

2017



# C40 CITIES ANNUAL REPORT 2017



# WHAT HAPPENED IN 2017?

1. Introduction and overview	<b>4</b>
2. What we do	<b>8</b>
3. Turning the Paris Agreement into action	<b>12</b>
4. Leading by example and moving markets	<b>15</b>
5. Removing barriers to bold climate action	<b>27</b>
6. Press and digital impact	<b>40</b>
7. C40 offices	<b>42</b>
8. Governance	<b>44</b>
9. Funders and partners	<b>46</b>



Together4Climate 2017, Paris



Women4Climate 2017, New York City

### **Introduction by C40 Chair:**

This report sets out what C40 achieved in 2017. C40's Deadline 2020 research revealed just how crucial the years to 2020 will be in shaping the future of our cities and our citizens. Cities have the potential to deliver more than 40% of the emissions reductions required to realise the highest ambitions of the Paris Agreement and avoid catastrophic climate change. The policies, investments and decisions made by mayors in office today, will play a significant role in determining the quality of life the majority of the world's citizens will enjoy in the next decades, as well as the state of the world that our children and grandchildren will inherit.

Cities are making incredible progress. 50 cities have already committed to deliver climate action consistent with the highest goals of the Paris Agreement. The C40 Steering Committee

approved a measure that makes commitment to a Deadline 2020 consistent climate action plan a condition of C40 membership, so we expect all members to rise to this challenge in the near future. C40 has successfully fundraised to ensure that more than 40 cities across Africa, Asia and Latin America, will receive targeted support in developing their climate action plans. These measures are concrete, timely and already delivering impact on the streets of the world's great cities.

In the year that saw the President of the United States announce his intention to withdraw from the Paris Agreement, it was once again cities, from across the US and globally that stepped up to fill the leadership gap. On behalf of every city in the C40 network, I applaud the courage of all those American mayors, within C40 and the hundreds more beyond, that have pledged their commitment to the Paris Agreement. The

unique coalition of cities, states, businesses and universities, that make up the "America's Pledge" alliance offer great hope for the future of American leadership on climate.

As we reach the end of the first year in C40's history under the leadership of a woman Chair, I particularly welcome the launch of the Women4Climate initiative and recognise the vital role that powerful women have played in the success of C40 in 2017. More than 60% of C40's staff are women, the Board of Directors is already balanced 50% between women and men, as is C40's management team. Over the last few years the number of women mayors in C40 has risen to more than 20. Changes agreed to the composition of our Steering Committee this year will also increase representation of women mayors, making C40 the most gender inclusive city network in the world.

C40's achievements in 2017 have been remarkable and the scale of action delivered by C40 mayors is unprecedented. From launching market-shifting action commitments, urban design competitions and ground breaking research, to facilitating new levels of intercity collaboration, knowledge sharing, investment in sustainable infrastructure, and diplomatic breakthroughs, cities are once again at the very forefront of climate action.

I am grateful to all C40 staff for their efforts this in 2017. C40's world class reputation amongst mayors, partners and everyone who encounters the organisation, stems from the professionalism and commitment and diligence of its staff.

**Anne Hidalgo,**  
Mayor of Paris, Chair of C40



### **Executive Director's message:**

As C40's Executive Director, I am privileged to see, week in, week out, incredible examples of bold climate leadership being implemented by cities around the world. 2017 was no exception and the following are just a selection of the most impactful initiatives I witnessed this year.

The most important global, science-led target to tackle climate change is that by 2020 global emissions need to have gone past their highest level ("peaked") and started coming down. While global emissions are still rising, One third of C40's member cities have now reported having already peaked their emissions, while continuing to strengthen their economies. That is a remarkable achievement and demonstrates to the rest of the world that a low carbon future is really possible.

2019 will be a crucial year for tying down national governments to commit to emission reduction that is truly in line with what they agreed at the Paris climate talks, but C40 cities are already a step ahead. New York City in 2017, and Barcelona, London, Oslo and Paris in early 2018 all published detailed roadmaps for how they will slash emissions and build strong low carbon economies, consistent with constraining global average temperature rise below 1.5 degrees.

C40 has played a critical role in pushing up levels of ambition with our Deadline 2020 and Focused Acceleration analysis. Over 50 C40 cities have now committed to follow the pathways set out by this work and C40 is providing a \$30m programme of technical support to help cities deliver on their commitments.

This is just a very small selection of the hundreds of examples of progress and momentum across C40's member cities in the last year. I am proud that C40 has played a role in supporting what our members are delivering. The key to our support is to leverage the experience and success of individual cities, so that this can be shared across the whole membership. Our 16 best-practice sharing Networks are critical to this, enabling transfer of knowledge through study tours, regular webinars and workshops, joint research, and developing common market signals.

Finally, celebrating success is critical to inspiring cities to greater heights of climate action. Once again in 2017 the C40 Cities Bloomberg Philanthropies Awards highlighted the best climate policies, projects and programmes in cities around the world. This year saw the first regional focus for the Awards, highlighting the

increasingly important role cities must play in driving climate action in the United States. Congratulations to the winning cities: Chicago & Copenhagen (Cities4Energy); New York City & Dar es Salaam (Cities4Mobility); Phoenix & Auckland (Cities4ZeroWaste); Fort Collins & Mexico City (Cities4Action) and Washington D.C. & Wuhan (Cities4Tomorrow).

### **Mark Watts**

Executive Director,  
C40 Cities Climate Leadership Group

**96**  
CITIES

**700+**  
MILLION PEOPLE

**25%**  
OF THE  
WORLD'S ECONOMY

C40 connects more than 96 of the world's greatest cities to deliver the urgent and essential climate action needed to secure a sustainable, prosperous and healthy future for urban citizens worldwide. Representing 700 million people and one quarter of the global economy, mayors in the C40 network are, and have to be, committed to delivering on the most ambitious goals of the Paris Agreement.

future. Citizens and businesses will 'vote with their feet', and choose to live, work and operate in those cities that are protecting our climate and protecting their citizens.

Ultimately C40's efforts are designed to help mayors realise the level of ambition we know they have to transform their cities into beacons of a climate safe future.

The bold climate actions that need to be delivered by mayors are increasingly clear. Emissions need to peak by 2020 and fall rapidly after that. Average per capita emissions across C40 member cities need to drop from the current level of 5.3 tonnes CO2 per person to around 2.9 tonnes by 2030 and to zero by 2050.

By setting the bar for all C40 cities to develop and implement a Paris Agreement compliant plan, C40 has pushed the ambition of the world's biggest and most influential cities. For example, New York City has increased its previous ambition of 80% GHG emissions reduction by 2050, to full net zero carbon neutrality by the same deadline. London, Paris and Barcelona will similarly increase the ambition of their climate action commitments in 2018.

The benefits of urgent climate action by cities increasingly clear. Those cities which make the sustainability transition fastest will also be the healthiest, wealthiest, most liveable cities of the

**How we operate**

The urban philosopher, activist and visionary, Benjamin Barber - who sadly died in 2017 - argued that cities are "the primary incubator of the cultural, social, and political innovations which shape our planet. And most importantly, they are unburdened with the issues of borders and sovereignty which hobble the capacity of nation-states to work with one another." Mayors tend to be uniquely responsive to the needs and interests of their citizens who expect clean air, resilient cities and a sustainable and prosperous future. They also wield significant powers over the policies and sectors that contribute the most to greenhouse gas emissions. That is why, with the support of C40, they have emerged as genuine global leaders on the issue of climate change, committing to the boldest climate action and most ambitious targets of the Paris Agreement. C40's delivery model - city-led, data-driven, peer-to-peer sharing - is demonstrably accelerating climate action.

**The highest performing C40 cities in each region over 2017 according to Participation Standards**

**AFRICA**

- 1. Durban
- 2. Johannesburg
- 3. Cape Town

**CENTRAL EAST ASIA**

- 1. Hong Kong
- 2. Wuhan
- 3. Guangzhou

**EAST, SOUTHEAST ASIA & OCEANIA**

- 1. Seoul
- 2. Melbourne
- 3. Tokyo

**EUROPE**

- 1. London
- 2. Paris
- 3. Copenhagen

**LATIN AMERICA**

- 1. Mexico City
- 2. Buenos Aires
- 3. Rio de Janeiro

**NORTH AMERICA**

- 1. New York City
- 2. Los Angeles
- 3. Boston

**SOUTH AND WEST ASIA**

- 1. Dubai
- 2. Amman
- 3. Bengaluru

**Participation Standards**

The C40 Participation Standards are guidelines for C40 membership and include a number of mandatory requirements including: a) setting a target for reducing GHG emissions; b) developing a climate action plan with concrete initiatives to meet the target and; c) actively sharing best practice examples with other cities through the C40 networks.

Having measured the level of participation by each city in the past year, C40 was able to recognize the best performing cities in each region over 2017. These leading cities were extraordinarily active in the C40 network throughout the year, and took exceptional measures and contributed additional resources to support the sharing of best practices among cities, provide thought leadership, and represent the C40 network globally.

**Data Driven Approach**

There are millions of things that cities could do to tackle climate change, but using a data driven approach ensures that C40 can target resources on the areas where there is greatest potential for emissions avoidance and improving resilience.

**Accelerating action through peer-to-peer exchange**

What differentiates C40 from other international organisations is that C40 cities have demonstrated how to make competition and collaboration work in tandem. Our sector-specific Networks are the bedrock of this collaboration, providing the opportunity for peer-to-peer exchange in all of the areas where there is greatest potential for cutting emissions and reducing climate risk. This information sharing means action on the ground in cities is better informed, more effective, faster and costs less.

