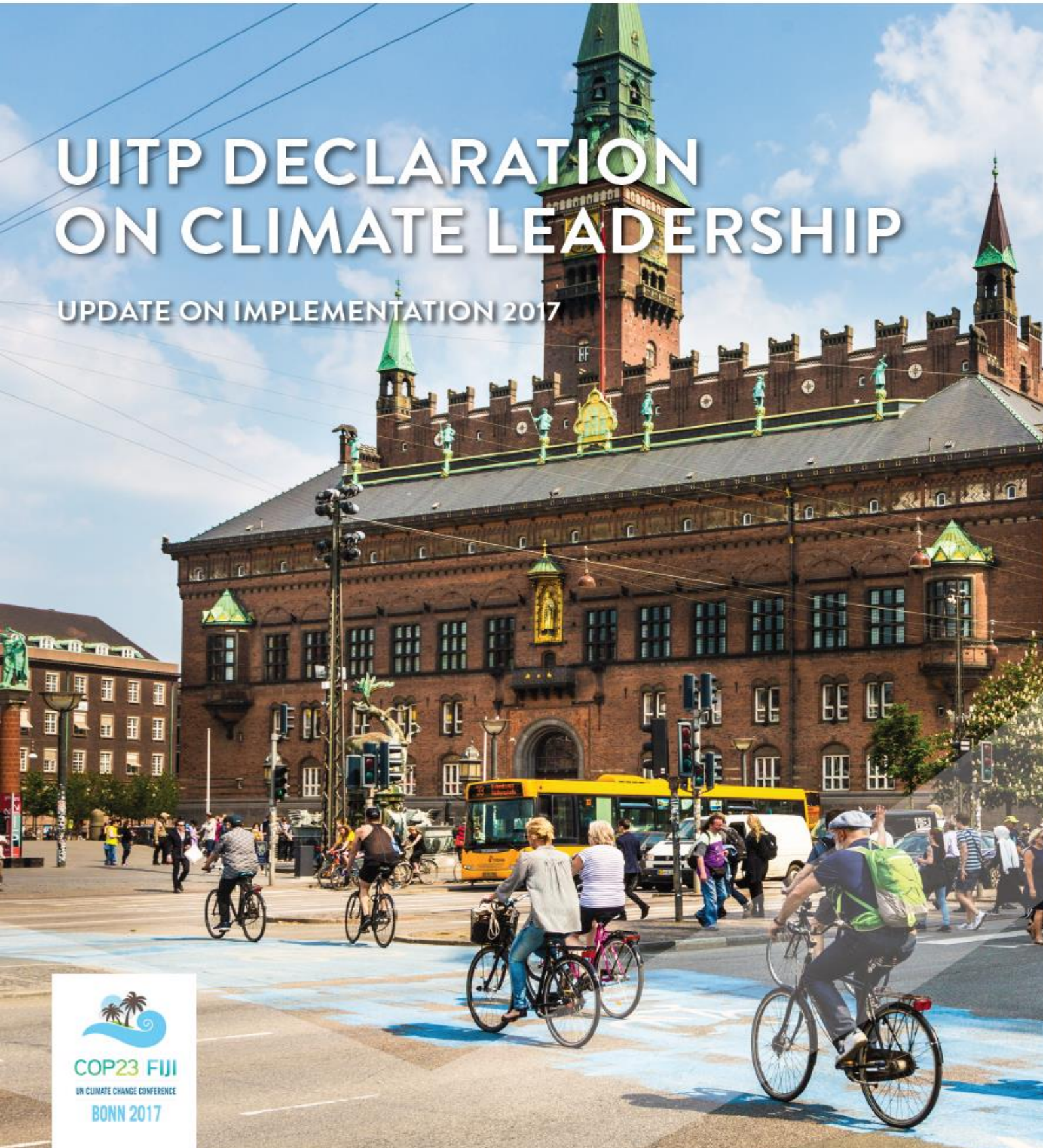
UITP
ADVANCING
PUBLIC
TRANSPORT

UITP DECLARATION ON CLIMATE LEADERSHIP

UPDATE ON IMPLEMENTATION 2017



COP23 FIJI
UN CLIMATE CHANGE CONFERENCE
BONN 2017

Introduction

UITP's Declaration on Climate Leadership demonstrates the public transport sector's commitment to tackling climate change and responding to one of the biggest economic opportunities of the 21st century.

Launched at the UN Climate Summit in September 2014 and as part of the Global Action Agenda at COP21, COP22 and now at COP 23, the Declaration's goal is to **double the market share of public transport by 2025 (PTx2)**. In doing so, it would allow us to cater for ever increasing demand for urban transport while **decreasing per capita urban transport emissions by 25%** (global average) which would ensure that we would move the transport sector in the direction of the COP 21 Paris Agreement.

In addition, the Declaration was supported by over **350 pledges to climate action from over 110 members of the international public transport community in over 80 global cities**. Actions aimed at giving a greater role to public transport in mobility which will help to decrease the regions carbon footprint. Actions also aimed at reducing corporate carbon footprints.

The Declaration was also a commitment from 1,400 members of UITP to support governments at all levels and provide them with **technical support and capacity building through lessons learned from delivering action on the ground** pledged under the Declaration. This is because many of the post-2020 national climate strategies (Nationally Determined Commitments (NDC)) linked to the Paris Agreement are dependent not just on financial support but also technical and capacity building which UITP can provide.

Under the Declaration, UITP will now start to develop guidance and material based on the lessons learned on key areas of implementation. By making this material available to Parties under the Convention and by working in collaboration, UITP can help the provision of technology transfer and capacity building support needed on public transport as proposed in the NDC's, notably to developing countries. This can achieve significant progress in quick start implementation and to ensure that interventions are of quality, helping to raise the level of climate ambition.

About this Report

For the occasion of COP 23, this report provides an update on implementation of the 350 actions pledged under the UITP Declaration since the UN Climate Summit 2014. This is to provide transparency of action both at the sector level and the company level. This tracking is overseen by the UITP Sustainable Development Commission which is a panel of global experts on sustainable mobility and acts as the internal UITP governance mechanism for the UITP Declaration.

