EMTA

europe sustainable mobility metropolis transport authority

barometer 2021 based on 2019 DATA
15 th edition

Foreword by Ruud van der Ploeg, EMTA Secretary general

With the vertiginous drop in levels of demand from the onset of Covid-19 still resonating the Barometer 2019 figures made me realize how our daily mobility came to depend on an adversary we can't see, let alone control. Amazing how fast the pandemic turned our contacts upside down forcing us to review our attitudes towards collective travel!

While little over 18 months ago authorities crunched their heads on how to scale up their urban public transport to cater for increasing peak hour demand local transport is struggling to recover. Looking at 2019 demand many ask when public transport will live to see the day of its redemption and rise to such levels to bench for "demand normality".

Recovery can't just be an attempt to rebuild what was invented before. Instead, governments will need to review public funding and terms of service delivery and contracting whilst continuing to invest in sustainable and digital infrastructure.

Experts in the sector consider it is inevitable for public transport to review the orchestration of governance and align with customer preferences of services and benefit from digital technology to improve the focus on user flexibility, convenience and ease.

The pandemic adds a new dimension on health conditions that looks at respecting social distancing. The management of mass volumes should not dispel the core task of our authorities to create an ecosystem that respects passenger needs for a secure and safe journey.

The European Commission's proposal on the Climate Act to reduce CO2 levels by 55% by 2030 revises the efforts of public stakeholders to accelerate investment in making urban transport and mobility sustainable. Achieving that goal requires public transport stakeholders to step up efforts and lead by example. Transport providers should keep doing what is their trade: cater for comfortable, reliable and high-quality services that renders the choice of using the private car senseless and attractive public transport logical. After all, every journey commences or ends with a walk or a bike trip to and from a station or stop. This helps to get people active and work on their health, even more if local air quality improves due to a reduction of exhaust by carbon fueled vehicles.

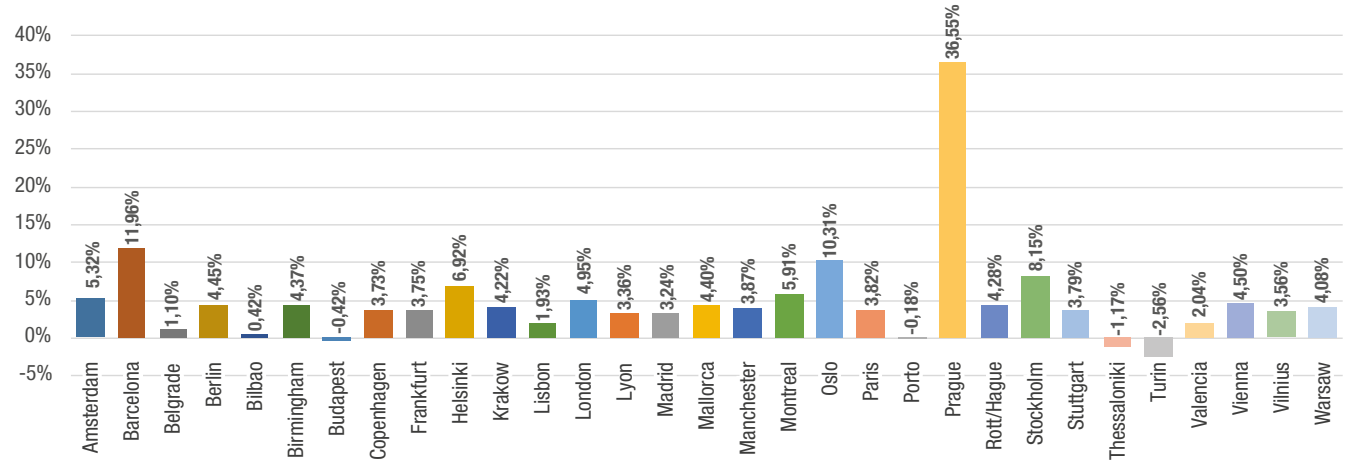
1. Description of the PTA(1) area surveyed

Authority responsible		Main city population	PTA area population	PTA (km²)	PTA urbanised area	PTA urban density (inhab./km²)	Annual PTA GDP per inhabitant (€)(2)
VRA	**Amsterdam**	872.757	1.565.759	1.025	850	1.842	34.300 €
ATM	**Barcelona**	1.636.762	5.627.752	8.810	3.373	1.668	44.529 €
SfPTB	**Belgrade**	1.696.192	1.696.192	3.222	620	2.736	11.277 €
VBB	**Berlin**	3.669.491	6.191.384	30.546	3.449	1.795	36.764 €
CTB	**Bilbao**	1.149.044	1.149.044	2.215	235	4.890	35.098 €
TfWM	**Birmingham**	1.141.816	2.928.592	902	680	4.306	30.216 €
BKK	**Budapest**	1.750.216	1.750.216	525	358	4.889	30.884 €
MOVIA	**Copenhagen**	736.645	2.643.799	9.196	1.713	1.543	59.343 €
RMV	**Frankfurt**	763.380	5.242.602	13.583	2.450	2.140	46.923 €
HSL	**Helsinki**	653.835	1.329.394	1.968	543	2.448	60.581 €
ZTP	**Krakow**	779.115	1.078.708	1.472	258	4.188	
AML	**Lisbon**	509.515	2.863.272	3.015	654	4.379	26.811 €
TfL	**London**	8.961.989	8.961.989	1.579	1.042	8.601	62.129 €
SYTRAL	**Lyon**	665.284	1.400.000	746	360	3.889	53.286 €
CRTM	**Madrid**	3.266.126	6.663.394	8.028	916	7.278	35.876 €
CTM	**Mallorca**	416.065	896.038	3.636	214	4.187	
TfGM	**Manchester**	552.858	2.835.686	1.272	959	2.957	28.405 €
ARTM	**Montreal**	2.064.991	4.159.084	4.402	1.607	2.588	
RUTER	**Oslo**	693.494	1.359.686	5.005	327	4.158	60.590 €
IdFM	**Paris**	2.142.903	8.750.949	12.000	2.728	3.208	55.227 €
AMP	**Porto**	216.606	1.728.226	2.041	510	3.387	22.693 €
ROPID	**Prague**	1.324.277	2.611.023	8.319			29.921 €
MRDH	**Rott/Hague**	651.157	2.390.416	1.256	969	2.467	
SL	**Stockholm**	974.073	2.377.081	6.514	903	2.632	64.831 €
VRS	**Stuttgart**	635.911	2.536.413	3.011	733	3.460	55.485 €
TheTA	**Thessaloniki**	765.433	1.104.023	3.677	397	2.781	15.774 €
AMP	**Turin**	857.910	4.311.217	25.387	1.771	2.434	21.371 €
ATMV	**Valencia**	801.545	1.748.850	1.551		5.909	
VOR	**Vienna**	1.911.191	3.889.914	23.559	14.421	270	44.044 €
MESP	**Vilnius**	561.642	561.642	401	204	2.753	25.400 €
ZTM	**Warsaw**	1.790.658	2.680.771	2.884	603	4.446	31.834 €

