C40 CITIES MAYORS SUMMIT

JOBURG 2014

Towards resilient and liveable megacities – demonstrating action, impact and opportunity

(4 – 6 February 2014)

Draft report prepared by

Indlela
GROWTH STRATEGIES

March 2014

CONTENTS

Letters from mayors

Letters from 3 mayors, Mayor Bloomberg, Mayor Paes and Mayor Tau, to be included here – with reflections on what the 2014 C40 Cities Mayors Summit meant for them.

Executive summary

From 4 to 6 February 2014, the City of Johannesburg hosted the 2014 C40 Cities Mayors Summit, attended by 44 cities, 18 mayors and 500 guests, including urban leaders, technical and sustainability experts and senior officials. The event took place under the theme: 'Towards resilient and liveable megacities – demonstrating action, impact and opportunity'.

The summit was a first on a number of counts: the first C40 summit to be hosted on the African continent; the first summit to be led by a Chair from the global South; and the first summit to be attended by a representative from the United Nations (UN). These 'firsts' were acknowledged as bringing with new opportunities: for the C40 network to impact across a wider array of cities; for meaningful engagement and sharing of best practice approaches established in cities in both the South and the North; for C40 cities to shape the global climate change agenda and promote the 2015 adoption of an urban Sustainable Development Goal (SDG) by the UN.

In support of the overarching theme, plenary sessions focused on an array of related subjects:

- The **importance of measuring and monitoring action in relation to climate change** (with the value of measurement reflected in the 8000 climate change actions undertaken by C40 cities, as reported on within the Climate Action in Megacities Volume 2.0 (CAM 2.0) report).

- The **role to be played by city leaders in addressing climate change mitigation and adaptation on the international stage** – with particular emphasis placed on the role of mayors in influencing the approach to climate change adopted by national government leaders, the UN, and multilateral financial institutions.

- The **value of 'climate proofing' and risk reduction when building adaptable and liveable cities** – with presentations reflecting the varied and multi-sectoral approaches adopted by cities when focusing on improved resilience.

- The **promotion of healthier, wealthier cities, through linking growth, prosperity and liveability** (with emphasis placed on the need to balance and align climate change responses with socio-economic development and improved quality of life for all).

- The drive for **smart planning and infrastructure – and the focus on building intelligent, liveable cities and neighbourhoods** (with C40 cities reflecting on efforts undertaken across all city functions, in driving adaptation and mitigation strategies).

- The objective of **setting achievable and actionable targets for improved urban sustainability** – with a central factor in the establishment of achievable and actionable city-level targets being the establishment of an appropriate urban SDG.

Network breakout sessions provided the opportunity for C40 networks to reflect on work to date, progress, best practice and the path ahead. Common themes emerging across a number of discussions related to the importance of:

- Analysing the value, impact, reliability and scalability of projects – with this analysis supporting successful roll out of similar solutions in other suitable contexts.

- Multi-stakeholder collaboration in developing and delivering on climate change projects (e.g. public sector, private sector, non-governmental and community based organisations, research bodies, academic institutions and individual citizens).

- Communicating the rationale for and benefits of climate change mitigation or adaptation projects, through focusing on the tangible improvements and shifts in the daily lives of individuals and communities (e.g. access to clean water; a reduction in hospital visits due to reduced air pollution).

- Involving communities in climate change agenda projects, as a way of establishing buy-in, encouraging joint solution development, supporting delivery and ultimately fostering improved self-reliance.

- Technology in promoting safer, more resilient cities (e.g. through data collection and analysis, the establishment of responsive systems, delivery of interconnected networks, promotion of big open data, encouragement of innovation, and promotion of improved inter-city, intra-city and citizen-city engagement).

- Developing climate change interventions that address all facets of the urban environment – e.g. spatial planning, urban development, mobility, health, food security and resource provision.

- Ensuring interventions address environmental well-being, liveability, inclusivity, enhanced economic growth and job creation – acknowledging that all elements require focus for long-term sustainability.

- Establishing common methods, at a global level, through which to measure the impact of climate mitigation or adaptation actions, in areas such as Green House Gas (GHG) emissions.

