

Summer 2016 n° 56

News from the cities



A total of 20 brand new buses improve the ratio of accessible services in Budapest

The mobility manager of the Hungarian capital, BKK Centre for Budapest Transport, was commissioned by the Municipality of Budapest to improve the service quality level of public transport. BKK and its service providers have recently put into service 20 brand new, barrier-free buses on several routes. A total of 15 Mercedes Conecto G articulated, low-floor, air-conditioned buses started passenger service on 1 May 2016 in South Budapest operated by VT-Arriva while the first five of C68E Modulo electric buses entered service on 30 April 2016 on lines 16A and 116 serving the Castle District in Buda. Fifteen more vehicles of this type will follow to complete the fleet of electric, accessible, air-conditioned midi-buses to be operated by BKV, the Budapest Transport Company. The low-floor, electric buses are 8 metres long with a passenger capacity of 41 (or 37, if a wheelchair passenger is on board) based on capacity calculation with 4 passengers/m². In addition to having less environmental load than traditional fuel -or hybrid-powered buses, the operation of the zero-emission fleet is more cost effective.

In line with the sustainable transport development strategy of the Municipality of Budapest, the Budapest Transport Company has for years included in its action plan the assessment of the operation, the compatibility with the rest of the fleet and the overall suitability of fully electrically powered buses under the professional guidance of BKK, the transport organiser. In 2015, the opportunity arose to procure 20 new, modern, Modulo Medio Electric type zero-emission electric vehicles through a non-repayable grant in the amount of some 4 billion Hungarian Forints (ca. 16 million Euros) by the Ministry of National Economy.



The Modulo C68E buses have been developed and manufactured entirely in Hungary using an innovative modular construction method and composite materials for the bodywork. The manufacturer will supply a total of 20 fully electric vehicles along with charging poles. BKV joined the midi-bus project at the development and testing stage and as a result gained invaluable experience about the new technology and at the same time has effectively assisted the supplier in designing solutions that suit the requirements of passengers in Budapest to a greater extent.



The new Mercedes Conecto G buses are equipped with Euro VI diesel engines, saving 62-87% CO₂, 88-95% NMHC, 94-97% NO_x and 96-99% PM emission compared to the replaced Ikarus buses which were equipped with Euro 0-Euro II diesel engines. With the arrival of the new buses and the reallocation of buses among different lines, the accessibility of public transport will improve throughout the city. While in 2010 only 25% of the buses were low-floor, today more than 80% of buses serving public transport lines in Budapest are now accessible while at weekends only low-floor, articulated buses are operating to facilitate the barrier-free transport of elderly, wheelchair and baby-carriage passengers and also of those with reduced mobility. Between 2011 and 2016, 300 second-hand and 600 new buses were

procured by BKK and its operators. The arrival of new buses decreased the average age of the bus fleet from 17.89 years to 9.49 years. This outstanding result will contribute to a sustainable, liveable, attractive and healthy urban environment in Budapest, as it is stated in the Balázs Mór Plan, the first SUMP based mobility plan of Budapest.

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Buses in Barcelona metropolitan network improved by a comprehensive (BHLS) upgrade and with a low investment.

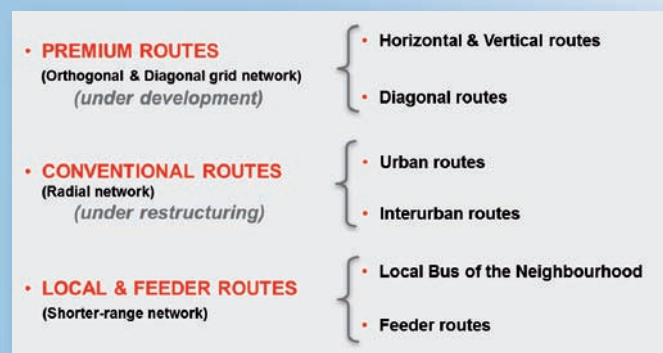
1. The New Bus Network in Barcelona

TMB operates in the city of Barcelona and part of its metropolitan area, serving a territory of 2.4 million inhabitants.

The former Barcelona Bus Network, with 100 lines, was highly appreciated by the citizens as the satisfaction ratios used to reflect it. Nevertheless, there were some weaknesses: it only provided good service from the city centre to the outskirts. It was impossible to give more or better supply without adding more resources. It had quite a lot redundant services as diverse routes run through the same corridors. There were no significant changes made to its layout since 2001; and it was very difficult for the occasional passenger to use it or even by the usual client in occasional routes.

Because of this, TMB and the Barcelona City Council wanted to improve the network keeping its strengths and overcoming its weaknesses, and all of this, with the objectives of gaining efficiency and increasing ridership, without adding more resources to the system.

Therefore, the New Barcelona Bus Network was created as follows:



Scheme of the proposed Barcelona's new bus network. Source: TMB.

The premium routes have been conceived as a BHLS network and the main features of these routes are:

1. Grid based network with 28 premium routes: 8 Horizontal, 17 Vertical and 3 Diagonal;
2. Serve-demand oriented route system;
3. Easier to understand network;
4. Maximum connectivity (from one end to the other of the city) and improved intermodality with other modes (conventional & feeder bus routes, regional buses, metro & tramway). Creation of the concept of "Interchange Areas";
5. High & very high frequency routes (5 - 8 min headways), from 7:00 am to 9:00 pm, during weekdays (Saturdays 10' and Sundays & bank holidays 15') weekdays (Saturdays 10' and Sundays & bank holidays 15');
6. Average distance between stops: 400 m;
7. 90% of journeys can be made with 0-1 transfers;
8. Environmentally friendly buses: Euro IV, V & VI, GNC, hybrid, full-electric buses. Nowadays, we are about to test the first full-electric articulated bus with on-street refuelling; wave based), and double bus stops;
10. Gradual implementation: 4-5 routes every year so far (started in October 2012).

Figure 4 shows the current layout of the premium routes, with 16/28 routes implemented: 7 horizontals, 8 verticals and 1 diagonal, with 50 interchange nodes that make possible transfers from one route to another.



Figure 4: The 16 premium routes implemented so far (May 2016). Source: TMB.

Concerning the evolution in ridership, shown in figure 5, the current situation shows that with 16 routes implemented we have reached up to 300.000 pax/day (42% of the bus network).