### **C40's city members**

**AFRICA:**

Accra, Addis Ababa, Cairo, Cape Town, Dakar, Dar es Salaam, Durban, Johannesburg, Lagos, Nairobi, Tshwane

**CENTRAL EAST ASIA:**

Beijing, Chengdu, Dalian, Guangzhou, Hong Kong, Nanjing, Qingdao, Shanghai, Shenzhen, Wuhan

**EUROPE:**

Amsterdam, Athens, Barcelona, Basel, Berlin, Copenhagen, Heidelberg, Istanbul, London, Madrid, Milan, Moscow, Oslo, Paris, Rome, Rotterdam, Stockholm, Venice, Warsaw

**LATIN AMERICA:** Bogotá, Buenos Aires, Caracas, Ciudad de México, Curitiba, Lima, Medellín, Quito, Rio de Janeiro, Salvador, Santiago, São Paulo, Tel-Aviv

**NORTH AMERICA:** Austin, Boston, Chicago, Houston, Los Angeles, Montréal, New Orleans, New York, Philadelphia, Portland, San Francisco, Seattle, Toronto, Vancouver, Washington DC

**SOUTH AND WEST ASIA:**

Amman, Bengaluru, Chennai, Delhi NCT, Dhaka, Dubai, Jaipur, Karachi, Kolkata, Mumbai

**EAST, SOUTHEAST ASIA AND OCEANIA:** Auckland, Bangkok, Changwon, Hanoi, Ho Chi Minh City, Jakarta, Kuala Lumpur, Melbourne, Quezon City, Seoul, Singapore, Sydney, Tokyo, Yokohama



### **Strategic funders:**

# Bloomberg Philanthropies

**CIFF** CHILDREN'S INVESTMENT FUND FOUNDATION

**Realdania**



In order to achieve a climate safe world, we must keep temperature rise at or under 1.5°C above the pre-industrial average – this is what the science tells us is safe and it is the target enshrined in the inter-governmental Paris Agreement on climate change. C40's groundbreaking Deadline 2020 research, developed in partnership with Arup, identified precisely what emissions reductions are required from the world's great cities in order to deliver on the highest ambition of the Paris Agreement. C40's main objective is to support its city members to help the world get on a trajectory to achieve this goal.

Therefore, by the end of 2020, a condition of membership for every C40 member city is to have a comprehensive, measurable climate action plan in place to deliver low-carbon resilient development that is consistent with the 1.5°C target of the Paris Agreement. This is C40's 'Deadline 2020' commitment, to which

25 pioneering cities, representing 150 million citizens, signed up in 2017: Austin, Accra, Barcelona, Boston, Buenos Aires, Cape Town, Caracas, Copenhagen, Durban, London, Los Angeles, Melbourne, Mexico City, Milan, New York City, Oslo, Paris, Philadelphia, Portland, Quito, Rio de Janeiro, Salvador, Santiago, Stockholm and Vancouver.



Wuhan

#### **City example**

##### **Wuhan**

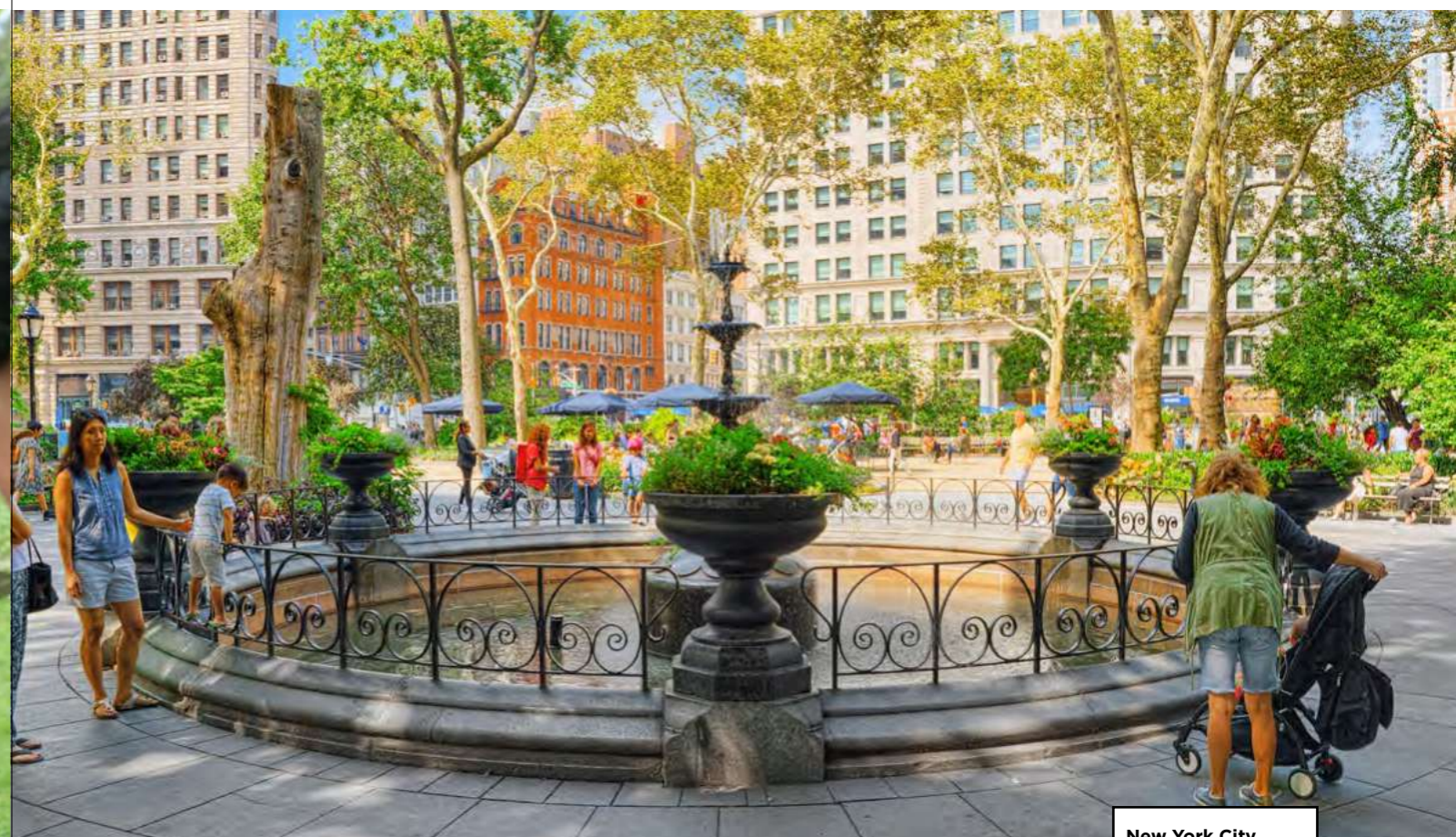
C40, together with our partner World Resources Institute (WRI), has supported Wuhan to compile its carbon emission inventory according to the UN recognized GPC methodology. The inventory data obtained using GPC approach lies closer to the actual emission of the city. It detailed the carbon emission in different sectors, e.g. transportation, industry, etc., and laid a sound foundation and reliable basis for making Wuhan's plans to peak carbon emissions.

##### **Oslo**

Oslo's goal is to reduce its greenhouse gas (GHG) emissions to 36% below 1990 levels which means Governing Mayor, Raymond Johansen, has committed to deliver close to 10% emissions reductions for each year of his term. By 2030 the goal is to have cut emissions by 95% from 1990s levels. Launched in 2017, the climate budget process is managed by Oslo's finance department, rather than the environment team, running simultaneously with the annual financial budgeting process. The governance system that has been put in place means the city council can only approve spending plans which have a realistic chance of delivering GHG reduction outcomes, consistent with the goals of the climate strategy. Thus climate goals are given primacy in the financial budgeting process.



Auckland



New York City

### **A data driven approach in action:**

To support our members we developed and launched the report 'Focused Acceleration – A strategic approach to climate action in cities to 2030', in partnership with The McKinsey Center for Business and Environment, which contains a delivery roadmap with guidance for cities on how to reduce emissions in line with the ambitions of the Paris Agreement.

The report analyses the biggest opportunities for cities to accelerate the reduction of their greenhouse gas emissions. It recommends cities focus and accelerate their efforts on 12 opportunities across four action areas that have the greatest potential in most global cities to curb emissions and put cities on a 1.5°C pathway through 2030:

- Decarbonising the electricity grid
- Optimising energy efficiency in buildings
- Enabling next-generation mobility
- Improving waste management

Together these opportunities can help cities achieve 90 to 100 percent of their 2030 emissions targets and build the knowledge and foundational capabilities needed to reach net zero carbon by 2050. C40 is offering bespoke presentations to mayors and their staff on these findings.

### **C40 cities prepare robust climate inventories, targets and plans**

Whilst many cities around the world had climate action plans in place at the outset of 2017, no city could be confident that their plan would deliver the scale of action required to realise the highest ambitions of the Paris Agreement.

In October 2017, Mayor of New York City, Bill de Blasio, unveiled '1.5°C: Aligning New York City with the Paris Climate Agreement', the first climate action plan anywhere in the world to be reviewed as compatible with C40's Climate Action Planning Framework, and therefore consistent with the highest goals of the Paris Agreement.

A further seven cities - Boston, Durban, London, Los Angeles, Melbourne, Mexico City, and Paris - are working to develop and launch their own climate action plans consistent with the highest ambitions of the Paris Agreement. With support from C40's Climate Action Planning programme, these plans will be launched in 2018.

By December 2017, more than 40 cities across Africa, Latin America, South East Asia and China had support confirmed to help them in developing the climate action plans that will reduce greenhouse gas emissions, adapt to the impacts of climate change and deliver wider social, environmental, and economic benefits, in line with objectives of the Paris Agreement.



## Greenhouse Gas Emission Inventories

53 C40 cities now have inventories that meet the requirements of the Global Protocol for Community-scale Greenhouse Gas Emission Inventories (GPC) standard, up from 36 at the end of 2016.

To support cities in developing GPC compliant inventories, C40 launched the City Inventory Reporting and Information System (CIRIS) tool - an accessible, easy-to-use and flexible Excel-based tool for managing and reporting city greenhouse gas inventory data.



