C40 GREEN AND HEALTHY STREETS ACCELERATOR

How cities are urgently delivering greener, healthier and more inclusive streets

2023 Report

C40 CITIES

ACKNOWLEDGEMENTS

This report was created in collaboration with officials in the C40 Green and Healthy Streets Accelerator signatory cities, C40 funders, and C40 staff. Thank you to everyone who has contributed to the report and the actions that are driving forward immediate and inclusive climate solutions to achieve the commitments of the C40 Green and Healthy Streets Accelerator. For further information on the C40 Green and Healthy Streets Accelerator, please check out the accelerator webpage.

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FOREWORD

Cities are grappling with the interconnected climate emergency and the air quality, congestion and health crises. The case for transport action has never been clearer. We must rapidly decarbonise the sector in order to phase out fossil fuels and halve global emissions by 2030. Equitable and accessible public space, mobility infrastructure and services are vital to ensure inclusion for all in education, employment, healthcare and many other facets of a thriving city. This means a significant shift in the ways we live, work, move and play in our cities, and a fundamental restructuring of our streets.

The C40 Green and Healthy Streets Accelerator was the first C40 accelerator to be launched back in 2017. It sets out a clear delivery timeline for the most ambitious climate action on urban transport. Signatory cities are tackling the key sources of urban transport emissions by scaling up their zero emission bus fleets, electrifying urban freight, removing highly polluting vehicles from the road, and transforming public space in a way that prioritises people, not cars. Cities are achieving this in an inclusive and equitable way by ensuring that the perspectives of historically marginalised groups, such as those of children, women, people of colour or diverse ethnic origin, the elderly and people with disabilities, inform these transformations. Signatory cities are also inspiring other cities and mayors to take similarly ambitious action.

However, cities are facing distinct challenges. The legacy impacts of COVID-19 on public transport ridership and transport agency budgets means that public transport investment and the transition to zero emission bus fleets has slowed in some cities. In recent years we have also witnessed the conflation of transport measures with the increasing culture wars and proliferation of misinformation, where a vocal minority are trying to delay and discredit these vital measures.

Despite this, there is global momentum to pursue these policies. C40 mayors continue to lead the way by implementing data-driven action to reduce transport emissions, improve air quality, improve road safety, and shift trips away from private vehicles to sustainable and active transport.

With just one year until the 2025 zero emission bus procurement target, and six years until the zero emission area (ZEA) target, we must now scale up efforts to achieve these ambitions.

Congratulations to all the cities featured in this report for demonstrating leadership and commitment to bold climate action, and for making our streets greener, healthier and more livable.

Mark Watts
Executive Director of C40

INTRODUCTION

Transport is fundamental to environmental, economic and social prosperity in our cities. An efficient transport system connects people, businesses and services. It allows us to move freely and safely in our cities and access jobs, education, leisure, communities, green spaces and cultural activities.

But urban transport is also a major contributor to the climate emergency, air pollution and congestion. One third of C40 cities' emissions are still generated by transport, and these emissions continue to rise. Global energy-related carbon dioxide (CO_2) emissions grew by 0.9% in 2022, but total transport emissions grew faster, increasing by 1.7%. It is essential that cities continue to pursue ambitious transport policies to combat this overall trend.

That is why 35 global cities have signed the C40 Green and Healthy Streets Accelerator, committing to address the principal causes of urban transport pollution through inclusive climate action. These commitments are:

- **Procure with their partners only zero emission buses from 2025**
- **Ensure a major area of the city is zero emission by 2030**

This report outlines the progress made in 2022–23 by 27 of the 28 C40 cities that have signed the C40 Green and Healthy Streets Accelerator and reported their progress. The information and data included covers the period September 2022 to the end of September 2023.

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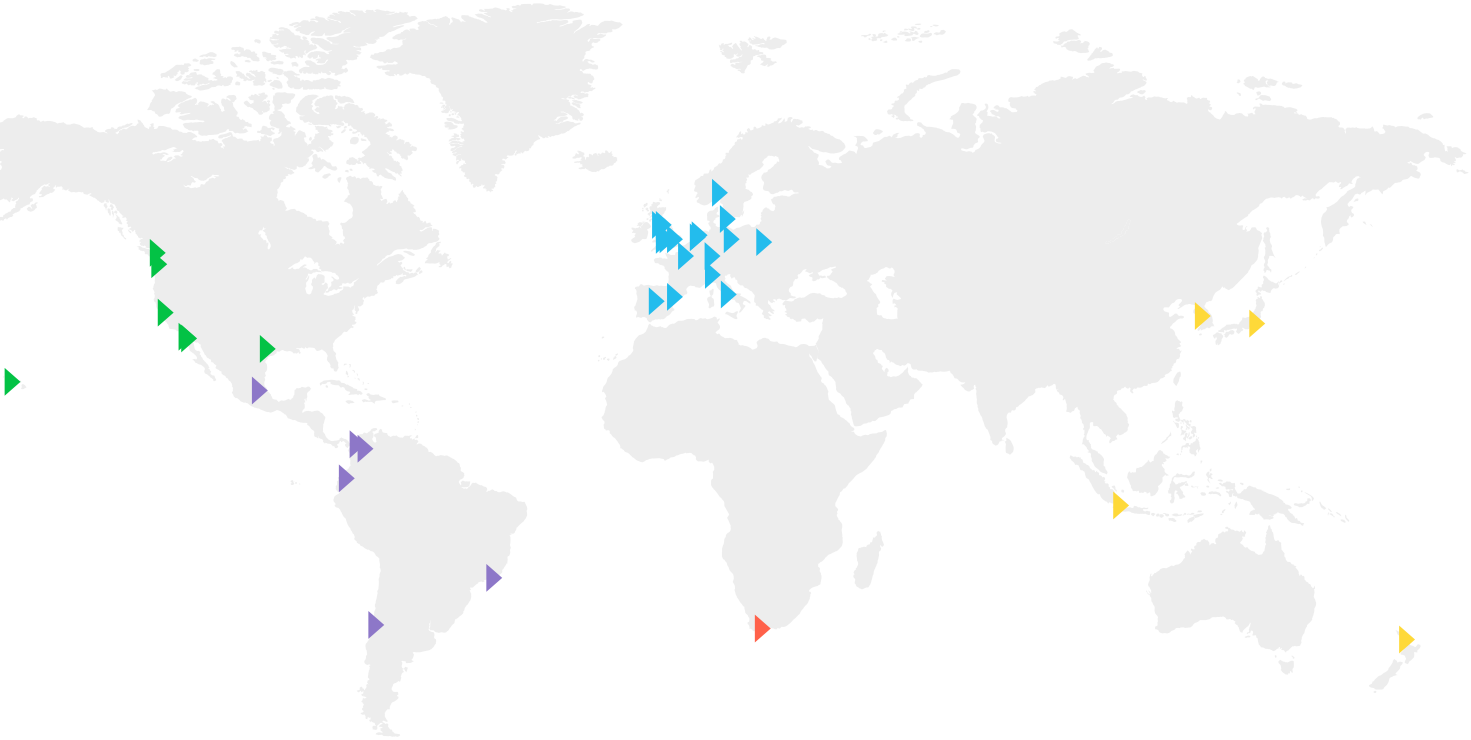
SIGNATORIES



- Amsterdam
- Auckland
- Austin
- Barcelona
- Berlin
- Birmingham
- Bogotá
- Cape Town
- Copenhagen
- Greater Manchester
- Heidelberg
- Honolulu
- Jakarta
- Liverpool
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- Rio de Janeiro
- Rome
- Rotterdam
- Santa Monica
- Santiago
- Seattle
- Seoul
- Tokyo
- Vancouver
- Warsaw
- West Hollywood

PROGRESS OVERVIEW

Cities are on the front lines of the climate emergency and suffer from significant air pollution and traffic congestion. There is a clear and urgent need to transform the way we travel around our cities.

In 2023, the global spotlight has centred on urban clean air zones. If designed with equity at the forefront and communicated effectively, vehicle reduction policies have the power to significantly improve residents' quality of life. Fewer polluting cars on our roads means improved road safety, better health and equity outcomes, and fewer harmful emissions. Vehicle pollutants like nitrogen oxides (NOX) and particulate matter (PM) contribute to health problems such as asthma, lung disease, cancer and dementia, among other conditions. Reducing the space for cars on our roads increases the space for alternative transport modes such as public transport, walking and cycling, and leads to a more equitable distribution of public space.

Removing polluting vehicles from cities is one of the most equitable and impactful climate actions that cities can pursue towards zero emission areas, and signatory cities are leading the way. A total of 14 signatory cities now have regulations that control the circulation of such vehicles across a significant part of the city. Notably, in August 2023, London successfully expanded its Ultra Low Emission Zone (ULEZ) to all of Greater London. The expanded zone is the largest of its kind in the world, covering 1,500 square km and improving air quality for 9 million Londoners.

