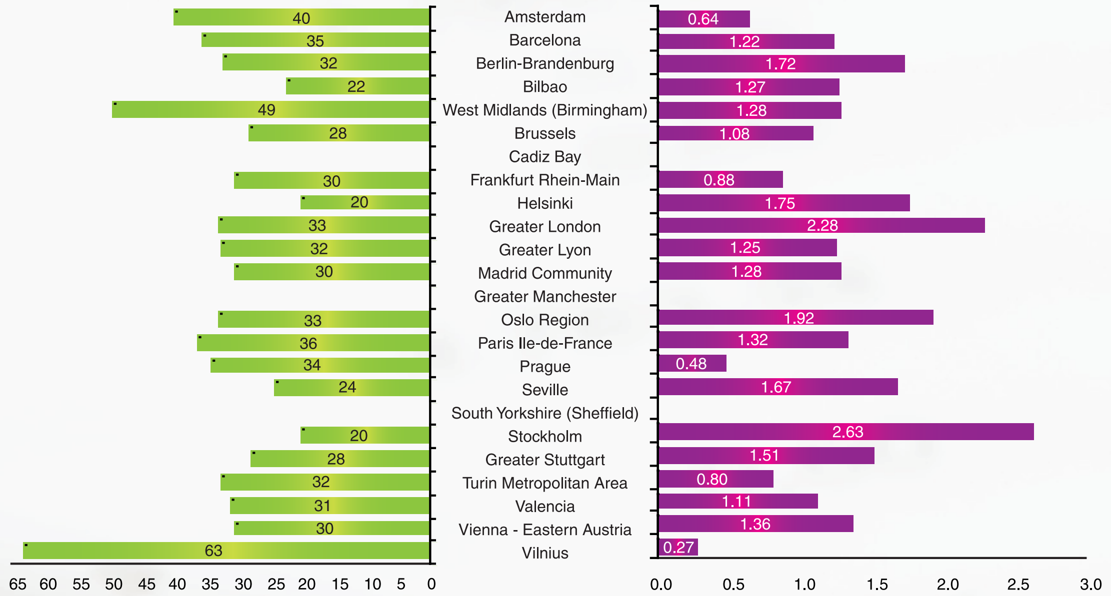
However, these figures make no difference with the size and economic features of the metropolitan areas, so we better look at the following ratios.

A ratio that appears very homogeneous among the cities is the relation between the price of the monthly pass and the single ticket price for the main city, which is around 30 in the majority of the cases. That means that a passenger with monthly pass pays as much as a single ticket everyday (30 days per month).

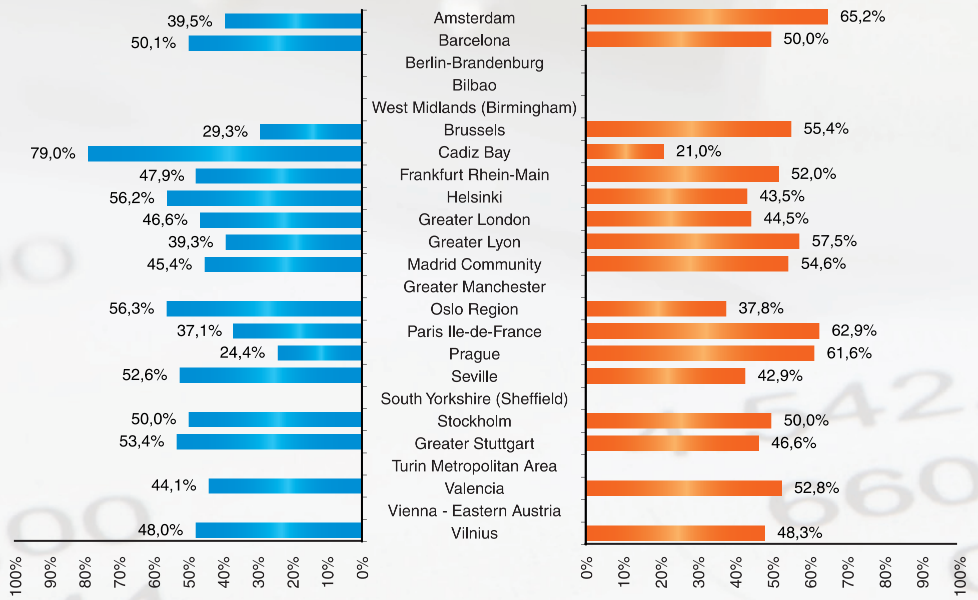
If we compare the single ticket with the petrol litre price (unleaded 95) we observe that lower ratios (0.3-0.5) contribute to the use of public transport, while on the other hand higher ratios (over 2) indicate high level of welfare (Stockholm, London, Oslo) or costly public transport systems.

