EMTA BAROMETER OF PUBLIC TRANSPORT IN THE EUROPEAN METROPOLITAN AREAS

data 2008

# EMTA barometer 2008

European Metropolitan Transport Authorities

## Foreword

The association of European Metropolitan Transport Authorities (EMTA) brings together the public authorities responsible for planning, co-ordinating and funding the public transport systems of 30 of the European largest metropolitan areas and Montreal (Canada).

**A precise knowledge of reality is a prerequisite to define pertinent policies.** Decisions on public transport affect the daily lives of millions of people, the investment and operation costs of complex system often amount to millions of Euros if not billions and have a determinant impact on the economic dynamism and environmental quality of urban areas.

In this context, **comparison of data between territories facing the same kind of challenges (benchmarking) is a useful source of information for decision makers.** The EMTA Barometer of public transport in the European metropolitan areas aims to provide such comparative insight.

Where they exist, **public transport authorities are the only organisations with a broad view of mobility issues in large urban contexts.** Metropolitan areas have multi-modal and multi-operator public transport networks. Besides, gathering data on mobility patterns and passenger perception is instrumental to their knowledge. Data collection shall therefore be a key responsibility of public transport authorities.

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To achieve this end, it is important to:

- **define pertinent territories,** corresponding to the reality of mobility of people. Analysis should capture the reality of the territory where people do travel beyond administrative boundaries of local authorities or transport companies;
- **determine a set of key indicators** that shall be collected and reviewed regularly so as to have a clear view of the main trends under way;
- **take into account not only public transport, but also mobility in a broader sense,** including of course trips involving private cars, but also taxis, bicycle, and walking.

The well known difficulties and biaises of collecting data call for a process of harmonization of definition at European level. In the meantime, EMTA continues to collect data from the transport authorities of the European largest cities. The present leaflet is a short update with 2008 figures*.

Changes over the previous edition - "Barometer 2006"- show:

- a denser population over the ten past years in the metropolitan areas, even in places where the population was slightly decreasing in the past five years, the decrease slows down;
- the modal share in favour of public transport is still high in the main cities. Remarkably it increased by 2% in the whole metropolitan area. As gaining shares over the private car in the suburbs is one of the main challenges for Public Transport Authorities (PTA), this is a positive sign.
- the demand for public transport is above one trip per inhabitant every working day, although in several metropolitan areas a decrease has been noticed due to the economic crisis;
- Resources from fare revenues in average have increased by 3% over 2006 (thanks to the combination of higher ridership and higher fares) however the recourse to necessary public funding has also raised by an average of 3% reaching now in average 51% of the total costs coverage.

*The Barometer is produced by CRTM Madrid.*

CONSORCIO TRANSPORTES MADRID

* This summary illustrates key findings on the diversity of public transport systems and public transport policies in the European largest cities. For more on previous editions see ***www.emta.com*** publication section.

# 5th edition presentation



**> 23 areas are listed in this leaflet with some changes over the previous edition of 2006.** It presently includes data from Cadiz Bay while Frankfurt Rhein-Main and Greater Manchester haven't participated.