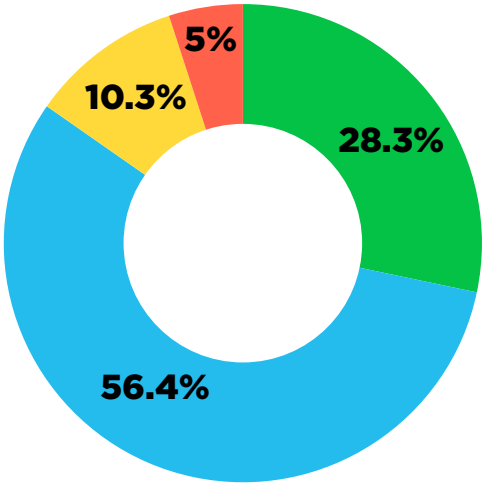
Cities also continue to transition their municipal bus fleets to zero emission. As of November 2023, nine signatory cities already procure only zero emission buses (up from five since 2021). In Latin America, C40's Zero Emission Bus Rapid-deployment Accelerator (ZEBRA) programme is transforming the zero emission bus market in the region. Santiago de Chile now boasts a fleet of 2,000 electric buses, while Bogotá has almost 1,500 electric buses in circulation. Similarly, Seoul is continuing to transition its fossil fuel bus fleet to electric, with just under 1,000 electric buses in the city. By 2026, the city aims to introduce an additional 1,000 hydrogen buses into the city fleet.

This report showcases how cities are continuing to transform their streets into inclusive, healthy and attractive public spaces.

DATA ANALYSIS

As part of the annual reporting process, cities submit detailed information on the specific actions they are implementing to meet the accelerator commitments. This section highlights some of the key insights drawn from this data.

Figure 1: Status of all Accelerator actions

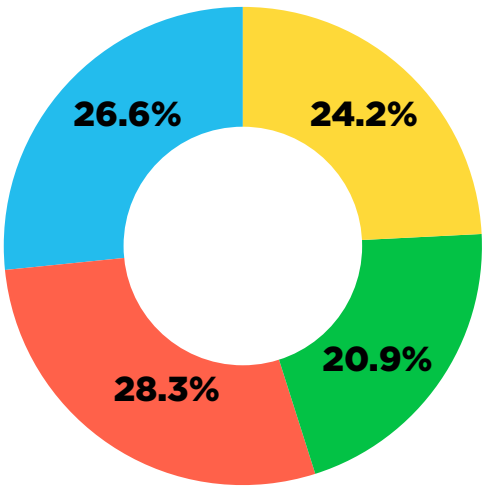


Cities are implementing a number of supporting policies towards the two overarching commitments. Signatory cities have reported more than 350 actions, with an average of 12 actions per city. This is an increase of 94 actions compared to the number of actions reported in 2021.

Figure 1 shows the status of all city actions. Around 85% of the total actions are on-track or delivered, while the remaining 15% are delayed or not yet started.'

- Delivered
- On-track
- Delayed
- Not yet started

Figure 2: Breakdown of zero emission area actions

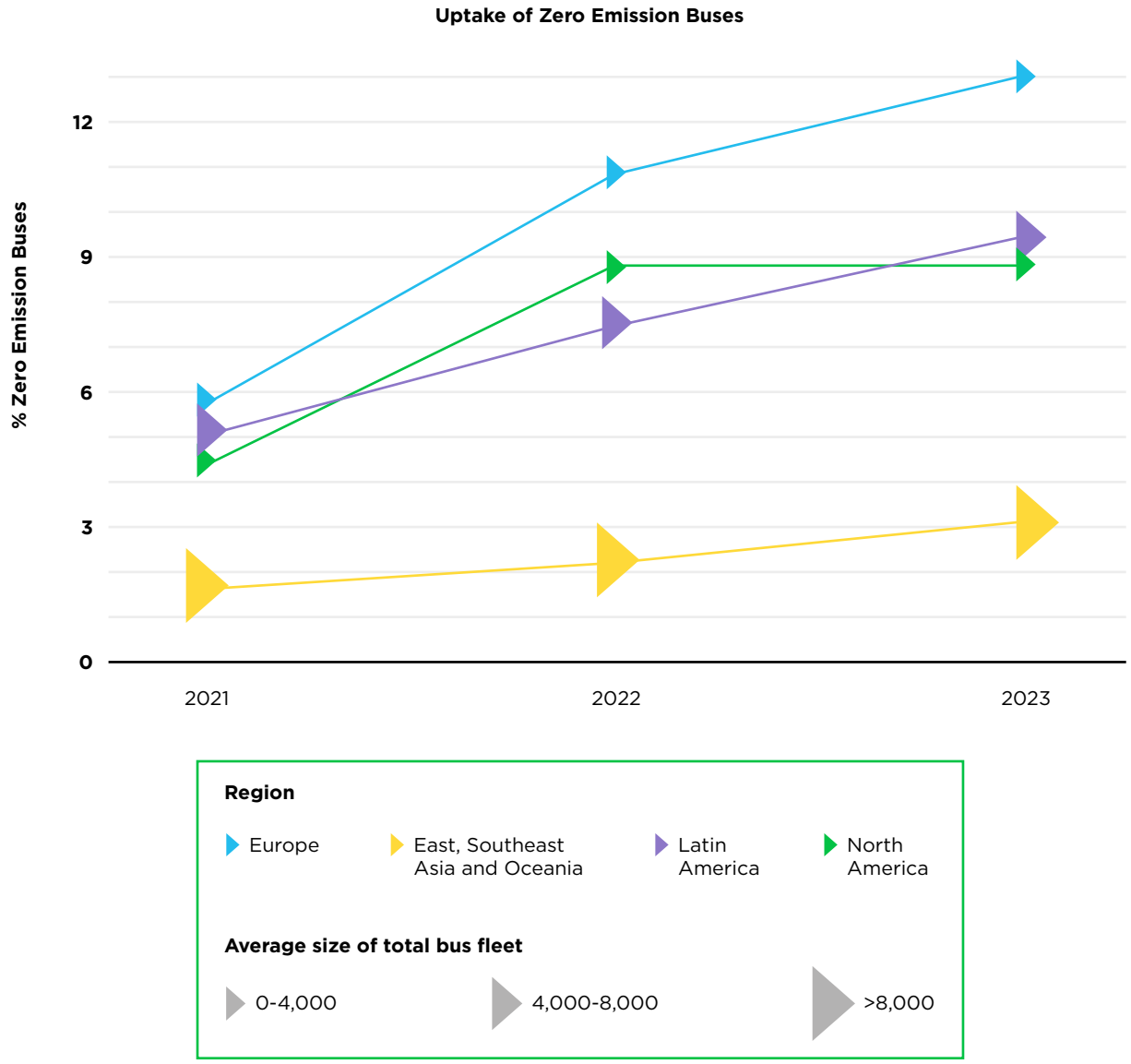


Zero emission areas (ZEAs) are a strategic priority for cities representing a holistic vision that comprises multiple interventions across the transport sector. This is reflected in the range of actions that cities are implementing towards ZEAs.

Figure 2 illustrates the areas in which cities are taking action towards ZEAs as reported to C40.

- Zero Emission Area Planning
- Zero Emission Freight
- Zero Emission Vehicles
- Walking, Cycling and Transit

Figure 3: Evolution of zero emission bus fleets



Cities are taking the necessary steps to transition to zero emission as quickly as possible, to welcome in a new era of cleaner and greener public transport. Overall, there are now more than 10,000 zero emission buses in operation across all signatory cities.

Figure 3 shows the evolution of zero emission bus uptake in signatory cities between 2021 and 2023, by region. It shows that cities continue to transition their public fleets to zero emission, with the percentage of the fleet that is zero emission increasing year-on-year since 2023, with one exception in North America between 2022 and 2023.

Graph based on data from 28 C40 cities reporting through the Green and Healthy Streets Accelerator

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CITY PROGRESS SUMMARIES

The following section of this report contains progress and action summaries that were self-reported by each of the C40 Green and Healthy Streets Accelerator signatory cities. The city summaries showcase past, present, and future actions the city is undertaking to achieve the implementation milestones of the Accelerator.

SIGNATORY CITIES IN

AFRICA

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CAPE TOWN

SOUTH AFRICA

Cape Town has experienced considerable environmental, social and economic stresses since signing the C40 Green and Healthy Streets Accelerator, including a devastating drought; the COVID-19 pandemic; and 'state capture' of many state-owned enterprises, resulting in the failure of the suburban rail service, and a highly unstable electricity supply.

Cape Town is therefore more committed than ever to plan and implement resilience measures in the city. The C40 Green and Healthy Streets Accelerator is supporting the City of Cape Town to track progress on its shift to using alternative energy for its bus fleet, as well as an innovative urban renewal programme on a major public transport interchange.

Cape Town is on track to procure alternative energy buses at the next opportunity to purchase vehicles for its MyCiTi fleet. Cape Town's bus service currently accounts for only around 2% of commuter trips, but the city aims to increase its use.

