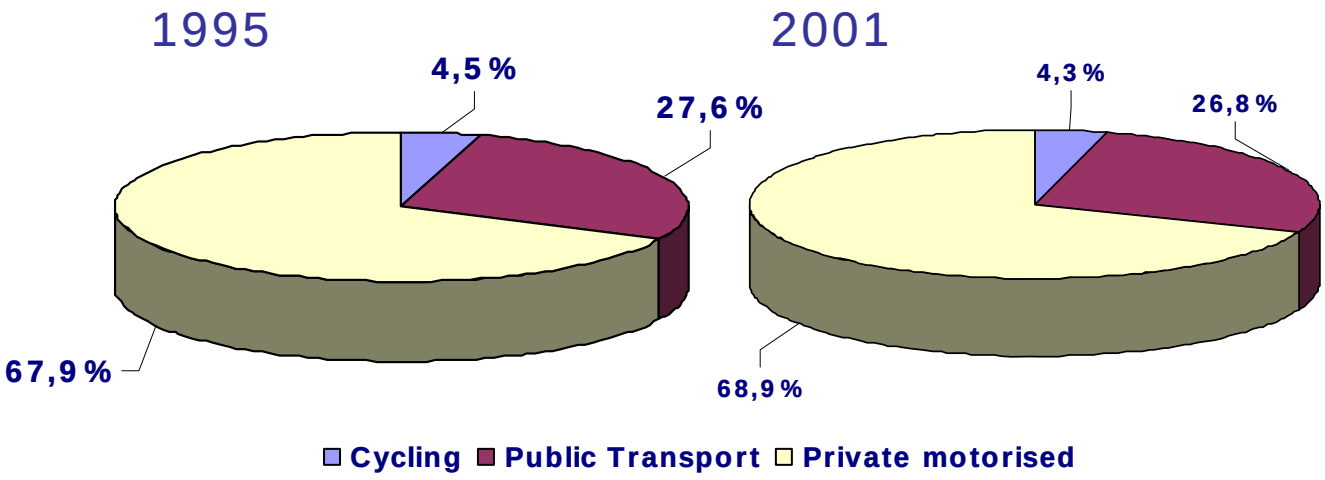
Motorisation rate

Modal split

- Modal split is globally stable



- Average modal split in MCD's Spanish cities: 26% (2001)

2. Performance and cost of transport

Cost of transport

Energy consumption

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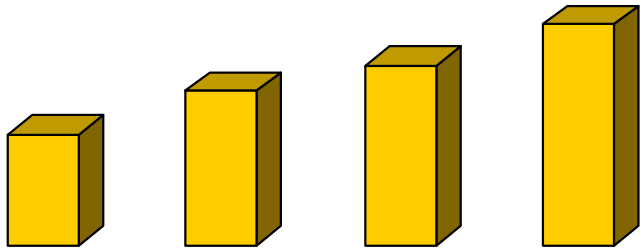

Cost of transport for the Community (% of GDP) vs Modal Share of Public Transport, Walking and Cycling

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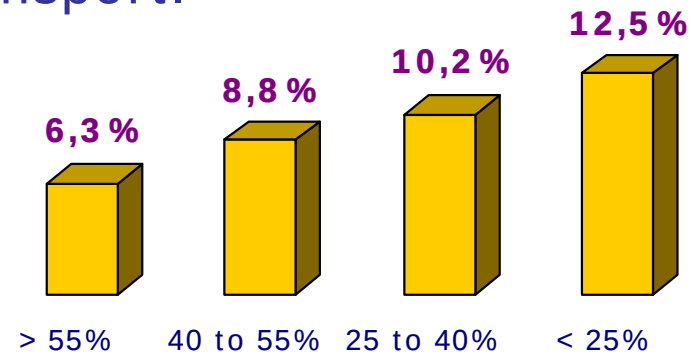

Cost of transport for the Community (% of GDP) vs Modal Share of Public Transport, Walking and Cycling

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Energy consumption

- Average cost of transport in MCD's Spanish cities: 10,1% of urban GDP with a modal share of walking, cycling and PT of 55%
- Role of the GDP/inhabitant in the variation of the cost of transport % GDP
- GDP in MCD's Spanish cities is lower than the sample's average: 16.600 EUR/inhabitant vs 25.400 EUR/inhabitant

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- The cost of transport for the community in cities with a high share of public transport is up to half the cost in cities where the private car is dominant. This difference represents a saving of 2.000 EUR per inhabitant per year.
- Cities characterized by the lowest cost of transport to the community are often those where expenditure in public transport is the highest.

