



# Mobility test 2014



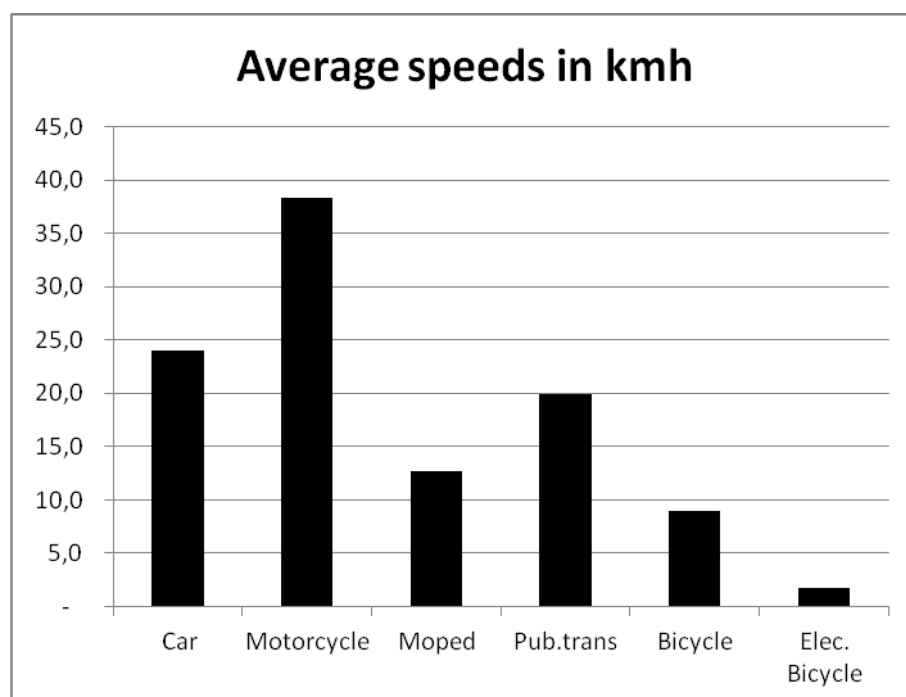
## Introduction:

The purpose of the mobility test was to investigate the time needed to enter European cities by different modes of transport. Several organizations, most of them united in FEMA, did these tests in 15 cities in eight countries. The tests were done with cars, motorcycles, heavy and light mopeds, e-bikes (pedelecs), bicycles and public transport (bus, tram and metro).

Work is a huge part of our lives and commuting to work takes more and more time due to congestion. More than 60% of the population in the European Union lives in urban areas and expectations are that this number will increase. The European cities are expected to grow with an increased demand for personal transport for commuting. Many urban areas of Europe are already chronically congested, which means an annual cost of € 100 billion (1% of the EU GDP, Gross Domestic Product) per year!

## Summary

To FEMA, PTWs are an obvious choice of transport to and in cities. To other stakeholders this is less obvious. In order to investigate the difference in transports, FEMA asked member organizations in Europe, the Swiss organization CI Motards and the Italian organization FMI to take part in a mobility test. 15 cities in eight countries participated in the first pan European mobility test ever. The rules were easy: use different modes of transport - motorcycle, moped, car, public transport and bicycle if possible. Start at the same time from a set place in a suburb and head for a goal inside a European city. Find a time keeper to collect the results. Calculate the costs. Take photos from the test. Send the results to FEMA.



The motorcycles and mopeds made the journeys faster in every city. The average speed for motorcycles and mopeds is higher than for cars in almost every city. Bicycles took part in the tests in Basel, Lausanne, Dublin, Marseilles, Antwerp and Brussels. The cyclist who took part in Antwerp only took nine minutes more than the car to travel 22 kilometers! The cyclist in the city of Marseilles was actually faster than all other modes of transport, due to bicycle lanes and experience.