## Description of the metropolitan area surveyed

| | Authority responsible | Population 2008 (inhabitants) | PTA* area surface (km²) | Urbanized surface (km²) | Family size | Annual GDP per capita (€) |
|---|---|---|---|---|---|---|
| Stadsregio Amsterdam | Stadsregio | 1,374,530 | 1,003 | 247 | 2.1 | 33,800 |
| Barcelona | ATM | 4,929,000 | 3,239 | 588 | 2.6 | 29,836 |
| Berlin-Brandenburg | VBB | 5,954,493 | 30,372 | 3,228 | 1.9 | 23,932 |
| West Midlands (Birmingham) | Centro | 2,604,000 | 901 | 436 | 2.4 | 19,666 |
| Brussels | MRBC | 3,017,000 | 5,162 | 1,160 | 1.9 | na |
| Central Hungarian Region (Budapest) | BKSZ Kht | 2,897,317 | 7,597 | na | 2.6 | 15,672 |
| Cadiz Bay | CMTBC | 701,275 | 1,877 | 83 | 3.0 | 9,805 |
| Greater Copenhagen | Movia | 1,900,176 | 2,868 | 642 | 1.9 | 41,735 |
| Helsinki | HSL | 1,022,139 | 745 | 240 | 2.1 | 48,850 |
| Greater London | TfL | 7,619,800 | 1,572 | 1,572 | 2.3 | 37,569 |
| Madrid Region | CRTM | 6,271,638 | 8,030 | 1,049 | 2.8 | 30,850 |
| Greater Montreal | AMT | 3,696,000 | 3,980 | na | 2.3 | 23,903 |
| Paris Ile-de-France | STIF | 11,740,738 | 12,012 | 2,521 | 2.3 | 47,155 |
| Prague | ROPID | 1,760,000 | 3,860 | na | na | na |
| Seville | CTS | 1,287,983 | 1,997 | 374 | 2.9 | na |
| South Yorkshire (Sheffield) | SYPTE | 1,305,900 | 1,552 | 610 | 2.3 | 16,418 |
| Stockholm | SL | 1,981,263 | 6,491 | na | 3.5 | 45,795 |
| Greater Stuttgart | VRS | 2,419,694 | 3,012 | 706 | 2.1 | 39,221 |
| Turin | AMMT | 1,552,612 | 837 | 246 | 2.2 | 19,973 |
| Valencia | aMM | 1,775,714 | 1,415 | 325 | 2.5 | 21,468 |
| VOR Region (Vienna) | VOR | 2,745,408 | 8,441 | na | 2.1 | 34,700 |
| Vilnius | MESP | 848,956 | 9,731 | 449 | 3.2 | 14,801 |
| Warsaw | ZTM | 2,396,293 | 2,278 | 902 | 2.8 | 15,439 |

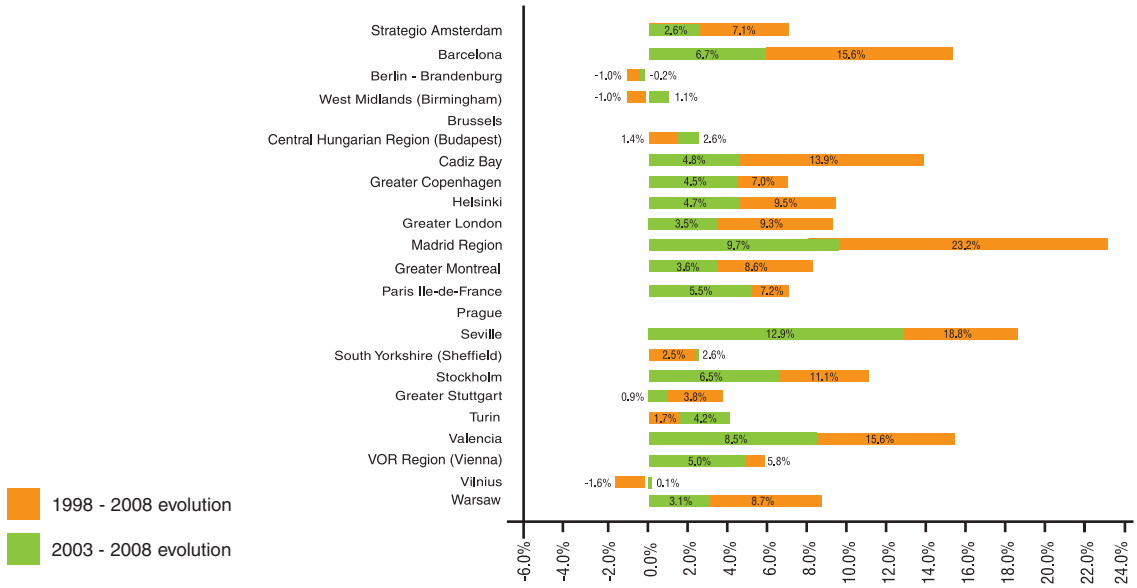
**PTA: Public Transport Authority*

**> European metropolitan areas keep growing but have various demographic structures**

Most urban areas surveyed have seen an increase of their population over the past ten years 1998-2008. The average growth rate is around 7% for the cities that have provided data. Spanish cities rank first and show significant gap with the rest of the cities. Madrid Region, Seville, Barcelona, Valencia and Cadiz bay enjoyed a growth over 14% while the rest of the metropolitan areas scored under 11%. Three metropolitan areas have a decrease in population on the last 10 years period. They are Berlin-Brandenburg, West Midlands (Birmingham) and Vilnius. Though in the last two regions the evolution is positive in the last 5 years.