(1) PTA: Public transport authority (2) GDP: Gross domestic product (3) Rotterdam and The Hague have one PTA

2. Evolution of population in PTA´s areas 2015-2019

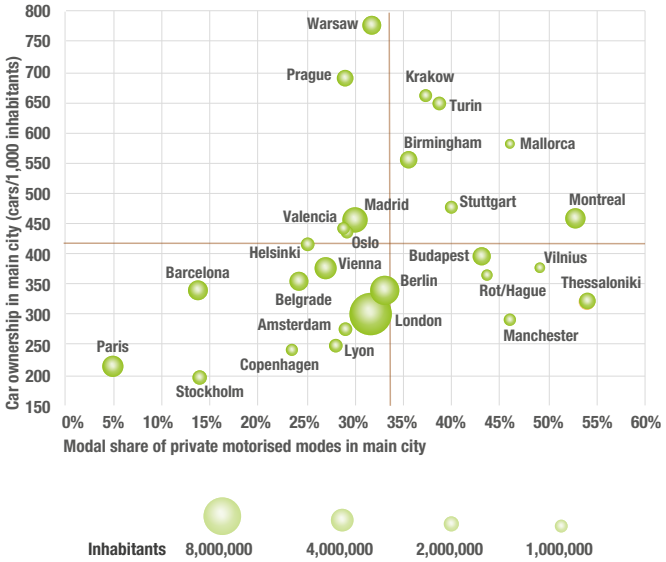
In general, all the PTA´s has increased the population except Thessaloniki and Turin that has decreased in the last five-year period. Prague has the highest growth followed by Barcelona due to the increase of its administrative limits.



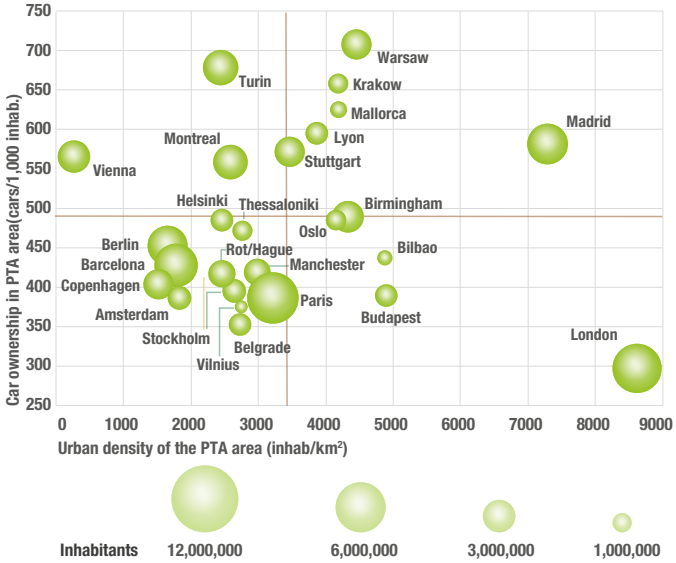
3. Car ownership rate

The first image represents the relation between car ownership in main city and modal share of private motorised modes also in the main city. In this graph the size of the balls represents the inhabitants in the main city. The second image is represented the relation between car ownership in the PTA area, expressed as cars per 1,000 inhabitants and urbanized PTA area density. The size of the balls represents the population in the PTA area.