For its urban renewable programme, Cape Town has successfully included the Bellville Future City plan in the city's district spatial development framework (DSDF), and the local spatial development framework (LSDF) plan, which is in the approval process. It strongly supports walking, cycling, public transport, micro-cargo to reduce freight vehicle emissions, and the improved integration of public transport modes.

SIGNATORY CITIES IN

EAST, SOUTHEAST ASIA AND OCEANIA

AUCKLAND

NEW ZEALAND

Since signing the C40 Green and Healthy Streets Accelerator in 2018, Auckland Council has worked to deliver green and healthy streets and thriving neighbourhoods across the city. Given the scale of this ambitious endeavour, the journey to bring about substantial and ambitious transformations in the transportation sector has been met with its share of challenges across the region. However, the city has embarked on a few pioneering projects to set in motion the positive changes the city is working towards.

Auckland Transport is working to electrify the city's bus fleet and has recently released the third edition of its Low Emission Bus Roadmap, which sets out a pathway to achieve a fully zero emission fleet by 2035. The Low Emission Bus Roadmap addresses decarbonisation challenges, while providing a set of principles to guide and progress the transition to a zero emission bus fleet. The roadmap will continue to be refined and updated as technology advances, market trends change, and more evidence is gathered from trials.

Motor vehicle traffic in the city centre is responsible for the majority of emissions and air pollution in Auckland. To address this, the city is moving towards zero emission transport across key areas. A comprehensive and coordinated Access for Everyone (A4E) plan is in development. This plan aims to reallocate some road space within the city centre to prioritise spatially efficient transport modes and fulfil the vision set out in the city centre master plan, with the aim to create a zero emission area (ZEA) in Auckland's city centre by 2030. This action is supported by the Transport Emission Reduction Pathway (TERP).

The A4E plan aims to deliver a ZEA and reduce the impacts of road transport on air quality in the city centre. The pedestrian priority zone across Auckland's Waihorotiu / Queen Street Valley forms a key backbone of the ZEA. Combined with low- or no-emissions public transport, this initiative could significantly reduce exposure of the city's residents to air pollutants.

The city also continues to improve access to sustainable transport modes. The city has completed the business cases for walking and cycling programmes that support the development of the ZEA. The first projects for walking, cycling and micro-mobility are underway. A Regional Public Transport Plan is also under development, which will set out the future of public transport planning and investment in the Auckland region. In 2023, the city conducted an electric truck trial. Key lessons learned from this trial will inform the A4E plan and support the transition to zero emission freight in the city centre.

The city is also developing a strategy to support electric vehicle (EV) infrastructure and transition priority fleets, which will align Auckland's approach with the national approach and inform a supporting charging network for the ZEA. While adoption of these strategies and pathways is an important step towards transforming transportation across the city, significant challenges exist in delivering the rapid and effective implementation necessary. Critically, focus on more cost-effective and expedient project delivery, stakeholder accountability, reshaping the city to reduce car dependency, and fostering ambitious action are all needed to truly transform the transportation landscape.

JAKARTA

INDONESIA

Since signing the C40 Green and Healthy Streets Accelerator in 2019, Jakarta has made significant progress towards making the city more walkable and healthier. Jakarta received the 2021 Sustainable Transport Award for its efforts to integrate transportation and revitalise the city's bus fleet.

The DKI Jakarta Provincial Government issued Governor Decision Number 576 of 2023 to help control air pollution in the city, which divides the city's 2023 action plan into three groups of strategies. These are the Strategy for Upgrading Administration of Air Pollution Control, the Strategy for Reduction of Air Pollutant Emissions from Moving Sources, and the Strategy for Reduction of Air Pollutant Emissions from Non-Moving Sources.

The Strategy for Reduction of Air Pollutant Emissions from Moving Sources includes measures to rejuvenate public transport, develop green transport and develop low emission zones (LEZs) in the city. To accelerate the implementation of green transport, the DKI Jakarta Provincial Government has also issued guidelines for the use of battery powered electric vehicles (EVs) in the Transjakarta Transport Service. The city has set a target to introduce over 10,000 battery-powered electric vehicles by 2030, with an interim milestone of 50% to be achieved by 2027.

The city's target for procurement and operation is 100 units of electric buses by the end of 2023, of which 52 units are already in operation. There are now three LEZs across Jakarta, including the Old Town (Kota Tua) LEZ, the Tebet Eco Park LEZ, and the Dukuh Atas LEZ. The DKI Jakarta Provincial Government is currently finalising a study to identify the best locations for LEZs in DKI Jakarta, in collaboration with the World Resources Institute Indonesia (WRI Indonesia).

In line with Jakarta's targets in the Air Pollution Control Strategy, the city is expected to introduce two new LEZ locations each year.

SEOUL

SOUTH KOREA

Between 2018 and 2023, Seoul deployed 1,033 electric buses and 27 hydrogen fuel cells. Since 2021, the city has procured only zero emission buses, four years ahead of the C40 Green and Healthy Streets Accelerator target date. The city will continue to replace fossil fuel buses with zero emission buses over the coming years. Seoul also intends to shift diesel street cleaning vehicles to compressed natural gas (CNG) and electric vehicles (EVs). The city will electrify small city buses into EVs, along with cargo trucks and motorcycles.

Seoul's Green Transport Zone was established in 2017 under the city's vision for a people-oriented, safe and pleasant city centre that minimises passenger vehicles. In the coming year, Seoul will also encourage early scrappage of Grade-4 vehicles and expand the driving ban in the Green Transport Zone and the low emission zone (LEZ), which affects the entire city boundary to include Grade-4 vehicles.

Seoul is aiming to reduce passenger car traffic within the zone by 30%, by reorganising the roads in the city centre. The zone covers 16.7 square km. By reorganising its roads, Seoul has expanded walking, cycling and public transport options. Older and more polluting vehicles are restricted from entering the zone to improve air quality. The city plans to reorganise a further 16 roads covering 22.6 square km by 2030.

TOKYO

JAPAN

The Tokyo Metropolitan Government has taken the initiative to ensure all government-owned vehicles are converted to zero emission vehicles (ZEVs) when they are renewed and is actively promoting the introduction of ZEVs.

Toei Bus, Tokyo's Metropolitan Transport Bureau, introduced fuel cell buses in 2017 as the first commercially available vehicles in Japan for use as route buses. Some private bus companies have also started operating fuel cell buses. Including private buses, a total of more than 100 fuel cell buses have been introduced as of March 2022.

Tokyo mandates businesses that use 200 or more vehicles to systematically introduce low emission and fuel-efficient vehicles. The mandatory introduction rate was raised in April 2022. The city also introduced a new mandatory introduction rate for non-gasoline vehicles in passenger cars. The Tokyo Metropolitan Government has set a new target of 50% of new passenger car sales to be ZEVs by 2030, to help achieve a Zero Emission Tokyo.

Tokyo is also promoting the spread of ZEVs in its programme for new buildings. With the expected rise in ZEVs, if charging facilities are not installed in newly constructed buildings, then additional costs and environmental burdens associated with retrofitting, such as noise and construction by-products, will be unavoidable. Tokyo recognises it is important to encourage the development of charging facilities with a view to a society in which ZEVs will be widely used in the future. Therefore, in order to promote the installation of a certain number of ZEV charging facilities, TMG established the Electric Vehicle Charging Facility Installation Standard, a requirement standard that must be followed when new buildings are constructed.

Tokyo's Green Building Programme for New Buildings requires large-scale new buildings with a total floor area of 2,000 square metres or more to install EV charging facilities in at least 20% of parking lots with an upper limit of 10 spaces when the building has five or more dedicated parking lots. It also requires that at least 50% of parking lots must be equipped with trunking and conduits, to prepare for the future installation of EV charging. In shared parking with one or more parking lots, the building is required to install at least one EV charging point. In addition, at least 20% of parking lots must be equipped with trunking and conduits to prepare for the future installation of EV charging facilities.

In September 2022, the Tokyo Metropolitan Government set up a council to promote the installation of charging facilities in condominiums. The council is made up of stakeholders such as charging companies and EV sales companies with the goal of expanding the installation of charging facilities in existing condominiums, where installation is difficult. As of March 2023, nearly 900 charging facilities had been installed in condominiums in Tokyo.

SIGNATORY CITIES IN

EUROPE

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AMSTERDAM

THE NETHERLANDS

On 6 June 2023, the City of Amsterdam adopted an implementation agenda to advance zero emission mobility. This policy document, covering 2023–2026, illustrates a zero emission pathway towards 2030.

The city is on track to electrify all bus routes by 2025, by which point all 230 buses operated by the municipal transport agency will be electric.

In 2025, Amsterdam's current low emission zone (LEZ) will be updated to include further vehicle classifications. All passenger vehicles must meet the minimum diesel Euro 5 emissions standard, while mopeds, scooters, trucks, delivery vans, taxis and coaches must be zero emission in certain areas of the city boundary.

Amsterdam is developing a roadmap for a zero emission area (ZEA) for cars by 2030, and has proposed zero emission vehicle incentives to support its implementation.