2. Performance and cost of transport

Cost of transport

Energy consumption

Cities which managed to increase the modal share of public transport saw a decrease in the cost of transport to the community.

	Modal share of public transport (mechanized and motorized trips)		Cost of transport to the Community (% of GDP)	
	1995	2001	1995	2001
Geneva	18,8	21,7	10,2	9,4
London	23,9	26,8	8,5	7,5
Madrid	27,2	30,2	12	10,4
Paris	27,1	27,5	6,8	6,7
Vienna	43,2	46,6	6,9	6,6

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- Energy consumption for transport includes public and private modes. Electricity consumption is counted at source.

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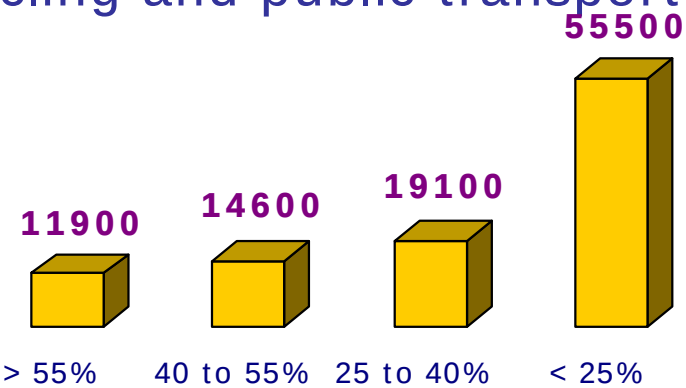
- Energy consumption per person is lower in dense cities with a higher modal share of walking, cycling and public transport.



Energy Consumption for Transport (MJ/person/year) vs Modal Share of Public Transport, Walking and Cycling

2. Performance and cost of transport

Cost of transport

Energy consumption

- Average energy consumption per inhabitant for transport in MCD's Spanish cities: 11.000 MJ with a modal share of walking, cycling and PT of 55%
- Energy savings between cities with a high modal share of public transport and cities relying mainly on the private car represent around 500 to 600 litres of petrol per inhabitant per year.

2. Performance and cost of transport

Cost of transport

Energy consumption

Cities which managed to increase the modal share of walking, cycling and PT saw a decrease in the consumption of energy per person.

	Modal share of walking, cycling and public transport		Average consumption of energy per person for transport (MJ)	
	1995	**2001**	**1995**	**2001**
Athens	34,1	40,9	12.900	12.600
Geneva	44,8	48,8	23.600	19.200
Rome	43,2	43,8	18.200	17.100
Vienna	62	64	10.700	9.050

3. Attractiveness of Public Transport

- Urban planning
- Control of traffic
- Support to public transport

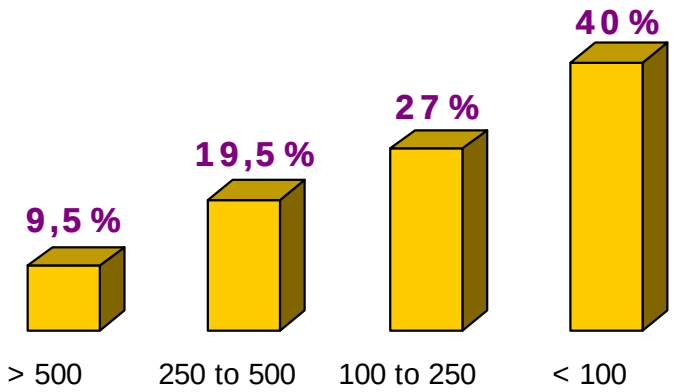
3. Attractiveness of Public Transport

Parking Supply

Volume of Supply

Speed and regularity

- Parking supply is the number of road-side and off-road parking spaces (except residential) in the Central Business District
- Market share of public transport higher in cities with restrictive parking policy



Market share of public transport depending on number of parking spaces per 1000 jobs in CBD.