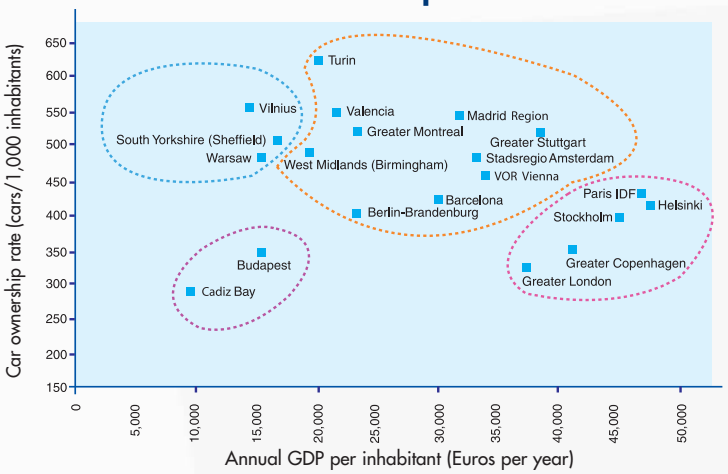
The weight of the main city over the whole metropolitan area is roughly a 50% (+ 2% over Barometer 2006) of total population with large differences illustrating the diverse administrative frameworks and histories of the cities.

## Evolution of Population: decade 1998-2008 compared to 5 years span 2003-2008

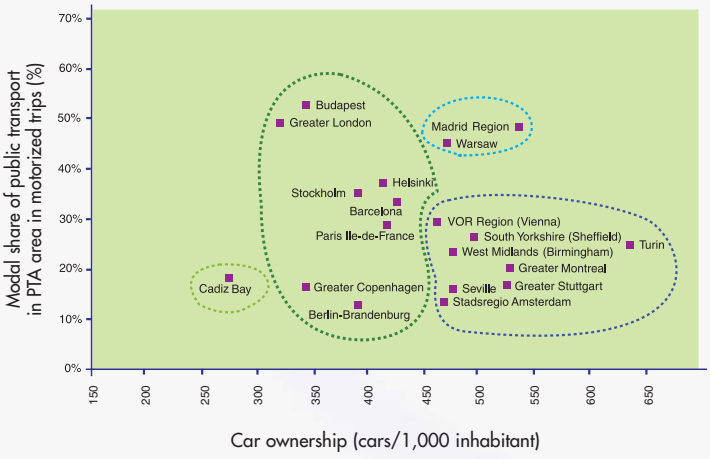



**> Car ownership rates are twice as high in some cities as in others** (620 cars per 1,000 inhabitants in Turin vs 289 in Cadiz Bay and 330 in Greater London). We can observe different groups and it seems that several wealthy metropolitan areas have a relatively low car ownership ratio (under 430 cars/1,000 inhabitants), and a high use of public transport. In other words, public transport authorities have growing responsibilities in the metropolitan areas to offer attractive public transport services to a less car dependant community.

## Annual GDP per capita versus car ownership rate




## Car ownership rate versus modal share of public transport




Other factors like urban density, family size, existence of efficient public transport systems, or the cost of using and parking of cars can lead to lower car ownership rates.