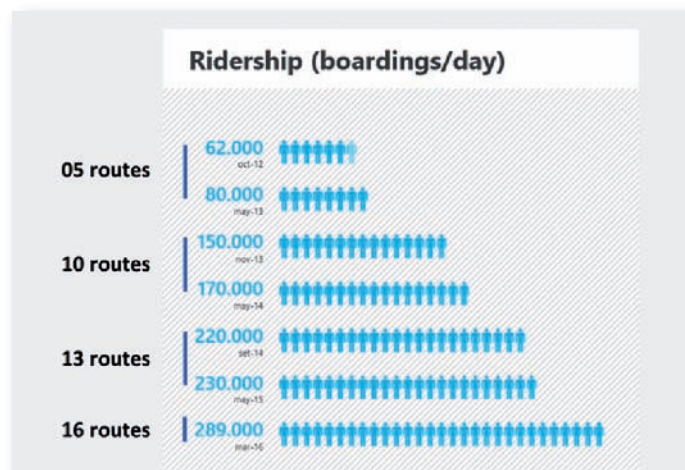


Figure 5: Ridership in 4 stages, with 5 routes (2012 & 2013), with 10 routes (2013 & 2014), with 13 routes (2014 & 2015) and with 16 routes (2016). Source: TMB

We carried out several customer satisfaction surveys with promising results: the characteristics that people appreciate the most are the same we wanted to promote: more user friendly, more frequency, more information; and an overwhelming majority (more than 90%) thinks that this project is a big improvement regarding the old Bus Network.



The implementation has been made possible with a minimum budget, due to the fact that both TMB and the municipality have taken full advantage of the budgeted resources.

2. The intercity BHLS network in Catalonia

85% of a new intercity bus network called "expres.cat" has been implemented in Catalonia in order to respond to the large increase of demand during the last ten years (57%).

The "expres.cat" network offers a high level service (BHLS) characterized by: high frequency in peak hours; modern, sustainable and accessible vehicles; high and competitive commercial speed, real-time information, and Wi-Fi and free press available on the bus.

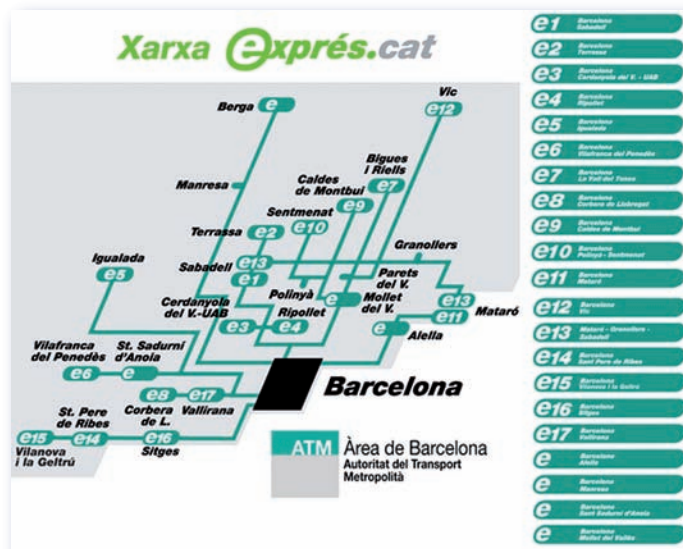


The project represents a firm commitment of the Catalan Government to promote intercity buses as an efficient and competitive mean of transport that allows a quick, sustainable and economical connection between the areas which concentrate a high and increasing mobility.

The implementation of the network is being progressive. It began in October 2012 with 4 new lines and nowadays, in Barcelona Metropolitan area, 17 "expres.cat" bus lines have already been implemented and there are 4 more lines planned.

Last 2nd of May, was put in service the 17th "expres.cat" line implemented in Barcelona Metropolitan Area which runs between Vallirana and Barcelona. This line has improved a bus service that was used by 120.000 passengers in 2015.

"Expres.cat" network ridership in Barcelona Metropolitan area in 2015 was 8.2 million trips. From January to April 2016, trips grew 30% in comparison to the same period of 2015.



For the implementation and maintenance of the “expres.cat” network in Barcelona Metropolitan area, Catalan Government invested € 1.5 million in 2015 and plans to invest € 2.4 million in 2016.

Contacts:

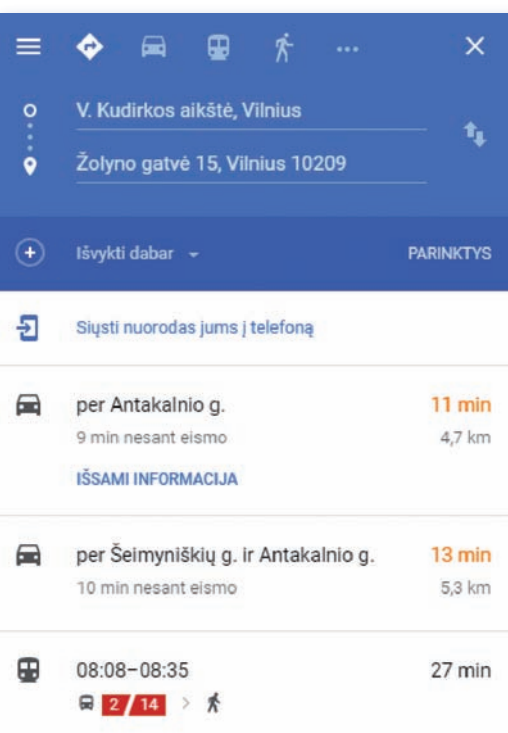
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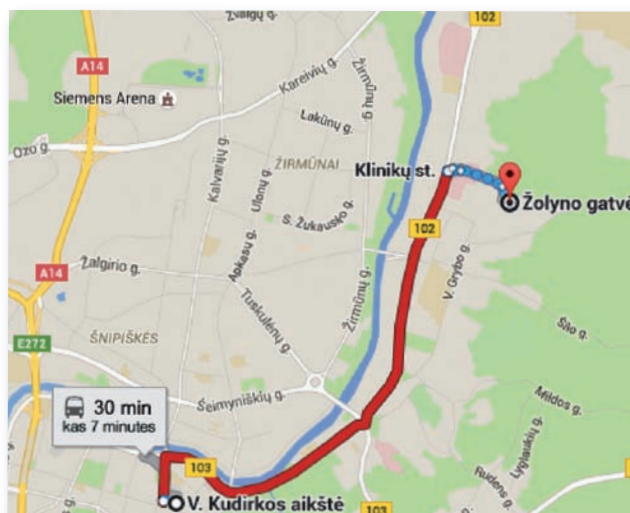
Customer information

This summer Vilnius again have some exciting news to share with our dear colleagues! We recently have been working a lot on of the main fields when it comes to any service provider, whether than would be public authority or grocery market and that is CUSTOMER INFORMATION. We always work on improving our services according to our customer needs and in order to find out those needs we carefully listen to them therefore every single feedback matters. This time we will briefly share our customer information innovations by giving you three different stories in regards to marking, journey planning and real time arrivals.