Working with partners, C40 developed the Climate action for Urban sustainability (CURB) scenario planning tool in order to provide 'strategic-level' analysis to help cities identify and prioritize low carbon infrastructure and other greenhouse gas emissions reduction actions.

CURB is consistent with the GPC, and benefits from an extensive built-in international dataset of building, energy, transportation and waste system data, enabling cities to quickly develop credible scenarios, while also allowing cities to insert their own data to strengthen the analysis.

## 4. LEADING BY EXAMPLE AND MOVING MARKETS

### Zero carbon buildings

*It is little wonder that buildings - the spaces where citizens live and work - are the greatest source of emissions from cities. Heating and cooling alone accounts for approximately 40% of urban emissions on average.*

*Given the long lifetime of buildings, it is crucial that new buildings are built to standards of ultra-high energy efficiency and existing buildings are retrofitted to decrease their emissions intensity. Projections indicate that many cities can reduce 20 to 55 percent of the total gap in their emissions abatement targets by improving how their buildings consume energy.*

In 2017, the C40 Building Energy 2020 programme was launched and the first 10 C40 cities received technical assistance thanks to CIFF and Climate Works Foundation funding. This has already enabled cities to progress a wide range of initiatives: in Quito an ordinance on energy efficiency was established to support building retrofits; in Toronto, financing was made available to scale-up a programme which retrofits multi-family buildings in the city.

Meanwhile, cities have continued to support each other through peer-to-peer sharing. Lima is now developing a pilot retrofit project for municipal buildings as a direct result of lessons learnt from other cities at a C40 Municipal Building Efficiency Network Workshop. Similarly, Sydney has leveraged Seattle's check list assessment tool for private building retro-commissioning - a vital step to ensure that building systems such as heating, cooling and ventilation are running efficiently and safely.

#### Buenos Aires:

The city of Buenos Aires launched a project on energy efficiency in private buildings targeting houses in poor neighbourhoods of the city. The City offers to change old and inefficient light bulbs with LED lamps, free of charge. The initial target was to install 130,000 and in six months 60,000 -and counting- have already been deployed. This project is already changing the community perception of the role of the city government while understanding the importance of the environmental action of saving energy. The city began to reduce the amount of money monthly billed by the electric utility company and the savings already paid back the ongoing investment. Buenos Aires also implemented good practices regarding the management of the old bulbs, many carrying mercury, so there is no environmental damage in the process.

**22 C40 cities**

have a building energy code mandating or incentivising net zero or passive house standards for new buildings

**32 C40 cities**

have building energy regulations mandating energy efficiency in existing buildings

## Renewable energy

*A transformative shift from fossil fuel based electricity sources to zero or low carbon sources will be crucial to delivering on the ambition of the Paris Agreement. As cities' vital functions increasingly run on electricity - such as heating, cooling, lighting, transport, wireless connectivity - ensuring a supply of clean, low-carbon power will be critical.*

Many cities, through close collaboration with utilities and regulators, could achieve a grid mix of 50 to 70 percent renewables by 2030. Depending on city specific attributes, this would equate to 35 to 45 percent of the total emissions reductions needed.

C40 launched the Clean Energy Network in 2017 in response to city demand for peer-to-peer learning in this area, and cities met at the inaugural workshop in Buenos Aires to share their experiences. Buenos Aires is now developing a strategy to expand solar PV projects on municipal buildings, inspired by the experience of Santiago's solar rooftop projects.

Elsewhere, Portland committed not only to 100% renewable electricity by 2035 but also to 100% renewable energy by 2050, informed by the commitments of several cities in the C40 Clean Energy Network, including Vancouver, Stockholm and San Francisco.

### Singapore:

Singapore announced plans to implement a carbon tax starting in 2019. The tax will be applied primarily to large emitters of greenhouse gases while the expected revenue will help fund industries to reduce emissions. One of the key priorities for the city state is to address industrial emissions and the carbon tax is seen as a crucial step to incentivize the industries to reduce emissions.

### Barcelona:

In March 2017 Barcelona City Council approved plans to create the first 100% publicly owned energy operator: Barcelona Energia. The new company will be fully operational in summer 2018 where it will supply all the City Council's electricity, representing a saving of 500,000 euros, and will also supply energy to up to 20,000 homes by the end of the same year. The company will offer hundred percent renewable local energy. Barcelona Energia is already a symbol against energy poverty ensuring users pay the lowest possible prices and guaranteeing energy access to families at risk. The company also means a chance to boost energy production by citizens and guarantees that excess energy produced by citizens will be bought by the public company.



### Milan:

Inspired by the Fossil Fuel Free Streets declaration that he publicly signed in October 2017, Mayor Sala decided to move forward the ambitious commitment of the declaration by 5 years, procuring zero emission buses from 2020 - rather than from 2025.

By 2020, the fleet of the transport municipal company, ATM (Azienda Trasporti Milanese) will already be equipped with 200 electric buses and 270 hybrid buses. At the end of 2030, diesel vehicles will disappear from the fleet of ATM that will be composed of 1,200 electric buses. The long-term investment of a total of 2 billion euros was approved in December 2017.

Milan

**49 C40 cities**  
are enacting policies to encourage or enable increased solar power generation.

**22 C40 cities**  
now produce electricity and/or heating at the district scale

## **Fast, clean, affordable mobility**

*As urban populations increase, the means by which citizens travel around cities have come to constitute a growing share of the carbon footprints of our cities. For many cities, the opportunity for emissions reductions in mobility are 20 to 45 per cent of emissions reductions needed by 2030. Additionally, incentivizing people to shift from private, combustion engine cars to take more journeys by walking, cycling, mass transit and electric vehicles will improve air quality and benefit public health. These initiatives will also reduce congestion which is estimated to cost as much as 8 percent of total city GDP in some cities.*

In October 2017, 12 pioneering C40 mayors committed to a series of ambitious targets to make their cities greener, healthier and more prosperous. By signing the C40 Green & Healthy Streets Declaration (Fossil Fuel Free Streets Declaration), the mayors of London, Paris, Los Angeles, Copenhagen, Barcelona, Quito, Vancouver, Mexico City, Milan, Seattle, Auckland and Cape Town pledged to procure, with their partners, only zero-emission buses from 2025 and ensure that a major area of their city is zero emission by 2030.

During 2017, Portland city council voted 5 to 0 to instruct the Portland Bureau of Transportation to study congestion pricing in advance of a planned highway expansion to determine if value pricing could equally reduce congestion. This result was catalysed by the attendance of the Director of Portland's Bureau of Transportation at C40's Mobility Pricing Academy, held in collaboration with NRDC and NACTO, where he heard from the experience of officials from London and Stockholm.

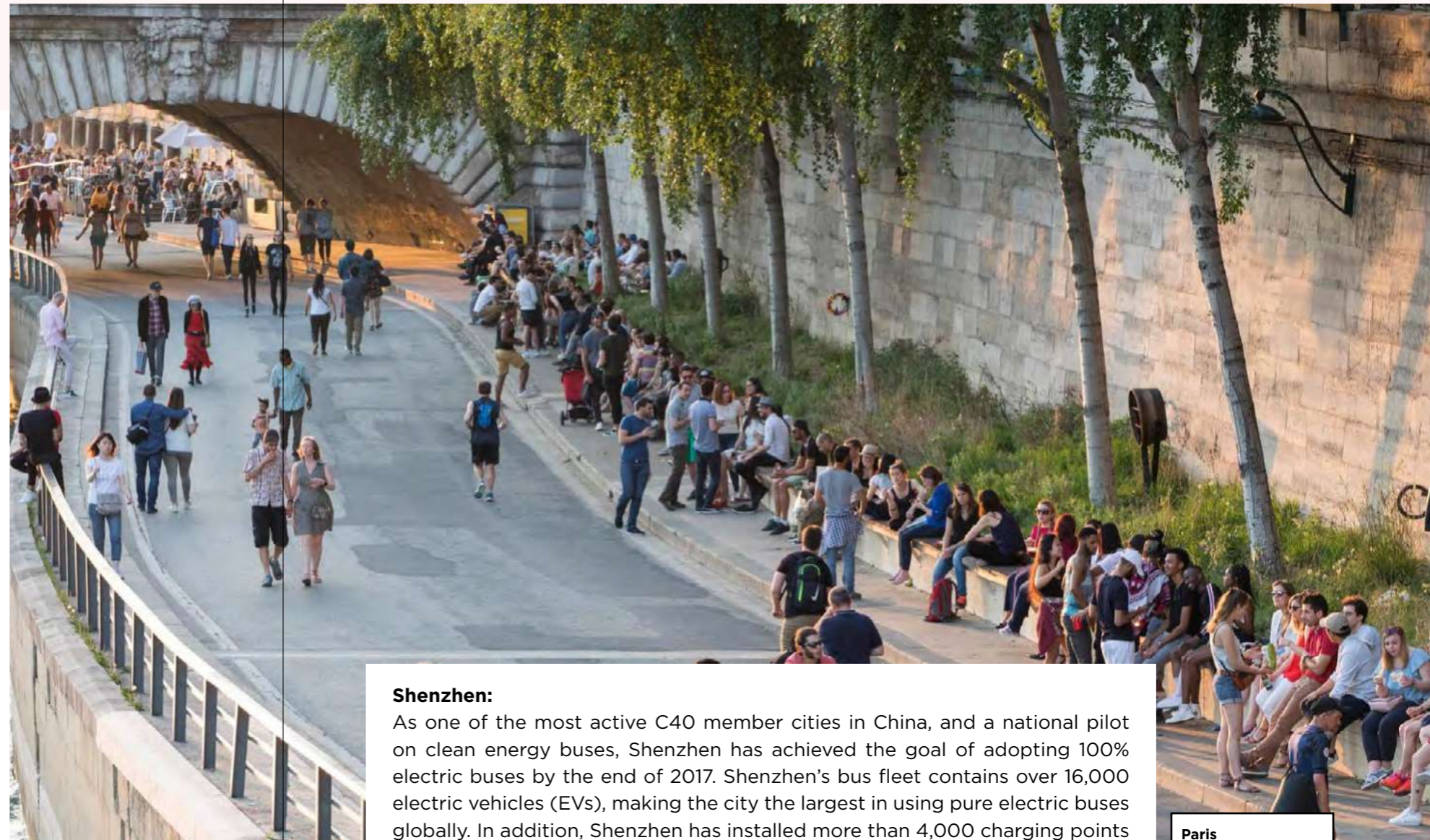
After workshopping the best approach for introducing a shared cycle scheme to a city with no cycling infrastructure, the city of Chennai revised their Request for Proposals (RFP) for a shared cycle scheme to build in insights received from other cities. This was a direct result of Chennai's participation in a C40 Mobility Management Network workshop, held in Wuhan with support from Mastercard.