Main city fares ratios



> **The rates of coverage of costs of operation by fare revenues are also varying greatly,** some cities nearing balanced situation, while in others, it is much below 50%. In average among those metropolitan areas surveyed we can say the operational costs of public transport are covered 50% by fare revenues and 50% by subsidies.

Coverage of operational costs



MEMBERS

PTA	City	Population	Web Site
STADSREGIO	AMSTERDAM	1,350,000	www.stadsregioamsterdam.nl
ATM	BARCELONA	4,841,000	www.atm.cat
CMTBC	BAHIA DE CADIZ	1,101,750	www.cmtbc.es
	in summer season	1,512,750	
VBB	BERLIN *MoB**	5,955,600	www.vbbonline.de
CTB	BILBAO	1,146,000	www.cotrabi.com
CENTRO	BIRMINGHAM	2,591,300	www.centro.org.uk
	BRUSSELS-CAPITALE REGION *Treasurer*	2,950,000	www.bruxelles.irisnet.be
BKSZ ht	BUDAPEST	3,200,000	www.bkv.hu
MOVIA	COPENHAGUE	1,800,000	www.movia.dk
DTO	DUBLIN	1,535,000	www.dto.ie
RMV	FRANKFURT	4,800,000	www.rmv.de
HVV	HAMBURG	3,320,000	www.hvv.de
YTV	HELSINKI *Président*	998,000	www.ytv.fi
TfL	LONDON	7,411,000	www.tfl.gov.uk
SYTRAL	LYON	1,373,300	www.sytral.fr
CRTM	MADRID *Vice Président*	6,008,180	www.ctm-madrid.es
GMPTE	MANCHESTER	2,482,000	www.gmpte.com
ATM	MILAN	3,700,000	www.comune.milano.it
AMT	MONTREAL	3,600,000	www.amt.qc.ca
RUTER	OSLO	800,000	www.ruter.no
STIF	PARIS *Vice Président*	11,490,000	www.stif.info
ROPID	PRAGUE	1,663,000	www.ropid.cz
CTAS	SEVILLA	1,250,000	www.consorciotransportes-sevilla.com
SYPTE	SHEFFIELD *MoB**	1,267,000	www.sypte.co.uk
SL	STOCKHOLM *MoB**	1,900,000	www.sl.se
VRS	STUTTGART	2,600,000	www.region-stuttgart.org
AMMT	TORINO *MoB**	1,500,000	www.mtm.torino.it
eTM	VALENCIA	1,562,000	www.etmvalencia.es
VOR	VIENNA	2,616,000	www.vor.at
MESP	VILNIUS *MoB**	848,500	www.vilniustransport.lt
ZTM	WARSAW	1,700,000	www.ztm.waw.at
AML	LISBON *Observer*	2,760,700	www.aml.pt

MoB* : Member of the Board

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EMTA BAROMETER OF PUBLIC TRANSPORT IN THE EUROPEAN METROPOLITAN AREAS

EMTAbarometer

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 32 of the European largest metropolitan areas.

A precise knowledge of reality is a prerequisite to define pertinent policies. This is particularly true in the field of public transport, where decisions affect the daily lives of millions of people and where the investment and operation costs of complex systems often amount to millions of euros, if not billions. They also 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.** One always learns by taking some distance from one's own local context and by looking at how others proceed. 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. But these different means should not hide the reality of trips as perceived by passengers, which is, or should be, that of integrated systems. Data collection shall therefore be a key responsibility of public transport authorities. To achieve this end, it is important to:

> **define pertinent territories,** corresponding to the reality of mobility of people. In too many cases, analysis is still confined to the administrative boundaries of local authorities or to the territory served by a given transport company, which don't always fit with the territory within which customers travel;

> **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 difficulties and biases in the collection of data are well known from experts. EMTA thinks it is time that a process of harmonisation of definitions could be undertaken at the European level, in co-operation with the representatives of the public transport sector. On its side, EMTA has collected data from the public transport authorities of the European large cities. A first edition of this Barometer was published in 2002 and a second one in 2004. This note is a summary of the third edition, released in 2007, with data of 2004. The Barometer is produced by CRTM Madrid.