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BARCELONA

SPAIN

Barcelona has committed to become carbon neutral by 2030. In addition, the city has approved its Urban Mobility Plan 2024, which presents a roadmap to achieve a safer, healthier, more equal and sustainable Barcelona. The plan includes 62 lines of action and over 300 measures. Its goal is to ensure that 80% of all journeys in 2024 are made on foot, public transport or by bike.

In the transition to zero emission buses, Transports Metropolitans de Barcelona (TMB) has procured an additional 36 hydrogen fuel cell buses, in addition to investing in the rail service on Line 1 of the metro with new 8000-series trains. These investments are translating into increased ridership. In September 2023, TMB experienced its highest ever number of journeys, with more than 53 million ticket validations across the TMB's public transport network.

Barcelona is also encouraging a shift to active travel by improving and expanding the bike network. Between 2021 and 2023, Barcelona built 32 km of additional cycle lanes to make it safe and accessible for people to make journeys by bike. The new bike lanes constructed in 2023 are on average used by 24,000 cyclists daily.

In January 2023 Barcelona introduced its new low emission zone (LEZ), meeting the air pollution and global heating requirements of the National Spanish Climate Change and Energy Transition Law. According to this law, all Spanish municipalities with more than 50,000 inhabitants must establish a LEZ by the end of 2023.

Public space has continued to be transformed across Barcelona. In the Eixample district, four new green axes and squares have been reconfigured in order to prioritise pedestrians.

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BERLIN

GERMANY

Berlin has made strong progress in converting its bus fleet to zero emission. Berlin is already procuring only electric buses for public transport, ahead of the accelerator target. In addition, the Berlin Mobility Act stipulates that public transport must be fully electrified by 2030. To this end, bus depots are currently being rebuilt or reconstructed so that they have the infrastructural basis for the conversion to electric vehicles.

Berlin's measures are primarily aimed at encouraging and enabling a switch to public transport, cycling and walking. Women, young and elderly people as well as those facing socioeconomic hardship are less likely to use cars and more likely to use buses, trains, bicycles, or to walk. Strengthening these modes of transport improves the mobility opportunities of these groups. At the same time, socially disadvantaged people in particular are forced to live along main transport axes, and are therefore most at risk from air pollution, noise and accidents. Measures that ensure fewer vehicles with combustion engines are on the road at high speeds in cities reduce the burden on these affected groups. The redistribution of road space associated with these measures also support marginalised communities who depend on public space for recreation because they have less living space available, often without usable open space such as a balcony or garden.

The zero emission zone is a relevant tool for Berlin to meet its climate targets and is mentioned in two central plans – the Urban Development Plan for Mobility and Transport, and the Berlin Energy and Climate Protection Programme (BEK 2030), with an implementation period of 2022–2026. The prerequisite for this is a further improvement in the services offered by the environmental network and the expansion of electromobility, which is constantly being worked on. Berlin also hosted the C40 Air Quality Workshop in 2023, with a central theme of low emission zones (LEZs) or zero emission zones.

To encourage a modal shift towards walking, cycling and public transport, Berlin is expanding its cycle paths, adding 65.6 km in 2021 and 2022. Berlin is also increasing the density and size of its public transport network, improving the timetable, capacity and connectivity, particularly in the outer district.

Berlin is promoting zero emission freight transport through two funding programmes. The first, Business-Oriented Electric Mobility, promotes the electrification of commercial vehicle fleets. Since 2018, the city has funded nearly 5,000 e-vehicles and 150 electromobility consultations. The second funding programme supported the purchase of over 200 cargo bikes and trailers in 2021. These are particularly relevant for zero emission last mile deliveries.

Berlin is expanding the charging infrastructure to facilitate the transition to electric vehicles. In Berlin, there are 2,909 publicly accessible charging points for this purpose.

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COPENHAGEN

DENMARK

The City Council of Copenhagen has mandated that all bus lines be converted to zero emission by 2025. In collaboration with Movia, Denmark's largest public transit agency, it has created new solutions within the transportation services which are efficient, green, and zero emission.

In 2022, 43% of Copenhagen's bus operations ran on electricity. By the end of 2023, this will rise to 60%, and will reach approximately 90% by 2025. The city will achieve 100% zero emission bus operations at the beginning of 2026. This will reduce Copenhagen's emissions by approximately 17,000 tons of carbon dioxide (CO_2) per year, and ensure cleaner air for residents and visitors, marking an important step towards a healthier, greener, and carbon neutral city.

The City of Copenhagen is also working to establish zero emission zones by 2030. Currently, the necessary legislation to establish zero emission zones is not in place. However, the City of Copenhagen is piloting a zero emission Green Traffic Street and monitoring results.

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HEIDELBERG

GERMANY

Heidelberg's air quality has improved significantly since the city introduced its low emission Environmental Zone. The city has complied with the national nitrogen dioxide (NO_2) limit since 2017.

The Karlsruhe regional council rolled back Heidelberg's Environmental Zone on 1 March 2023, in accordance with an update to the air pollution control plan for the Karlsruhe administrative district. Data analysis shows that pollutant limits will not be exceeded even after the Environmental Zone has been abolished.

The city will introduce further measures to reduce emissions through its sustainable mobility funding programme, including expanding cycling.

On 20 July 2022, the City Council of Heidelberg adopted the following new climate neutrality targets:

1. Heidelberg is committed to work towards climate neutrality by 2030 in all areas of action and to prioritise climate protection in line with its participation in the EU Climate Neutral and Smart Cities mission.
2. The city will achieve complete climate neutrality by 2040 at the latest, according to the municipal BISKO (municipal accounting system).
3. Heidelberg is developing a new climate protection plan with new additional quantified measures by sector and interim targets up to 2030.

So far, the city has been working to achieve targets set out in its 100% Climate Protection Master Plan and Climate Action Plan. Going forward, the Climate Mobility Plan will be based on the target of climate neutrality in line with the resolution of 20 July 2022.

The Climate Mobility Plan will be combined with Heidelberg's urban development concept and the climate neutrality targets. In addition, immediate measures will be defined in scenarios with high climate impact.

The project is expected to be completed and approved by Heidelberg City Council in the first quarter of 2024.

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LONDON

UNITED KINGDOM

London has made significant strides in its commitment to transform its streets into greener, healthier, and more prosperous places. Notably, C40 Co-Chair Mayor of London Sadiq Khan expanded London's Ultra Low Emission Zone (ULEZ) on 29 August 2023 to cover the whole Greater London area. The expansion of the ULEZ has made London the largest clean air zone of its kind in the world, helping the capital's nine million residents to breathe cleaner air.

The London-wide ULEZ has already been highly effective at reducing the number of older, more polluting vehicles in London. On an average day, 95% of vehicles seen driving in London now meet the ULEZ emission standards, up from just 39% in 2017. The expansion of the ULEZ is projected to clean up London's air by cutting road traffic nitrogen oxides (NO_x) emissions by 362 tonnes across Greater London in 2023 alone. This is on top of the air quality improvements Londoners are already experiencing from the Central London and Inner London ULEZ, as well as those expected in the long term. The policy has already contributed to a 46% reduction in harmful nitrogen dioxide (NO_2) concentrations alongside roads in Central London, and a 21% reduction in Inner London compared to what they would have been without the scheme.

The ULEZ is the centrepiece of a range of measures Mayor Khan is implementing to reduce the number of polluting vehicles in London and transition away from vehicles powered by fossil fuels. This has included putting a record number of over 1,000 zero emission buses on London's roads. Furthermore, over half of London's taxi fleet and 25% of London's Private Hire Vehicle (PHV) fleet are now Zero Emission Capable (ZEC). London is also supporting the delivery of more than 18,000 electric vehicle charge points, over one-third of the UK's total.

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MADRID

SPAIN

Since September 2022, the city of Madrid has continued to implement the Madrid 360 Sustainability Strategy as a guide for policies to improve air quality and mitigate and adapt to climate change.

The strategy includes a series of measures that prioritise active travel, a commitment to improving and expanding public transport, shared mobility and the renewal of the vehicle fleet with cleaner fuels and technologies. In addition, Madrid City Council is working with other administrations to implement structural measures, such as low emission zones (LEZs), park-and-ride zones, BUS-VAO lanes, and improvements to parking policies to minimise unnecessary journeys.

In the last year, Madrid has promoted the public access fast charging network, as well as increased the number of charging points in municipal facilities for the City Council's vehicle fleet. The city has completed the pedestrianisation of Puerta del Sol, eliminated diesel vehicles from the city bus fleet, and introduced 180 electric buses which now operate on Madrid's streets. The city has expanded the public bicycle rental service 'BiciMad' across the whole city, with 611 stations and 7,500 bicycles. Madrid has also expanded the Regulated Parking Service (SER) and continued introducing more electric vehicles (EVs) into the taxi and bus fleet.

MILAN

ITALY

Since signing the C40 Green and Healthy Streets Accelerator in 2018, the City of Milan has coordinated with the public transport agency ATM to transform the city bus fleet.