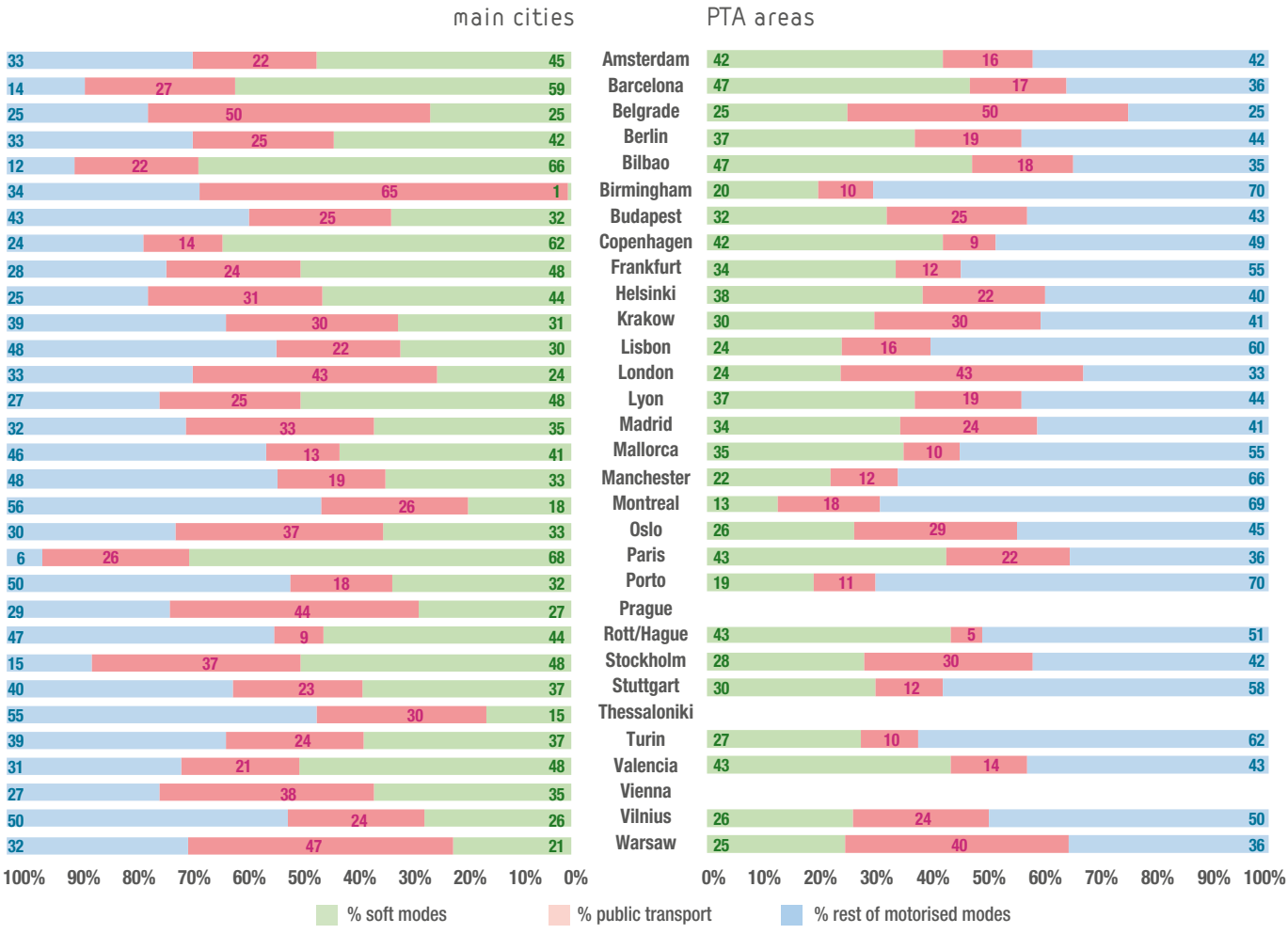
Car ownership versus modal share in private motorised in main city



Car ownership versus urban density in PTA area



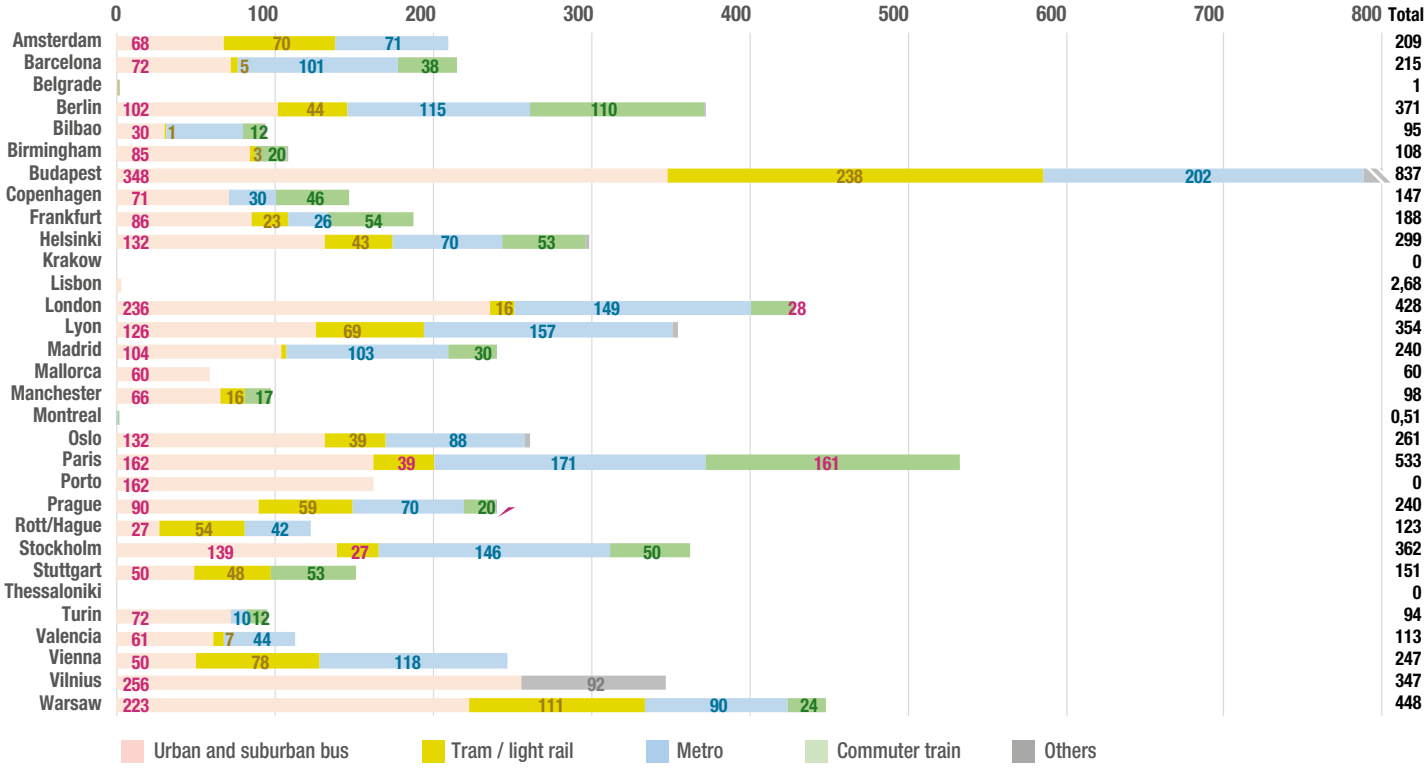
4. Modal share in main cities & PTA areas