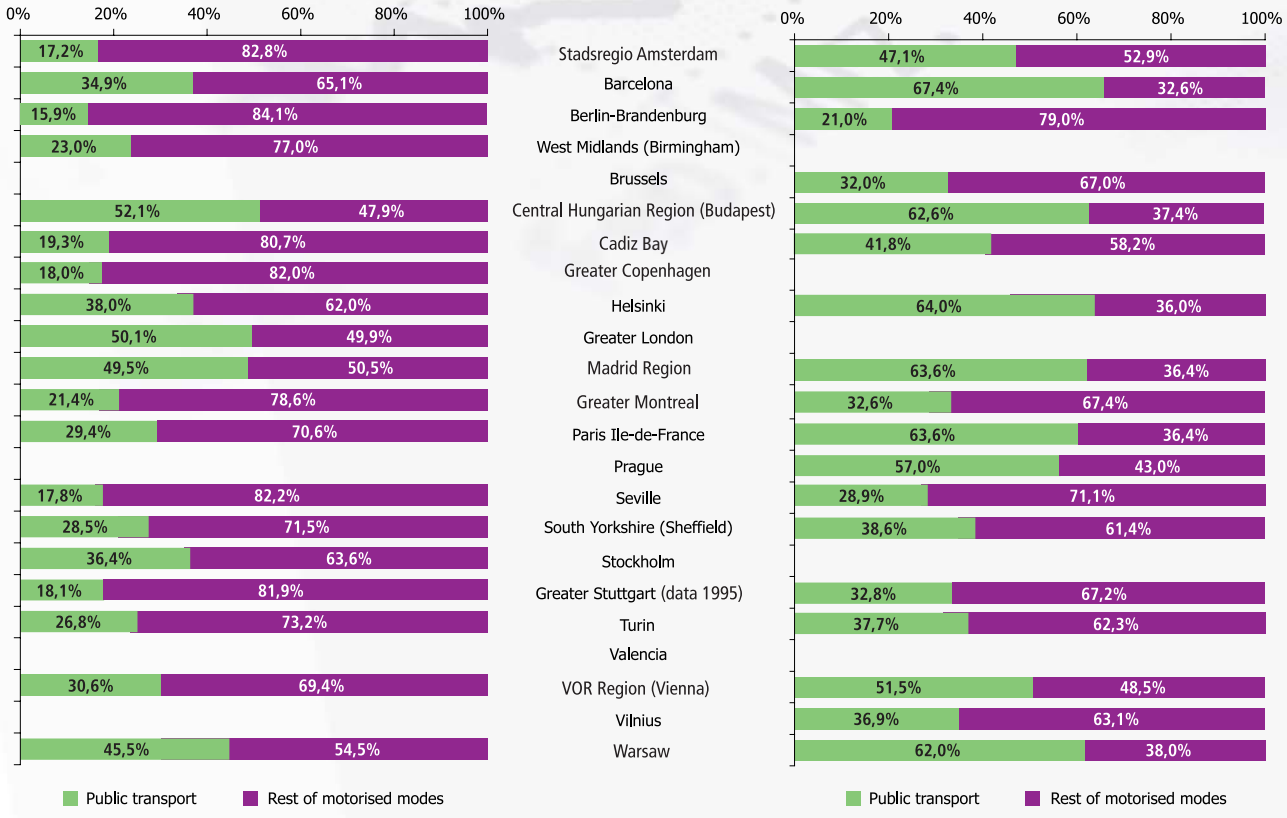
**> Public transport accounts for more than 46% of all motorized trips (48% in 2006) in the densest parts of most European metropolitan areas (in the main cities),** illustrating its fundamental economic, social and environmental role in large urban territories.

Several main cities achieve more than 50% of modal share for public transport. Barcelona, Helsinki, Madrid, Paris, Budapest and Warsaw stand out with a rate over 60% of all motorized trips, illustrating the very dense public transport systems irrigating the heart of those capital cities.

Budapest is the European metropolitan area among those surveyed, where public transport accounts for the highest modal share of all motorized trips (52%). Other metropolitan areas with more than one third of motorized trips done by public transport include Greater London, Madrid Region, Warsaw, Helsinki, Stockholm and Barcelona.

There is a gap between modal share in the main city and modal share in the whole metropolitan area where public transport accounts, in average, for 30% (+2% vs 2006) of motorised trips. This figure embodies one of the main challenges facing public transport authorities and operating companies in the coming years: to develop public transport in the suburbs and the less dense parts of the metropolitan areas.