Since 2021, ATM has committed to procuring only zero emission buses, four years ahead of the accelerator target.

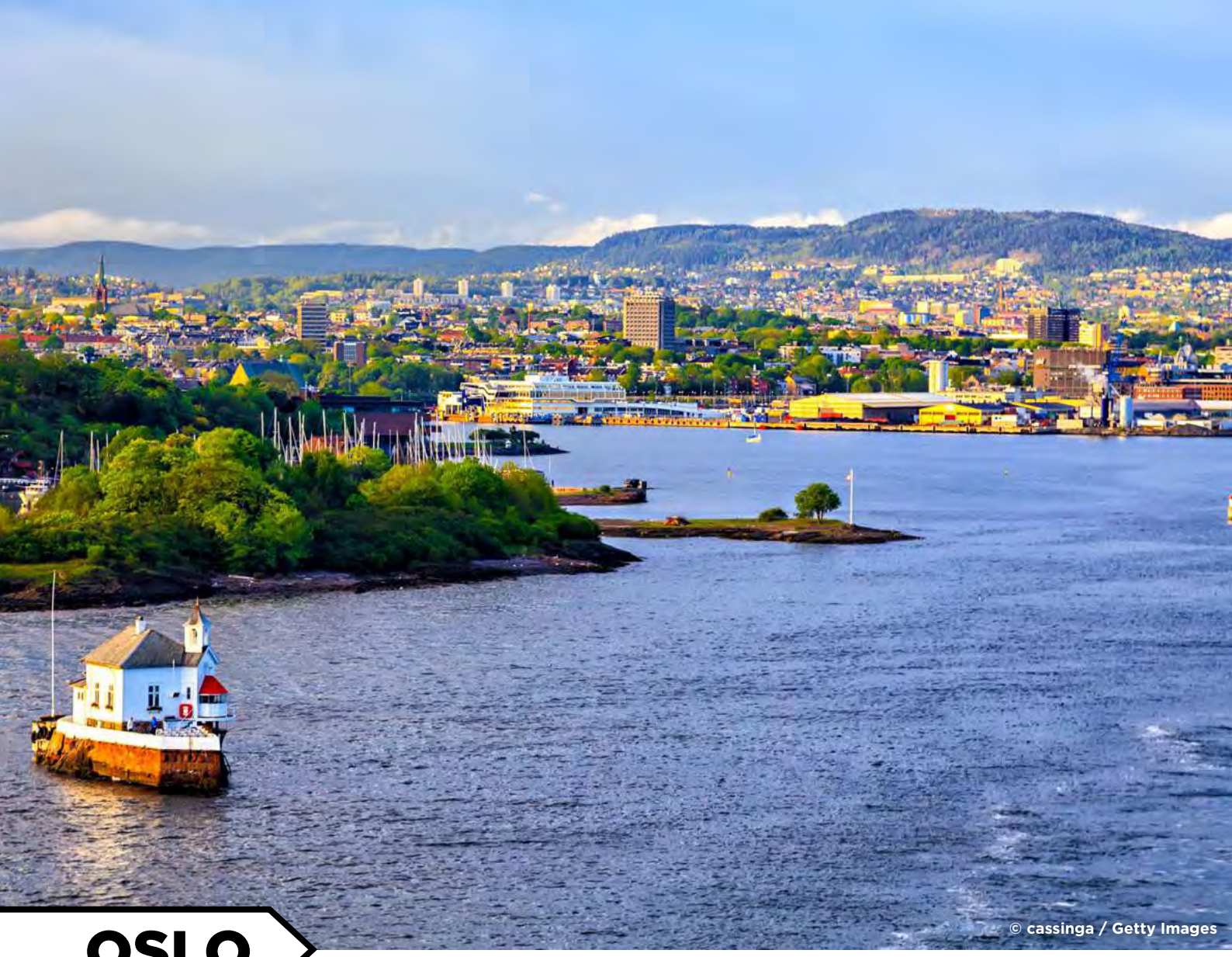
The City of Milan is committed to reducing vehicular traffic, particularly from highly polluting vehicles, and consequently atmospheric emissions. This is achieved through measures to improve sustainable mobility and quality of life for residents. These include the creation of pedestrian areas and limited traffic zones, as well as reducing on-street parking spaces and long-term parking.

The city is also strengthening its existing policies to reduce traffic, accelerate the transition to sharing mobility and zero emission transportation, and promote pedestrianisation projects throughout the city. These projects are designed to open up public spaces, expand sidewalks, and create new bike lanes which cover 328 km as of December 2023. In November 2022, the city inaugurated the first section of the new M4 metro line and the second section in 2023, connecting the city centre to Linate airport in 12 minutes. The entire line will connect Linate airport to San Cristoforo terminus and will be 15 km long.

Milan continues to tighten the rules to limit the most polluting vehicles in accordance with the regulations of the Congestion Charge Area (Area C) and the Low Emission Zone (Area B). Diesel vehicles will be completely banned by 2030.

Milan is also actively addressing equity concerns for public transport drivers and marginalised users, by providing welfare plans for ATM employees and removing transit barriers for people with disabilities. Public grants are also being offered for replacement to electric vehicles (EVs), demonstrating the city's commitment to support its residents to transition to less polluting modes of transport.

The Agency for Mobility, Environment and Territory (AMAT), in collaboration with the Municipality of Milan and with the support of C40 Cities and the INGKA Group (IKEA Retail), has undertaken a two-year project to gather knowledge and assist local decision makers to understand the dynamics influencing urban goods distribution. The project engaged stakeholders, assessed the flow of goods to quantify daily freight transported in Milan, and implemented a pilot action to assess the economic, operational, and environmental sustainability of cargo bikes for last-mile e-commerce deliveries. The project also analysed potential actions and measures to guide the ecological transition of logistics and make Milan more sustainable, efficient, safe, and livable. The overall aim is to implement a zero-environmental impact logistics system by the 2026 Milan-Cortina Winter Olympics and Paralympics.



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OSLO

NORWAY

Oslo's public transport administration Ruter now only procures zero emission buses in its tenders. In 2024, the majority of buses circulating within Oslo will be zero emission, with very few exceptions. By 2028 all buses in Ruter's operating area will be zero emission.

The City of Oslo is working on several measures to ensure that a major area of the city is zero emission by 2030. The city has developed a plan for the implementation of a zero emission zone, however is waiting for an amendment to be introduced by the national government in order to go ahead with implementation.

Further steps have been taken to make the wider city area a more liveable place by encouraging walking and cycling and reducing car dependency. More streets have been closed off temporarily for cars and opened for pedestrians, cyclists, restaurants and other outdoor activities.

Oslo's cycling infrastructure is ever expanding, with 20 km of new infrastructure built in 2023. Measures to increase pedestrian safety have also been implemented in 2023 with intersection rebuilding, speed reductions and shortcuts for pedestrians.

Charging infrastructure is continuously being rolled out, including both curbside charging for personal vehicles as well as charging reserved only for freight vehicles.

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PARIS

FRANCE

Paris has continued to implement actions to decarbonise its transport system. The city's electric vehicle (EV) charging network now has over 2,000 charging stations, which is helping to encourage the uptake of cleaner vehicles. The city introduced the Central Paris low emission zone (LEZ) in 2015, banning Unclassified, Crit'Air 5 and Crit'Air 4 vehicles from entering the zone. The current plan to increase limits to include Crit'Air 3 will come into place on 1 January 2025.

Paris' 'school streets' programme to pedestrianise streets in the vicinity of schools continues to expand across the city. As of 2023, there are 180 'school streets' benefiting 230 schools in Paris. The aim is to make the journey between home and school safer for children by calming traffic, but also to combat air and noise pollution by eliminating or limiting car use where possible, or by lowering their speed to 20 kph in calmed zones.

The city has implemented 21% of the Paris Plan Velo and has 55 km of cycling lanes planned for the 2024 Olympics. This has already made an impact on the uptake of active travel. The use of the capital's bicycle facilities jumped by over 37.3% in the first quarter of 2023 compared to 2022, according to figures from the Observatoire Parisien des Mobilités. Cycling is hugely popular in Paris, with 7% of journeys made by bike, compared with less than 5% of journeys before the COVID-19 pandemic. There has been a 71.6% increase in the use of cycle paths between 2021 and 2023.

Paris is also working to electrify waste collection with the introduction of 18 electric refuse vehicles. Servicing vehicle fleets and heavy duty vehicles represent less than 5% of the vehicle fleet, but produce between 40–60% of road traffic particulate matter (PM) and nitrogen oxides (NO_x) emissions. Through this procurement, 21 tonnes of carbon dioxide (CO_2) emissions will be avoided every week in Paris.

Following April 2023's vote by Parisians in a referendum on the end of free-floating electric scooters in Paris, the three operators offering this soft mobility service (Dott, Lime and Tier Mobility) had until August 31, 2023, to remove the 5,000 electric scooters from the streets of the capital. The entire fleets of scooters were removed from Paris public spaces. Most of the scooter parking spaces were transformed into bicycle parking areas.