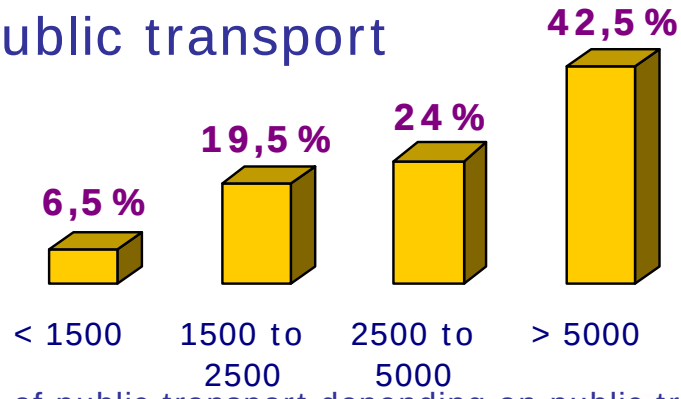
3. Attractiveness of Public Transport

Parking Supply

Volume of Supply

Speed and regularity

- Volume of supply is vehicle x km per inhabitant and vehicle x km per hectare
- Market share of public transport grows with the volume of supply
- In particular, the extensive coverage of the area by public transport



Market share of public transport depending on public transport supply per hectare (vehicle x km / ha)

3. Attractiveness of Public Transport

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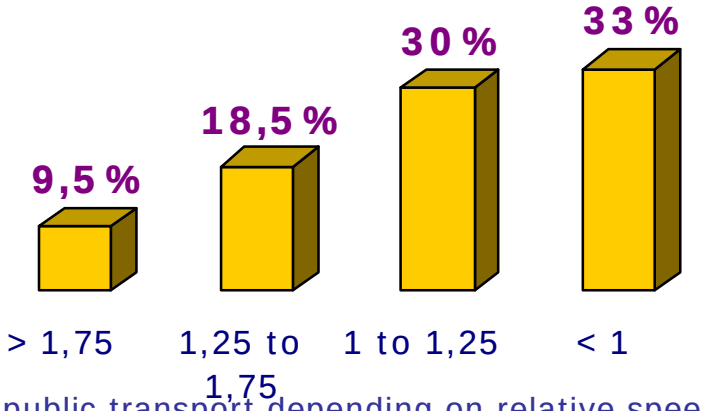
Speed and regularity

- Relative speed of cars is the ratio between car traffic speed and public transport commercial speed
- Market share of public transport increased when relative speed of cars decreases



Market share of public transport depending on relative speed of cars.

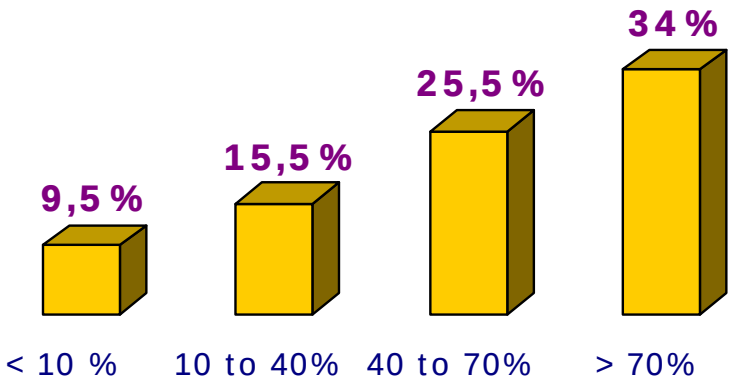
3. Attractiveness of Public Transport

Parking Supply

Volume of Supply

Speed and regularity

- The share of supply by rail modes is the share of place x km by rail modes.
- Market share of public transport is higher where the share of supply by rail modes is larger.



Market share of public transport depending on share of supply by rail modes.

Thank you for your attention

Database and analysis report available in December.

For more information www.uitp.com

Jerome.Pourbaix@uitp.com

Tel. +32 2 663 66 22

Fax +32 2 660 10 72