Doubling the Market Share of Public Transport

In 2016, UITP provided a snapshot of where we are at in our "PTx2" public transport journey to double the public transport market share worldwide by 2025 compared to 2005[1]. **This ambitious strategy recognises the role public transport plays as the backbone of current and future urban and local mobility systems, boosting economic growth and sustainability in cities and regions, and provides guidance on how to successfully develop a sustainable mobility system based on public transport.**

Doubling the market share of public transport will mean:

- Savings of around 170m tonnes of oil
- Savings of around 550m tonnes of CO_2
- A 15% reduction in urban traffic fatalities
- Double the number of jobs in public transport operator companies
- A 50 % reduction in the risk of obesity and heart disease

[1] Data from 2005 indicates that almost half of all trips in cities were made by private motorized modes. PTx2 aims at a more balanced mobility mix and not to reduce the number of trips made by private vehicles but rather to keep it at its current level (about 3.5 billion trips per day) and to ensure that all extra mobility would be ensured by sustainable modes of transport (mode share: public transport (32%), non-motorized (36%), private motorized (32%)) http://www.uitp.org/sites/default/files/documents/Advocacy/UITP_climate_leadership_implementation_2016_report_20161010.pdf

This objective can only be reached in those cities in which a series of circumstances coincide (i.e. size and density of cities, lifestyles) and specific policies are developed (i.e. introduction of smart finance mechanisms or mobility demand management measures). Every city around the world is contributing to this global target and the UITP Declaration reaffirms the public transport sector's commitment to achieve it in light of the Paris Agreement.

While the ultimate goal of the Paris Agreement is to decarbonise the transport sector, there is an urgent need to avoid unnecessary polluting travel and shift to sustainable low carbon transport solutions like public transport in the immediate future as this will make it easier and cheaper to decarbonise the transport sector going ahead.

As reported at COP 22[2], though public transport supply has nearly doubled compared to 1995, the growth of mobility demand is such that it puts transport networks under pressure, requiring massive investments. While there has been clear progress in some countries and regions towards meeting our PTx2 goal, in developing cities mode share of public transport has decreased as the supply of public transport has not matched the growth in population meaning that, globally, many of the mode share gains are offset, so that there is still work to do. Thankfully, many countries in developing economies are proposing public transport interventions in their NDC. It is however worth remembering that members of the international public transport community will be the ones to implement these interventions and UITP can play an essential role in supporting them to do this through the Declaration.

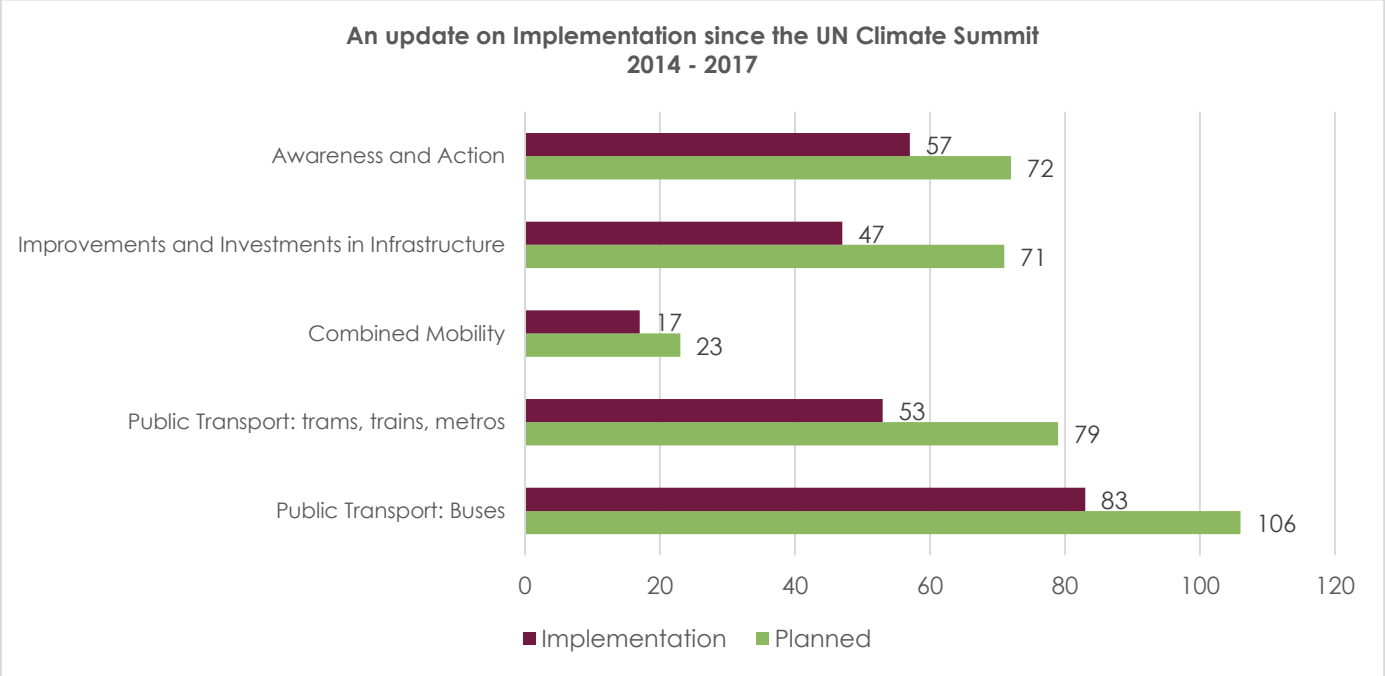
The need to better track performance of our PTx2 goal is a key challenge and in 2017 UITP has been working in collaboration with a range of stakeholders overseen by the World Bank to develop a Global Tracking Framework (GTF) under the Sustainable Mobility for All (SUM4ALL) initiative. The GTF has a direct link to the Sustainable Development Goals (SDGs) which targets expanding public transport (SDG11.2). Led by UITP, this will help to better track global performance and target funding when it comes to delivering on SDG 11.2. In addition, throughout 2017, UITP has been working in collaboration with key UN Agencies to build capacity at the local and national level on the SDGs linked to public transport. UITP pledged to do this under the Lima Paris Action Agenda at COP 21 because by enabling governments to better monitor progress towards expending public transport they can set the right policies and allocate resources accordingly to realise SDG 11.2. As such, significant progress has been achieved in 2017 in terms of delivering on UITP's commitment made at COP 21.

More than 350 Climate Actions – where do we stand in 2017?

Examples of implementation could be reported in nearly all of the 80 cities that had pledged action, covering 73% of the interventions pledged in 2014. This is an increase of 54% compared with this time last year. Annex A outlines all the initiatives that have been implemented or are in the process of being implemented in five key clusters:

1. **Public Transport – buses:** initiatives and actions relating to clean fuels and efficiency, including the development of new bus lines and low emissions buses.
2. **Public Transport – trains, trams and metros:** initiatives relating to new lines and train cars as well as initiatives designed to improve vehicle efficiency.
3. **Combined Mobility:** enhancements to walking facilities, car and bike-sharing schemes (including shared transport systems) and cycle lanes and facilities.
4. **Improvements and Investment in Infrastructure:** initiatives and investments that improve the efficiency of lighting (e.g. LEDs), energy production systems and use of green electricity, energy efficient buildings, stations and green procurement.
5. **Awareness and Action:** stakeholder engagement (internal and external) and development of carbon reduction strategies.