Paris Ring Road (also called boulevard périphérique) will be transformed during the Paris Olympic Games: a lane will be reserved for athletes and the Olympic and Paralympic family. In 2024, the City of Paris wishes to implement this lane permanently on the entire boulevard périphérique for carpooling and public transport, as a legacy of the Olympics. Vehicle speed will also be limited to 50 kph. In Spring 2023, a consultation was held in the form of electronic public participation on the implementation of a lane reserved mainly for car-sharing on the boulevard périphérique.


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In just a few years, changing modes of transport and the boom in soft mobility, such as bicycles and scooters, have transformed Paris. Tensions and conflicts between users of public space have also emerged, as well as incivilities. To address this, Paris City Council adopted the Street Code in July 2023, which is designed to restore serenity to the streets, giving priority to pedestrians and marginalised people. It reminds people of the rules to be respected collectively and individually, so that they can enjoy public space without apprehension. It is based on three pillars: design of public space facilities, public education and communication, and enforcement. Numerous departments of the City of Paris are involved, including the Municipal Police, Communication, Roads and Transport, School Affairs and more.

Following the Street Code, in December 2023 Paris adopted an investment plan 100% dedicated to pedestrians. The city pedestrianised one hundred new hectares, extended the 'Paris Respire' scheme, created more shaded areas, planted sidewalks, and designated new pedestrian districts. The municipality's new plan gives pride of place to walking in all its forms.

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ROME

ITALY

In the city's efforts to update and improve its public transport system, Rome has finalised the purchase of 38 metro trains and 121 trams. The city has also launched a call for tenders for the first part of the Termini Vaticano Aurelio tram line for the Termini–Piazza Venezia section. The electric minibus system in the historic centre has been completely restored, and the city has also introduced 118 new 12–metre hybrid buses. The city has overseen the renovation and restoration of Tram Line 8 and begun implementing a new low emission zone (LEZ) in the green belt, with the installation of the first 51 electronic gates.

Over the past year, Rome has opened the first two green and safe 'school streets', which are car-free areas outside schools. The city has also opened the Annibaliano and Conca D'oro metro exchange car parks, and the first seven bike box stations for storing bicycles in metro stations were unveiled and made operational. The city also launched new shared mobility services for scooters and bikes and launched a call for tender for a new car-sharing service.

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ROTTERDAM

THE NETHERLANDS

Rotterdam is working to achieve its goal of an emissions free urban mobility system by 2040. Part of this ambition is replacing public transport buses with electric buses. Today, more than 40% of all bus kilometres are driven by an electric bus. By 2030, all buses in the city will be zero emission.

Rotterdam is also introducing a 49 square km zero emission zone for logistics vehicles. This zone will be implemented in 2025 and be fully effective in 2030. The main risk is ensuring that the grid has capacity for the fast transition in fields including renewable energy, industry, built environment and mobility. The availability of zero emission trucks may also prove a challenge.

Rotterdam is cleaning up its own municipal fleet in line with and ahead of the transition scheme for the zero emission zone. Rotterdam is also continuing its research and development phase to create simulation tools for the development, analysis and evaluation of flanking policy. To help all parties in Rotterdam switch to zero emission, Rotterdam is also rolling out a dense network of slow, fast and heavy duty electric vehicle (EV) chargers. In addition to the rollout of public chargers, the municipality has also commissioned a project which stimulates companies cooperating in industrial zones, to ensure the energy transition avoids overexerting the grid. Rotterdam is also working with large employers in and around the city to clean up the mobility of their commuting employees.


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WARSAW

POLAND

Warsaw is tackling emissions from transport by expanding its metro and tram networks. The city is gradually replacing its public transport fleet with cleaner vehicles and prioritising active transport with the creation of new cycling routes. Many streets and public spaces in the city are being redesigned to increase greening with trees, pocket and linear parks, and space is being reallocated for more walking and cycling.

By the end of 2024, the city plans to expand the metro by 45.4 km. So far, additional sections of Warsaw's second metro line have been opened in the Wola, Bemowo, and Targówek districts. Above-ground transportation has been improved to quickly and frequently connect to the new underground stations, and new bus connections have been launched. New solutions have been implemented in the southern and eastern districts of Warsaw. New tram connections to Mokotów, Wilanów, Wola and Bemowo are being constructed, as well as to the Southern Warsaw Ring Road with a tunnel under Ursynów district and a bridge over the Vistula River. Additionally, a concept has been developed in the city for the expansion of the metro network through three new lines, plus new tram routes to connect all 18 districts of the capital by 2050.

Warsaw is also working to create a clean transport zone in 2024, Strefy Czystego Transportu (SCT), which will limit the entry of the most polluting vehicles into the city. This is after a recent statutory change which has given local governments in Poland the power to implement clean transport zones in order to reduce transport-related air pollution. Residents have had access to the design of the zone through public consultations. Findings from a Clean Air Fund study demonstrated support for policy intervention in Warsaw. It showed that over half of Warsaw's residents believe air quality is poor in summer. It also found that 66% of residents would like to create a clean transport zone in their city, and almost half of the respondents point to cars as the main source of pollution in the capital. The clean transport zone was voted through by the city council in December 2024, and will be gradually implemented from July 2024.

SIGNATORY CITIES IN

LATIN AMERICA

BOGOTÁ

COLOMBIA

Since signing the C40 Green and Healthy Streets Accelerator in 2018, the city of Bogotá has worked on different projects with diverse stakeholders using the avoid-shift-improve sustainable mobility model. These projects seek to reduce emissions, mitigate climate change, protect residents' safety and transform the city's streets into greener and healthier spaces.

In 2021 Bogotá formulated the Bicycle Public Policy (2021–2039) to improve the physical, socioeconomic and cultural conditions of the city to encourage the use and enjoyment of bicycles. In 2023 the city introduced the Zero and Low Emissions Mobility Public Policy (2023–2040) to guarantee zero- and low-emission technologies in all motorised mobility segments of the city. These policies both contain short-, middle- and long-term measures to achieve their goals. The city is also formulating its Pedestrian Public Policy which aims to promote and improve the quality of pedestrian mobility and enjoyment of public space through the promotion of infrastructure, accessibility and safety conditions.

The city is undertaking significant work to shift towards active mobility in the city. The city's shared bicycle system – Tembici – has enabled over 1.1 million trips since its launch in 2022. The system provides residents with 1,500 bicycles, 1,500 pedal-assisted bicycles, 150 handlebars, 150 box bicycles, 150 child seats and 300 cycle stations for bicycle repair. In addition, the city has maintained 29,000 square metres of pedestrian platforms, installed 5,354 pedestrian crossings and 521 pedestrian protection elements, and has carried out 3,034 traffic pacification interventions.

Additionally, Bogotá is working on its Vital Neighbourhood strategy, which manages vehicular traffic and revitalises public space to ensure local communities live in close proximity to all their essential needs. Bogotá has launched four Vital Neighbourhoods – San Felipe, El Porvenir, Las Cruces and San Cristobal.

The city also announced its first Clean Air Urban Zone (ZUMA), Bogotá's version of a low emission zone (LEZ), in Bosa-Apogeo. This strategy aims to improve air quality in highly polluted areas that are home to marginalised communities, through the implementation of intersectoral actions between stakeholders. On 21 September 2023, the City of Bogotá announced the beginning of ZUMA's collaborative work with the community of Bosa, in which a public commitment was signed by the environmental, mobility and planning secretariats. In the month of September, 17 roads in this locality were repaired, 325 trees were planted, and 45 students received a pedagogic air quality workshop. The administrative act to adopt the project and declare the first ZUMA was signed by then Mayor of Bogotá Claudia López, and the Environmental, Planning and Mobility Secretariats.

MEDELLÍN

COLOMBIA

Since signing the C40 Green and Healthy Streets Accelerator in 2018, the City of Medellín has worked in collaboration with its relevant municipal institutions to transform the city's bus fleet.

Medellín is working to increase its fleet of electric buses to 130, up from the 65 in operation since 2019. The city introduced four electric buses in 2020, reducing criteria pollutants such as particulate matter ($PM_{2.5}$) in the atmosphere and greenhouse gases (GHG) such as carbon dioxide (CO_2) by 0.094 tonnes and 3,952 tonnes per year respectively. This has had a positive impact on the health of Medellín residents, as mobile sources are the main contributors to the levels of air pollution that trigger respiratory diseases.

The city is also working to improve its public transport system through the 2016 Municipal Resolution 2504. This resolution aims to improve the quality of life of residents through efficiency, safety, accessibility, integration, sustainability and community. Within the framework of this administrative act, a schedule for the renewal of collective public transport vehicles was defined and is being implemented. A total of 1,410 vehicles have been renewed with clean fuels as of March 2023.