The biggest difference between the motorcycle and the car was 38 minutes to travel 29 kilometers in Oslo, (27 versus 65 minutes) and 48 minutes to travel 19 kilometers in Dublin (27 compared to 75 minutes). If you choose to ride a motorcycle instead of driving a car in Oslo, you would save more than one hour every day! The fact that all motorcyclists have access to bus lanes in Oslo also gave the rider a safe and pleasant journey. The rider in Dublin saves more than 1,5 hour per day compared to the motorist. In most of the cities the test is conducted in July and August, which means during school holidays. The differences would probably have been larger if the tests were done outside the school holidays.

The cost for the journeys, parking and tolls was also compared. Motorcycles and mopeds used less petrol compared to cars. There were no costs for parking motorcycles and mopeds. In

most cities cars had to pay up to €25 to park for one working day. Cars must also pay toll/congestion tax in Stockholm and Oslo where motorcycles and mopeds are excluded from the city toll. The PTW-riders spend less money commuting compared to motorists.

The mobility test proves that powered two-wheelers can contribute to improve mobility and reduce congestion all over Europe. Individuals would spend less time and money commuting to work if they used a PTW. A switch to PTW is also profitable for society as a whole. It would be easy for the European cities to promote PTWs and improve safety at low cost, for example by allowing filtering, give access to bus and taxi lanes, open dedicated parking spaces for PTWs and exempt PTWs from congestion charge.

## Findings per country

### Belgium

In Belgium the test was conducted in two cities, Antwerp and Brussels. The test in Antwerp is conducted in the middle of July (holiday season) with a motorcycle, car, moped, bicycle and public transport. The participants started at 8:00 AM. The public transport testers took two different ways. The travelled distances were between 21 and 26 kilometer and a second way of 36 kilometer by public transport. The explanation for the different distances is, that cars, motorcycles, mopeds and bicycles often have to use different, sometimes dedicated, lanes and ways. The motorcycle needed 29 minutes, where the car needed 51. The moped (45 km/h) and the bicycles needed about the same time. This is due to the fact that the moped had to take a longer track. Public transport was by far the slowest and also had to take longer ways. The car driver also has to pay € 15 in parking fees per day. The costs for public transport would be € 5,00 (bus/tram) or € 12,00 (bus/tram/train). For the motorcycle it would be € 1,50 (fuel) and for the moped € 1,95 (fuel, longer distance).



In Brussels the test was conducted in the beginning of September and went from Leuven to the former FEMA office in Brussels, which route includes a distance outside the city. The participants all started at 8:00 AM. Here also the motorcycle spent much less minutes than the other transport modes, with a large difference in the time needed for the motorcycle (35 minutes), the car (63 minutes) and public transport (88 minutes). The costs would be the highest for the car driver with € 3,50 for fuel and € 30 per day for parking costs. The costs for public transport would be € 7,30, for the motorcycle € 2,38 (fuel).

### France



Six mobility tests were conducted in France in five cities: Caen, Marseilles (2), Mulhouse, Paris and Strasbourg. The tests were all conducted in the middle of September 2014.

In Caen the distance was quite short, 6,9 kilometers, but still the needed times went wide apart. Public transport (37 minutes) turned out to be very slow compared to car (19 minutes) and motorcycle (12 minutes). Bicycle and moped were not tested here.



In Marseille two tests were conducted, one of 7,4 kilometers (6,6 kilometers for the bicycle) and one of 17 kilometers. Here on the long distance test public transport turned out to be much faster than car and nearly as fast as the motorcycle (motorcycle 33 minutes, public transport 34 minutes, car 86 minutes). The moped used a little longer than the motorcycle (43 minutes). On the long distance the bicycle used the least time (17 minutes), the motorcycle and moped needed two minutes more. The car needed almost 10 minutes more. Remarkable was the time needed by public transport: 54 minutes, what came down to an average speed of 8,22 kilometers per hour.

In Mulhouse the test was also conducted in the middle of September. As in Marseille public transport turned out to be the slowest way. The car needed half the time (28 minutes) and the motorcycle was again faster than the car (22 minutes). The bicycle came in between with 37 minutes.