Google your trip

Google in cooperation with the Vilnius city municipality and ME "Susisiekimo paslaugos" have expanded intelligent transport system to Google Maps by adding Vilnius public transport schedules and enhanced travel planning choices therefore now Vilnius public transport passengers can use Google Maps service extension "Transit".



Before that customers could plan their journey on our website <http://m.stops.lt/vilnius/> however, not all foreigners knew this tool is existing. Moreover, in Europe today we have a common practice to plan and check the journeys on google maps. We really hope this Google service extension will be very beneficial for our guests and they will choose public transport for their journeys much more often.

We also hope that it will have an added value for our citizens also since they will have the opportunity not only plan the journey via Google maps but also see how long the same journey would take them if they would go by private car or by foot or public transport. We hope people will see that some journeys take even less when using public transport, plus PT ticket costs less than fuel, insurance and exploitation of the car, plus you save time by not having to park your car in the center where parking spots usually are pretty busy. We are happy that Vilnius joins such cities as New York, London, Tokyo and Sydney where millions of people are already using intelligent travel planning tools.

New marking at the main Station



Since May using public transport in Vilnius main station area is much easier. All bus stops signs at the main station was marked with prominent channel letters - cubes, which are visible from a distance. It is expected that this innovation initiated and established by ME „Susisiekimo paslaugos“ will help both, the residents of Vilnius and guests of the capital, to find the required bus stop much easier as today we have even 11 bus stops in the main station from where large number of different busses and trolleybusses departs every hour.

Passengers had difficulties finding the certain bus stop for the certain bus because station area had 11 bus stops under the same name "Station" therefore, we hope that this innovation will considerably help the residents of Vilnius and guests of the city to find the right route.

Stops indicating cubes are blue with large white letters, which are arranged in a certain order - in alphabetical order, starting from the first bus station to the railway station on the right.



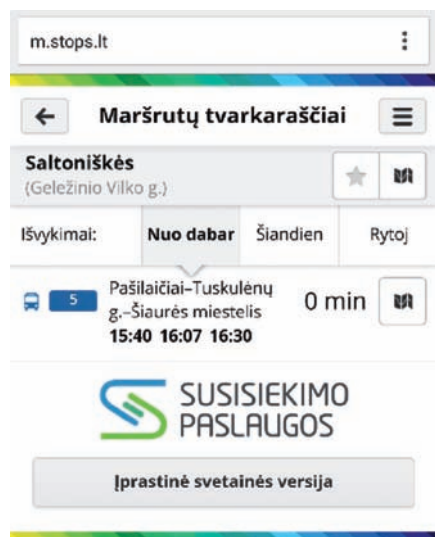
Along with the updated station infrastructure marking, public transport information station area scheme with the same letters indicating the stations will soon be updated. Information of the scheme will be provided on the public transport stops cylinders with schedules.

Real time arrivals on your phone



In Vilnius we have 40 LED-escreens where passengers can see real time bus and trolleybus arrivals. However, the number of public transport stops is much higher than that- in Vilnius we have more than 1200 public transport stops.

It is very important for passenger to know when exactly which bus is arriving, they then can plan their trips more precisely, moreover waiting time does not seem that crucial when you know exactly when the bus is due. Therefore we came up



with a great solution for providing real time arrivals information at every single stop by not having any infrastructure costs- QR code. We have provided QR codes on every public transport stop next to timetables, by simply scanning QR code passengers will get real time arrival information for that specific Public transport stop on their phone.

Now we can say that 100% of public transport stops is equipped with real time passenger information.

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A fully electric standard bus line for the Paris region

The first 100% standard electric bus line was inaugurated in Paris on 30th May 2016. By the end of the year, Route 341* (Charles de Gaulle – Etoile ⇄ Porte de Clignancourt) will be equipped with 23 Bluebus** standard 12 metre 100% electric buses built by Bolloré. This is a first in Europe for a fleet of this size. Buses will be recharged at night at the Belliard bus depot in the 18th arrondissement within the city of Paris, a measure that will not drain the electricity grid during peak times.

For Mrs. Valérie PÉCRESSE, the President of STIF, “this line is an historic first step towards the industrial and ecological revolution I wish to implement in public transport for the Grand Paris project. In the next few weeks, a “1,000 bus” plan in the Paris region will be launched in which STIF will invest massively to bolster the transport offering in poorly covered areas, particularly the outer suburbs, and to offer a genuine alternative solution to taking the car. Wherever possible, these next-generation vehicles will be zero-emission vehicles, i.e., electric, biogas, hydrogen or powered by other low-carbon solutions”.



The integration of the first 100% electric bus in the RATP fleet is a decisive step in the bus energy transition for the Paris region, which was decided on 11 December 2013 by the Board of STIF, the regional public transport authority. It was at this date that an ambitious investment programme was adopted for the renewal of the bus fleet in the Paris region introducing electric and Biogas vehicles from 2018. This decision has been translated in the Bus 2025 plan implemented by RATP as the company aims to have a bus fleet (4,500 vehicles) that is 100% green by including 80% electric buses and 20% biogas-powered vehicles.

The first fully-electric line (341) will help RATP and STIF gather as much information as possible in both operations and maintenance thanks to surveys of drivers, passengers and locals. Calls for tenders will be issued for a wide-scale deployment of electric and biogas-powered buses starting in 2017. Thanks to Bus 2025 and the future bus plan for the Grand Paris project to be adopted in the months to come by the Board of STIF, Paris and the Ile-de-France region will become a global standard as a very low carbon, urban public transport road network.

Lastly, the initiative has been selected by the European Union to take part in the ZeEUS project (Zero Emission Urban Bus System) which aims to boost the introduction of electric buses in cities. Paris and Ile-de-France are among the 10 pilot sites in Europe (in 9 countries) to experiment 100% electric buses.

* Route 341 is a representative route of the Paris bus network. In service since 2008, bus route 341 stretches for 10 kilometres. It includes 26 stops and 9 interchange points. Service is provided from 7:00 to 20:30, at intervals of 7 minutes in rush hour. The average speed is 10.5 kph. The route is used daily by 8,800 passengers, that is 2 million passengers per year.