### **Hanoi:**

Hanoi Council unanimously voted to ban all motorbikes by 2030. The council also plans to increase public transport to ensure that half of the population will be using public transport by that time. These are in line with the city's goal to decongest roads and address increasing levels of air pollution in the metropolis.

### **Paris:**

In Paris, Mayor Hidalgo pedestrianised the right banks of the river Seine, creating a new space for citizens and visitors to enjoy on bikes and on foot. The initiative is central to her bold efforts to reduce the number of journeys taken by car in Paris, to clean the air citizens breathe and rapidly reduce greenhouse gas emissions generated in the city.



Paris

### **Shenzhen:**

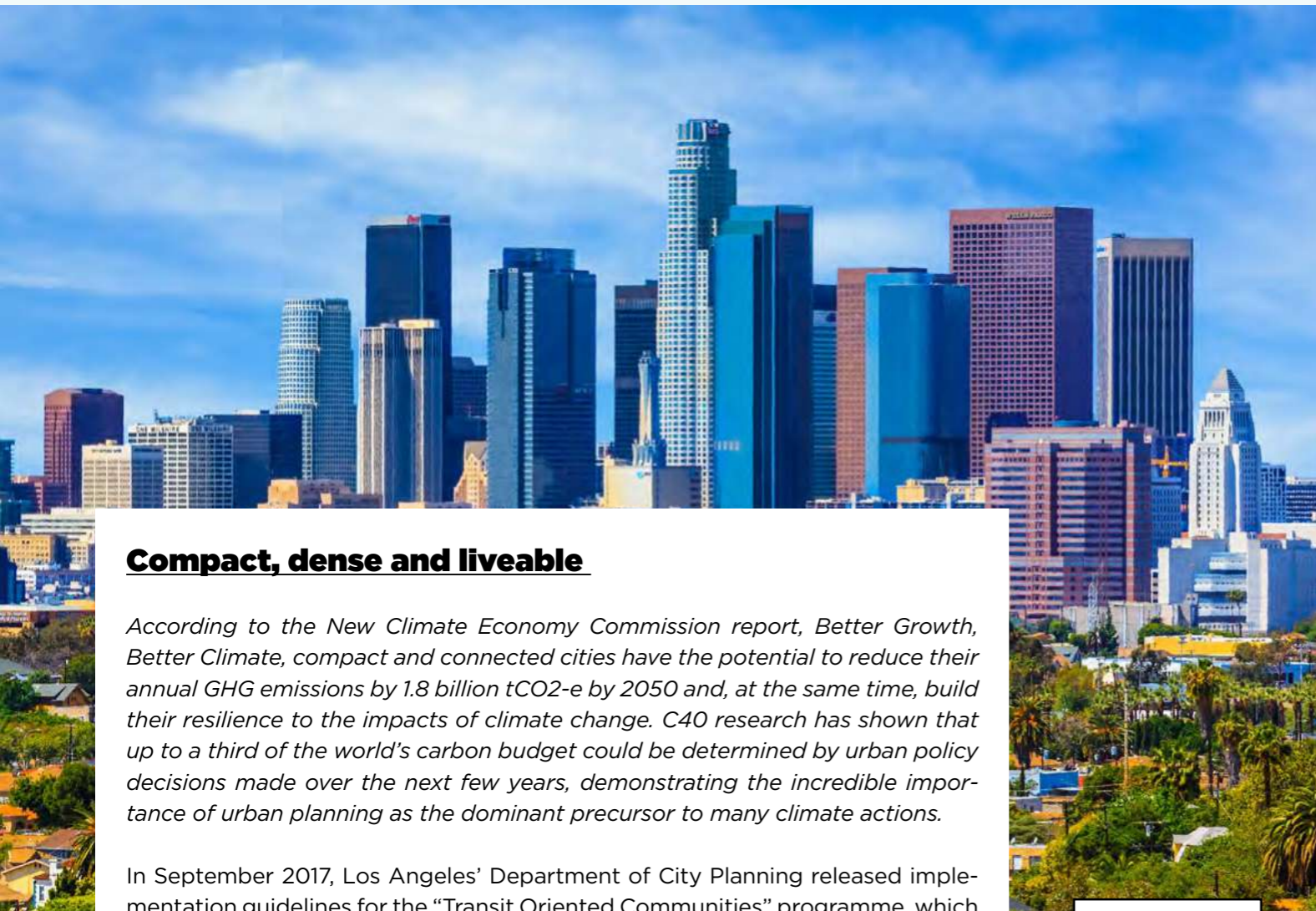
As one of the most active C40 member cities in China, and a national pilot on clean energy buses, Shenzhen has achieved the goal of adopting 100% electric buses by the end of 2017. Shenzhen's bus fleet contains over 16,000 electric vehicles (EVs), making the city the largest in using pure electric buses globally. In addition, Shenzhen has installed more than 4,000 charging points for EVs by the end of 2017.

### **Chennai:**

Through its engagement with the C40 Mobility Management Network Chennai has taken some best practices and specific learning for the cycle share system currently being developed in the city. The dock-less model, IT backbone and multi-vendor scaling are some of the specific features included in Chennai's contracts for their cycle share system. C40 has also assisted in the continuous review of the cycle share RFP before it was floated. Once implemented, Chennai will have the largest cycle share system in India with 5,000 cycles.

**48 C40 cities**  
are implementing cycle hire or bike share programmes

**47 C40 cities**  
are introducing or expanding Bus Rapid Transit



Los Angeles

### **Compact, dense and liveable**

According to the New Climate Economy Commission report, *Better Growth, Better Climate*, compact and connected cities have the potential to reduce their annual GHG emissions by 1.8 billion tCO<sub>2</sub>-e by 2050 and, at the same time, build their resilience to the impacts of climate change. C40 research has shown that up to a third of the world's carbon budget could be determined by urban policy decisions made over the next few years, demonstrating the incredible importance of urban planning as the dominant precursor to many climate actions.

In September 2017, Los Angeles' Department of City Planning released implementation guidelines for the "Transit Oriented Communities" programme, which strongly incentivises the production of affordable housing near transit. C40's technical assistance allowed Los Angeles to make better, data-based policy decisions for preserving and expanding transit-oriented housing opportunities.

Over the course of 2017, the city of Buenos Aires engaged with many cities in the Land Use Planning network as it undertook a major overhaul of its Zoning Code. The city used these inputs to increase the environmental requirements of its proposed zoning code, took steps to incorporate resilience data into urban planning, and removed parking ratio minimums and created maximums in some areas of the city. The new Zoning Code is now pending legislative approval and is expected to be adopted in 2018.

**43 C40 cities**  
are prioritising development in areas well connected by transit

**24 C40 cities**  
are implementing minimum density requirements

### **Towards zero waste**

Methane emissions from waste have 86 times the near-term global warming potential of carbon dioxide, making it an urgent priority for preventing the worst effects of climate change. The United Nations Environment Programme estimates that improvements in waste management can achieve a 10 to 15 percent reduction in total global emissions, or up to 20 percent if waste reduction measures are also included.

In 2017, Sao Paulo published a handbook designed to encourage schools to separate and recycle organic waste with the aim of reducing food waste disposal, which will become an important tool to be used in Sao Paulo's 1,500 municipal schools in conjunction with trainings and communication to reduce CO<sub>2</sub> emissions. The handbook was developed with technical support from the Climate and Clean Air Coalition (CCAC) through their partnership with C40.

The Waste to Resources Network hosted a Global Workshop in April 2017 in Guangzhou, China, where senior officials representing 10 cities from 6 regions came together to accelerate action on waste reduction, food waste collection and treatment alternatives and increased resource recovery. It provided a platform for Auckland to learn from cities like New York regarding their food waste avoidance campaigns and the food waste collection schemes. Learnings from the sessions are being used to introduce a food scraps collection service as part of its Zero Waste by 2040 strategy.

#### **Accra:**

The greenhouse gas inventory developed by the city of Accra, with support from C40 revealed high levels of emissions from illegal waste dumpsites. In response, Accra has closed 33 out of the 42 illegal dump sites, within one year and has engaged the private sector to construct two waste transfer stations.

**26 C40 cities**  
have introduced incentives to increase recycling from residential waste

**32 C40 cities**  
are taking action to increase reuse programmes



## Eating well, eating sustainably



Food production accounts for 11% of global greenhouse gas (GHG) emissions, rising to 30% when food distribution and land use are included. By 2045, the number of people living in cities is predicted to exceed six billion, making food systems, particularly sustainable urban food production, sustainable diets, distribution, wasted food and food waste management critical issues in addressing climate change over the coming decades.

Inspired by their participation in the C40 Food Systems Network, which is delivered in partnership with the EAT Foundation, and the Milan Urban Food Policy Pact, Paris became the first city to set ambitious food systems targets as part of their Climate Action Plan. For example, Paris intends to reduce the greenhouse gas emissions related to food 40% and ensure that 20% of Paris regional agricultural production is organic by 2030, in addition to setting other bold targets. This work builds on the new visionary Paris' Food Strategy, elaborated in cooperation with a great number of local, regional and national stakeholders.