Public transport authorities are the only organisations with a broad view on mobility issues in large urban contexts.

CONSORCIO TRANSPORTES MADRID

This summary of the Barometer illustrates some key findings (data 2004) on the diversity of public transport systems and public transport policies in the European largest cities. Full report at *www.emta.com*, section publication.

Presentation

Presentation of the 3rd edition of the EMTA Barometer

> 24 metropolitan areas are listed in the third edition of the *EMTA Barometer of public transport:* These metropolitan areas vary heterogeneously in terms of surface and population.

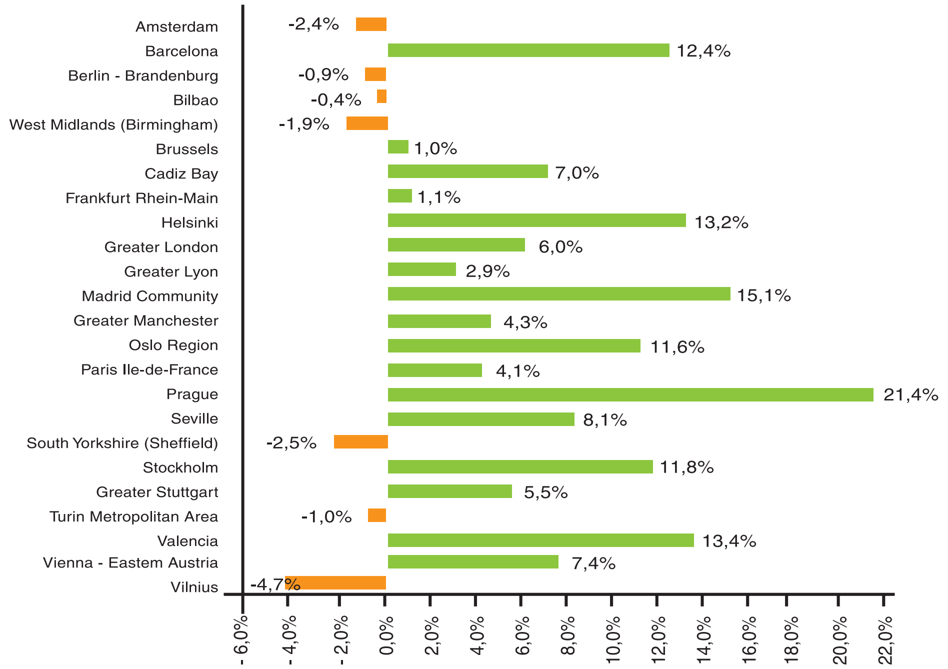
Description of the metropolitan area surveyed

	Authority responsible	Population 2004 (inhabitants)	Metropolitan area surface (km²)	Annual GDP per capita (€)
Amsterdam	ROA	1 353 820	1 003	33 000
Barcelona	ATM	4 770 180	3 236	21 373
Berlin - Brandenburg	VBB	5 955 532	30 730	20 636
Bilbao	CTB	1 135 243	2 217	23 887
West Midlands (Birmingham)	CENTRO	2 578 400	901	23 793
Brussels	AED - BUV	2 980 106	5 162	
Cadiz Bay	CMTBC	629 054	2 087	6 800
Frankfurt Rhein-Main	RMV	4 793 000	14 000	35 000
Helsinki	YTV	990 448	743	39 200
Greater London	GLA	7 500 000	1 579	33 887
Greater Lyon	SYTRAL	1 167 086	500	25 153
Madrid Community	CRTM	5 964 143	8 030	23 777
Greater Manchester	GMPTE	2 539 000	1 272	16 470
Oslo Region	AS Oslo Ruter	1 024 064	5 014	46 494
Paris Ile-de-France	STIF	11 097 400	12 012	38 740
Prague	ROPID	1 700 000	3 860	17 155
Seville	CTS	1 213 747	1 759	14 550
South Yorkshire (Sheffield)	SYPTE	1 272 609	1 552	20 402
Stockholm	ABSL	1 900 000	6 500	
Greater Stuttgart	VRS	2 405 168	3 012	34 858
Turin Metropolitan Area	AMMT	1 529 157	837	23 769
Valencia	ETM	1 664 560	1 415	18 077
Vienna - Eastern Austria	VOR	2 349 000	6 457	31 000
Vilnius	MESP	553 076	392	7 588

> European metropolitan areas keep growing but have various demographic structures
Most urban areas surveyed have seen an increase of their population over the past 10 years. The average growth rate is around 9% for the cities which have provided data, Prague ranking first with a growth estimated at 21.4% for the period 1994-2004. Madrid Community comes second, with a growth of more than 15%, followed by Valencia (+13.4%) and Helsinki (+13.2%).