The summit saw significant emphasis being placed on the role of mayors in targeting climate change mitigation and adaptation. Proceedings provided a valuable opportunity for cities to share best practice, challenges and areas for future collaboration. Emphasis was placed on the ability of cities and city mayors to bring about quick and impactful change, given the proximity of their actions to the daily experience of citizens.

The summit concluded with the incoming Chair and Mayor of the City of Rio de Janeiro, Eduardo Paes, presenting UN Habitat's Executive Director, Dr Joan Clos, with a letter signed by 41 C40 mayors, calling for the introduction of an urban SDG. Emphasis was also placed on the provision of a space for the voices of city government leaders to be heard, in the context of international discussions relating to climate change target setting.

1.   Introductory comments and report outline

The C40 Cities Climate Leadership Group (C40) is a network of megacities, collectively committed to "implementing meaningful and sustainable climate-related actions locally that… help address climate change globally[1]". From 4 to 6 February 2014, the City of Johannesburg hosted the fifth biennial C40 Mayors Summit, with 44 cities, 18 mayors and 500 guests, including urban leaders, technical and sustainability experts and senior officials, gathering together to engage on the 2014 Summit theme: 'Towards resilient and liveable megacities – demonstrating action, impact, and opportunity'. Delegates shared challenges, experiences and solutions in relation to global climate change, while establishing further partnerships through which to advance the climate action agenda.

The report that follows serves as a reference point for continued action. Rather than providing a detailed record of the proceedings, emphasis has been placed on key points of discussion, examples of good practice, emerging questions and areas for further action. The report framework is structured in line with the proceedings of the Summit itself.

2.   Welcome address

Formal proceedings were opened by the City of Johannesburg's Executive Mayor, Mpho Parks Tau. He noted that the Mayors Summit served as a critical opportunity to share mutual experiences and best practice in mitigating the impact of global climate change, with participants working together for the collective good of cities and citizens. Some of the steps taken by Johannesburg in mitigating the effects of climate change and reducing Green House Gas (GHG) emissions were outlined, including efforts to:

- Foster transit-orientated development, while encouraging cycling, walking and the increased use of public transport (including a Bus Rapid Transit or BRT system).
- Densify and improve land-use along the backbone of transport corridors – in this way decreasing emissions while also addressing Johannesburg's apartheid spatial legacy, which relegated black citizens to life on the urban edge without access to amenities or equal opportunities. It was noted that the City's 'Corridors of Freedom' programme targets "re-stitching the city into an integrated urban system that functions as one".
- Explore greener fuel technology, with the intention of shifting the City's fleet onto dual-fuel systems, and ultimately, supporting scalability through the provision of conversion kits for all drivers. This was reflected on as one programme through which to simultaneously stimulate growth, support job creation, and reduce the city's carbon footprint.
- Mitigate against high levels of food insecurity and urban poverty through targeting interventions across the full food chain.
- Use all urban development initiatives as incubation hubs for innovation in the context of the climate change agenda.

---

[1] C40 Cities Climate Leadership Group. (2014) *About C40.* [Online] Available from: http://www.c40.org/about. [Accessed: 12 March 2014].

A call was made for discussions on climate change and sustainability to include a focus on the impact on the poor and vulnerable – with this necessitating a comprehensive and balanced response. The role of local government in mitigating the effects of climate change on communities and economies was emphasised, with this role seen as strengthened by the appointment of the outgoing Chair, former New York Mayor Michael Bloomberg, as United Nations (UN) Special Envoy for Cities and Climate Change.

3. Plenary Session 1: C40 cities taking measurable action to combat climate change – and release of the Climate Action in Megacities 2.0 report

Incoming C40 Chair Mayor Eduardo Paes introduced Plenary Session 1 and the opening speaker, Michael Bloomberg, President of the C40 Board, Special Envoy for Cities and Climate Change and former Mayor of New York. Mayor Paes reflected on C40's growing status as a global institution through which cities are able to learn from each other, share practical solutions, grow partnerships and develop into a stronger political force for action. The release of the Climate Action in Megacities 2.0 (CAM 2.0) report was heralded as a real demonstration of the progress made by cities in the South and North in terms of climate action – while also serving as a reflection of the steps to be taken by mayors in making cities inclusive, sustainable and resilient. Michael Bloomberg extended this emphasis on the role of cities in leading climate action. He noted that in 2009, cities were largely excluded from international climate action conversations – in contrast with the UN's establishment of a Special Envoy post for Cities and Climate Change.