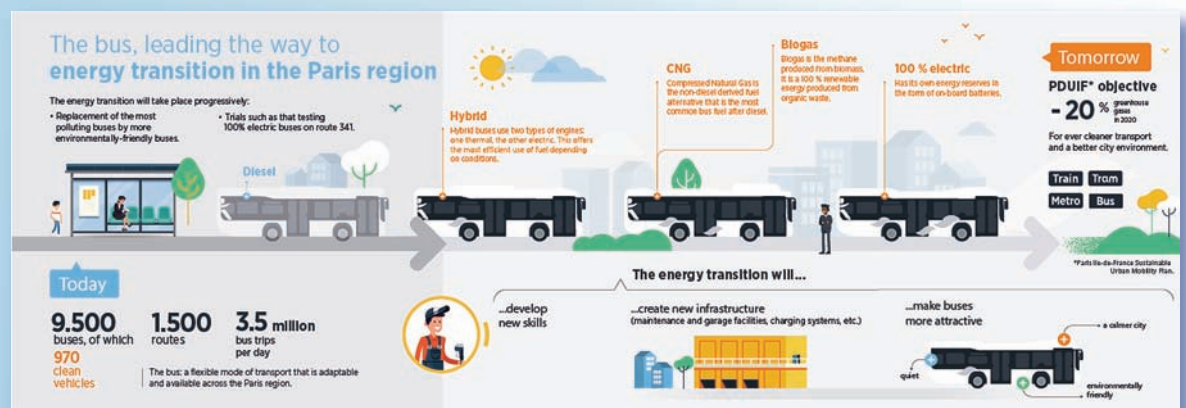
** Manufactured by the Bolloré group, the Bluebus is a 100% electric vehicle designed and built using French LMP® (Lithium Metal Polymer) batteries owned by the Bolloré group. The standard 12-metre bus can transport 91-101 passengers with a range of at least 180 km, which means it can run for a full day before recharging.

The ZeEUS trials are designed to test a wide range of innovative technologies in real-time conditions on different models of bus and electricity charging infrastructure solutions. The goal is to anticipate the rollout of electric buses and encourage manufacturers to offer proven solutions. The trials should also help validate different bus operating models from an economic, environmental and societal perspective.

For all stakeholders involved in ZeEUS, the solutions to be found are based on 5 key points:

- > economic feasibility;
- > performance (availability and reliability);
- > the supply of vehicles and the scope of contracts (maintenance, support, training, ...);
- > interoperability and charging standards;
- > electricity resources (stability of production, location of charging points, energy prices).

The test conducted on route 341 will enable STIF and operators to learn valuable lessons in preparation for bus fleet renewal in Paris from 2018. It will also feed the database of the ZeEUS Observatory and will allow for and inspire the exchange of best practices at a European level. After the various trials performed within the 10 pilot sites, ZeEUS will provide a guide to European cities and tools to encourage the energy transition of urban buses. The results of the ZeEUS project will be presented in 2017 to support the strategic choices of the leading players in public transport across Europe.



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European map of ZeEUS demonstrations:
<http://zeeus.eu/demonstrations-activities/demonstrations> or
<http://zeeus.eu/img/map-europe-zeeus.png>



The Sustainable Mobility Strategic Plan of the Madrid Region continues to developing measures and proposals

The Sustainable Mobility Strategic Plan of the Madrid Region, developed by the Consorcio Regional de Transportes, continues progressing, thanks to the collaboration between the different administrations, since it was set up in late 2013.

This Plan has involved the 179 municipalities of the Madrid Region, through regular meetings with technical staff of the different City Councils. Currently, the Consorcio Regional de Transportes is working on the definition of indicators to help assessing the progress of the Plan.

During 12 years (2013-2025), the Plan will develop more than 200 programs, subsumed in 12 measures, such as integrating mobility in the territorial strategy, promoting universal accessibility, or improving road safety and intermodality between bicycle and public transport, among others.

Moreover, the Sustainable Mobility Strategic Plan contains the objectives established in the Strategy for Air Quality and Climate Change of the Madrid Region 2013-2020 (Blue Plan +) and sectoral plans on energy, derived from the EU 20-20-20 Strategy. Under these guidelines, the Plan sets goals related to reducing GHG emissions (Greenhouse Gases), and to increasing the share of renewable energies in overall transport system energy consumption.

There is a Working Group to monitor the Plan. It is composed of experts from several Ministry of Public Works departments, the Madrid Region and the Madrid City Council. Also, the Federation of Municipalities of Madrid participates in this group. These four public departments work together on mobility issues, land management and environment planning, among others.

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Android Pay accepted for pay as you go travel in London

Since May, customers using Transport for London (TfL)'s services, including the Tube, buses and trams, as well as most National Rail services in London, have been able to travel using Android Pay on their mobile phone.

The new payment app, developed by Google, supports MasterCard and Visa credit and debit cards from many of the UK's major financial institutions. To use Android Pay, customers just need to download the app from the Google Play Store and set up their account with their bank card. They then simply touch in and out with the top half of their phone on the yellow card readers at stations, or touch in only on a bus or at a tram stop, in the same way they use their Oyster or contactless payment card.

TfL then calculates the best fare for each day or week, depending on where and when customers have travelled. The costs of all journeys a customer makes are then added together and, if appropriate, daily and weekly (Monday to Sunday) caps are applied.

Contactless payments have been a huge success with more than 400 million contactless journeys made already across all TfL and most National Rail services in London, using cards from over 80 countries. Around a third of all pay as you go journeys made in London are now made using contactless payments.

One in ten contactless transactions in the UK are made on TfL's network, making TfL one of the largest contactless merchants worldwide. More than ten million unique credit or debit cards have been used on TfL services so far.

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The North West's first guided busway has arrived

The opening of the North West's first guided busway in April 2016 was a crucial milestone for Transport for Greater Manchester's wider bus priority package, a £122 million investment to enable more people to enjoy faster, more punctual and more reliable bus services from a wider area across Greater Manchester, to, from and through the city centre.



Operated by First Manchester under the brand Vantage, a fleet of 20 new, bespoke, state-of-the-art buses connect Leigh, Atherton and Manchester in as little as 50 minutes. Passengers travelling between Leigh and Manchester previously faced journeys timetabled at up to one hour and 20 minutes.

The high-specification, low-emission hybrid buses have Wi-Fi and USB charging points, plush seating, tables on the upper deck, audio and visual stop announcements and climate control.

Passengers are now able to travel directly between the refurbished Leigh bus station and Stevenson Square in Manchester city centre in a single journey, using the busway and other bus priority measures on the A580 East Lancs Road and through the heart of Manchester city centre.