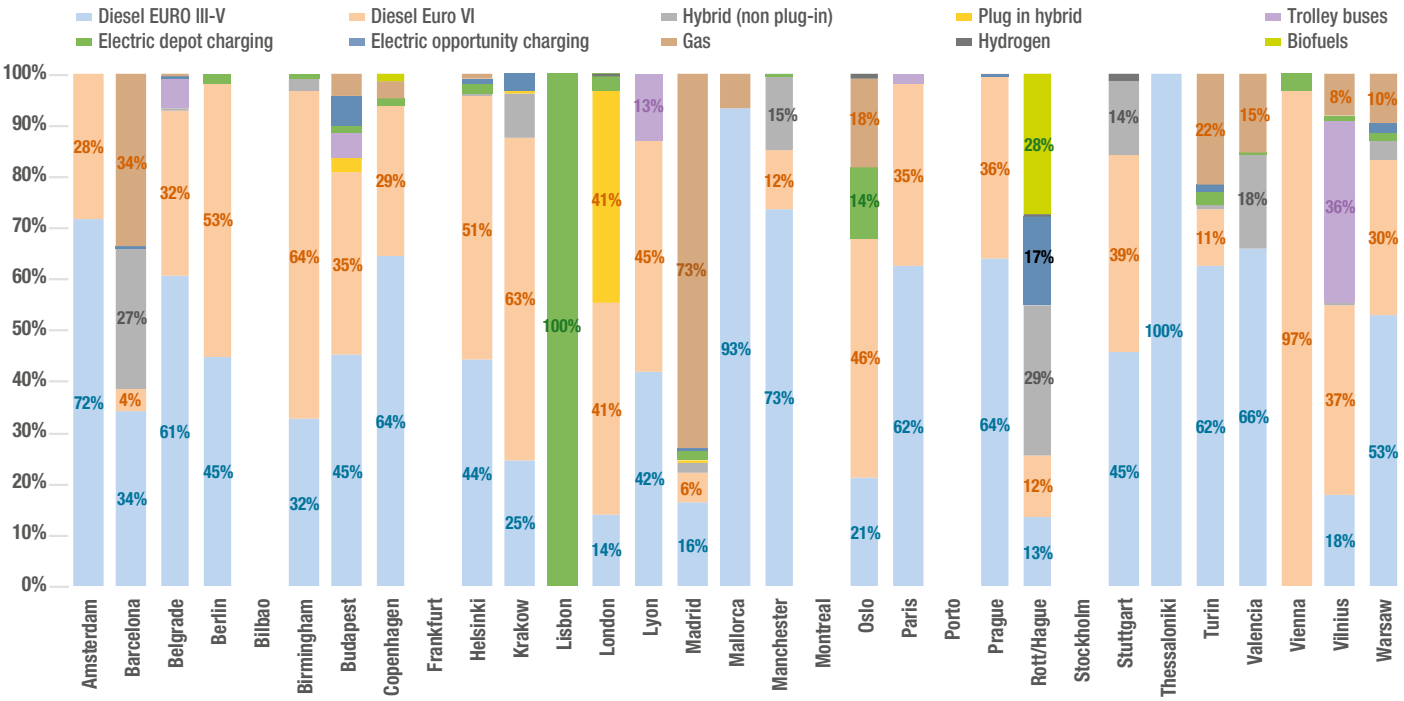
5. Public transport demand per inhabitant in PTA areas

Regarding the public transport demand, 2019 had practically the same use of PT in comparison with the last years with 324 boardings per inhabitant: the average number of boardings was 304 in 2015; 324 in 2016; 346 in 2017; and 339 boardings per inhabitant in 2018 were made. The bus being the most used transport mode (102 boardings per inhabitant, 110 in 2018) followed by the metro (97 boardings per inhabitant, 87 in 2018). In the case of Budapest, the high numbers are due to the fact that BKK is accountable for only PT services within the city borders of Budapest whilst boardings in this figure include both local journeys from citizens on top of commuter trips from outside services into the city. Hence, the city population produces a lower denominator.

Public transport demand (boardings per inhabitant in PT per mode)