# 165 cities

including more than 40 C40 cities have signed the Milan Urban Policy Pact, which the Mayor of Milan announced in February 2014 at the C40 Summit in Johannesburg

# 10 C40 cities

have municipal food purchasing/procurement guidelines

# 40 C40 cities

operate community gardens and allotments

## Adapting to climate change

*The impacts of climate change are already being felt in the world's great cities. 98% of C40 cities report that climate change presents significant risks to their city and 70% of C40 members recorded that they are already feeling the negative impacts of climate change. Unless preventative action is taken, climate change-related natural disasters have been estimated to put 1.3 billion people at risk by 2050 and destroy assets worth USD\$ 158 trillion -- double the world's annual productive output.*

In January 2017, at the C40 Dubai Adaptation Conference, the Secretary General of the Executive Council of Dubai committed to developing an adaptation plan for the city for the first time. Nine delegates from Dubai participated in the inaugural master class of C40's new Climate Adaptation Academy in Rotterdam. Delegates gained enhanced technical knowledge on heat, water management, and governance through the Academy. They also developed an understanding of the building blocks of an adaptation strategy, including key factors for success and methodologies for integrating various strategies to build a unique plan for Dubai, which is scheduled for release in mid-2018.

As a result of having participated in a research project through the C40 Climate Change Risk Assessment Network on inter-sectoral interdependencies and cascading failures in cities, Toronto is using GIS mapping software to integrate climate risk and interdependent infrastructure and systems. Similarly, Bogotá convened sectoral agencies and utilities to develop a framework for collaborative risk-reduction; Melbourne incorporated the research framework into their Adaptation Strategy update;

and Johannesburg developed a specific localized framework with their local university which served as the basis of their Adaptation Strategy launched in July.

As a result of a study tour facilitated by the C40 Cool Cities Network, Paris is now using data from the National Observatory of Athens and replicating Athens' heat mobile application in French to inform citizens about their heat risk and the cooling centres available across the city.

### Johannesburg:

In 2017, the city of Johannesburg established an inter-disciplinary and multi-stakeholder committee, replicating similar models learned from other C40 cities, to carry out a comprehensive update of their Climate Adaptation Strategy. By incorporating an innovative interdependencies and cascading failures approach, the new framework helps by offering a complete risk map and the ability to quickly identify and prioritise critical assets that need adapting to climate impacts.

### Dubai:

After hosting C40's largest Network Workshop with 53 cities attending the Water and Adaptation Conference, Dubai became the first C40 city to attend the Adaptation Academy hosted by the City of Rotterdam. Consequently, Dubai has announced the formulation of Dubai Climate Change Adaptation Plan.

# 75 C40 cities

are reporting their climate hazards to CDP, while those reporting to have a risk or vulnerability assessment has risen to 51

# 55 C40 cities

have a plan that addresses climate change adaptation

### Air that is safe to breathe

Air pollution is responsible for 4.5 million premature deaths every year according to the World Health Organisation (WHO), with cities across almost every continent experiencing air pollution that breaches WHO guidelines. Eighty percent of urban dwellers are regularly forced to breathe dangerously polluted air, as measured by WHO standards. Many of the pollutants that cause poor air quality also contribute to climate change.

In December 2017, the cities of London and Bengaluru committed to lead a new C40 Air Quality Network to identify climate-friendly solutions that also address the public health crisis of air quality.



Bengaluru

“Only by working together will we help **beat this international health crisis** and protect people from breathing in air so filthy it damages their lungs and causes diseases”

Sadiq Khan,  
Mayor of London

“Together with London’s Mayor Sadiq Khan, I look forward to bringing together mayors from cities around the world and sharing our lessons learned, to **tackle the urgent need to address air quality in our cities.**”

Sampath Raj,  
Mayor of Bengaluru

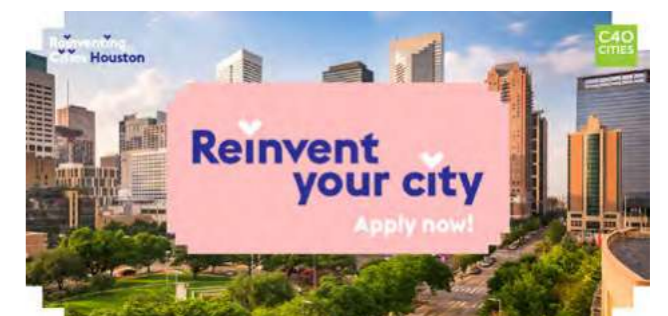
## 5. REMOVING BARRIERS TO BOLD CLIMATE ACTION

C40’s research has identified a number of barriers to effective city climate action. In particular, many C40 cities are unable to attract the finance they need to deliver low carbon infrastructure. Many mayors still struggle to win political and popular support for climate action. They also face challenges in collaborating with partners in national government and the private sector. C40 is working across each of these areas supporting cities to overcome such barriers that can restrict the scale of their ambition.

**Moving markets:** Mayors have the power to shape some of the markets that are most critical to deliver a prosperous low carbon future, particularly when they group together to make market-shifting commitments. That is why we have focused in 2017 on creating three key action commitment coalitions, following the priorities identified in our Focused Acceleration analysis:

- **Fossil Fuel Free Streets:** 12 pioneering cities committed in 2017 to dramatically shift the market for electric vehicles, by only purchasing zero emission buses from 2025 at the latest, and making a major area of their city entirely free of fossil-fuel powered vehicles. This builds on the success of Shenzhen and other Chinese cities in already having transformed their bus fleets.

- **Reinventing Cities:** an unprecedented global competition to drive carbon neutral and resilient urban regeneration, whereby 15 participating C40 cities have made available public land or buildings and invited architects, urban planners, designers, developers, entrepreneurs, environmentalists, start-upers, neighbourhood collectives, innovators and artists to collaborate and compete for the opportunity to transform the sites into new beacons of sustainability and resiliency.



## Financing a low carbon urban future



### C40 Cities Finance Facility (CFF)

The C40 Cities Finance Facility (CFF), provides intense project preparation technical assistance to C40 cities in developing countries, while

building city capacities and capturing knowledge for dissemination. During 2017, the CFF successfully initiated cooperation with its first two partner cities:

Bogotá is developing the ‘Quinto Centenario’ Cycle Highway, a 25km route which will connect citizens from low, middle and high-income neighbourhoods with jobs, education and recreational opportunities. The CFF is supporting the development of a robust monitoring, reporting and verification system for potential climate financing, and helping identify and embed the most suitable financing options.

Mexico City is pioneering the ‘Eje 8 Sur’ project, a 22km electric bus corridor serving an estimated 160,000 daily trips and providing connections with Metro and BRT lines. The CFF is supporting Mexico City to identify and implement replicable financing models and is supporting feasibility studies, mobility studies, financing and funding structure analysis and technical scoping.

This work was made possible with support from the governments of Germany, the United States and United Kingdom, delivered in partnership with GIZ.

Mexico City



### The Financing Sustainable Cities Initiative

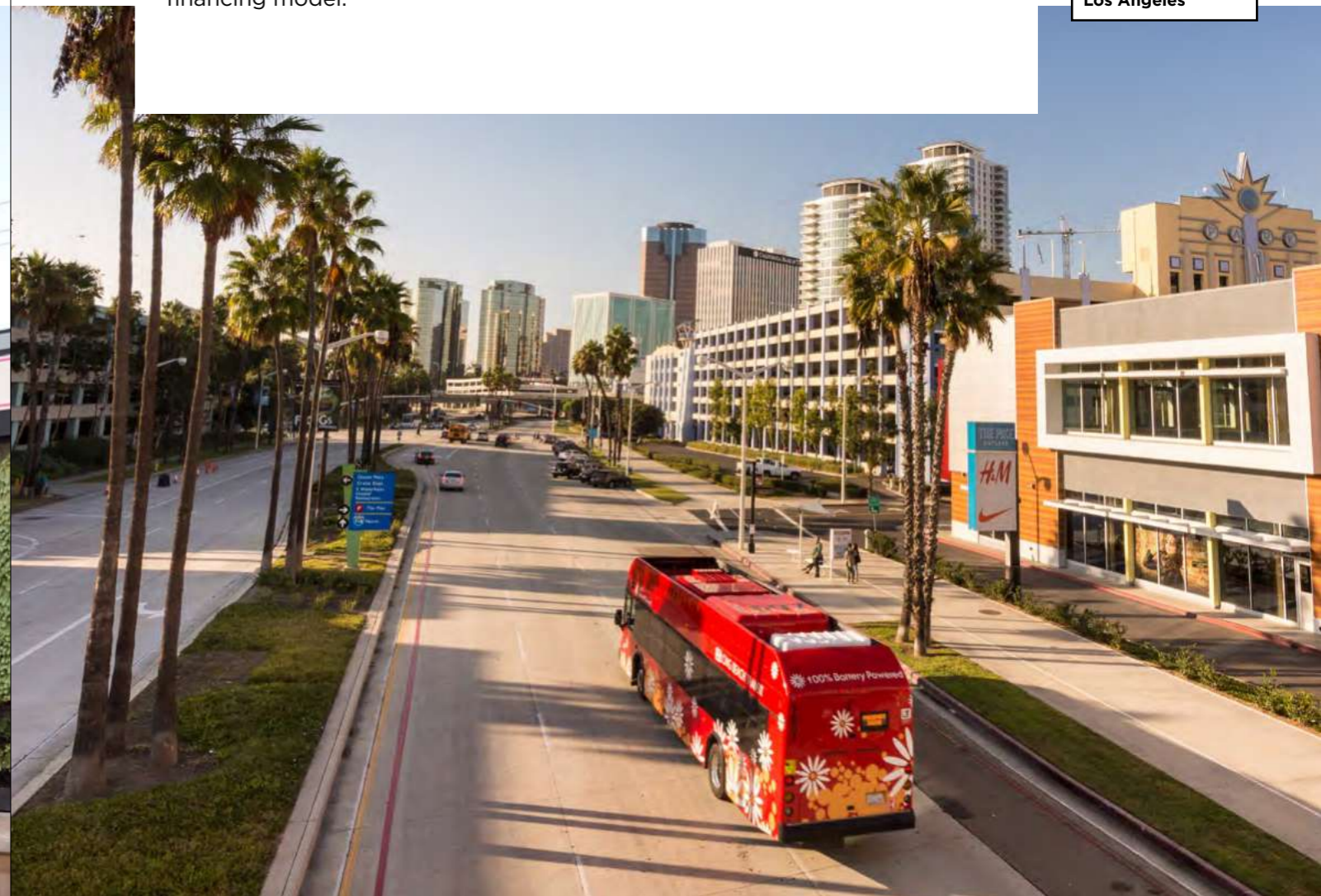
During 2017, C40’s Financing Sustainable Cities Initiative (FSCI) has supported C40 cities to take significant steps forward in addressing the challenges they face in securing finance for transportation. There has been a particular focus on clean transportation finance.

ing the challenges they face in securing finance for transportation. There has been a particular focus on clean transportation finance.