The 4.5 mile guided busway between Leigh and Ellenbrook forms part of a much longer 14 mile route linking Leigh, Atherton and Tyldesley with Salford, Manchester city centre and beyond.

As well as the promise of reliability, speed and punctuality, TfGM made a commitment to quality. And since opening, the busway has seen more than 150,000 passengers travelling aboard a fleet of new, state-of-the-art buses, operated by First Manchester under the new Vantage brand in just the first five weeks of operation.

The busway not only signifies one of the largest investments into Greater Manchester's bus network in decades but it sets out to address many of the transport issues that these areas have long endured.

Residents in Leigh, Atherton and Tyldesley had long faced transport problems wherever they turned: there was congestion on radial roads to and from the regional centre, no rail service from Leigh and overcrowding on services from Atherton and Newton-le-Willows. Coupled with dated transport interchange facilities and generally poor and unreliable public transport access and connectivity these areas had little option but to place heavy reliance on the private car.

The main aim of the busway was simple – provide a better transport link to key destinations for thousands of people while guaranteeing them a travel experience seldom rivalled by other modes of public transport.

This project leaves a sustainable legacy by encouraging economic growth in areas such as Leigh, Atherton and Tyldesley and helping to reduce congestion by providing an attractive and viable alternative to the use of a private car which will cut emissions.

It will help to stimulate increased investment along the route, as well as supporting current and emerging businesses and commercial opportunities. It will deliver efficient and improved connectivity to employment, leisure and retail opportunities, thereby making areas such as Leigh, Atherton and Tyldesley more attractive to live and work in.





By encouraging more people to use the new transport link, congestion will be reduced for other road users and open up wider access to jobs, for example, giving young people better access to education and training, and getting older and disabled people out of social isolation.

Greater Manchester is growing at a faster rate than ever before and investment in the transport network is keeping pace. A multi-million pound investment is currently well underway to improve and expand the city's Metrolink light rail network, and with buses accounting for four in every five local public transport journeys, Transport for Greater Manchester remains committed to investing in better bus services and infrastructure, like the guided busway.



By enabling true cross-city bus services to run directly through the heart of Manchester city centre – free from other traffic – the scheme will greatly reduce the need for people to change buses meaning that more people will be likely to use public transport.

The busway scheme was developed to form a key part of the 'bus priority package' – a major integrated investment that prioritises buses and active travel while encouraging modal shift in Greater Manchester by facilitating shorter journey times aboard services that are more reliable and punctual. For businesses and communities, the outcome is stimulation of the local economy and inward investment catalysed by the enhanced connectivity.



A significant investment in Greater Manchester's bus infrastructure, the overall package connects the busway to over 25 miles of bus route improvements between Leigh, Atherton, Tyldesley, Salford and Middleton through Manchester city centre and along one of Europe's busiest bus corridors – Oxford Road – to the south of Manchester.

The city centre works are themselves part of a £1 billion investment to 'future-proof' the transport network and support the regional economy. By providing truly dedicated bus only routes we are finally able to reduce connection time to the city below 50 minutes – a 30-minute improvement on previously timetabled services.

The busway investment included specific provision for a shared path alongside the whole 4.5 miles, surfaced so it could be used by a variety of users including, horse riders, walkers and both leisure and commuter cyclists. Each bus stop has shelters, level boarding, covered cycle parking, CCTV and is lit during the hours of operation. Specific considerations during the design process ensured each pair of stops were located at street level and were fully accessible, safe and secure.



To further encourage modal shift by providing more travel choices, the busway also included three new park and ride sites, offering free parking for more than 400 cars.

The bus priority measures don't end with the busway, they also link up with 15km of new, on-highway bus lanes on the East Lancs Road through Salford to ensure quicker journeys than were previously possible.

One piece of the bus priority jigsaw now remains outstanding – Manchester city centre's Oxford Road.

Work is now well under way to redevelop one of Europe's busiest bus corridors into a European-style boulevard that provides better

bus journeys, an improved pedestrian realm and truly dedicated 'Dutch-style' cycle lanes. Once complete in early 2017, the Oxford Road corridor will provide busway services with a finishing point outside one of the country's best healthcare facilities, the Central Manchester Hospital site. In doing so, buses will also pass the University of Manchester and the Manchester Metropolitan University sites providing access to healthcare and education to thousands more people.

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The Barik contactless: topping up your card by an app on your smartphone

The possibility of topping up Biscay's contactless card, Barik, using smartphones was launched on 29 February 2016. The Biscay Transport Consortium (CTB) activated an app on Google PlayStore, Barik NFC, which makes it possible for any Barik user to top up their card, as many times as they want, anywhere and at any time in the day.

After a pilot group of people comprising 740 users successfully tested an experimental application for more than six months (since mid July 2015), the CTB launched it to the market, incorporating some improvements suggested by this group of users.

The CTB's application makes it possible to top up transport tickets online, using a smartphone with NFC (Near Field Communication) activated and by paying the amount via a secure payment channel. Thus, the user, from any geographical location and without having to go to a fixed top-up point, can increase the balance of their card or purchase a transport ticket supported by the Barik. CTB's application is a technological milestone in the Barik system that facilitates the use of public transport.



The project is part of CTB's policy to progressively incorporate in Biscay the latest technological advances in the field of ticketing systems. Up until now it was possible to carry out the top-up operations at the usual physical locations of the Barik card (Metro Bilbao, Ferrocarriles Vascos, Bilbao Tram, Renfe -including Feve-, Funicular of Larreineta, Funicular of Artxanda, urban and inter-urban bus ticket offices (Bilbobus and Bizkaibus) and at newsagents, kiosks, commercial premises and ATMs), and since December on the website (ctb.eus).

Right now, there are more than 1.4 million Barik cards in circulation and more than 800 top-up points distributed throughout Biscay.

The smartphone top-up application developed by the CTB consists of a mobile application for Android devices with NFC technology, which enables short-range and high-frequency wireless communication between devices; in this case, between the card and the mobile phone. The system also contemplates the section of cryptographic and authentication operations of Barik cards, that is, a secure payment channel and the appropriate applications that enable fully guaranteed transactions.

During its first three months of operation, the "Barik NFC" application by the Biscay Transport Consortium (CTB) has reached a total of 25,137 top ups. In addition, more than 18,000 users have already downloaded this free app which makes it possible to top up the Barik card using an Android smartphone. During this period there were 178,880 information requests.

Of the 27,888 operations carried out, 26,884 were to top up Barik travel money and another 1,004 to purchase monthly tickets.

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Positive change is happening in the West Midlands. A new West Midlands Combined Authority (WMCA) governance model supported by a transformation Devolution Deal with the UK Government, will see an unprecedented step change in delivery to support our collective ambitions for economic growth.