[2] http://www.uitp.org/sites/default/files/documents/Advocacy/UITP_climate_leadership_implementation_2016_report_20161010.pdf



This clustering is consistent with the UITP action plan submitted for the UN Climate Summit and the analysis that UITP undertook at that time[3]. This is done to ensure transparency and consistency of reporting. For the purposes of this report, an action is defined as a specific deliverable in a particular focus area. Projects could include multiple actions, for example a new electric bus line would constitute two actions. It should also be noted that multiple actions were committed by some organisations and that reported progress on implementation may not mean full scale adoption but progress towards.

Next steps for the UITP Declaration

UITP's intention has not been to increase the number of climate action pledges since the Summit. Rather it has been to focus on implementation, reporting against the commitments and to build capacity to report, notably linked to the wider sustainability agenda. UITP will work with a number of cities to build capacity to report which can provide substantial input and insights for COP 24 and the High Level Political Forum on sustainable cities in 2018.

Technical and capacity building on implementation will be a major focus area going ahead. UITP will now start to develop guidance and material based on the lessons learned on the five key areas of implementation. In 2017, UITP will develop a review of policy mechanisms and procurement recommendations that will help to scale up low emissions buses systems. Bus interventions are the most frequently identified climate action outlined in NDCs and such a guide will support the strategic deployment of low emission bus systems in support of national plans. This will be shared with relevant Member State contact points when complete. In addition, UITP will organise a training on Bus Rapid Transit (BRT) in Dakar, Senegal, at the end of 2017 in support of the national Ministry. Senegal has stated in its NDC that it will undertake a BRT project in the city and this training will support its implementation. UITP will continue to undertake similar projects going ahead.

By making material available to Parties under the Convention and by working in collaboration, **UITP can help the provision of technology transfer and capacity building support needed on public transport, helping achieve significant progress in implementation and ensure that interventions are of quality. This in turn will help to raise the level of climate action with public transport.**

[3] http://www.uitp.org/sites/default/files/documents/Advocacy/Climate%20action%20and%20PT.pdf

Annex A - Report of Implementation 2014 – 2017

Public Transport: Buses Low carbon vehicles and technology	• Through the Zero Emissions Urban Bus System (Zeeus) project, UITP is supporting the uptake of electric buses across Europe. Since April 2015, electric buses have been running on the demonstration line 14 in the City of Munster (Germany) with three fast charging stations primarily powered with green power from a photovoltaics facility. • As of August 2015, Seattle (USA) in addition to the testing of electric buses, new electric trolley buses have been rolled out using up to 30% less electricity than the current fleet. In 2017 it was confirmed that it will add 120 new all-electric trolley buses and as of February 2017 more than 78% of the fleet was either hybrid or electric. The following month, after extensive stakeholder engagement, the undertaking outlined their plans to achieve a zero emissions public transport service by 2034. • Darmstadt (Germany), the city conducted the second testing of electric buses on their line L in July 2015. • Montreal (Canada), 2015 saw out-of-service testing and in-service testing with passengers helping scale up the electrification of public transport. In addition, a new system was set up allowing users to track their buses in real-time to know when the next bus will arrive at a designated station has since been rolled out. • In Laval (Canada) in April 2016, the testing of electric buses alongside hybrid buses commenced with 18 in total, which will help to achieve their goal to reduce emissions by 50% by 2031. • In the city of Gdynia (Poland) in April 2015, the operator started using new battery hybrid trolley technology which will help to reduce energy consumption by 3%. • In Paris (France) since June 2016, the first 100% electric bus line is in operation and by 2025 the goal is to field a 100% ecological fleet in the Paris region consisting of buses running solely on electricity (80%) and buses using renewable gases (20%) reducing greenhouse gas emissions by 80%. 2017 also saw the first driverless bus run in the capital. • Washington (USA) is adding a total of 533 hybrid buses to replace its diesel bus fleet as announced in 2016. • Two electric buses started running in Helsinki (Finland) at the start of 2016 and the construction of charging stations began in spring of 2017. The plan is to bring 12 further electric buses into service by the end of 2017. • The city of Belgrade (Serbia) has reached an agreement to receive five new electric buses at the start of 2016. • In July 2015, London (UK) announced that two further bus routes will operate entirely with electric buses from the autumn alongside hybrid buses, lowering carbon emissions and helping to improve London's air quality by reducing 408 tonnes of CO_2 and 10 tonnes of NOx per year. In 2016, all 800 New Routemasters are in passenger service, reducing CO_2 emissions by 27,500 tonnes a year. Over 1,400 older buses have been retrofitted reducing their emissions by 88% and at the end of 2016, the world's first double deck hydrogen bus was unveiled. • Cologne (Germany) received its first e-bus in November 2015 and at the end of 2016 a new line 133 was officially converted to fully electric. • In Campinas (Brazil) 10 new electric buses will join the fleet during 2017 making it the largest electric bus project in the country.

	• Barcelona (Spain) started experimenting with four pure electric buses and using smart technologies. This approach will see the progressive electrification of the bus fleet, for better efficiency as well as for environmental reasons and their new Orthogonal Bus Network will help to save 5,000 tonnes of CO_2 per year. Also, in February and March 2016, Barcelona introduced 27 new articulated hybrid vehicles into the fleet. Bringing the total number to 159, the most advanced vehicles achieve consumption and emission reductions of up to 30%. • Tests are also currently under way with three e-Buses in the centre of the city of Hannover (Germany) with a rapid charge facility (within 4 to 6 minutes). New insights can be gained on how economically viable it will be for scaling up and the project is anticipated to save at least 200 tonnes of CO_2 per year. • On June 15 2015, a new bus service started between Chalmers/Johanneberg Science Park and Lindholmen Science Park in Gothenburg (Sweden). The three demo buses run on renewable electricity and are entirely emission-free. • Calgary's (Italy) commitment to electrify their bus fleet also took a giant step forward during 2015 following the purchase of 6 full electric trolleybuses, which were delivered at the end of the year and tested no later than February 2016 through the creation of a new bus line. Further upgrading of the fleet now means that Calgary has one of the youngest and environmentally friendly fleets in Europe. • On 18 December 2014, the city of Hamburg's (Germany) public transport operator launched Europe's very first "innovation line". Low carbon and ultra-low carbon buses (electric, hydrogen and fuel cell technologies) are tested on the bus line 109, used by some 15,000 passengers on a daily basis. Hamburg's target is to purchase only emissions free buses as of 2020. • In Oslo (Norway) testing continued throughout 2015 and the city aims to run all its public transport using renewable sources by 2020. The city has been operating electric and fuel cell buses running on hydrogen since the Summit. • In Aberdeen (UK), in its first year, the hydrogen bus fleet had travelled 250,000 miles by March 2016 and 15 new hybrid buses entered the bus fleet in 2016 which are 30% more efficient than the ones they replaced. • Since 2015, the public transport operator in Flanders (Belgium) is deploying 138 new low floor diesel-electric hybrid buses in 6 Belgian cities and towns, helping reduce 3,500 tons of CO_2. The organisation also enhanced its eco-driving program as well as participating in two demonstration projects: one in Antwerp involving the operation of 5 hydrogen fuel cell buses (in collaboration with manufacturers such as Van Hool) and another one in Bruges putting up a testing ground for inductive charging of 9.65 m electric city buses. • In Rosario (Argentina), 12 electric trolley buses were shipped with services expected to run in the summer of 2017. • In Bogota (Colombia), the first electric bus was unveiled in the summer of 2015 which complements the 230 and more hybrid buses already in operation. • In Vienna (Austria) 12 innovative electric microbuses were purchased in 2015 reducing emissions by 300 tonnes annually. This will help deliver on the city's strategy for improved bus efficiency with 75 new Euro 6 vehicles added in the same year with the aim of developing a zero emissions public transport service in the city centre.