In Los Angeles for example, the decision by the LA Department of Transit to commit to a 100% zero emission bus fleet by 2030, joining regional transit agency LA Metro in its recent commitment to the same 2030 goal, was a major step forward in ambition. This outcome was the culmination of several months of work by LA, including their engagement in C40’s knowledge sharing initiatives, participation in workshops, the Clean Bus Finance Academy hosted by C40’s Financing Sustainable Cities Initiative (supported by The Citi Foundation) and the European zero emission bus study tour. The two agencies will have over 2,500 zero emission buses in total.

Also as a result of their engagement with FSCI, Durban authorised development of a major new BRT programme through a new incremental roll-out and financing model.

Los Angeles



## Benefits Research

C40's Benefits Research supports cities to identify and measure the wider economic and social benefits from climate action, thereby enabling them to make a stronger case for climate policies and projects, unlocking and accelerating action.

### Walking & Cycling:

Throughout 2017, the city of Bangalore has introduced a bike sharing scheme, Cape Town has invested in improved data collection and understanding of cycling habits and Rio de Janeiro has created safer street crossings for pedestrians and cyclists. Each of these initiatives were introduced after C40 shared research on the wider benefits of investing in more walkable and bikeable cities and invited city delegates to a masterclass on the subject.

### Climate, air quality and health:

Five C40 cities have a greater understanding of the climate, air quality and health impacts of their policies at the end of 2017 than they did before. Barcelona's planned low emission zone; Paris' Fossil Fuel Free Streets declaration; a cook stove replacement project in Santiago; an electrification project in informal settlements in Johannesburg; and bus fleet upgrade project in Salvador, have each been assessed against a robust and practically viable tool to measure their effects on emissions, public health and air quality. The findings help cities to make the case for these policies and for the investment needed to scale them up across the city.

### Green Growth:

Seven C40 cities have a greater understanding of the size of their green economies, as a result of targeted research carried out by C40. Copenhagen, London, New York, Oslo, Portland, Sydney and Vancouver each received a detailed profile of their green economy using a standard methodology, which allowed for direct comparison between the cities, and identification of the areas of strength to help present the case for climate action specific to each city.



Cape Town

## Fostering collaboration between cities and national & international partners

In order to achieve the goals of the Paris Agreement, cities must be working hand in hand with nation states, as well as other non-state actors. Throughout 2017, C40 has collaborated with some of the world's most influential organisations and networks to ensure the voices of cities are heard at every level of decision making globally.

### Cities IPCC

C40 has been leading on the CitiesIPCC campaign from its inception in early 2016, which resulted in the landmark 'IPCC decision on cities' taken by the panel in April 2016. In 2017, this decision was implemented and C40 leadership position consolidated with the decision to appoint C40's Director of Research, Seth Schultz as a lead author for the IPCC Special Report on 1.5 Degrees. Throughout 2017, C40 was a leading force in planning the IPCC Cities and Climate Change Science Conference, to be held in Edmonton, Canada, in March 2018. This leadership role will help define the global research agenda on cities and climate change for the next 10 years and made the case for stronger links between the urban and scientific communities to implement the Paris Agreement at the local level.

### Global Covenant of Mayors for Climate & Energy

2017 has also been a critical year for the Global Covenant of Mayors for Climate and Energy (GCOM). C40 has been deeply involved in supporting the merger between the Compact of Mayors and the EU Covenant of Mayors. C40 worked throughout 2017 to ensure that the merger is a success. C40's leadership in the GCoM Founders Council, the Technical Working Groups on Data Management, Global Regional Coherence and Finance, has ensured that the highest standards of GPC compliant Greenhouse Gas Emission Inventories were embedded into the new standards being rolled out at the global level.

### COP23 and One Planet Summit

The leadership of C40's mayors in the delivery of the Paris Agreement is now widely recognized, and translated into increasing engagement in the UNFCCC. Through shaping the agenda of the Marrakech Partnership for Global Climate Action, multiple high level sessions and the Yearbook for Global Climate Action, C40 mayors were amongst the most visible and influential voices at COP23.

In December 2017, President of France, Emmanuel Macron hosted the One Planet Summit in Paris. C40 and the Global Covenant of Mayors for Climate and Energy announced the One Planet Charter, a commitment campaign to mobilize cities towards the delivery of ambitious sectoral outcomes for the Global Climate Action Summit to be held in San Francisco, California, in September 2018.



IPCC 2018

Cop 23





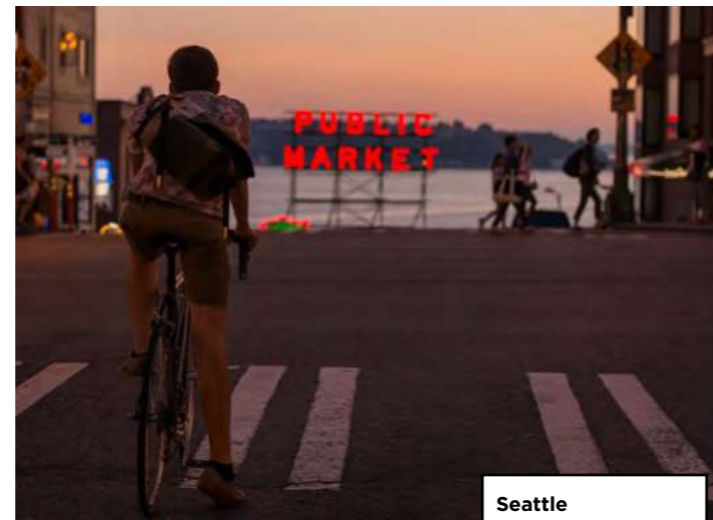
Melbourne



Sydney



Rio de Janeiro



Seattle

## **Collaboration with businesses**

### **City Solutions Platform**

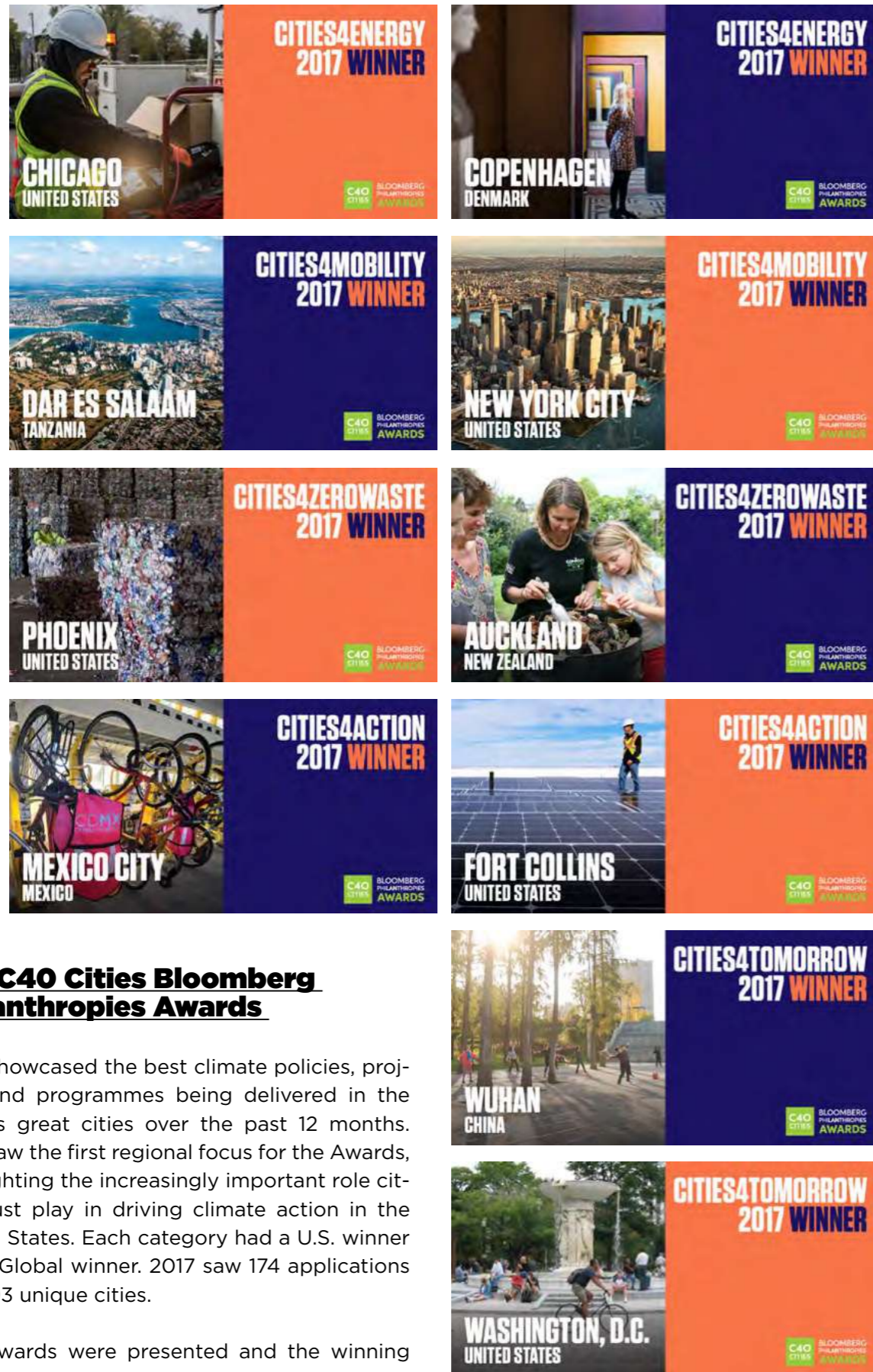
The cities of Melbourne, Sydney, Rio de Janeiro and Seattle have each developed new partnerships to accelerate climate action with private sector providers during 2017, thanks to the C40 City Solutions Platform.