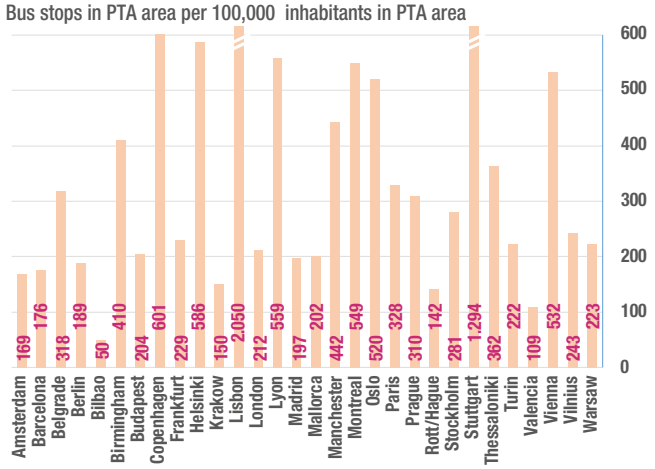


6.Urban bus fleet based on propulsion system

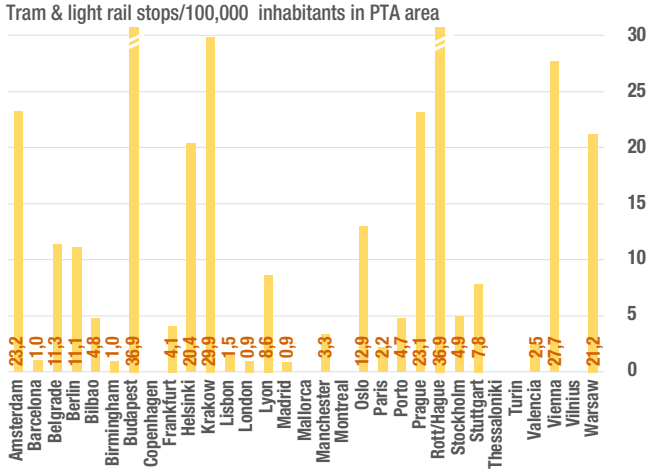


7. Ratio of stops or stations per 100,000 inhabitants in PTA area

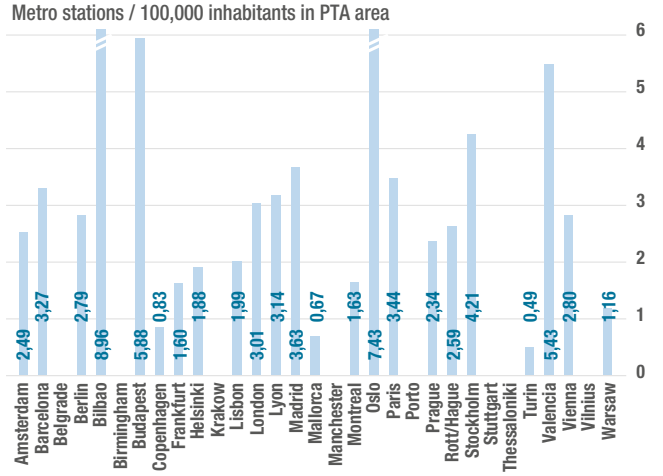
Bus stops in PTA area per 100,000 inhabitants in PTA area



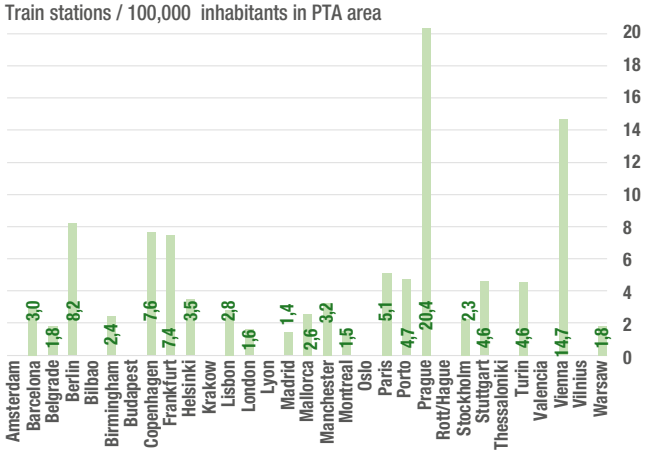
Tram & light rail stops/100,000 inhabitants in PTA area



Metro stations / 100,000 inhabitants in PTA area

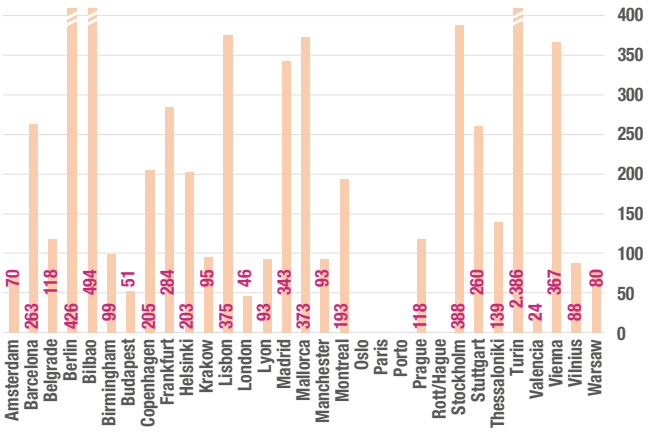


Train stations / 100,000 inhabitants in PTA area

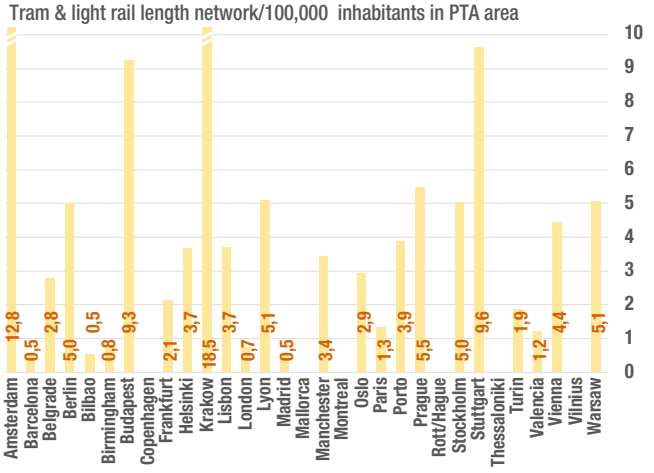


8. Ratio of length network per 100,000 inhabitants in PTA area

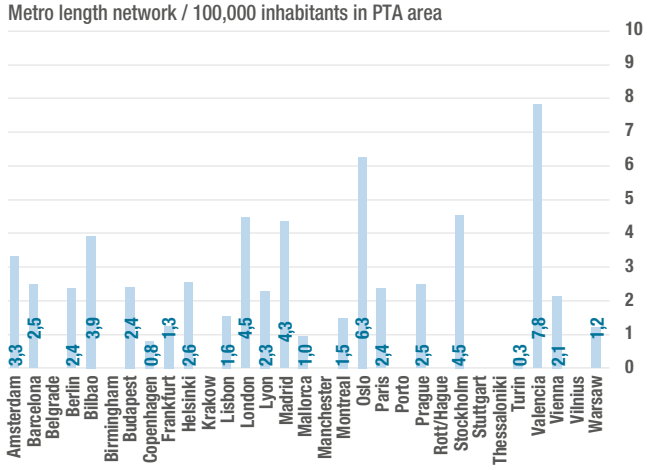
Bus length network / 100,000 inhabitants in PTA area