Medellín has been working to deliver a sustainable, smart, safe, and inclusive transport system that everyone can access. The city has also implemented an Urban Protected Air Zone (ZUAP) in the city centre to reduce traffic. It is also promoting and incentivising low and zero emission transport in collective, individual, and freight public transport. With the support of C40's UCAP Climate Action Implementation (CAI) Programme, Medellín recently finalised a feasibility study on transport management measures in its ZUAP, with a focus on gender and equity.

Medellín continues to promote walking and cycling in the city and is integrating both within the SITVA public transport system and public spaces, to encourage a switch to low and zero emission transport.

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MEXICO CITY

MÉXICO

Mexico City is working in a coordinated manner to place people at the centre of urban mobility policies and guaranteeing them the right to a healthy environment. Climate action is helping to improve inequality and enhance equity in the city, promoting social and economic justice.

As part of the C40 Green and Healthy Streets Accelerator commitments, the city is working extensively to increase and improve the city's public transport system. Mexico City is prioritising the accessibility and safety of its most marginalised communities, by establishing designated guide dog and wheelchair access areas for people with disabilities, as well as exclusive safe spaces and seating for women and children.

Mexico City has acquired 425 new Trolleybus units and is aiming to reach 500 units by 2024. An elevated 7.6 km Trolleybus line was newly built, along with two Cablebús lines with a total of 10.9 km between them, and a third Cablebús line is under construction with a total length of 5.4 km. The city is also improving the infrastructure of Metro lines 1 and 12, and an additional 39 trains were acquired and will be operating on Metro line 1. The Metrobús system's lines 3, 4, and 5 were expanded, and line 3 became the first 100% electric line with the introduction of 63 new electric units. The city is also preparing for the conversion of Metrobús line 4.

Maintenance was carried out on 12.7 km of light rail, and nine trains were acquired in order to improve energy efficiency in the system. In private transport, taxi drivers are being encouraged to convert their units that are ten or more years old through financial incentives that allow them to exchange their vehicle for hybrid and electric vehicles.

The city is also facilitating the uptake of bicycles through the construction of new bicycle lanes, which to date total 230 km. In addition, ten large and medium-sized bike garages have been built, of the 16 planned by 2024. The city has renovated 480 bicycle stations of the Ecobici bike-sharing system and created 207 new ones, in addition to renovating 5,800 bicycles and aiming to reach 9,300 by 2024.

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QUITO

ECUADOR

Over the past year, Quito has made progress on its commitments to the C40 Green and Healthy Streets Accelerator.

The city has introduced its first metro line, Quito Metro, which is transforming the way people travel in the city. Quito is also developing a project that promotes active travel and is developing a project to implement more cycle infrastructure in the city.

Quito has been successfully implementing its Solutions Plus project, which has seen the introduction of measures such as 'Hoy no circula' no-drive days and vehicle use restrictions, which have been implemented to reduce traffic.

The city has faced delays and challenges in implementing a zero emission area (ZEA) in the Historic Centre, however parts of it continue to be pedestrianised. The city is also developing measures to promote zero emission vehicles through the creation of incentives, such as parking discounts and tax reductions.

Quito is also gradually renewing public transport and taxi fleets with zero emission vehicles. Quito is introducing urban tree planting and restoration of vegetation cover programmes to improve the city landscape. The city has planted one million trees, and work is being done to recover green areas that will help the city adapt to the impacts of the climate crisis.

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RIO DE JANEIRO

BRAZIL

Rio de Janeiro's Sustainable Development and Climate Action Plan has set a target of zero carbon emissions in one area of the city by 2030, under its Greener and Healthier Streets municipal degree. This will be achieved through comprehensive urban space programmes and measures to increase active mobility, sustainable urban solutions and the adoption of non-emitting vehicles.

The Reviver Centro Programme, introduced in July 2021, established and delimited the Low Emission District with the aim of implementing actions to reduce the City of Rio de Janeiro's greenhouse gas (GHG) emissions. By 2024 the city aims to implement a Low Emission District in the central region, occupying 35,000 square metres of public space, as part of the Strategic Plan 2021–24. The decree regulating the Low Emission District was introduced on 29 July 2022.

Rio de Janeiro's Air Quality Monitoring Plan, GHG Monitoring Plan and Communication Plan are all in the delivery phase. In 2022 some stretches of cycle paths were implemented. Between 2022 and 2023, the Safe Cycling Advocacy Programme (SCAP) Cargo Bike Project was carried out in partnership with Transporte Ativo and European Cyclists' Federation (ECF), to experiment with the use of cargo bikes by city hall employees in the Low Emission District area. A partnership with C40 on the Zero Emissions Freight Transport Programme in Latin America will begin in 2023.

The next steps are to expand the city's cycling infrastructure, draw up the implementation plan and clean mobility projects, and develop the Zero-Cargo Programme.

Rio de Janeiro's municipal transport department, in partnership with the German Agency for International Cooperation (GIZ) and C40, is developing the Ecogaragem project for 50 electric buses. As a result of this technical cooperation, by October 2024 the city will have defined the business model to be adopted, including the technical, economic and legal modelling of the project. The aim is for this project to be replicable in other areas of the city.

At the beginning of 2024 Rio de Janeiro will issue a public call for tenders for a test period of electric buses for at least 90 days, which will operate both on a cultural route in the centre of Rio and on a passenger collection service. The pilots will compare the electric buses with diesel buses operating on the same service, to find out about the performance and technical characteristics of the various zero emission bus manufacturers.

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SANTIAGO

CHILE

As of October 2023, there are 2,247 electric buses in the Santiago metropolitan area, comprising 31% of the total fleet. This is the result of a major state effort. Measures have included the city's women drivers programme, which provides scholarships for women to obtain their bus licence and provides employment contracts upon completion of the course. These courses have been implemented in seven districts of the city, providing local employment and improving quality of life.

The city has introduced an additional 22 buses for neighbourhood transport in seven communes of the Santiago Metropolitan Region, representing 13% of communes and achieving a total of 2,269 electric buses. The proposed target for 2026 has been exceeded by 73% in 2023.

SIGNATORY CITIES IN

NORTH AMERICA

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AUSTIN

UNITED STATES

In the City of Austin and Greater Austin, CapMetro provides public transportation services which include bus, rail, MetroBike, Pickup, University of Texas Shuttles, RideShare and Freight rail services. Their first electric buses began service in early 2020 and now a dozen are in operation. These zero emission buses source their electricity from clean solar and wind energy.

The future electric charging depot for the city's electric bus fleet is currently under construction at a CapMetro facility in North Austin. When the work is complete, the facility will accommodate 214 buses, which amounts to more than half of the city's current fleet. Its infrastructure will support charging capacity for 187 battery electric buses.

CapMetro operates on a ten-year fleet replacement schedule that ensures the fleet is well maintained and operates efficiently. In 2021, the city approved the purchase of nearly 200 electric buses, the largest procurement of electric vehicles in the country. Those buses will be able to operate any of the city's bus and rapid routes. They will also have features not found in the city's current fleet, including:

- An open floor plan to encourage quicker boarding and more riders per bus
- USB ports available throughout the bus
- Advanced wheelchair securement systems to enable quick and safe securing of wheelchairs
- Wider doors that allow more people to quickly and safely board and exit the bus
- Soft vinyl upholstery to improve the look and feel of bus seating

Austin is also progressing towards the zero emission area (ZEA) commitment through a community centred approach. The Living Streets Program was adopted by Austin City Council on 21 October 2021. The Living Streets Program envisions local streets as places where communities can walk, bike, gather, and connect. The programme offers residents a set of options for activating neighbourhood streets to create opportunities for safe community building throughout the city. The programme is now seeking applications from interested neighbourhoods, with three versions of street closures available: Neighborhood Block Parties, Healthy Streets, and Play Streets.

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SEATTLE

UNITED STATES

Seattle continues to make progress on its C40 Green and Healthy Accelerator commitments. The city continues to ramp up on its Low-Pollution Neighborhoods (LPN) work, which will carry over into 2024 with a goal to deliver three LPNs by 2028.

Seattle's transportation department recently released its Climate Change Response Framework, a pathway to accelerate a reduction in transport-related emissions. This includes work on e-cargo bike regulations and digital curb management for more efficient delivery and access to the curb. The department is also making progress on electrifying its fleet of work vehicles. The city continues to work with its transit partners to deliver an improved transit service in the wake of the pandemic and also to make steady progress on a zero emission bus fleet.

Radcliffe Dacanay

Principal Planner, Seattle Department of Transportation, City of Seattle

> What is your role within the city, and what actions have you been involved in with your team that make you proud?

I'm a Principal Planner in the Policy and Planning Division of the Seattle Department of Transportation. I work on climate actions and policy to reduce emissions in the transportation sector. (In Seattle, the transportation sector accounts for 60% of total emissions.) I've been involved in helping prepare the department's Climate Change Response Framework, which focuses on actions to reduce emissions in the transportation sector. Related to that work, I'm also involved in working with the community to deliver low-pollution neighborhoods.