The WMCA consists of twelve local authorities and three Local Enterprise Partnerships working together to move powers from Whitehall to the West Midlands. The WMCA is the Local Transport Authority for its constituent Authorities, as well working in partnership with its non-constituent members. The WMCA membership consists of two elected members from each of the constituent authorities, referred to as "Constituent Members or Metropolitan Authorities":

- > Birmingham City Council;
- > City of Wolverhampton Council;
- > Coventry City Council;
- > Dudley Metropolitan Borough Council;
- > Sandwell Metropolitan Borough Council;
- > Solihull Metropolitan Borough Council and;
- > Walsall Metropolitan Borough Council;

Non-constituent members will be appointed, one each from the following Councils and LEPs:

- > Greater Birmingham and Solihull LEP;
- > Black Country LEP;
- > Coventry and Warwickshire LEP;
- > Cannock Chase District Council;
- > Nuneaton and Bedworth Borough Council;
- > Redditch Borough Council;
- > Tamworth Borough Council;
- > Telford and Wrekin Borough Council.

Other authorities have expressed an intention to join the Combined Authority following its initial establishment and the relevant legislative process.

These include Stratford-on-Avon District Council and Shropshire Council. The membership of additional authorities will be consulted on during the consultation regarding Mayoral WMCA powers and functions and it is expected additional members will be formally incorporated towards the end of 2016.

Transport is firmly at the heart of these changes and from Friday 17 June 2016, transport is led by Transport for West Midlands (TfWM) – the transport arm of the Combined Authority.

TfWM is responsible for formulating transport strategy and policy and project delivery, incorporating strategic highways, freight, rail, bus, tram and rapid transit network.

TfWM also covers the delivery of Swift smart ticketing, promoting walking and cycling, the use of real time journey information for journey planning and the use of new technologies. These are all priorities helping encourage better mobility for people across the area.

Key areas

In June 2016, WMCA approved the West Midlands Strategic Transport Plan "Movement for Growth". "Movement for Growth" sets out an ambitious plan to greatly improve the transport system to support economic growth and regeneration, underpin new development and housing and improve air quality, the environment and social inclusion.

It is based on improvements, year in year out, over the long term to an integrated transport system made up of 4 tiers:

- > National and Regional;
- > Metropolitan (Metropolitan Rail and Rapid Transit Network, Key Route Network, Strategic Cycle Network);
- > Local;
- > Smart Mobility.

TfWM is now working on a 10 year transport delivery strategy and implementation plan, which will set out priority projects for delivery and development. This work will include plans and measures to ensure the resilience and operational stability of the transport network during a period of previously unprecedented infrastructure investment, by the WMCA and partners, as well as by Network Rail, Highways England and HS2 Ltd.

The WMCA is also developing a series of more detailed policies and strategies, for example to support freight. Other key areas for policy and strategy development include air quality and work to identify measures to support the young, socially excluded and troubled individuals.

HS2 Growth Strategy Local Connectivity Package

The Combined Authority Devolution Deal has a £4.4bn HS2 Growth Strategy to make the most of HS2 arriving in the West Midlands. This includes the Curzon Masterplan in central Birmingham. As part of this Growth Strategy there is a local connectivity package of 20 transport schemes to effectively “plug-in” the 2 new HS2 stations to local transport networks. These schemes include the East-West Metro with Metro light rail extensions to Dudley - Brierley Hill and through East Birmingham to North Solihull and HS2 Interchange station.

Description of metropolitan area

The West Midlands is made up of seven Local Authority areas with a total population of 2.8 million inhabitants. These Local Authorities are: Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall and Wolverhampton.

Birmingham is the largest of the Local Authority areas and is the second largest city in the United Kingdom. The West Midlands is predominantly an urban region with a diverse ethnic and cultural make up. It is traditionally famous for its car manufacturing industries but the last decade has seen an increase in the service and hospitality sectors as new investment has been made. Millions of pounds have been invested in recent years, in particular the new developments in Birmingham city centre which acts as a vibrant, cultural centre for the region.

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CERT&INFO: a tool for Public Transport performance monitoring and service contract management

SERVICE CONTRACT AND PUBLIC TRANSPORT PERFORMANCES

In the last years the PT service contract has become the main tool for regulating the relations between Public Transport Authority and Public Transport Operators in the context of service operation and

performances monitoring. Generally a PT service contract uses Key Performances Indicators (KPI) for assessing the reliability and quality of the service. Lower KPI values impact directly the contract management, triggering penalties and/or remedial measures (up to the closure of the contract) while higher values achieved during the service operation trigger bonus/incentives payment provided by the contracting body.

The management of the contract is a formal and also legal process committing both parties and contract prescriptions must rely on data which are reliable and verifiable.

In this context CERT&Info supports the monitoring process of the PT service reliability and contract KPIs supporting PTO in data reporting and PTA in the assessment and evaluation of the service operation accordingly to the contract obligations.

In any case, the two pillars of a correct PT service contract management are the accuracy of the reported data on service operation and the use of a commonly “agreed” tool between PTA and PTO supporting the whole process of data reporting, validation and monitoring.

CERT&Info covers these two pillars and simplify the relation between authority and operators.

ARE AVM SYSTEMS “SMART” ENOUGH FOR THESE NEEDS ?

In the last decades, AVM/AVL (fleet monitoring systems) were deployed mainly to support real-time monitoring and regulation of PT-service operation on the network. Among the various functionalities, AVM/SAE systems reports the service operation data which are supposed to guarantee contract needs.

The quality of data on the operated service, generated by the AVM-system, usually could be affected by:

Failure in operational procedures:

- > lack of appropriate actions by the system management team in case of irregular cases of service for diversions or vehicle replacement, or errors in vehicle assignment;
- > poor maintenance of on-board devices and the overall system.

Incorrect service planning/scheduling procedures:

- > inconsistent geo-located data for stops/nodes or stop-by-stop route segments.

Technological aspects:

- > on-board hardware/software and communication failures;
- > system failure in detection of the correct service per line or trip operated by vehicle.

When these events, or others, occur, data reported by AVM can be partially or totally wrong so data reported by PTO are not representative of real operated services and the related KPIs achieved values are biased.

Nevertheless, with the recent technological developments, technical failures are minimized but not removed: on the other side, operational issues are in charge of PT operators and AVM systems cannot be so intelligent to recognize when data are corrupted due to inappropriate operating conditions. A second stage cross-check of data reported by AVM is thus required to validate the reported service and to assess its real performances: this process is not guaranteed by AVM currently offered by the market which provide reporting functions but not cross-analysis of data.