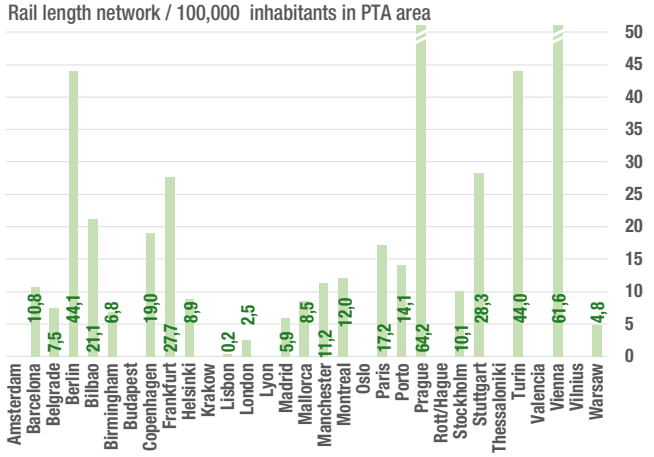
Tram & light rail length network/100,000 inhabitants in PTA area



Metro length network / 100,000 inhabitants in PTA area

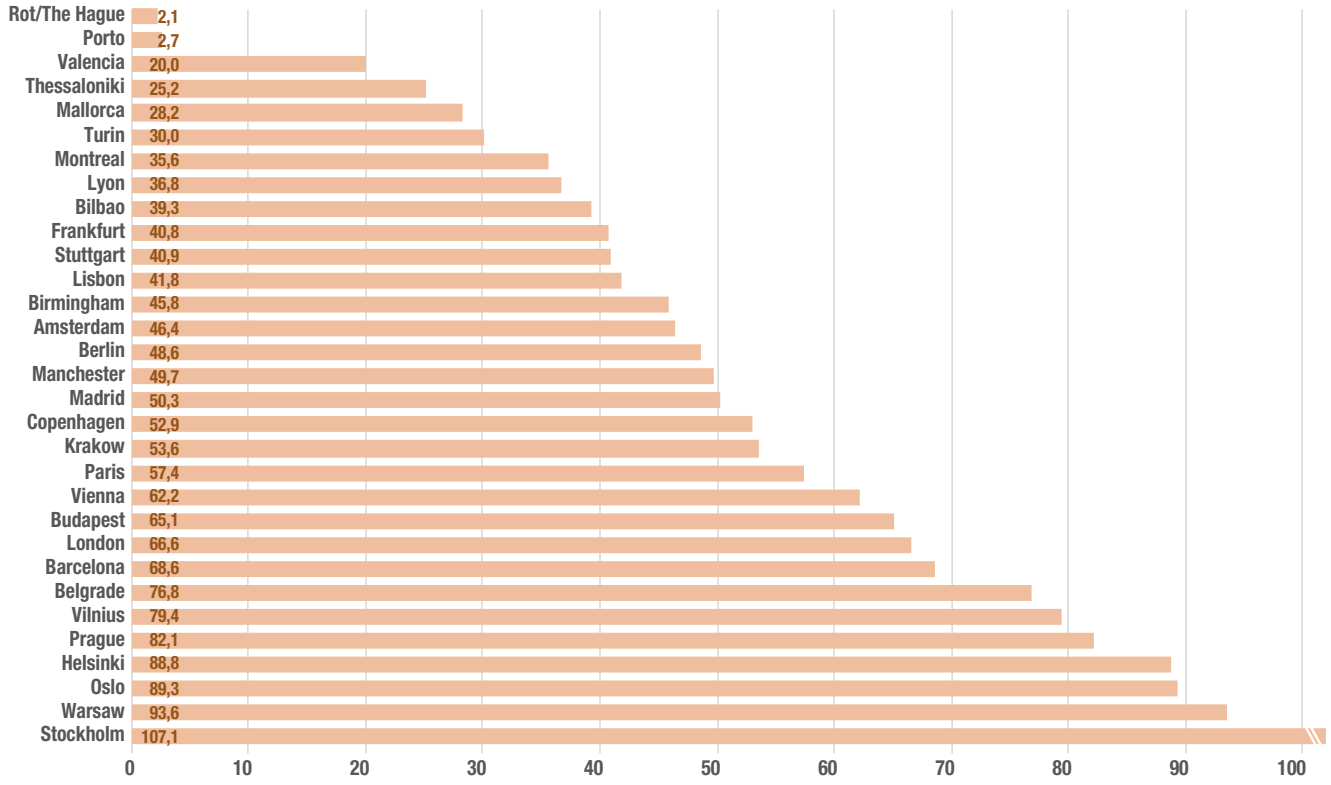


Rail length network / 100,000 inhabitants in PTA area



9. Vehicles-km per inhabitant and PTA area

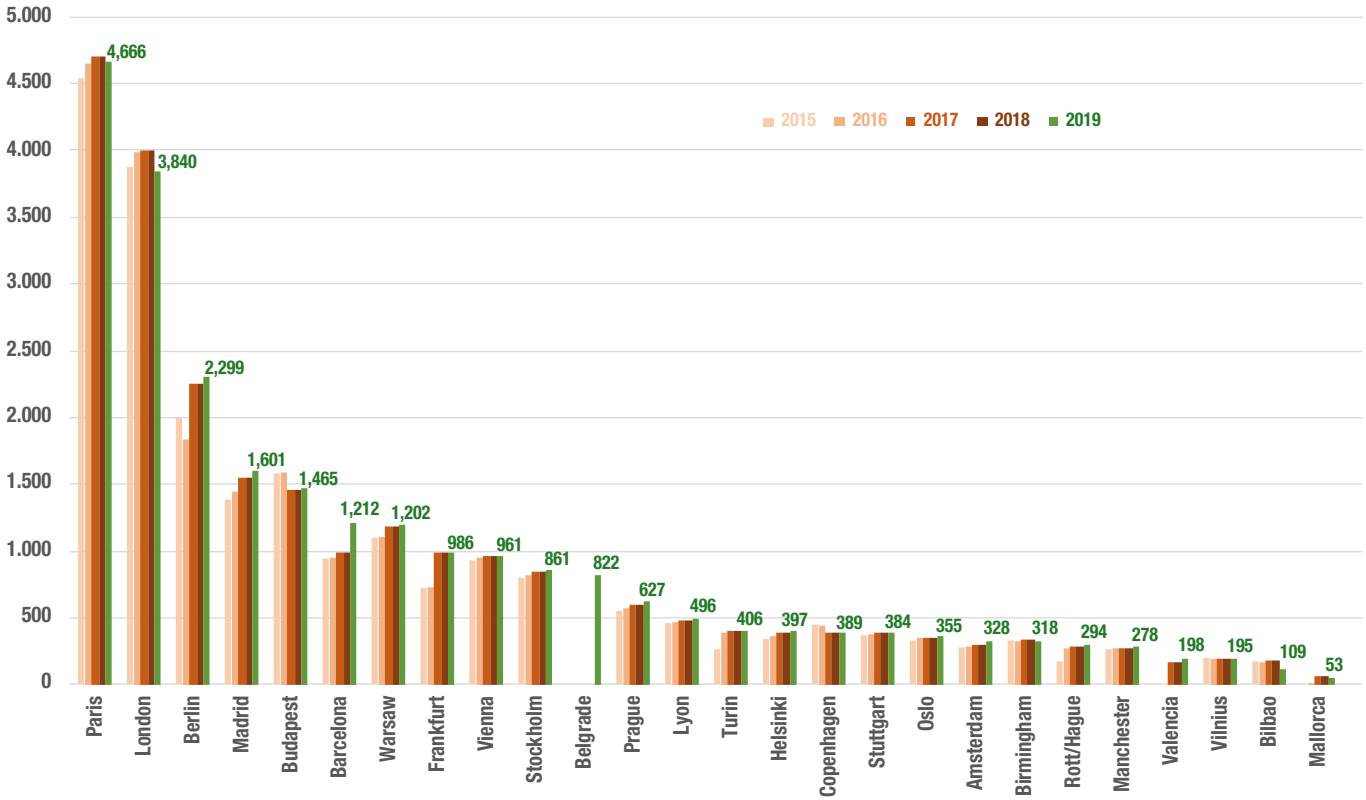
Vehicle km / inhabitants PTA/1000000



10. Public transport demand trends