> What inspires you in the work you do to improve transport in your city to achieve the commitments of the C40 Green and Healthy Streets Accelerator?

Working with dedicated colleagues and community members who are committed to curbing emissions in the transportation sector. And at the same time helping to deliver more livable neighborhoods.

> What have you learned from another city official (either in your city or another city) that has changed the way you approach your work?

I'm inspired by work in Bogotá and Milan on recent "open streets" efforts. Their approaches can be replicated here in the North American context. (Or at least I hope so.) And it's something we're trying to adapt to our own similar efforts with the low-pollution neighborhoods campaign.

VANCOUVER

CANADA

Since signing the C40 Green and Healthy Streets Accelerator in 2018, the City of Vancouver has seen successes in a number of its commitments, but has also encountered challenges that have delayed or cancelled other commitments.

Vancouver has worked in a coordinated manner with TransLink, the regional transportation authority, to advance the transformation of its bus fleet. Vancouver is still progressing towards purchasing only battery-electric buses to replace retiring diesel and hybrid-electric buses. Although it is slightly behind schedule with the amount of buses it has purchased due to funding impacts of the COVID-19 pandemic, TransLink purchased 15 new battery-electric buses along with approval to add another 57 battery-electric buses to the fleet in the second quarter of 2023.

Following the adoption of the Climate Emergency Action Plan in late 2020, Vancouver experienced challenges in its work on citywide parking pricing and downtown road transport pricing. Following engagement work by city staff, both projects were suspended by Vancouver City Council in 2021 and 2022 respectively. The city has now shifted its priorities to other actions to address its climate goals, and hopes the lessons learned through this process can help other C40 cities facing similar challenges.

Vancouver launched its Cycle Logistics Hub pilot in 2022 and has subsequently cancelled the pilot due to a number of challenges largely related to shifting priorities of partners which led to the ongoing unsustainability of the project.

Despite this setback, the city has learned from this endeavour, and is using this experience to guide future work related to zero emission freight. At the same time, the city completed a survey of gig workers in Vancouver and are using the findings to support a variety of projects relating to e-commerce.

Vancouver launched an electric vehicle (EV) charging programme and a retrofit accelerator to support the electrification of existing buildings to support the EV charging capacity of older buildings. These programmes are leveraging federal funding and the first 14 buildings are scheduled to have EV chargers installed by April 2026. Vancouver has also begun developing the DC Fast Charging (DCFC) network with 6 DCFCs installed since 2022. This network will continue to grow in the coming years.

Vancouver launched its seasonal School Streets programme and has been steadily expanding it to cover more schools with each school year. The programme has been shown to increase active travel and reduce total motor vehicle volumes around participating primary and secondary schools. This programme will continue to expand over the coming years.

BARRIERS TO ACHIEVE THE COMMITMENTS

Decarbonising urban transport is vital to halt climate breakdown, and to make our cities greener, healthier and more inclusive places to live.

Yet the car-centric design of many cities has led to an entrenched car culture, which subsidises private car use at the expense of walking, cycling and public transport, directly or indirectly. Coupled with increased urbanisation, this presents a number of distinct challenges for signatories to significantly shift the way we move in our cities.

Zero emission buses

One of the core challenges that many cities continue to grapple with is the ongoing financial impacts of the COVID-19 pandemic. City budgets are still recovering, and public transit agencies across the world are seeking to return ridership to pre-pandemic levels. The degree to which city budgets are impacted varies, but public transport investment must be significantly scaled up to successfully halve global emissions by 2030. On average, public transport use must double by 2030 in line with the 1.5°C target. This requires significant investment in the improvement, expansion and electrification of formal and informal public transport. Over the next decade, US$ 208 billion a year is needed to improve, expand and electrify public transport to keep emissions below the 1.5°C threshold in C40 cities.

Transitioning large city fleets to zero emission also presents technical and infrastructure challenges. For example, charging depots require significant space to accommodate electric charging stations, which is not always readily available in cities. There are also grid considerations. Increased charging needs can place significant demand on the electricity grid that can surpass capacity in some cities.

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Zero emission areas

The challenges involved in implementing zero emission areas (ZEAs) vary across different cities, regions and contexts, but there are some commonalities. The holistic nature of ZEAs means that they require several actions across urban transport and urban planning to achieve their vision. Internally, this can be difficult for cities to coordinate, and requires breaking silos to ensure all cross-departmental teams are aligned and united around a shared vision.

There is also the challenge of building public support for the composite measures of ZEAs. As a whole, ZEAs are transformative as they fundamentally shift the way we move, live, work and play in our cities. As such, they attract opposition from some groups on various grounds. While there are some legitimate concerns from residents and businesses on the scale of transformation, ZEAs have the power to address multiple social, racial and economic injustices. Cities must place inclusivity and equity at the heart of ZEA design and ensure that concerns are heard and addressed as part of the just transition.

Too often, the narrative is set by a vocal minority that attempts to discredit these evidence-based, transformative measures in the absence of evidence to support their own claims. Cities should seek to control the narrative and vision and demonstrate to the public the multiple co-benefits that ZEAs bring on air quality, health, economic prosperity, safety, and quality of life. Effective and clear communication is vital. Cities should seek to understand the priorities of the public and develop creative and engaging communication assets that speak to this.

In some cities, there are also legal barriers to measures that reduce the circulation of high polluting vehicles. In Europe, cities have been able to introduce urban vehicle access regulations (UVARs) that either charge or ban high polluting vehicles in certain areas of the city. However other cities, particularly those in the US, are prevented from regulating road access based on emissions. Signatory cities in the US are therefore exploring alternative ways to address critical transport emissions.

CONCLUSION

This report celebrates the continued ambition of signatory cities to reduce transport-related emissions and transform their streets into greener, healthier, and more inclusive and vibrant places to live.

As we fast approach the zero emission bus milestone of 2025 and with the zero emission area (ZEA) target of 2030 just six years away, there remain some distinct and common challenges that cities are facing to meet their commitments. C40 is streamlining and amplifying its support to cities to most effectively move the dial on these policies centred around C40's two main missions, announced in early 2023:

- Help get the world off fossil fuels
- Address the impacts and injustice of climate breakdown

C40 recognises that the delivery of stepping stones towards ZEAs in cities is critical to help end the use of fossil fuels and halt climate breakdown. The "ZEA Mission" was launched in 2023 as a cross-organisation effort that leverages policy and advocacy resources across C40 to build public support and social acceptance of ZEA measures.

Through the ZEA Mission, C40 has supported a select group of strategic cities in 2023 that are in the critical stages of their ZEA development, through a combination of support measures including public engagement, polling, communications and technical support. This includes but is not limited to:

- The launch of Bogotá's clean air programme – Zonas Urbanas por Mejor Aire (ZUMA)
- The introduction of new restrictions in Milan's Area B LEZ and the city's 2030 sustainable mobility vision
- The expansion of London's Ultra Low Emission Zone (ULEZ) to Greater London in August 2023
- Supporting Warsaw with its 2024 LEZ

The ZEA Mission also convenes teams that are supporting cities with ZEAs through existing technical assistance to leverage expertise from across the organisation. Cities have received support through C40's Air Quality Technical Assistance programme, which for some cities has focused on the development and analysis of transport actions, including Bogotá, Jakarta, Mexico City and Rio de Janeiro. The ZEA and Zero Emission Freight Programmes have also completed technical assistance, webinar series and in-person roundtables to further progress in these areas. Laneshift is a new C40 programme in partnership with The Climate Pledge which supports cities in Latin America and India to transition to zero emission freight.

C40 also supports cities to transition to zero emission buses through regional delivery programmes. The Zero Emission Bus Rapid-deployment Accelerator Partnership (ZEBRA), co-led by C40 and the International Council on Clean Transportation (ICCT), has provided extensive support to a number of cities in Latin America to advance their zero emission bus fleets (and is currently expanding support to additional regions). Cities are supported to develop fleet-wide deployment strategies and innovative business models, while also increasing the availability of zero emission buses in the region through engagement with bus manufacturers and industry partners. In addition, C40 is a delivery partner in the Transformative Urban Mobility Initiative (TUMI) e-Bus Mission funded by the German Agency for International Cooperation (GIZ) and supporting cities across

Latin America, Africa and Asia in partnership with the Institute for Transportation and Development Policy (ITDP), the World Resources Institute (WRI), the United Nations Environment Programme (UNEP), ICLEI – Local Governments for Sustainability and the International Association of Public Transport (UITP).

C40's transport programmes are supported by our networks, which continue to be the pillar through which cities can access peer-to-peer learning and knowledge sharing support. The Public Transport, Walking and Cycling, and Zero Emission Vehicles networks foster collaboration among cities through workshops, webinars and working groups.

In 2024, C40 will continue to support cities through the ZEA Mission and related programmes and networks. The C40 Green and Healthy Streets Accelerator will maintain the ambition to implement high impact actions to decarbonise urban transport and improve the quality of life for all, while recognising the impact of global events on cities' ability to accelerate towards the commitments.

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C40
CITIES