	• The city of Differdange (Luxemburg) will see the running of electric buses in the second quarter of 2017 following the purchase of 4 electric buses at the end of 2016 which will reduce like for like emissions by 80%. • Bangalore (India) has introduced 50 hybrid diesel-electric 'green' buses from 2016, the first in the country. These buses are expected to save 30% diesel and also check harmful gas emissions • Belgrade (Serbia) received five electric buses in 2106 which are the first of their kind to enter into service.
Public Transport: Buses New bus lines / BRT	• By the end of 2014, 40 new bus services were introduced alongside new multimodal initiatives in Singapore. They are also doubling the number of new bus routes from 40 to 80, from 2015 to 2017. In addition, work started in 2016 on developing dedicated bus lanes and service enhancement programmes that will improve efficiency and reduce overcrowding by 85%. • Improved bus services and enhancements on the Greater Bristol Bus Network (UK) will help to reduce emissions by 42,771 tonnes over the lifetime of the project. It is one of a number of sweeping changes to the multi-modal public transport system that aims to reduce by 16% per capita emissions from road transport in the region by 2020. Construction started in early 2015 and services are expected to start in 2017. • In Montreal (Canada), there are now reserved lanes for buses on 212 km of roadways, while 273 intersections are equipped with priority traffic signals, for a total of 287.5 km featuring bus priority measures. The public transport undertaking hopes to reach its 375 km target by the end of 2017. • In Birmingham (UK) a new bus line came into operation in September 2016 which is helping to enhance the accessibility of city residents. The service will include 'roaming zones' which will allow for the bus to deviate off its fixed route to pick up and drop off passengers wherever they like. The service will include the latest technologies and wifi, all helping to enhance the customer experience. • Helsinki (Finland) was reorganising bus routes in 2016 to help provide a more integrated public transport offer. • New BRT projects are under in greater Montreal (Canada) where work continued in 2016 on a major 11km bus corridor and starting May 11 2015, a new bus line (77) serves the city, thus enabling persons with limited mobility to reach their destination more easily. • In Edinburgh (UK) a new bus route opened in April 2017 linking the city to the airport creating jobs for 45 new drivers and a further ten apprentice engineers. • Dakar (Senegal) funding for a new BRT bus line was secured last year and in 2017 tendering for an operator was sought. The BRT is a key project in the government's COP 21 NDC. • Sao Paulo (Brazil) in 2015 was awarded for implementing 320km of exclusive bus lanes, increasing average bus speeds by 21%. • In September 2015, funding had been earmarked for a BRT system in Campinas (Brazil) which will serve 250,000 people each day. • In July 2016 a new 26km BRT express corridor was launched in Rio de Janeiro (Brazil). The city will now have three corridors expected to carry approximately 500,000 passengers per day. One of the BRT lines (Transoese) alone is estimated to generate savings of 107,000 tonnes of CO_2 per year.
Public Transport: Buses	• The use of renewable fuel derived from the sugar cane used on BRT corridors in Rio de Janeiro (Brazil) has been implemented. It is 100% renewable and is estimated to reduce emissions by 90% when compared to diesel fuel.

Cleaner fuels and efficiency	• In May 206, Bangalore (India) launched the implementation of an intelligent transport system which will help to improve the operational efficiency of the bus network as well as the wider transport network. • In Brisbane (Australia) with a fleet of over 1,100 city route buses, real gains have been made in progressing smart transmission functionality and eco-driving, realising fuel savings of more than 3% with a target of 10% by 2017. In May 2015 Brisbane's buses became 100% low floor and wheelchair accessible, thereby encouraging broader patronage and reducing reliance on private vehicles. • Seattle (USA) reported a 6% improvement in transit efficiency in 2015 thanks in part to eco-driving measures. • In Helsinki (Finland) in 2017 the authority plans to pay bonuses to operators which suggest measures to reduce carbon and local emissions such as using biodiesel. The initiative alongside active stakeholder engagement will help to reduce 125 tonnes of CO_2 which will help to reduce public transport emissions by over 90% by 2025. • In Brussels (Belgium) during 2015 the bus operator has ramped up its eco-driving programme and has equipped 84% of its bus fleet with an electronic system of on-board indicators. The system gives drivers information about their driving behaviour in 'real time' to help them improve their driving style. Bus drivers are also given personalized coaching sessions, which started in 2015 and it is expected that all the drivers will have received coaching by 2016. In 2017, it was reported that 2,000 drivers had been trained reducing emissions by 7%. • In Laval (Canada) at the end of November 2016 the city started work following internal stakeholder engagement to implement five measures that that will be the largest work to prioritise and improve public transport in Laval. This ranges from 13.4 km of reserved lanes, 6 bypass lanes and 227 smart traffic lights that represent 90% of all lights in the city as well as 55 improved stops and shelters. Riders can count on saving 5 minutes of travel time which will amount to 50,000 hours over the course of the year all of which plan to be done until June 2017. • In Copenhagen (Denmark) more environmentally friendly buses were in operation as announced in March 2017. With new contracts enforcing the operation of cleaner Euro 6 buses, it will help to reduce emissions by 26%. • In Leipzig (Germany) in March 2017 it was announced that that 18 new more efficient buses will join the 14 already in operation received at the end of 2016. • Mexico City (Mexico) saw in 2016 the adoption of cleaner biogas buses on the main bus line which is helping to update and clean the city's bus fleet.
Public Transport: Trains, Trams & Metros New Lines & Upgrades	• On September 12 2015, the 7.3-mile Light Rail Transit Project in Portland (USA) opened, connecting communities between downtown Portland and North Clackamas County to the south. The MAX Orange Line incorporates new vehicles and active transportation amenities and a net zero multi-level Park & Ride facility. By 2030, it is estimated that the line will reduce 60,000 miles travelled per weekday by shifting car travel to public transport reducing the amount of CO_2 by nearly 60,000 pounds per day • April 2015 saw the opening of the Prague Metro extension Line A (Czech Republic). Four new stations – Bořislavka, Nádraží Veleslavín, Petřiny and Nemocnice Motol – on the more than six kilometre metro route have now come into passenger service, with about 127,000 local people benefiting from increased access to public transport.