Therefore validation of service data requires a cross-analysis of data produced by AVM (at least limited to the incongruence cases). Then in the current practice of PTO/PTA the supposed “automatic process” provided by AVM is partially corrupted by the adoption of manual work.

CERT&INFO AS COMMON TOOL FOR SERVICE PERFORMANCES VALIDATION

CERT&Info represents a new approach for supporting PTO and PTA with a high level and configurable Software Module which enables in the same environment the certification of the data coming from AVM and the validation of overall operated PT service (PTO side) and the continuous control and monitoring of PT service performances (PTA side).

(a) MemEx is an independent consultancy company active since 1994 supporting Public Administrations, Agencies and Operators in designing, operating and evaluating Intelligent Transport Systems (ITS) for Public Transport, Mobility, Logistics and Smart Cities – www.memexitaly.it/en/

(b) Tiemme is one of the ten larger Italian bus PT operators providing urban, suburban and rural services in the southern and eastern area of the Tuscany.

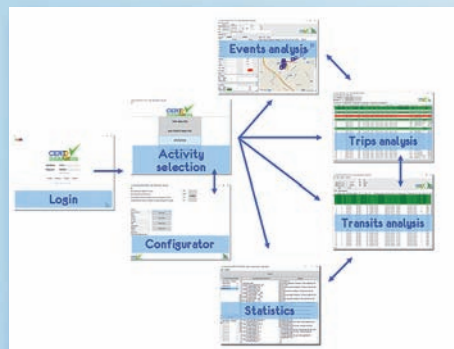
CERT&Info allows the cross analysis of service data reported by the AVM system, in order to identify possible anomalies and differences between planned and operated service (pillar 1).

Based on the experience carried out by Tiemme, CERT&Info automatically detects an average of 65%-70% of real incongruence of service not appropriately reported by AVM system decreasing the amount of data which finally must be checked manually. Adopting CERT&INFO the validation of the data related to the daily service in the network of Siena (Tuscany) now requires 0,5 man/day (1 man/day less than before!).

Furthermore, CERT&Info can represent the common tool (pillar 2) for monitoring the performances of the operated services reducing the level of possible conflicts between PTO and PTA in the contract management. Indeed, from PTA perspective, CERT&Info can be the tool allowing a more reliable and effective monitoring and management of the service contract.

CERT&Info is also "simple" from the architecture side based on client application directly or indirectly interfaced with the data base of any AVM system (through data adapting interfaces). The CERT&Info client can be delivered as a software module either deployed and running in the customer software environment or hosted on a virtual infrastructure (virtual server) and delivered according to the Software as a service (SaaS)-model.

The figures shows the main components and some screenshot examples of the tool functionalities: login, selection of the analysis, trip analysis and map representation.



CERT&Info main components



*Some screenshots:
trips analysis and map representation*

For more information please visit

www.memexitaly.it/en/certifomobilita-2/

(where a video on the use of the tool is available) or contact Claudio Disperati

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Pay for what you use

RMV pilots innovative smart fare system

As of April 2016, the RMV is the first public transport association in Germany to try out an innovative kilometre-based fare system in a large-scale pilot. 20,000 test users of the new fare model RMVsmart are no longer paying the rate for an entire fare zone but only for the trip they actually take. The new fare is initially being sold via smart-phone.

The Rhein-Main-Verkehrsverbund (RMV) connects the international finance and mobility city of Frankfurt am Main with the regional capitals Wiesbaden and Mainz as well as with medium-sized polycentric cities

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Marburg and Darmstadt and also rural areas such as the Odenwald and the Rhön Mountains (2.5 million passengers per day). In order to make allowance for the wide variety of transportation links when the RMV was founded in 1995, it was decided to create large-area fare zones based on the municipal and district boundaries.

People's mobility behaviour has changed

Since that time, these patterns of mobility have changed considerably. Nowadays passengers use public transportation to meet a much wider range of mobility needs and cover longer distances beyond municipal and district boundaries. A typical public and political criticism is that connections between directly neighbouring towns and stations attract over-priced fares when a fare boundary is crossed on a short trip. This problem demonstrates the weaknesses of the zone-based fare system today – a challenge felt not just by the RMV but throughout Germany.

Step by step towards fare structure reform

A step-by-step reform has now been underway for five years to improve the RMV fare structure: First Fares for different target groups (school students, trainees, university students and old-age pensioners), later differentiated fare levels for the different sized towns and cities. At the present stage, the most complex issue of all is being addressed: developing the fare system to include single and day tickets for use throughout the region on an occasional basis.

The challenge here lies in the fact that even slight changes in the percentage of ticket sales have an immediate and quite substantial impact on the transportation company's revenue.

The new fare model is initially being tested on smartphones: in this way, existing technology allows complex fare calculation structures to be applied while still ensuring that the system is very easy for customers to use.

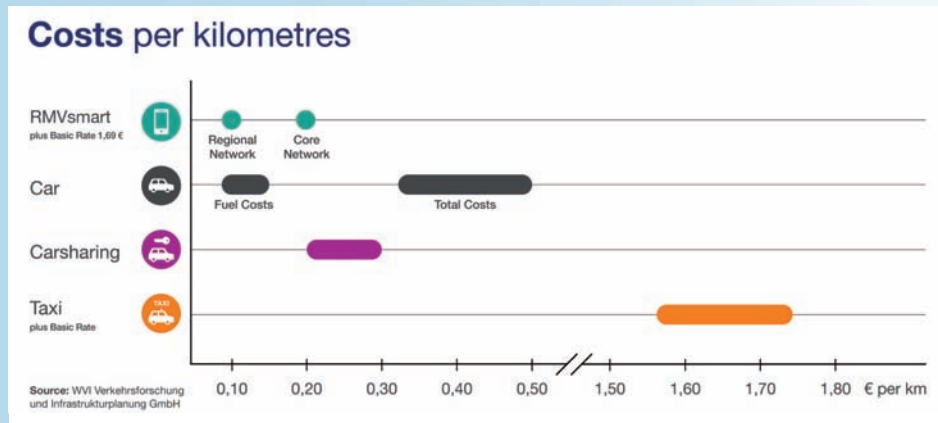
Fares that reflect actual use of the transportation system

The RMV has developed the prototype of a distance-based smart fare based on the kilometres travelled and the means of transportation selected. In the same way as when taking a taxi or using car sharing services, RMVsmart means that passengers only pay for what they actually use, so the amount charged for the ticket reflects the real distance travelled.