C40 Executive Director Mark Watts presented insights from the CAM 2.0 report – with the following concepts highlighted as the foundation of the analysis: actions through which cities are reducing GHG and mitigating the impact of climate change; the extent of power leading cities have to address climate change (e.g. via city assets or functions); levers used to address climate change action (e.g. projects; procurement; policy formulation; regulations; incentives/ disincentives); scale of impact (varying from pilot to proposed, significant and transformative). Watts argued that the report provided tangible evidence that the network model was working as a mechanism through which to share ideas and best practice between cities (with one example of this relating to the significant uptake of the BRT model).

C40 cities were acknowledged for their work in holding each other accountable in the climate action field, while also finding ways to reduce the transactional costs of taking action and increasing the scale of impact. The transformative impact of cities was attributed to the leadership of mayors within the C40 network, and their willingness to be bold and take the power to act – with innovation evident even in those areas where the powers of mayors are seemingly limited (e.g. energy supply and Information and Communication Technology or ICT). Mayors were applauded for not being constrained by their formal powers in their efforts to drive change. The report also highlighted that focus was being placed on the areas in which the biggest difference could be made (e.g. addressing building emissions). Attention was also drawn to the implementation of the 'smart' cities concept – with the most significant delivery in this regard being amongst those cities with either the lowest or highest Gross Domestic Product (GDP) per capita.

The panel discussion within Plenary Session 1 focused on the theme of 'Measure to manage: measurement and data in advancing city climate agendas'. Mark Watts served as moderator, with panel members including:

- Governor Babatunde Fashola, *Lagos State*
- Mayor Eduardo Paes, *City of Rio de Janeiro & Incoming C40 Chair*
- Mayor Annise Parker, *City of Houston*
- Governing Mayor Stian Berger Røsl, *City of Oslo*
- Andrew Steer, *President and Chief Executive Officer (CEO), World Resources Institute*

The following core themes emerged from the discussion:

- The power cities hold in addressing climate action – with emphasis placed on the importance of 'action' over talk, and the value of CAM 2.0, which reflects this action across all areas of intervention.

- The strength of innovative solutions produced by many less wealthy cities in the South, and the value of the network as a global platform through which to share original solutions amongst megacities of the world.

- The importance of technology and the digital revolution in supporting climate action and in enabling communication with, and participation and involvement of residents in daily climate action and mitigation.

- The value of data in enabling cities to drive different behaviour among citizens. Emphasis was placed on the importance of data in: measuring the impact of action taken; determining priorities; conveying the rationale for priorities; clarifying the reactions deemed as necessary as a result of priorities (e.g. Rio's use of data to identify geographical areas at greatest risk of landslides, during extreme weather events – thereby supporting evacuation decisions).

- Benefits derived from the establishment of a consistent approach through which to report on GHG – with 60 cities committed to supporting this effort, thereby making it possible to demonstrate the impact, costs and benefits of different actions, to support future prioritisation of those with the greatest returns.

- The importance of communicating the message of climate action in a way that demonstrates the direct impact of action or non-action on citizens (e.g. in terms of financial savings, an improved economy or better living conditions) – in this way encouraging them to take direct action.

A call was made for the C40 network to work further on how communication with citizens can be improved for greater impact and for improved clarity – with an example made of the difficulties associated with changing mind-sets and practice on the ground in relation to recycling. Finally, while there were many examples of good practice emerging from the discussion, highlights included:

- The City of Houston's work in reducing GHG emissions as a municipality by 28% over a seven year period – with efforts undertaken in every area, including the roll out of a complete energy analysis of all buildings, the establishment of individual energy emission plans for each building, supported by retrofitting.

- The City of Oslo's Climate Pact and 'Business for Climate' network, initiated with an understanding that the city's resources are limited, and that partners are needed for targets to be achieved. 93% of all companies within the network report to the City on their work and targets, with companies also sending through their environment and climate change policies – demonstrating the tangible ways in which efforts are being taken on-board.