The City Solutions Platform is designed to support the early engagement between cities, the private sector, academic institutions and other solution providers to accelerate the deployment of climate solutions. In each of the four cities the CSP innovation process created a neutral space for solution providers and cities to engage in co-creation activities, innovate, and come up with solutions to the cities key climate challenges.

From adaptation advice on urban development of a neighbourhood of Melbourne; plans for a mobility innovation district in Seattle; financial modelling to support the operation of a waste management plant in Rio and increasing community participation in solar generation in Sydney, cities and businesses are collaborating to find solutions that will enable mayors to deliver on the highest ambitions of the Paris Agreement.

# **Celebrating success**

From a position at the periphery a decade ago, cities are now at the centre of international efforts to tackle climate change, widely recognised for their role in delivering solutions and driving progress. C40 has played an influential role in achieving this global recognition. By celebrating the success of mayors as global climate champions C40 seeks to inspire more ambitious climate commitments by cities. This in turn will help to build the momentum necessary among the far wider group of actors that is necessary to deliver on the 1.5 degrees° target of the Paris Agreement.



**The C40 Cities Bloomberg Philanthropies Awards**

2017 showcased the best climate policies, projects and programmes being delivered in the world's great cities over the past 12 months. 2017 saw the first regional focus for the Awards, highlighting the increasingly important role cities must play in driving climate action in the United States. Each category had a U.S. winner and a Global winner. 2017 saw 174 applications from 93 unique cities.

The Awards were presented and the winning cities celebrated at the North American Climate Summit in Chicago.

**Women4Climate**

In March 2017 more than 300 guests from around the world gathered to celebrate women's leadership in tackling climate change at the inaugural Women4Climate conference in New York City. C40 Mayors, citizens and business leaders shared their experiences of the many ways women are already building a greener future, and overcoming barriers to leadership positions.

To help empower the next generation of climate leaders in C40 cities, C40 Chair and Mayor of Paris Anne Hidalgo announced a global Women4Climate mentorship programme dedicated to advancing women leaders in C40 cities. In May 2017, Paris became the first city to launch a Women4Climate mentorship, matching 10 future climate leaders with influential women from across French politics, business and philanthropy.



New York City



Paris

## Together4Climate

Taking place alongside the CityLab Summit in Paris, C40's Together4Climate event brought together chief executives and mayors to discuss the most pressing climate challenges facing the world's great cities and businesses. Representatives of several of the world's largest companies across vehicle manufacturers, energy, architecture, construction and financial services, met with mayors in closed door sessions. The format of the event allowed a frank exchange on the challenges faced by the private sector and cities in collaborating on bold climate action.



**Together4Climate**  
made news around the world.  
It was reported in more than

**900**

individual articles

- f FACEBOOK:**
  - **129 000 global reach**
- t TWITTER:**
  - **1.4 M Impressions**
- Instagram:**
  - **28 000 Impressions**

## C40 Talks

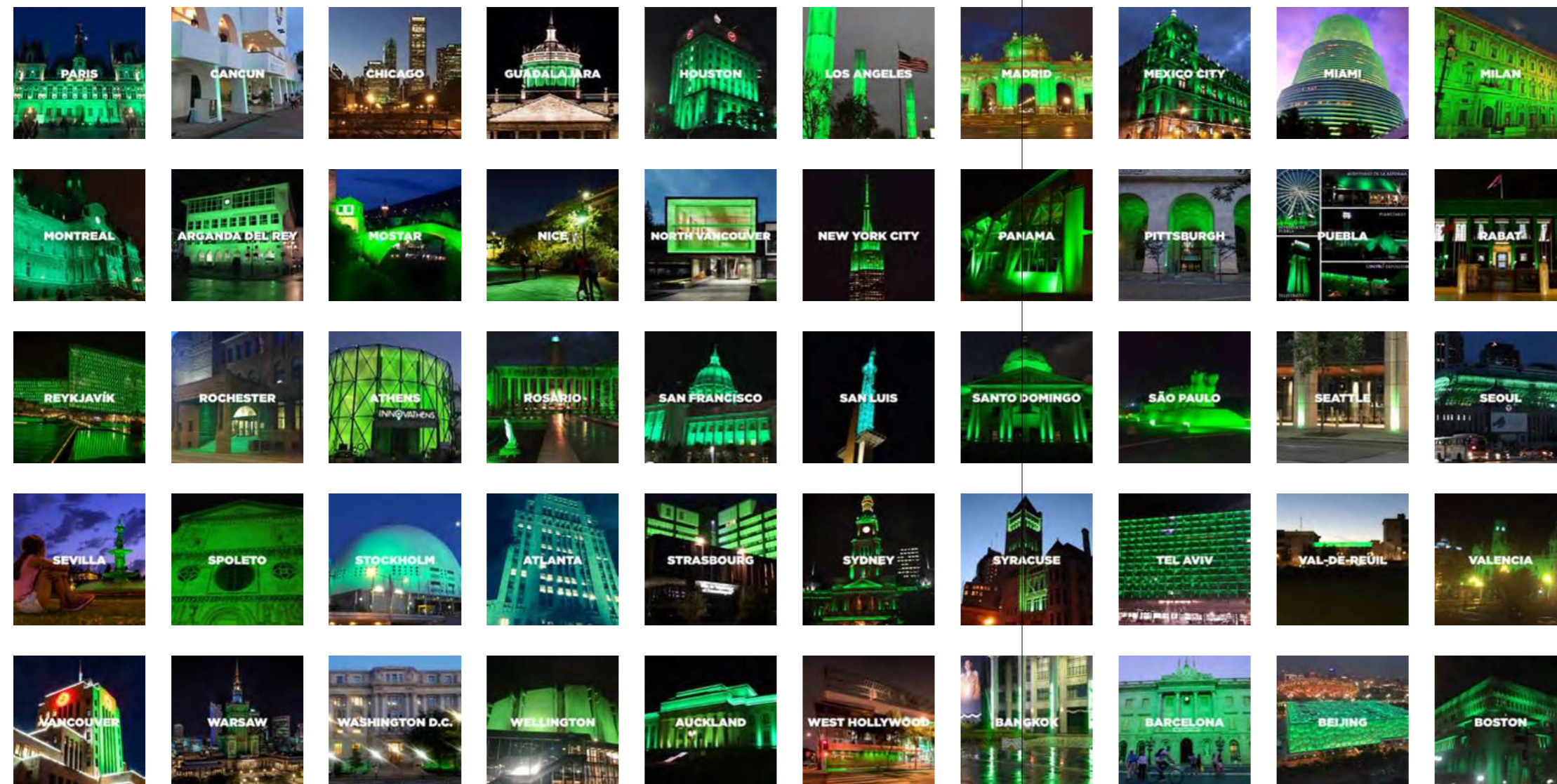
The first edition of a new C40 event series, C40 Talks, took place at the New York Times Building in September 2017 kicking off Climate Week. The event brought together 100 notable guests including global mayors, business leaders, influencers and internationally renowned climate journalists to explore how cities are setting the agenda for a better tomorrow. The Mayors of New York City, Paris, Chicago, Vancouver, Austin and Mexico City along with the Governor of California, were amongst a unique line-up of speakers discussing the global climate leadership of cities.



## Response to US withdrawal from Paris Agreement

On June 1st 2017, President Donald Trump announced his intention to withdraw the United States from the Paris Agreement, a potentially catastrophic decision for the deal. Yet the response by other nations, cities, and businesses has served to reinforce the Paris Agreement. C40's North American mayors have emerged as national and global leaders in pledging their continued support for the Paris Agreement regardless of the decision of the US federal government. Through the Climate Mayors group and 'We Are Still In' coalition, US cities are honouring the long tradition of American climate leadership.