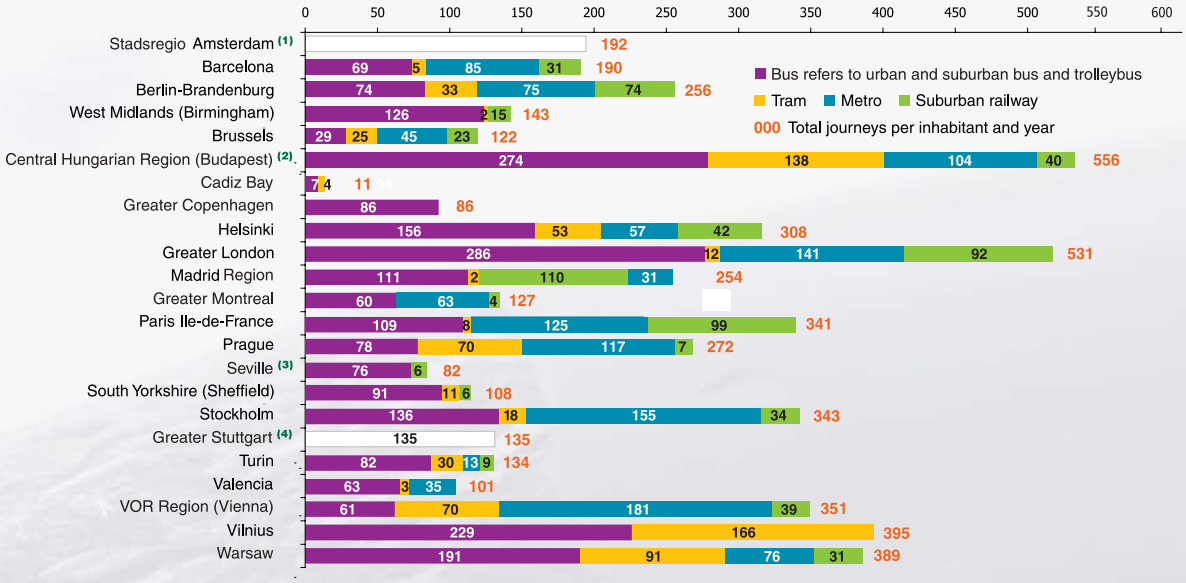
## Modal share of motorized trips



**> Regarding the public transport demand, each inhabitant does more than 236 journeys (vs 230 in 2006) per year on public transport,** slightly above one trip every working day. Please note that for Vilnius, tram actually refers to trolleybuses. In some cases the total demand is over 500 journeys as in Budapest and Greater London. Out of the total demand for transport, half of it is made on buses, which confirms this mode of transport as fundamental in the whole public transport system.

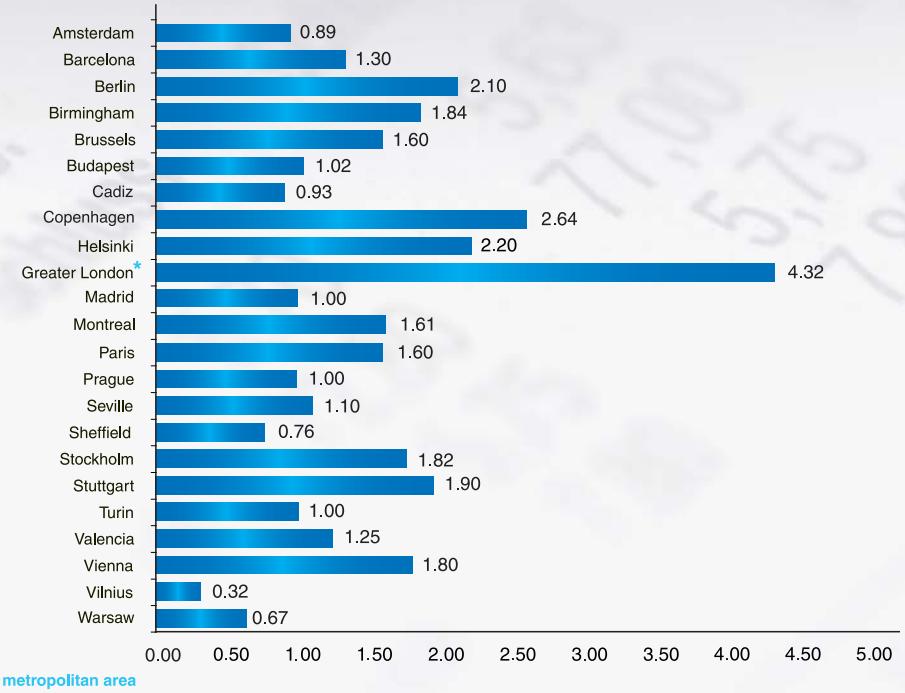
Over the years the increase in public transport demand reflects the effort being made by authorities and operators to offer a high quality public transport system, with accessible vehicles and stations, using ITS (Intelligent Transport System) technologies to guarantee reliability and safety in the operation, and real time information and contactless tickets to the user to promote the public transport use and make it more competitive to stand in front of the private vehicle.