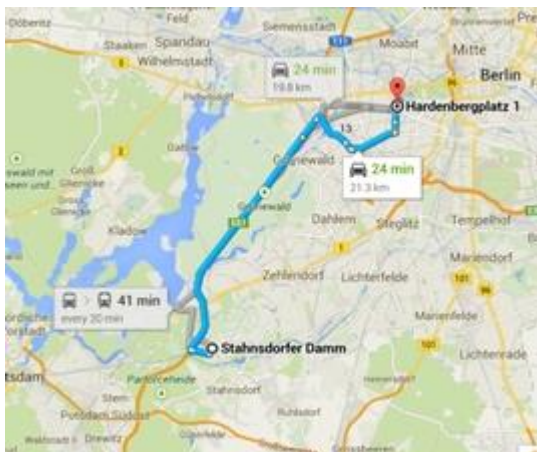
In Paris the motorcycle needed 25 minutes for a distance of 17,8 kilometers. The moped needed 39 minutes, but had to take a longer route and the car needed twice as long as the motorcycle. Public transport however was again the slowest way and the traveler needed 61 minutes. Public transport was also the most expensive (€ 2,70). The cost for the car was € 1,20 (1,44 liter Diesel) and for the motorcycle € 1,54 (0,95 liter gasoline).

The last city where the test was conducted was Strasbourg, where the journey went from Hüttenheim to Central Strasbourg. This was the longest distance: 31 kilometers. Public transport (42 minutes) profited the most from this and was almost as fast as the car (38 minutes). The motorcycle however was winner again with 25 minutes.

## Germany

In Germany the test was conducted in three cities: Berlin, Hamburg and Stuttgart.

In Berlin the test was conducted on the 7<sup>th</sup> October 2014 and organized by Bikers Union. The participants started at 10:20 AM and went from Stansdorfer Damm to Hardenbergplatz 1, Berlin.



The bicycle needed 75 minutes, twice as much as the car (35 minutes) and three times as much as the motorcycle (25 minutes). Public transport (bus and train) needed 55 minutes for the 21 kilometers. The costs were the highest for the car driver with € 1,65 Diesel fuel and € 4,00 parking costs. Second came public transport with € 3,20. The motorcycle used for € 2,50 fuel.

Second German city was Hamburg, where the longest test was conducted (33,3 kilometers) on 23<sup>rd</sup> of July 2014. This test also was organized by Bikers Union. The journey started at 7:15 AM and went from Nahe, Hüttkahlen to Marco-Polo Terrassen, Hamburg. Here the time needed by the car (58 minutes) and the motorcycle (55 minutes) were almost the same. Public transport (99 minutes) and the pedelec (109 minutes) needed much more time. The costs of fuel was not calculated. Remarkable was that both car driver and



motorcycle rider had to pay € 12,00 daily for parking costs. The costs of public transport was € 4,90 (one way).

Stuttgart was the third city where the mobility test was conducted. It started in Ludwigsburg, which is a typical suburban area, and went to Industriegebiet Feuerbach, Stuttgart, very near to the company where the participants all work, a distance of 10 kilometers. This was done on the 31<sup>st</sup> of July 2014. Testers here were members of the motorcycle club "Bosch Motorradgruppe Stuttgart". The motorcycle (15 minutes) needed less than half the time of public transport (33 minutes) and a third less than the car (22 minutes). The moped (20 minutes) also was a little faster than the car.



## Ireland

In Ireland the test was conducted by MAG Ireland with the assistance of Bike Buyers Guide magazine and of Cycling Ireland (the governing body of cycling in Ireland) with a start at . MAG Ireland opted to start from 1 Rockingham Avenue, Lexlip, Co. Kildare. This location is a suburban housing estate and is well served with public transport links for bus & rail users. The destination chosen was the former MAG Ireland office at 96 Merrion Square West, Dublin 2. This is a South city centre location in a prime office district which has on street parking available. This made for a travel distance of 19 kilometers for the motorcycles, car and public transport. The bicycle could use a shorter way of nearly 18 kilometers. The differences were large, with a needed time of 27 and 30 minutes for the two motorcycles, 40 for the bicycle, 65 for public transport (bus) and 75 minutes (almost three times as much as the motorcycle) for the car. MAG reckons that the journey would have cost 55 minutes with the train (including waling to and from the train stations).