	• Rio de Janeiro (Brazil) opened its new metro extension alongside new trains in the September of 2016 which is forecast to carry an additional 300,000 passengers per day. • Leipzig (Germany) unveiled its new trams in February 2017 with room for 220 passengers which is expected to be installed on two new lines allowing for a better customer experience. • Tyne and Wear (UK) has seen 1.3 million more journeys on their network in 2015 as they progress with renewing assets (programme to be completed in 2021), which will help to avoid 15 million more local car journeys per year. • Construction work started in May 2015 in Casablanca (Morocco) which expects to have 80 additional kilometres of tramlines running by 2022. • The Second Avenue subway extension in Manhattan (USA) opened at the start of 2017. The new energy efficiency stations opened at 72nd, 86th and 96th Streets. The route is an extension of the Q Line, which now runs from the Upper East Side of Manhattan to Coney Island in Brooklyn. • In Birmingham (UK) a new 0.7 mile tram extension launched in May 2016 has seen ridership increase 31%. • Sao Paulo (Brazil), expansion projects continued in 2016 and 2017 albeit at a slower rate than expected. This included station enhancements, the opening 2km of new lines and the modernisation of equipment as well as new trains, all of which represents a 1,500% gain in CO_2 avoided thanks to the network. • In September 2016, a new section of the Moscow (Russia) metro opened comprising of three stations. Three other stations will be completed in 2017. It will enhance the accessibility of around half a million people in the city and in October 2016 enhanced the connectivity of citizens through technological upgrades - from wifi connectivity, live communications desks, cashless payment and new energy efficient metro trains. • In Vienna (Austria) work is underway to extend the underground and tram line with 5 new stations set to be opened in 2017 and work on a new underground line due to start in 2018 alongside modernisation of trams. • In Montreal (Canada) a new commuter train line service opened at the end of 2014 shortly after the Summit which is part of a wider 2020 plan which will reduce emissions by 300,000 tonnes of CO_2 per year. • In Munich (Germany) work started in February 2016 on a new 2.7 km tramway which is expected to save 245 tonnes of CO_2. • In the metropolitan area of Granada (Spain) a light rail line neared completion in 2016 (scheduled to open in the summer of 2017) which will cater for an extra four million journeys per year, which will result in a reduction of 15% in car use and 10% fewer emissions. • New extensions were launched in Bern (Switzerland) at the end of 2015 in order to meet ever increasing demand for public transportation. • New stops were added to a 1.2km light rail extension to Altenhagen (Germany) in December 2015 • In May 2016, Stuttgart (Germany) opened a 1.1km light rail extension helping to expand public transport. • St. Petersburg (Russia) reported in January 2017 the signing of a new contract that will deliver 40 new railway cars which are 30% more efficient that the current stock. It is expected that the cars will be delivered in May 2018 which will also see around 430 new cars delivered in 2020. • In Toronto (Canada), June 2016 saw the first extension to its tram network since 2000.

	• Singapore saw the launch of two new car trains in 2016 resulting in shorter waits for 61,000 commuters as well as efforts to improve the accessibility of stations. A new line extension will open in June 2017 which is expected to benefit 100,000 commuters by cutting commutes by 35 minutes and making them even greener. • Bremen (Germany) opened its new 5.5km tram network just before the opening Summit which has helped the city develop an integrated seamless public transport network. • In London, (UK) new vehicles and four lines were modernised and upgraded in 2016 better accommodating around 1 million passengers each day. • The expansion of the tram system in Innsbruck (Austria) is all part of their 2020 plans, saving 1,405 tonnes of CO_2 per year.
Public Transport: Trains, Trams & Metros Improved efficiency through technical measures, regenerative breaking or eco-driving	• In the UK, a major energy recycling project was launched on the south-western rail franchise, which is the largest in the country, and when fully implemented is expected to save 15 million kWh of electricity per year (conservative estimate), enough to power more than 3,500 UK homes for an entire year. • Innovative smart tram systems now in operation in Linz (Austria) further improving driving efficiency as well as reducing 85 tonnes of CO_2 and a 10.2% reduction of energy requirements. • In Bielefeld (Germany) three inverters and a flywheel accumulator were introduced in 2015, saving of more than one gigawatt-hour of energy. Similar initiatives in Hong Kong (China) are in operation on the metro and in Brussels (Belgium) which has led to annual savings of 3,060 tonnes of CO_2. • Rio de Janeiro (Brazil) opened its new metro extension in September of 2016 featuring the latest technological enhancements including regenerative breaking, enhanced driver efficiency and LED lighting. • In Brussels (Belgium) a feasibility study in 2017 looked at possible ways to reduce energy consumption in the tram network to recapture energy from breaking. In two lines, 97% of energy could be reused alongside over 200 new more efficient tram vehicles. • Sofia (Belgrade) saw the introduction of new trams and lines in 2016 alongside the construction of a third metro line. Currently 156 trams are running in the capital. • In London (UK), all new trains in 2015 have regenerative breaking and on one line, when combined with other technology on trains, enhanced driver efficiency, signalling and power systems has cut the energy required to run services by 34%. In total, the technology could enable London Underground to save 5% on energy costs enabling it to reinvest in transport. In addition, it was reported in 2016 that a new energy efficient signalling system was completed on four key lines which will allow for a 33% increase in capacity by the early 2020's. • Kuala Lumpur (Malaysia) will install a new U-shaped viaduct solution as reported in 2016. This will be accompanied by an extension of the metro totalling 37km in length. • A new public-private partnership in the European rail sector initiated a call for research projects in 2016 which aims at increasing reliability and punctuality of the sector by 50% by 2020. • A European Project (Osiris of which UITP is a partner) was completed in 2015 and aims to enable a reduction in the overall energy consumption of EU urban rail systems by 10% by 2020.
Combined Mobility	• In 2016, a new Munich (Germany) housing development has created an e-mobility service so that its residents can rent electric vehicles for their day-to-day travel needs. In addition, launched in October 2015, the new bike-sharing scheme in the city will contribute to a further reduction of CO_2 of 308 tonnes per year.