## Public transport demand per inhabitant




**> Fare policies and fare levels differ a lot between the different metropolitan areas.** The price of a single ticket valid for the main city varies from less than €0.32 up to more than €4 (same as 2006). The monthly pass varies from €17.38 to over €180 (respectively €16.20 and €120 in 2006). However, these figures make no difference with the size and economic features of the metropolitan areas.

## Single ticket price for the main city (Euros)




* Greater London metropolitan area

(1) *Figure includes urban bus, tram and metro*
(2) *Figure includes urban and suburban bus and trolleybus*
(3) *Figure includes urban and suburban bus and tram*
(4) *Figure includes all modes*

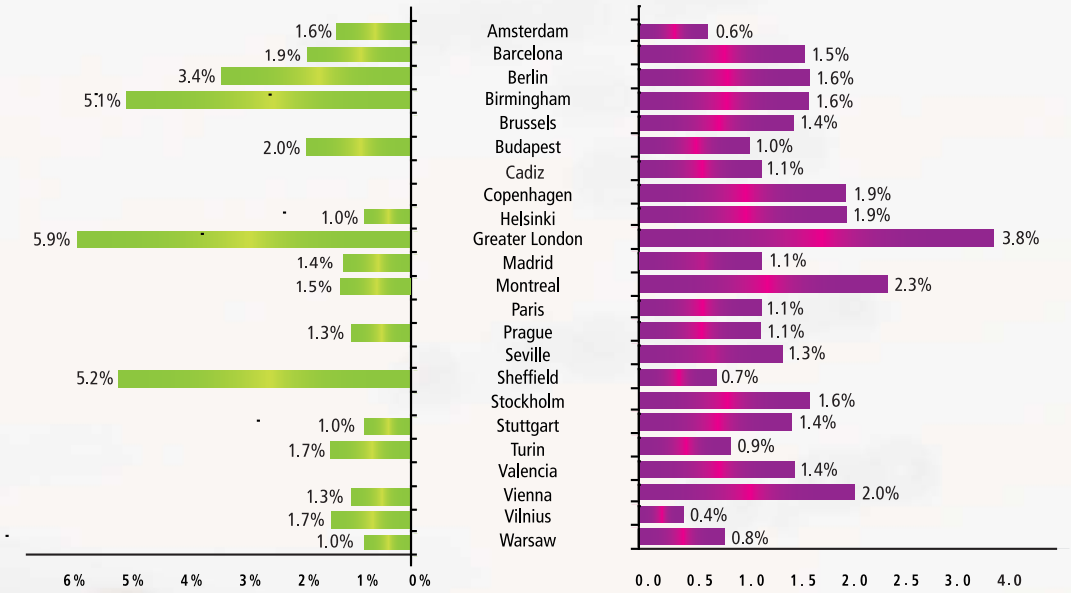
The monthly pass fare in main city compared to GDP per capita (annual GDP in city divided by 12) gives a ratio of 2.3%. Especially cheap are the monthly passes in Helsinki, Stuttgart and Warsaw (1%) as opposed to the highest prices in Greater London (5.9%), Sheffield (5.2%) or Birmingham (5.1%) all three situated in the United Kingdom.

If we compare the single ticket with the petrol litre price (unleaded 95) we observe that lower ratio (0.4-0.9) should contribute to the use of public transport, while on the other hand higher ratios (over 2) indicate high level of welfare (Greater London, Montreal, Vienna) or costly public transport systems.