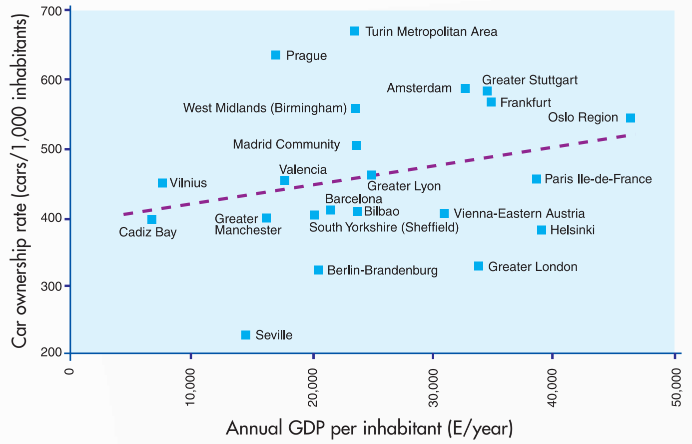
The weight of the main city over the whole metropolitan area is roughly a 44% of total population with large differences, illustrating the diverse administrative frameworks and history of the cities.

Population evolution (1994-2004)

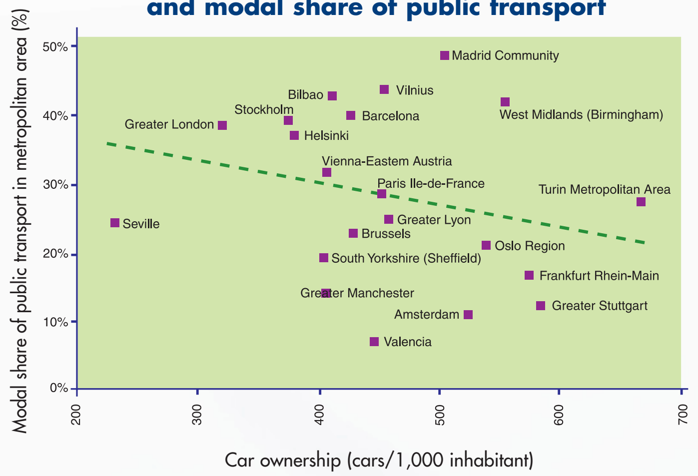


> Car ownership rates are nearly thrice as high in some cities as in others (670 cars per 1,000 inhabitants in Turin vs 227 in Seville and less than 350 in Berlin and London). Regression analysis seems to show a weak link between economic wealth and car ownership rates, on the one hand, and car ownership rates and public transport modal split, on the other hand, with large variations in some cases.