Walking, cycling, taxi and car sharing	• Portland's (USA) new light rail project has provided new bike parking spaces and approximately 10 miles of new or replaced sidewalks and eight miles of new or replaced bicycle facility improvements have been constructed. • Vienna's (Austria) Smile initiative which ended in May 2015, resulted in the development and testing of a prototype integrated mobility platform (including taxis and cycling) allowing for real time information, booking, ticketing and payment to a single platform. An online survey showed that 48% of users now use public transport more often and 20% now combine a public transport trip with bike sharing more frequently. • By the end of the 2016, the West Midlands (UK) saw an increase in cycling by more than two million trips per year, and walking trips by more than 10 million alongside enhancements to the public transport network, helping to reduce CO_2 by 10,000 tonnes. By March 2015, a scheme which provides free travel passes and cycling support for jobseekers has supported more than 14,000 job seekers back to work more than doubling the target set. • Budapest (Hungary) launched a public bicycle sharing in 2015 and by May that year 1,100 bicycles were available at 76 docking stations throughout the city. • In Montreal (Canada) the public transport undertaking alongside the city lunched in 2015 an electric car sharing programme. • 2017 saw the Flemish government (Belgium) invest over €1bn in tram and bus as well as cycling upgrades which will see the creation of 80 new cycling highways. • The year 2015 saw Singapore's third intra-town dedicated cycling path network completed. This is just one part of their wider 2030 plan to complement their public transport network which will see the construction of 200km of sheltered walkways by 2018, and a cycling network over 700km in length by 2030. In addition, by end 2017 a new bicycle sharing service with 1,000 bikes and 100 docking stations is set to be launched alongside a new nationwide electric car sharing service. • Osnabrueck (Germany) saw the launch of regional car sharing programmes in 2016 with over 2,200 members. • On January 1 2017, a good 1.7 million customers were registered with German CarSharing providers. This is 36% more than in the previous year. • In Casablanca (Morocco) alongside the tramline extension, sustainability considerations are being integrated into the 10 hectares of pedestrian areas and rehabilitated walkways. • After the Summit, Berlin's public transport company (Germany) launched an energy efficiency competition which has enabled a startup to launch a shared electric scooter scheme which is helping to complement the public transport network and provide the last mile between public transport and home.
Improvements & Investments in Infrastructure *Renewables, lighting, green procurement &*	• April 2015 saw the launch of a solar photo-voltaic plant in Phoenix (USA) at the Light Rail Facility Operations and Maintenance Centre which is comprised of 2,800 solar voltaic panels spanning 1.15 acres, mounted at ground-level and on parking lot shade canopies. It is capable of generating 1.3 million Kilowatt-hours (kWh), saving around 900 tonnes of GHG annually, enhancing the efficiency of buildings and operations. • In Japan, the rail operator has launched the operation of its first large-scale solar power generation facility on the grounds of the Keiyo Rolling Stock Centre with an output capacity of 1,050kW. The electricity generated is used at the Centre and will also help to operate trains, reducing CO_2 emissions by about 500 tonnes annually

office and building enhancements	and they also started operation of another solar power generation facility on the Joban Line during 2015, enhancing the efficiency of the facility. • In January 2017, a new green deal was signed to ensure the sustainability of the construction and procurement of train stations, buildings and railways in Holland. • Wind turbines have been installed in places such as Manchester (UK) capable of generating 25,000 KwH. • Brussels (Belgium) wind turbines are saving around 450 tonnes of CO_2 per year thanks to their green procurement efforts all helping to reduce emissions from office buildings. • Photovoltaics installed at a green station in Bielefeld (Holland) is improving building efficiency and saving 68 tonnes of CO_2 per year. • In Karlsruhe (Germany) a new combined heat and power plant began operation in October 2015 at the operator's western depot and is able to provide electrical power of up to 600 kW, with the utilisation of up to 550 kW of heat. In this way, around 75% and 55% respectively of the organisation's power and heat needs will be realised from this renewable source enhancing the efficiency of operations, stations and buildings. • In 2015, lighting upgrades at all five downtown transit tunnel stations in Seattle (USA) is reducing electricity use by 71%. The organisation has also received a LEED Gold rating for their central operations base. • In Rotterdam (Holland) their station and offices has improved efficiency through energy efficient lighting thanks to green procurement initiatives. • Washington (USA) has reported 70% energy efficiency improvements through their lighting upgrades which commenced at the start of 2015, which is part of their wider plans to replace 13,500 light fixtures with high-efficiency LED lights through all types of stations and buildings. The project is expected to save more than 15 million KWh in energy per year, reducing carbon emissions by over 10,000 tonnes. • In April 2015, New York (USA) announced the completion of its largest-ever energy-efficiency project, which will save $2.5 million in annual energy costs at Grand Central Terminal. The upgrades will reduce emissions by more than 11,200 tonnes a year. In addition, 2016 saw LED lights installed at the Bronx-Whitestone Bridge improving efficiency by over 70% in recognition of Earth Day. In June 2016 the Fulton Centre was the first subway hub to receive a LEED rating for sustainability and design achieving 25% energy savings. Half of the energy used comes from renewable sources. • The world's leading manufacturer of braking systems for rail and commercial vehicles helped to reduce its corporate carbon emissions by installing throughout 2015 and 2016 renewable energy infrastructure, LED lighting, employee engagement, renewable energy, green procurement and energy efficient buildings all of which helped to reduce consumption by 9% compared to the previous year. • In Paris (France), the operator is installing renewables and LED lighting in all the 366 metro and stations and aims to replace 250,000 light points which will help to save 8,000 tons of CO_2. All of which will ensure a better customer experience through the enhancement and efficiency of stations and buildings. • In Moscow (Russia) energy efficient escalators were installed in the metro system in 2016 as part of the system upgrade which will see the launch of new stations. • London (UK), continued in 2016 to install renewables and upgrade their buildings and road street lighting to the latest green standards through green procurement which aims to cut CO_2 emissions by 9,700 tonnes.