- The City of Rio de Janeiro's Operation Centre, which is supported by 500 cameras that stream in live data – with every department within the City involved in on-going analysis, to support intelligent short-term decision-making and long-term planning. Communication with citizens takes place by means of sirens, social networks and more traditional platforms – depending on the nature of the issue, and the level of urgency.

4. Plenary Session 2: City leadership and the international climate agenda

Christiana Figueres, Executive Secretary of the UN Framework Convention on Climate Change (UNFCCC), provided the keynote address, focusing on the leadership role of cities and the role of city leadership in driving the global climate change agenda. In opening, she reflected on the special significance of the Johannesburg-hosted C40 Cities Mayors Summit, noting a number of firsts – with it being the first time that the event was being held in Africa, under the leadership of the first C40 Chair hailing from a developing country, with the UN being present for the first time. Figueres also highlighted the significance of the panel members themselves – with the leaders present together seen as representing the past, present and future of the global response to climate change. Copenhagen, the host of COP 15 in 2009, was reflected on in the context of the 'past'; the 'present' was seen as represented by Warsaw, host of COP 19 in 2013; while New York and Lima were seen as representing the future (with the Climate Change Summit to be held in New York in September 2014, and COP 20 to be hosted by Lima in December 2014). Each event was noted as establishing further progress in terms of intergovernmental agreements, with the most recent amongst these being the targeted maximum temperature rise of two degrees Celsius, with all partners agreeing to put in place measures to ensure this is not exceeded.

Cities were acknowledged for their work in implementing practical, sustainable solutions on the ground (e.g. increasing resilience and liveability through reducing congestion and pollution, improving the quality of the environment, improving energy efficiency and rolling out smarter infrastructure). However, concern was noted in terms of the lack of integration, cooperation and coordination between cities and national governments. This was highlighted as an area the UNFCCC hoped to offer support – encouraging linkages and alliances between cities and their national governments, while also working towards an effective international climate change agreement that would in turn open the door to shorter-term gains with direct impact for residents. It would be to everyone's benefit to establish a strong agreement that vertically integrates the interests of both city and national governments. Three suggested areas were raised for collaboration between the UNFCCC and C40:

- Using a common set of global metrics to support target setting, action, monitoring and unlocking of support (financial and other).

- Growing financial resilience through targeting low carbon-linked investments, thereby ensuring that climate change does not place the financial health of cities and citizens at risk.
- Encouraging commercial funding and private investment in solutions that support climate change resilience and adaptability, and that promote low carbon outcomes.

Finally, a call was made for attention to be given to improving communication between city-specific and intergovernmental processes targeting climate change, and addressing the lack of regulatory integration between cities and national governments – with mayors acknowledged as key coalition builders in this regard.

Dr Rohit Aggarwala served as moderator of the panel discussion within Plenary Session 2, with focus placed on the theme of 'cities and a global climate agreement'. Panel members included:

- Michael Bloomberg, President, *C40 Board and former Mayor, New York*
- Lord Mayor Frank Jensen, *City of Copenhagen*
- Deputy Mayor Hernan Nuñez, *City of Lima*
- Deputy Mayor Michal Olszewski, *City of Warsaw*
- Christiana Figueres, *Executive Secretary, UNFCCC*

Discussions centred on areas for further work and key lessons learned, particularly in relation to COP conventions hosted, and efforts associated with driving climate action. Critical messages related to:

- The importance of ensuring dialogue with all role-players within a national context when committing to international climate targets, with achievement of Copenhagen's target of being carbon neutral by 2025 acknowledged as being dependent on the support of national government and business partners.
- The value of building buy-in to climate action from communities and ordinary citizens through communicating in a way that avoids a focus on being 'carbon neutral' – instead relating actions to improving the quality of life and health of the citizens, growing sustainability and establishing new economic and job opportunities.
- Potential benefits to be drawn from using events such as COP meetings to foster improved dialogue between cities and their own national governments, with the City of Warsaw reflecting on enhanced engagement with its own national government, following the sharing of knowledge and best practice between cities at COP 19.
- The important role to be played by mayors, given their proximity to localised issues, and the expectation of citizens for them to address all aspects of city life – regardless of whether this is within their jurisdiction. As such, mayors can take advantage of the opportunity to dialogue with the public, engage with opinion-shapers such as the media, and shift mind-sets in targeting climate action on the ground.