Link between annual GDP per capita and car ownership rate



Link between car ownership rate and modal share of public transport



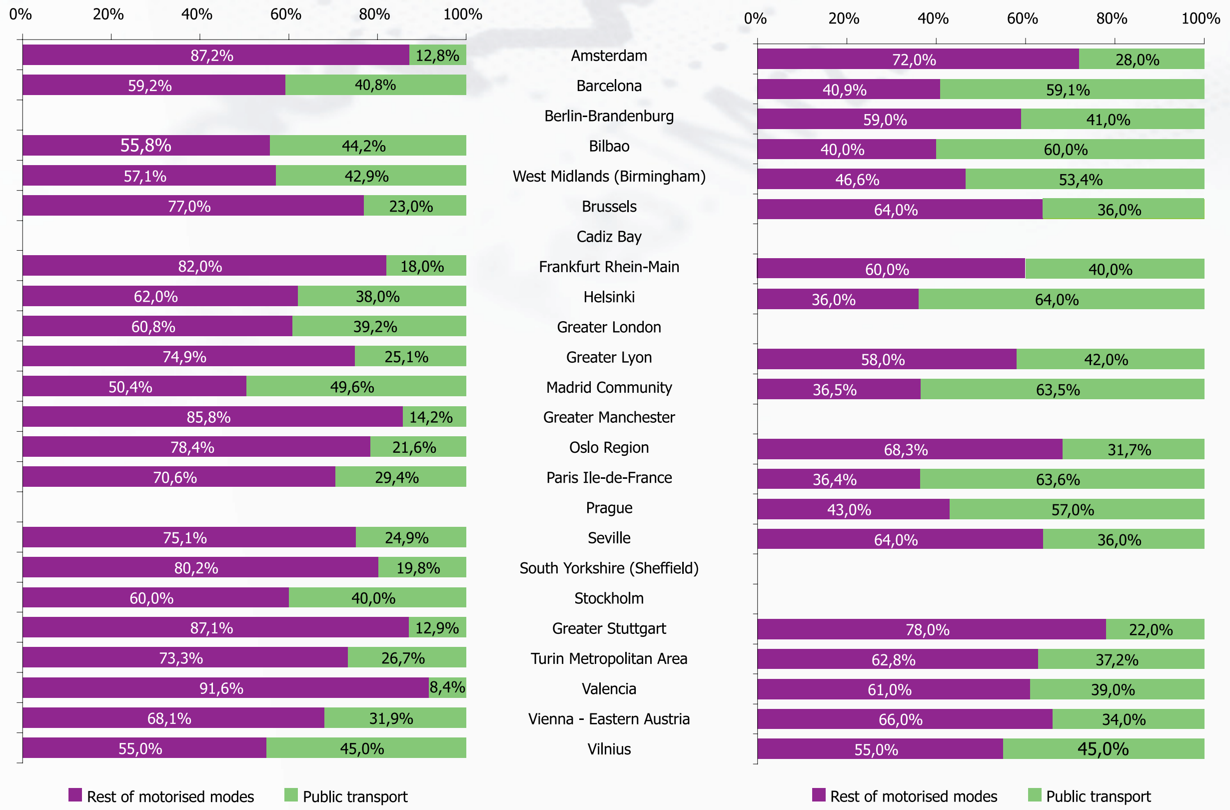
> Public transport accounts for more than 50% of all motorised trips in the densest parts of most European metropolitan areas (in the main cities), illustrating its fundamental economic, social, and environmental role in large urban territories. Madrid is the European metropolitan area among those surveyed, where public transport accounts with the higher modal share of motorised trips (49.6%). Other metropolitan areas with more than one third of motorised trips done by public transport include Barcelona, Bilbao, West Midlands (Birmingham), Helsinki, London, Stockholm, and Vilnius.

In the main city of the metropolitan areas, a lot of cities achieve more than 50% of modal share for public transport, Helsinki, Paris and Madrid leading with a rate of two thirds of all motorised trips, illustrating the very dense public transport systems irrigating the heart of the three capital cities.

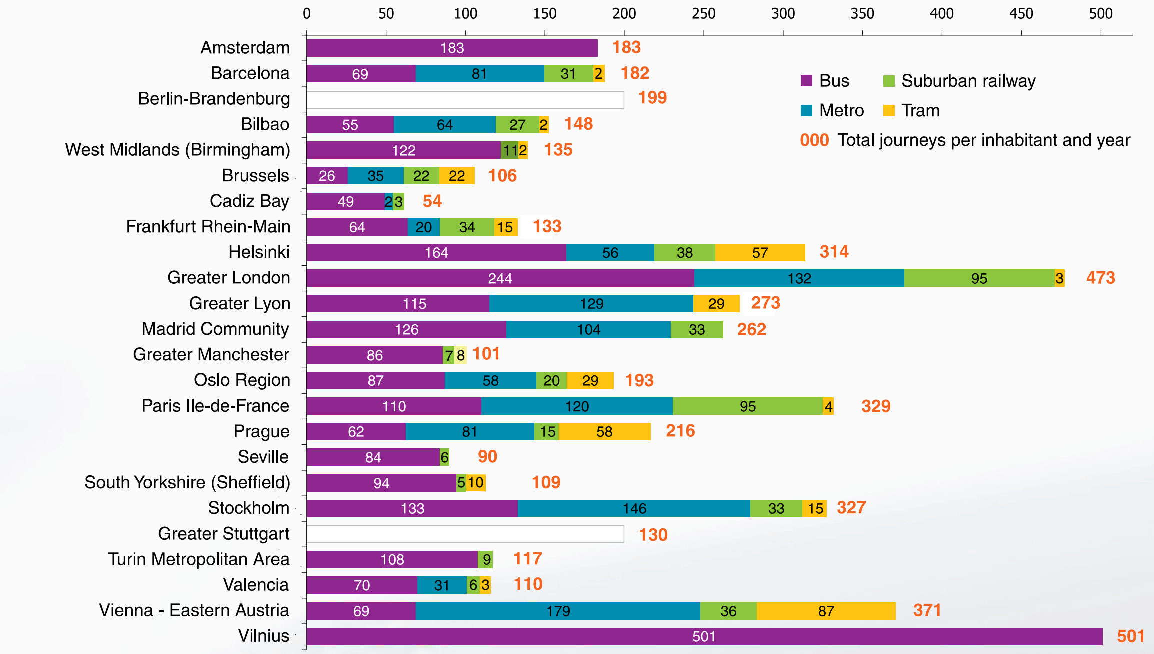
The strong gap between modal share in the main city and in the whole metropolitan area (where public transport accounts, in average, for 30% of motorised trips) illustrates one of the main challenges facing public transport authorities and operating companies in the coming years: develop public transport in the suburbs and the less dense parts of the metropolitan areas.