	• The Railsponsible initiative was launched in March 2015. This new global initiative is focused on improving sustainability and transparency throughout the entire rail procurement supply chain through sharing best practices and processes, driving a common understanding across the industry, and to use and share common tools helping to drive down supply chain emissions. • Energy efficiency improvements, green procurement, LED lighting and renewable efforts in Hong Kong (China) are expected to save 30,000 tonnes of CO_2 in the coming years as more of their properties and stations receive the highest level of environmental standards. For instance, three properties and stations received a provisional assessment of BREAM Plus Gold in 2015. • Gothenburg's public transport operator (Sweden) goal is to reduce energy consumption by 25% by 2025 and during 2015 seven of their terminal buildings reached high levels of environmental certification as recognized by the Sweden Green Building Council. All buildings were to be certified in 2016. • The Stinson bus garage in Quebec (Canada) received the first of its type LEED Gold certification. The heat recovery system generates annual energy savings of nearly $1 million which also represents a 60% reduction in emissions. In addition, the upgrade of the Youville Metro workshop has also been completed.
Awareness & Action Stakeholder engagement & climate strategies	Many of the deliverables quoted above are a result of concerted effort to deliver on climate strategies, which include external and internal consultation. Additional efforts of note include: • Manchester's (UK) goal is to be become zero carbon by 2033 and targets aimed to reduce specific emission per passenger km have been established in other organisations, for example in Hong Kong the target set is 21% by 2020, in Montreal (Canada) the goal is a 20% fall by 2020 and in London (UK), the goal is to to reduce CO_2 per passenger km from their network and fleet by 40% by 2025. • In Belgrade (Serbia), the city in 2015 started examining a range of scenarios to enhance the efficiency of the public transport and develop mobile ticketing. • Through the Vivapolis Charter signed in 2015, the international private public transport operator in France has shared their expertise to the planning of the high service bus service in Bogota (Colombia) which will help to reduce emissions by 280,000 tonnes of CO_2. • Public transport organisations are increasingly being highlighted as driving innovation towards greater environmental sustainability as recognised when the Utah (USA) transport authority received a Green Business Award in 2015. In addition, 2017 saw the launch of a number of people engagement initiatives that will help to improve the local public transport services. • Energy challenges launched at depots and stations in Brussels (Belgium) since the Summit has helped to save €50,000 in energy costs. • In the Greater Toronto and Hamilton Area (Canada) the company is already saving an estimated $1.5 million annually through staff engagement programmes initiated in 2015. • External engagement programmes have been implemented in a variety of forms over the year such as engaging with children and parents on the benefits of public transport and sustainable travel choices, as they have done in cities such as Manchester (UK) and Munich (Germany).

	• Over 2015 and 2016 in Laval (Canada) the city re-launched an initiative which encourages citizens to use public transport on smog days during the summer when levels go below acceptable limits. By providing incentives to use public transport, it could prompt 1,500 motorists to get off the roads in a single day. • In Bangalore (India), the operator has again over the past couple of years engaged the community of the benefits of public transport during World Environment Day. • Commitments have been made by public transport associations in Brazil, Italy and the USA and by organisations in Lebanon to raise awareness of the importance of climate action with public transport. • Singapore in 2015 saw the launch of a smart travel programme which aims to reduce/shift the morning peak hour demand and encourage a shift to sustainable transport alternatives through encouraging commuters to flexi-travel: re-time their trips to off-peak periods, re-mode to more sustainable modes (public transport, cycling and walking), and to reduce travel demand altogether. • The Polish rail operator controlling over 70% of the regional market launched a targeted promotional campaign in February 2015 aimed at encouraging motorists to use rail travel instead of private cars. During a specified week, any person who applied with a valid car registration was able to buy a five-day ticket on any route for only PLN 1 (EUR 0.24). It showed that of those participated, 62% were using trains for the first time, encouraging private motorists to switch to rail public transport options. • In New York (USA), the public transport authority offered it's first-ever "Green Bonds" to the public in a two-day order period on 17 February 2015. The bonds' proceeds of $500 million will pay for continuing work on infrastructure renewal and upgrade projects. In addition, to mark the start of the Climate Week in September 2015, a million metro cards were issued with a green front face and a green message on the back reminding customers that they are helping to address climate change by taking public transport and asking how else they can incorporate greener efforts into their lives. • In Seattle (USA) community members and stakeholders shared their views throughout 2015 and 2016 on how to develop the public transport network in order to get around better. This effort of co-creation will ensure that the future system offers new innovative travel options which are also clean, safe and customer friendly. In addition, in September 2016 the authority worked with more than 70 local businesses to build teleworking programmes removing an estimated 12,000 cars from regional commutes each weekday helping to reduce employers' carbon footprint.

Organisations that participated in the UITP Declaration at the UN Climate Summit in 2014:

ARGENTINA (ENTE DE LA MOVILIDAD DE ROSARIO); **AUSTRALIA** (BRISBANE TRANSPORT); **AUSTRIA** (GRAZ KÖFLACHER BAHN UND BUSBETRIEB (GKB), INNSBRUCKER VERKEHRSBETRIEBE UND STUBAITALBAHN GMBH (IVB), LINZ LINIEN GMBH FÜR ÖFFENTLICHEN PERSONENNAHVERKEH, WIENER LINIEN GMBH & CO KG); **BELGIUM** (SOCIETE DES TRANSPORTS INTERCOMMUNAUX DE BRUXELLES (STIB/MIVB), ASSOCIATION OF THE EUROPEAN RAIL INDUSTRY (UNIFE), VAN HOOL NV, VLAAMSE VERVOERMAATSCHAPPIJ VVM DE LIJN); **BOLIVIA** (MINISTERIO DE OBRAS PUBLICAS SERVICIOS Y VIVENDA); **BRAZIL** (ASSOCIACAO NACIONAL DOS TRANSPORTADORES DE PASSAGEIROS SOBRE TRILHOS (ANTPRILHOS), COMPANHIA DO METROPOLITANO DE SAO PAULO – METRO, CONCESSAO METROVIARIA DO RIO DE JANEIRO SA (METRO RIO), CONSORCIO METROPOLITANO DE TRANSPORTES - AUTOPASS (CMT - AUTOPASS), ELEKTRO, EMPRESA MUNICIPAL DE DESENVOLVIMENTO DE CAMPINAS SA (EMDEC), FEDERACAO DAS EMPRESAS DE TRANSPORTES DE PASSAGEIROS DO ESTADO DO RIO DE JANEIRO (FETRANSPOR), GRUPO CCR S/A, INSTITUTE FOR TRANSPORTATION & DEVELOPMENT POLICY (ITDP)/BRT TRANSOESTE, MINISTERIO DAS CIDADES - SECRETARIA NACIONAL DE TRANSPORTE E DA MOBILIDADE URBANA, SISTEMA DE TREN ELECTRICO URBANO (SITEUR); **BULGARIA** (STOLICHEN ELEKTROTRANSPORT PLS); **CANADA** (AGENCE METROPOLITAINE DE TRANSPORT (AMT), SOCIETE DE TRANSPORT DE LAVAL (STL), SOCIÉTÉ DE TRANSPORT DE MONTRÉAL (STM), TORONTO TRANSIT COMMISSION (TTC), METROLINX); **CHINA** (MASS TRANSIT RAILWAY CORPORATION LIMITED (MTRC); **COLOMBIA** (EMPRESA DE TRANSPORTE DEL TERCER MILENIO TRANSMILENIO S.A., SOCIEDAD INTERNACIONAL DE TRANSPORTE MASIVO (CIUDAD MOVIL SA); **CZECH REPUBLIC** (DOPRAVNI PODNIK HLM PRAHA AS (DP PRAHA)); **DENMARK** (CITY OF COPENHAGEN; MOVIA PUBLIC TRANSPORT - TRAFIKSELSKABET MOVIA); **FINLAND** (HELSINKI REGIONAL TRANSPORT (HSL)); **FRANCE**(RÉGIE AUTONOME DES TRANSPORTS PARISIENS (RATP GROUP),SOCIETE NATIONALE DES CHEMINS DE FER FRANCAIS (SNCF), SYSTRA, TRANSDEV GROUP); **GERMANY** (BERLINER VERKEHRSBETRIEBE (BVG), BOCHUM-GELSENKIRCHENER STRASSENBAHNEN AG (BOGESTRA), BOMBARDIER TRANSPORTATION, BREMER STRAßENBAHN AG (BSAG), BUNDESVERBAND CARSHARING E.V (BCS), RESDNER VERKEHRSBETRIEBE AG (DVB), HAFTPFLICHTGEMEINSCHAFT DEUTSCHER NAHVERKEHRS- UND VERSORGUNGSUNTERNEHMEN (HDN), HAMBURG PORT AUTHORITY, HAMBURGER HOCHBAHN AG (HHA), HEAG KONZERN-MOBILO GMBH, HÖFT & WESSEL - ALMEX AG, KASSELER VERKEHRS- UND VERSORGUNGS-GMBH (KVVKS), KNORR-BREMSE, KÖLNER VERKEHRS-BETRIEBE AG (KVB), LEIPZIGER VERKEHRSBETRIEBE GMBH (LVB), MAGDEBURGER VERKEHRSBETRIEBE GmbH (MVB), MOBIEL, MÜNCHNER VERKEHRSGESELLSCHAFT (MVG), STADTWERKE MÜNSTER GMBH (SWMS), STADTWERKE OSNABRÜCK AG VERKEHRSBETRIEBE STUTTGARTER STRASSENBAHNEN AG (SSB), ÜSTRA HANNOVERSCHE VERKEHRSBETRIEBE AG, VERKEHRS- UND TARIFVERBUND STUTTGART GmbH (VVS), VERKEHRSVERBUND OBERELBE GmbH (VVO)); **HOLLAND** (CONNEKT, PROVINCIE GELDERLAND, ROTTERDAMSE ELEKTRISCHE TRAM (RET)); **HUNGARY** (BUDAPESTI KÖZLEKEDÉSI KÖZPONT (BKK)); **INDIA** (BANGALORE METROPOLITAN TRANSPORT CORPORATION (BMTC)); **IRELAND** (RAILWAY PROCUREMENT AGENCY (RPA)); **ITALY** (AZIENDA TRASPORTI BERGAMO SERVIZI S.P.A. (ATB SERVIZI), CONSORZIO TRASPORTI E MOBILITÀ CAGLIARI S.P.A (CTM), ASSOCIAZIONE TRASPORTI (ASSTRA)); **JAPAN** (EAST JAPAN RAILWAY COMPANY (JR EAST)); **LEBANON** (TEAM INTERNATIONAL); **LIECHTENSTEIN** (VERKEHRSBETRIEB LIECHTENSTEINMOBIL (LIEMOBIL)); **LUXEMBOURG** (SALES-LENTZ AUTOCAR SA. (SLA)); **MEXICO** (DINA CAMIONES, SISTEMA DE TREN ELECTRICO URBANO (SITEUR)); **MOROCCO** (CASABLANCA TRANSPORT SA (CASA TRANSPORT)); **NORWAY** (RUTER AS); **POLAND** (PRZEDSIEBIORSTWO KOMUNIKACJI TROLEJBUSOWEJ SP.ZO.O (PKT) **PORTUGAL** (CARRIS – LISBON, METROPOLITANO DE LISBOA); **ROMANIA** (SOCIETATEA DE TRANSPORT PUBLIC ALBA IULIA (STP SA)); **RUSSIA** (MOSCOW METRO, SAINT PETERSBURG METRO, TRANS-ALFA ELECTRO); **SENEGAL** (CONSEIL EXECUTIF DES TRANSPORTS URBAINS DE DAKAR (CETUD); **SERBIA**(GSP BEOGRAD-CITY PUBLIC TRANSPORT COMPANY); **SINGAPORE** (LAND TRANSPORT AUTHORITY (LTA)); **SPAIN** (CONSORCIO DE TRANSPORTE METROPOLITANO AREA DE GRANADA (CTAG), FERROCARRILS DE LA GENERALITAT DE CATALUNYA (FGC), TRANSPORTS METROPOLITANS DE BARCELONA (TMB)); **SWEDEN** (CITY OF GOTHENBURG, X2 KOLLEKTIVTRAFIK AB, VÄSTTRAFIK AB); **SWITZERLAND** (BERNMOBIL - STÄDTISCHE VERKEHRSBETRIEBE BERN (SVB), REGIONALVERKEHR BERN-SOLOTHURN (RBS), TRANSPORTS PUBLICS FRIBOURGEOIS (TPF)); **UNITED KINGDOM** (ABERDEEN CITY COUNCIL - ABERDEEN HYDROGEN BUS PROJECT, ARRIVA, CENTRO, GO-AHEAD GROUP, LOTHIAN BUSES, NEXUS, RAIL SAFETY AND STANDARDS BOARD (RSSB), STAGECOACH GROUP, TRANSPORT FOR GREATER MANCHESTER (TFGM), TRANSPORT FOR LONDON (TFL), WEST OF ENGLAND LOCAL ENTERPRISE PARTNERSHIP; **UNITED STATES OF AMERICA** (AMERICAN PUBLIC TRANSPORTATION ASSOCIATION (APTA), KING COUNTY METRO, METROPOLITAN TRANSPORTATION AUTHORITY (MTA), SAP AMERICA INC, TRIMET, UTAH TRANSIT AUTHORITY, VALLEY METRO, WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA)

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