Public transport demand trends have evolved differently over the last years. Overall, in 2019 it shows an increase in public transport demand for all PTA areas. In the graphic below we can distinguish three important groups: more than 2,000 millions trips per year for Berlin, Paris and London; more than 1,000 millions trips per year for Madrid, Budapest, Barcelona and Warsaw; and below 1,000 millions for the rest of the PTAs.

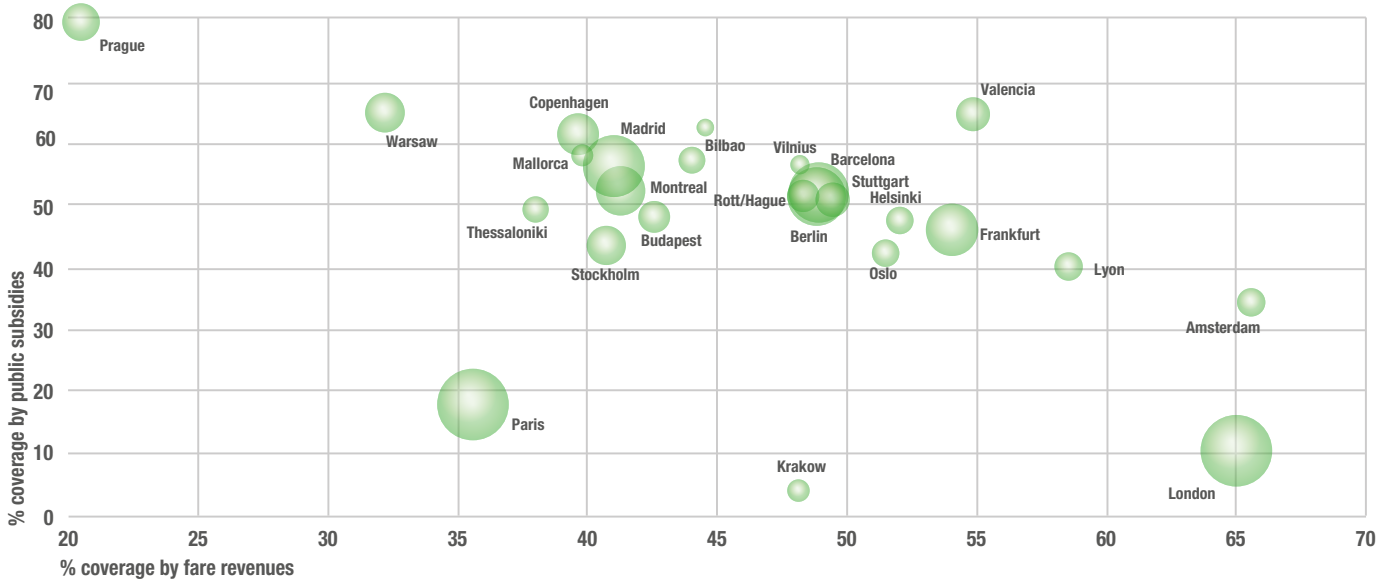
Trends PT trips (boardings per year x10⁶)