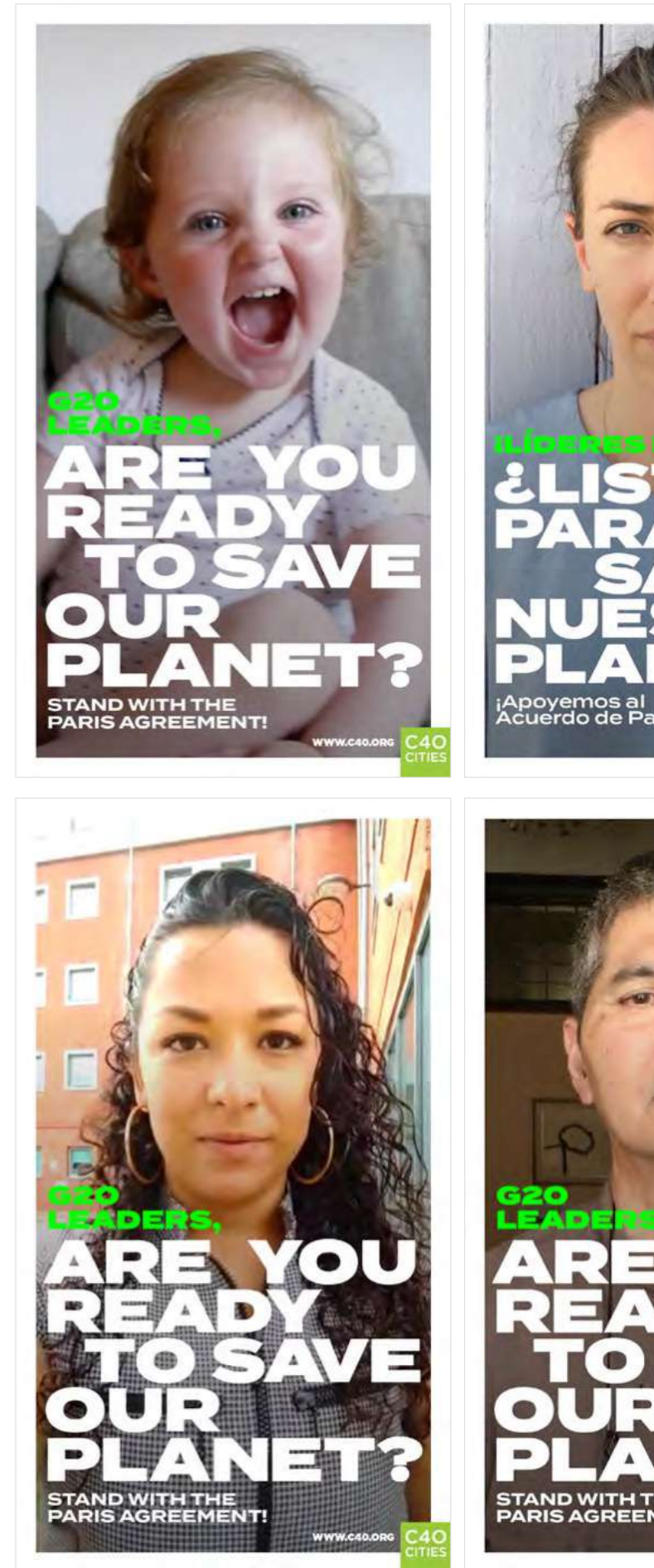
Within hours of the announcement that the United States would withdraw from the Paris Agreement, 50 cities around the world turned their city halls and monuments green as a sign of solidarity and support for the deal. The campaign was coordinated by C40 cities.



## G20 engagement

As the G20 leaders met in Germany later in 2017, a joint statement signed by 52 C40 Mayors, representing more than 275 million citizens, urged leaders of the world's richest nations to work with cities to "save our planet." The campaign was boosted by a petition signed by more than 60,000 people.

At the One Planet Summit in December 2017, Mayor Larreta of Buenos Aires and Mayor Hidalgo of Paris, supported by C40, launched Urban20. The first-of-its-kind city engagement strategy in the G20, led by cities, Urban20 will provide high-level visibility for mayors, and a unique opportunity to influence global policies, whilst also strengthening city diplomats within C40 cities.



# 10,554

## Total number of articles mentioning C40 during 2017



Cities have the boldest plans to deliver a sustainable future



How you can help your city fight climate change



Cities must lure private dollars fast to meet climate goals



The death of diesel: has the one-time wonder fuel become the new asbestos?



A Voice From Paris on Climate Chang



Women4Climate : et si vous deveniez une héroïne du climat ?



Motorists can identify most polluting vehicles before buying them



Clima, Trump conferma l'uscita degli Usa dagli accordi di Parigi.



Buildings light up green in solidarity with Paris climate accord



The Mayors of Pittsburgh and Paris: We Have Our Own Climate Deal



How Cities, States and Businesses Are Already Fighting Climate



Les maires des grandes villes lancent un appel aux dirigeants du G20



Alcaldes del mundo piden al G20 luchar contra el cambio climático



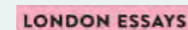
Cities Turn To Other Cities For Help Fighting Climate Change



Should Sydney and Melbourne have their own foreign policies?



Cambio climático y liderazgo urbano



Mark Watts Cities Can Defend Us Against Climate Change



Twelve big cities to buy zero emissions buses, extend green areas



**Twitter**  
65,2 K Followers



**Instagram**  
9,000 Followers



**LinkedIn**  
8,500 Followers

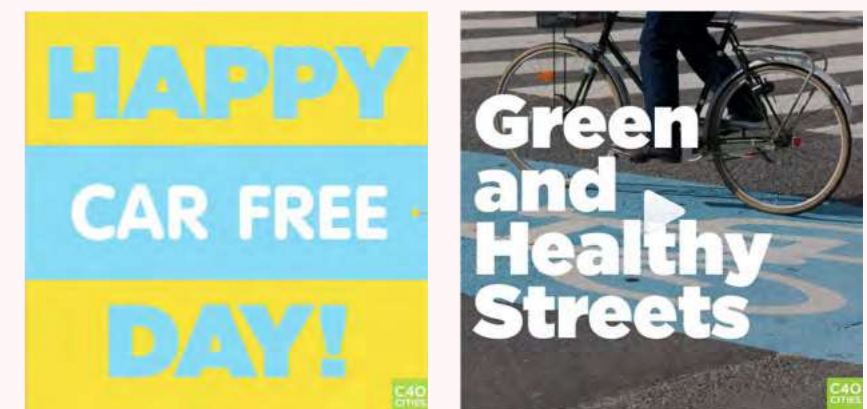


**Facebook**  
22,000 Fans

### Best Tweets



### Best Insta



**London**

3 Queen Victoria Street  
London  
EC4N 4TQ

**New York City**

120 Park Avenue, 23rd Floor  
New York,  
NY 10017

**Copenhagen**

**Beijing**

北京市朝阳区秀水街1号建外外交公寓12号楼101  
(100600)  
Rm. 101, No. 12 Building, Jianwai Diplomatic  
Compound, No.1 Xiushui St., Chaoyang  
District, Beijing, 100600

London



**Steering Committee Members - 2017**

C40 was founded by mayors and is led by mayors. The C40 Steering Committee is made up of mayors of C40 cities, and provides strategic direction and governance for C40. Members are elected to represent cities from their geographic region, as well as a representative of C40's Innovator City members.





<u>CHAIR</u>	<u>VICE CHAIRS</u>	
 <b>Mayor Hidalgo</b> Paris	 <b>Sec. General Al Basti</b> Dubai	 <b>Mayor Garcetti</b> Los Angeles
 <b>Mayor Walsh</b> Boston	 <b>Mayor Mancera</b> Mexico City	 <b>Lord Mayor Jensen</b> Copenhagen
 <b>Mayor Kahn</b> London	 <b>Mayor Sala</b> Milan	 <b>Sec. Wong</b> Hong Kong
 <b>Governor Koike</b> Tokyo	 <b>Mayor Park</b> Seoul	 <b>Mayor Gumedde</b> Durban

**Board of Directors - 2017**

The C40 Board of Directors oversees the management and day-to-day activities of the organisation.

 <b>Michael R. Bloomberg</b> President	 <b>Antha Williams</b> Treasurer Bloomberg Philanthropies	 <b>Patrick Klugman</b> Secretary City of Paris	 <b>Sonia Medina</b> Children's Investment Fund Foundation (CIFF)
 <b>Anne Skovbro</b> Realdania	 <b>Bruce Lindsey</b> Clinton Foundation	 <b>Shirley Rodrigues</b> City of London	 <b>Krish Kumar</b> City of Durban

**C40 Cities Climate Leadership Group, UK**

 <b>Antha Williams</b> Chair Bloomberg Philanthropies	 <b>Anne Skovbro</b> Realdania	 <b>Jemma Read</b>	 <b>Simon Lloyd</b>
---	--	---	--

**Corporate Leadership - 2017**

 <b>Mark Watts</b> Executive Director	 <b>Kevin Austin</b> Deputy Executive Director	 <b>Andrea Fernández</b> Director of Governance & Global Partnerships	 <b>Shannon Lawrence</b> Director of Global Initiatives
 <b>Simon Hansen</b> Director of Regions	 <b>Hervé Marro</b> Director of Communications & Events	 <b>Juliette Carter</b> Corporate Services Director	 <b>Anna Beech</b> Head of the Executive Director's Office

**Strategic funders**

**Bloomberg Philanthropies**

**Bloomberg Philanthropies**

Bloomberg Philanthropies works in more than 120 countries around the world to ensure better, longer lives for the greatest number of people. The organization focuses on five key areas for creating lasting change: Arts, Education, Environment, Government Innovation and Public Health. Bloomberg Philanthropies encompasses all of Michael R. Bloomberg's charitable activities, including his foundation and his personal giving. In 2015, Bloomberg Philanthropies distributed over half a billion dollars.

**CHILDREN'S INVESTMENT FUND FOUNDATION**

**Children's Investment Fund Foundation**

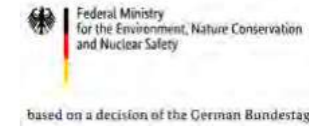
The Children's Investment Fund Foundation (CIFF) is an independent, philanthropic organisation. Our staff and Trustees combine the best of business and the best of development, bringing a wealth of experience from both sectors to CIFF's work. We aim to demonstrably improve the lives of children in developing countries by achieving large-scale, sustainable impact. We believe that every child deserves to survive, thrive and mature into adulthood in a supportive and safe environment. However, climate change disproportionately affects children living in poverty in developing countries. A key focus for CIFF is climate-smart urbanisation.



**Realdania**

Realdania is a modern philanthropic association that works to create quality of life and benefit the common good by improving the built environment: cities, buildings and the built heritage. Realdania grew out of a 150 year old mortgage credit association whose credit activities were sold off in 2000. Over the past 13 years Realdania has engaged in a total project value of approximately EUR 3.7 billion. Realdania's grants accounted for EUR 1.9 billion.

**Funders & Partners**





C4O  
CITIES