Building blocks of RMVsmart

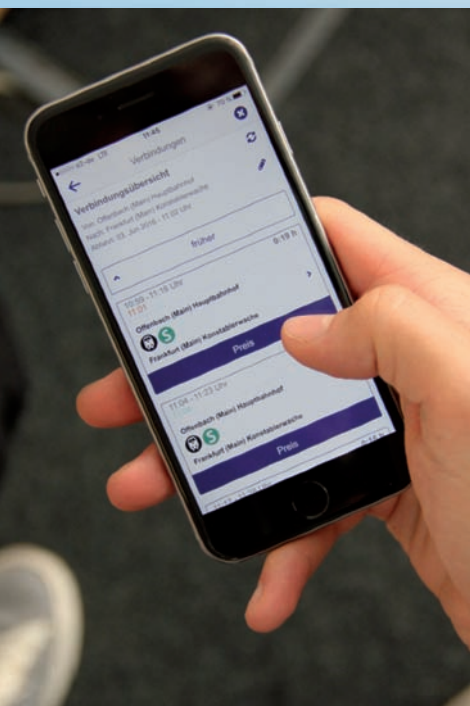
The fare is made up of a small number of clearly structured components. Each component attracts a fixed basic rate of EUR 1.69 per trip. Passengers pay a distance-related charge for trips on regional trains, rapid transit trains (S-Bahn) and underground trains: within the close-knit and frequently served core network of greater Frankfurt this is 21.8 cents/km while in the remainder of the RMV area (regional network) it is 10.9 cents/km. An individual fare is calculated for each trip passengers take using these means of transport. For bus and tram rides there are clearly structured flat-rate fares depending on the size of the towns or villages served.



RMVsmart: Direct comparison of kilometre-based fare prices with other modes of transport

These new fare components are only intended as background information: When the transportation route is selected and a ticket is purchased, the smartphone app automatically calculates the specific fare. Therefor the successful RMV-Handyticket-App was enhanced (1.5 million downloads, 500,000 routing requests per day).

The RMVsmart ticket prices have been very carefully calibrated: they are geared towards existing fare revenue so that, on average, fares and earnings remain the same as compared to the previous fare system as applicable to occasional use of the transportation system.



RMVsmart-App

Prototype in focus

In order to subject the new fare system to intense testing for acceptance, functionality and profitability, RMVsmart will be piloted for a period of three years among a limited group of users across the entire RMV region. The RMV is the first public transportation company in Germany to carry out a project like this on such a large scale.

For the first time, the RMVsmart pilot project allows innovative new discount and incentive systems to undergo real-life testing in a public transportation system, including impact analysis. To start with, every user is given a 10 per cent discount per calendar month if they spend EUR 20 or more on tickets in the month in question. Additional incentives are planned for frequent users. These might include kilometre-based models, allowing the system to be transferred from the occasional user to the season-ticket customer. This opens up the possibility of an entirely new fare system, providing it is accepted by passengers.



RMVsmart logo

Since the innovation is so fundamental, the RMV is keen to involve the very people for whom the fares are designed: the passengers themselves. The field test is being accompanied by an innovation dialogue where test users, experts, association representatives and politicians are all called upon to scrutinize the prototype fare system – through surveys, online debates and discussion events. So RMVsmart is being developed for market readiness on a collaborative basis, paving the way for a decision to be made regarding potential introduction to a wider-ranging route network. The test phase and dialogue process are already generating groundbreaking insights in terms of advancing the development of public transportation fares.

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Agenda

Events and, conferences calendar,
2nd semester 2016

- **CIVITAS study tour and thematic workshop**
05 - 06 July 2016
Parma, ITALY
<http://www.civitas.eu/content/civitas-study-tour-and-workshop-linking-territories-long-short-distance-co-modality>
- **World Conference on Transport Research**
10 - 15 July 2016
Shanghai, CHINA
<http://www.wctrs-conference.com/>
- **Sustainable mobility international summer school**
Urban mobility planning
15 - 19 August 2016
Leipzig, GERMANY
<http://www.eltis.org/participate/events/sustainable-mobility-international-summer-school>
- **Wocomoco**
Urban mobility planning
07 - 08 September 2016
Warsaw, POLAND
<http://www.wocomoco.org/en/index.php>
- **Revolve mobility debate**
15 September 2016
Residence Palace, Brussels, BELGIUM
<http://revolve.media/mobility-debate-2016/>
- **European mobility week 2016**
16 - 22 September 2016
<http://www.mobilityweek.eu>
- **InnoTrans**
Collective passenger transport
20 - 23 September 2016
Berlin, GERMANY
<http://www.innotrans.de/en/AtAGlance/Overall/>
- **European Transport Conference**
Casa Convalescència
05 - 07 October 2016
Barcelona, SPAIN
<http://etcproceedings.org>
- **EMTA general meeting**
06 - 07 October 2016
Warsaw, POLAND
- **Intelligent Rail Summit**
22 - 24 November 2016
Naples, ITALY
<http://www.railtech.com/intelligent-rail-summit-2016/>
- **POLIS Annual meeting**
01 - 02 December 2016
Rotterdam, THE NETHERLANDS
<http://www.polisnetwork.eu/2016conference>



Anna Luten the first Amsterdam Mayor for Cycling

As of Friday June 24 Amsterdam has its own cycling mayor. Ms Anna Luten had the honour to receive out of the hands of the Amsterdam City Region councillor for public transport and city councilor Pieter Litjens the chain for the cycling mayorship. A world first on the initiative of Cyclespace, the joint venture that has won earlier this year the tender of Stadsregio Amsterdam and the Amsterdam municipality for founding a "Cycle Lab".

Exchange of cycling know how

Cyclespace receives many foreign visitors and representations from all over the world that call on the Stadsregio or municipality's front door to learn and collect information about cycling and make bicycle tours in and around the city of Amsterdam. The organization aims to innovate and build capacity on all concepts and relevant know how regarding cycling. A cycling mayor is one of those concepts. Anna Luten has to voice the interests and wishes of the cyclists in and around City Hall and is supposed to act as intermediary between the city local and regional administration and the cyclists in Amsterdam and the Amsterdam urban region. One of her goals is to recover Amsterdam's leading position as the global cycling capital.



The cyclist's voice

Cyclespace hopes that other cities will soon follow up on that example by appointing a cycling mayor as well. Moreover, also abroad cycling is taking of and everywhere the cyclist's stakes should be advocated.

For more information: about Cyclespace op
<http://cyclespace.nl/> or www.facebook.com/cyclespaceorg

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