## Main city fare ratios

### Monthly pass fare in main city / Monthly GDP per capita (%)

### Single ticket fare the main city (€) / petrol litre price (unleaded 95 in 2008, €)

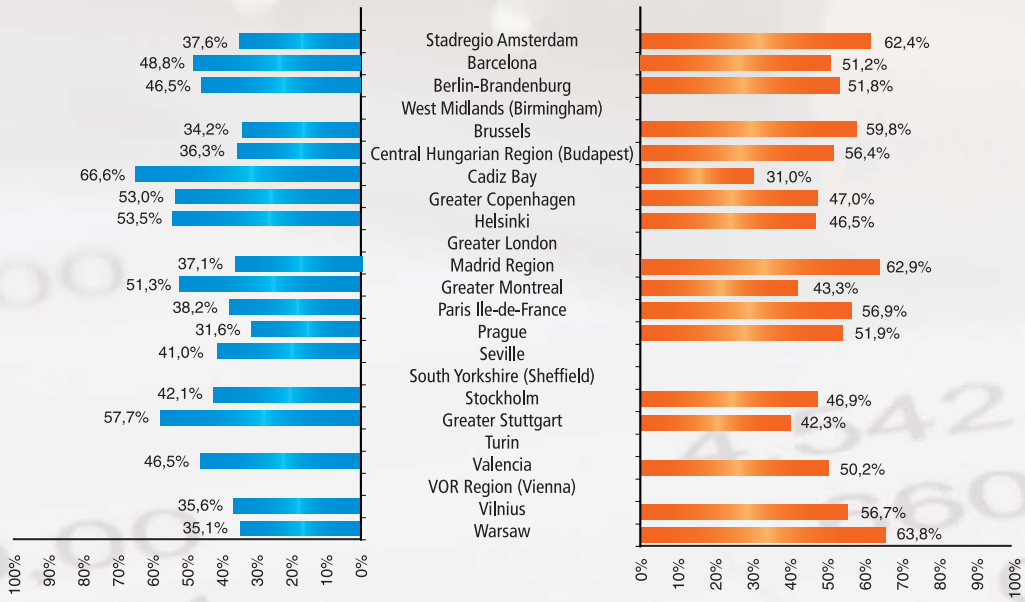



**> The rates of coverage of costs of operation by fare revenues are also varying greatly,** some cities cover more than 50% of operational cost with fare revenues but the majority is far from it. In average among those metropolitan areas surveyed, the operational costs of public transport in 2008 are covered 47% (vs 44% in 2006) by fare revenues and 51% (vs 48% in 2006) by subsidies.

## Coverage of operational costs

### Coverage by fare revenues

### Coverage by public subsidies




# MEMBERS AS OF 1RST JANUARY 2010

| PTA | City | Web Site |
|---|---|---|
| STADSREGIO | AMSTERDAM | www.stadsregioamsterdam.nl |
| ATM | BARCELONA *MoB** | www.atm.cat |
| VBB | BERLIN-BRANDENBURG *President* | www.vbbonline.de |
| CTB | BILBAO | www.cotrabi.com |
| CENTRO | BIRMINGHAM | www.centro.org.uk |
| MRBC | BRUSSELS-CAPITALE REGION *Treasurer* | www.bruxelles.irisnet.be |
| BKSZ | BUDAPEST *MoB** | www.bksz.hu |
| CMTBC | CADIZ BAY | www.cmtbc.es |
| MOVIA | COPENHAGUE | www.movia.dk |
| RMV | FRANKFURT | www.rmv.de |
| HVV | HAMBURG | www.hvv.de |
| HSL | HELSINKI | www.hsl.fi |
| TfL | LONDON | www.tfl.gov.uk |
| SYTRAL | LYON | www.sytral.fr |
| CRTM | MADRID *Vice President* | www.ctm-madrid.es |
| ATM | MILAN | www.comune.milano.it |
| AMT | MONTREAL | www.amt.qc.ca |
| RUTER | OSLO | www.ruter.no |
| STIF | PARIS ILE-DE-FRANCE *Vice President* | www.stif.info |
| ROPID | PRAGUE | www.ropid.cz |
| CTAS | SEVILLA | www.consorciotransportes-sevilla.com |
| SYPTE | SHEFFIELD *MoB** | www.sypte.co.uk |
| SL | STOCKHOLM | www.sl.se |
| VRS | STUTTGART | www.region-stuttgart.org |
| AMMT | TORINO *MoB** | www.mtm.torino.it |
| aMM | VALENCIA | www.etmvalencia.es |
| VOR | VIENNA | www.vor.at |
| MESP | VILNIUS | www.vilniustransport.lt |
| ZTM | WARSAW *MoB** | www.ztm.waw.pl |

*MoB* :* Member of the Board

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|---|---|---|
| AML | LISBON *Observer* | www.aml.pt |

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