## Italy



In Italy the test was conducted by the Federazione Motociclistica Italiana (FMI), in the city of Rome in rush-hour (8:30 AM) and ended at the FMI office. The test was conducted on a school holiday, the Italian rapporteur estimates a bigger gap between the two-wheelers and other car on days when the schools are open. The length of the journey was 17,49 kilometers for a 600cc motorcycle, car, moped and public transport (bus and metro). The moped turned out to be the fastest and needed

41 minutes for the journey. This means an average speed of 25,6 kilometers. The motorcycle came shortly after this with 43 minutes. Much slower were the car (59 minutes) and the bus (69 minutes). In costs the moped and public transport were the cheapest (fuel and tickets), both journeys cost € 1,50, then came the motorcycle (€ 3,00) and the car (€ 7,40, fuel and parking)





## Norway

The Norwegian Mobility Test was carried out on a Tuesday in September. The journey started at 7:42 AM in a residential area just outside the city of Ski, with Helsfyr metro station in Oslo as our destination. The Helsfyr area has many small businesses and office buildings. This is a typical commuter travel and the distance is 28,7km. The travel modes compared were: Passenger car (Lexus RX400Hybrid), motorcycle (BMW F800GS), light motorcycle (Vespa GTS125), moped (Vespa Primavera50) and train/metro. The moped could not follow the same road as the other vehicles, because it is not allowed on the motorway. His travelling distance was 340 meters longer. The car needed the longest time (65 minutes), then the user of the public transport and the moped rider (both 55 minutes). The motorcyclists needed the least time, both 27 minutes. They could manage this short time because they are allowed on the bus lanes and they could ride past a still standing lane of cars near the end of the journey. The costs where much apart, with NOK 14,94 (€ 1,60) and 15,54



(€ 1,66) for the moped and light motorcycle. The 800cc motorcycle uses more fuel and therefore the costs where higher (NOK 28,22, € 3,02). This is much less than you pay for the public transport (tickets NOK 80, € 8,56). However: the testers bought day-tickets. A season ticket is probably much less expensive. The most expensive was the car with costs for petrol (NOK 50,70, € 8,64) and toll (NOK 31, € 3,32), together NOK 81,70 (€ 8,75)

## Sweden

In Sweden the test was conducted on the 9th of September with a motorcycle, two mopeds (45 and 25 km/h), a car and public transport. The journey went from Kolemilegränd in Täby to Waness Coffee, Kungsgatan 48 in Stockholm. The motorcycle came out the quickest with a needed time of 39 minutes for the 18,19 kilometers, second was the car that needed 51 minutes and then came the heavy (45 km/h) moped with 53 minutes. The small moped (25 km/h) and the public transport needed the same time, 66 minutes.

The mopeds had to travel a slightly longer distance, 19 kilometers. In comparison to the motorcycle the car not only needed 12 more minutes, but also there are added costs of about € 30 for toll and parking.



## Switzerland

IG Motorrad and CI Motards organized two mobility tests in Switzerland. The first was conducted on the 15<sup>th</sup> of August 2014 in Basel and here the journey was 21,5 kilometers from Himmelried to Basel Claraplatz. Here the motorbike was with a needed time of 26 minutes

slightly faster than the car that needed 33 minutes. Much more time was needed by the public transport (55 minutes) and the bicycle (79 minutes). The second test was conducted in Lausanne on the 28<sup>th</sup> of August 2014 and went from Parc des Sports in Morges to Place Pépinet in Lausanne, a distance of 14 kilometers. Here the differences between car and motorcycle were much larger: where the car needed 37 minutes, the motorcycle could do the journey in less than half that time, 18 minutes. With public transport 33 minutes was needed, with the bicycle 49 minutes.