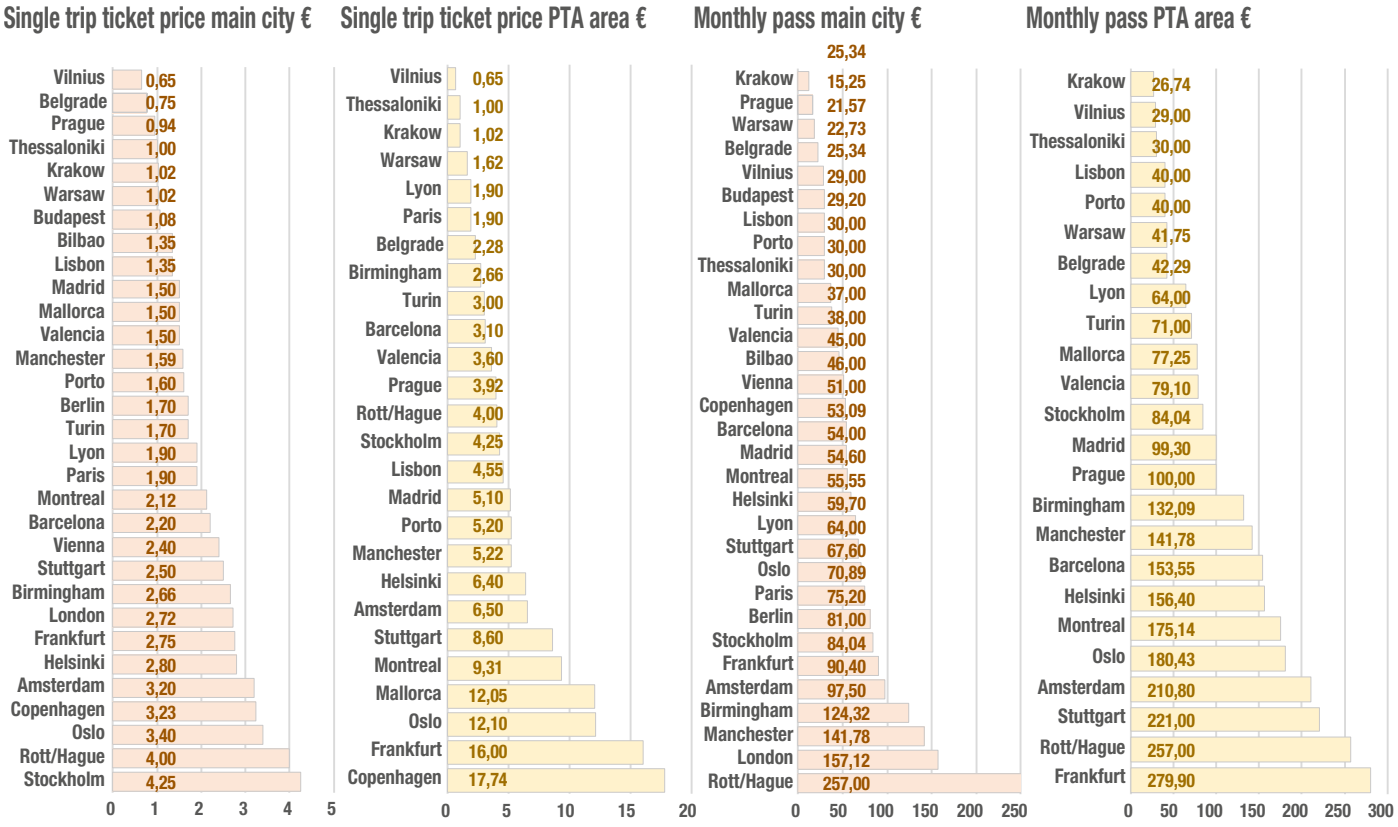
11. Coverage of operational costs

The size of each ball in the diagram below represents the relative volume of the annual cost of operations of public transport divided by the population of the PTA area (costs/total inhabitants). The ratio of the annual operational average authority costs per inhabitant for the PTA areas amounts to around 385 €. The PTAs of Paris Île-de-France (1,183 €/inhab.), Greater London (960 €/inhab) and Stockholm (860), have the highest ratio (more than twice the average authority) and Thesaloniki the lowest (89 € per inhabitant per year). Most of the cities have a cost-coverage ratio for fare revenues within a margin of 40 - 60% and a public subsidies coverage ratio of 48% as average authority. Paris Île de France has the lowest coverage by public subsidies (36%) but Paris has an special coverage of operational costs that partly comes from the "versement transport" (a hypothecated local tax levied on the total gross salaries of all employees of companies larger than 11 employees). Prague have the highest coverage by public subsidies with a 79%, to be partly explained by the fact that in the case of Prague also has the lowest coverage by fares revenues of all PTA's (21%).

Coverage by public subsidies vs coverage by fare revenues per PTA area´inhabitants



12. Ticket price for the main city and PTA area




Public transport authorities´ partners

Vervoerregio Amsterdam (VRA)

Autoritat del Transport Metropolità (ATM) Barcelona

Sekretarijat Za Javni Prevoz (SfPT) Belgrade

Verkehrsverbund Berlin-Brandenburg (VBB) Berlin

Consorcio de Transportes de Bizkaia (CTB) Bilbao

Transport for West Midlands (TfWM) Birmingham

Budapesti Közlekedési Központ (BKK) Budapest

Trafikselskabet Movia Copenhagen

Rhein-Main Verkehrsverbund Frankfurt

Helsinki Region Transport (HSL) Helsinki

Zarzad Transportu Publicznego w Krakowie

Area Metropolitana de Lisboa (AML)

Transport for London (TfL)

Syndicat Mixte des Transports pour le Rhône et l'Agglomération Lyonnaise

Consorcio Regional de Transportes de Madrid (CRTM)

Consorci Transports Mallorca

Transport for Greater Manchester (TFGM)

Autorité régionale de transport métropolitain de Montreal (ARTM)

RUTER Oslo

Ile-de-France Mobilités Paris & Ile-de-France

Área metropolitana do Porto

Regional Organizer of Prague Integrated Transport (ROPID)

Metropoolregio Rotterdam Den Haag (MRDH)

Stockholms Lokaltrafik AB Stockholm(SL)

Verband Region Stuttgart (VRS)

Thessalonoki Transport Authority (TheTA)

Agenzia della mobilità piemontese (AMP) Torino

Autoritat de Transport Metropolità de València (ATMV)

Verkehrsverbund Ost-Region Wien (VOR)

Susisiekimo Paslaugos (MESP) Vilnius

Zarzad Transportu MiejKiego Warszawie (ZTM) Warsaw

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