Modal share of motorised modes

In whole metropolitan area — In main city



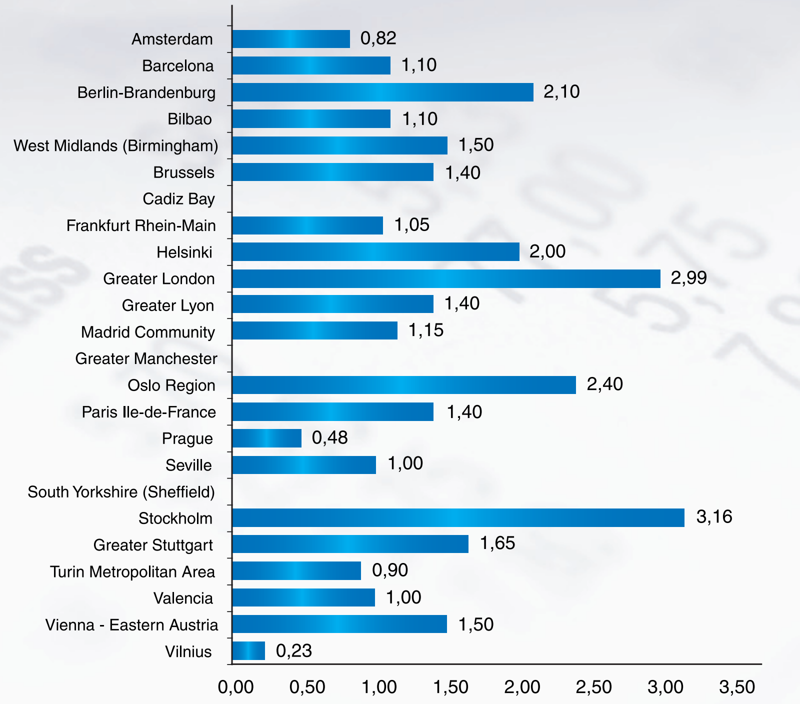
Public transport demand per inhabitant



Regarding the public transport demand, each inhabitant in average does more than 200 journeys per year on public transport, which means at least once every working day. In some cases the figure is over 400 journeys as in Vilnius (which figure includes buses and trolleybuses) and London. Out of the total demand figure, half of it is made on buses, which confirms this mode of transport as fundamental in the whole public transport system.

It is also very important to highlight the effort being made by authorities and operators to offer a high quality public transport system, with accessible vehicles and stations, using ITS technologies (Intelligent Transport Systems) to guarantee reliability and safety in the operation, and real time information to the user, and finally to promote the public transport use and make it more competitive in front of the private vehicle.

Single ticket price for the main city



> Fare policies and fare levels differ a lot between the different metropolitan areas, varying the price of a single ticket valid for the main city from less than 0.30 € up to more than 3 €. The saving with the multiple trip ticket is around 40% compared with the single ticket. The monthly pass varies between 14.48 and 97.53 €, and the students pass is 50% cheaper than the same category of conventional pass.