In moving forward, the following suggestions were noted in terms of the leadership role cities could play in fighting climate change:

- Using international platforms such as C40 and the UNFCCC to raise their own voices, ensuring that actions taken at a national and international level support city initiatives – with all efforts being collaborative in nature rather than mutually exclusive.

- Collaborating with citizens, industry and their own national governments when exploring investment instruments, thereby ensuring the necessary finances to meaningfully address climate change.

- Sharing technical skills, knowledge and best practice and input on relevant technologies with other cities, to avoid the repetition of errors – and to fast-track progress.

- Communicating the message of climate action in a way that makes it real and of immediate importance to citizens in their daily lives (e.g. ensuring a clean environment that makes it possible for citizens to cycle or swim in the harbour, with these being goals pursued by Copenhagen).

5.   Network Breakout Sessions 1

The first set of network breakout sessions focused on sharing 'report-outs' amongst the following active C40 networks: 'green growth network'; 'sustainable solid waste systems'; 'Bus Rapid Transit and low carbon fleets'; 'sustainable communities'. Highlights in terms of progress, key ideas and areas for further action are outlined below.

5.1.   Green growth

This network session was moderated by Jeremy Oppenheim, Programme Director of the New Climate Economy Project. Panellists included:

- Adugna Mekonnen Beyene, *Deputy Manager, Addis Ababa*
- Josh Alpert, *Policy Director, City of Portland*
- Tea-hean Rim, *Director General, Environment and Forest Bureau, City of Changwon*
- Karoline Amalie Steen, *Head of Division: Growth, Partnerships and International Affairs, City of Copenhagen*

Examples of work underway across the green growth network were varied – e.g. Portland's work in promoting electric vehicles, and Addis Ababa's four pillared approach of adopting an agricultural and land use efficiency measure, greening the city, deploying renewable and clean power generation, and implementing advanced low carbon technologies in industry, transport and buildings. Copenhagen's efforts were highlighted as focusing on addressing the interdependent elements of quality of life, growth and sustainability, with this principle represented in efforts such as the city's bicycle sharing scheme.

Key themes arising from the network breakout discussion included:

- The importance of establishing a driving policy, strategy or plan as a foundation for initiatives implemented – with this emerging as a commonality across all city efforts.

- The benefits associated with being able to the measure the impact of 'green growth' in terms of numbers that hold meaning for citizens and other stakeholders (e.g. number of jobs created) – with success stories enabling cities to engage the global market place with requests for funding and other support.

- The emergence of clear evidence that green initiatives have the ability to bring with positive socio-economic impact (with, for example, the City of Changwon's initiative of providing waste heat to companies resulting in a cost reduction of 8.7 billion South Korean Won for businesses, while creating jobs and significantly reducing GHG emissions – and Copenhagen's cleaning efforts resulting in an inner harbour that is once again swimmable, thereby increasing liveability).

Areas identified for future action included the following:

- The establishment of a shared language in terms of what is meant by a 'green job' or a 'green economy' – with the absence of a common language leading to challenges in measurement and collective action.

- Ensuring a continued focus on measurement – with this being a critical requirement when attempting to enlist the necessary political support.

- Collection of tangible evidence in the form of a cost-benefit analysis associated with green projects, to build the business case and ensure the necessary information for investment attraction and with this, up-scaling. In this regard, C40 delegates were informed of the intention, over the next 6 to 9 months, to capture evidence from around the world on good practice examples that link improved economic performance with climate action initiatives, to demonstrate how these two elements can be brought together. Delegates were asked to share tangible data in this regard, to further efforts.

5.2. Sustainable solid waste systems

The network session on 'sustainable solid waste systems' was moderated by Helena Molin-Valdes, Head of the Secretariat of the Climate and Clean Air Coalition (CACC), with panellists including:

- Christian Gaebler, *Permanent State Secretary, City of Berlin*
- Laura Spanjian, Director, *Office of Sustainability, City of Houston*
- Governing Mayor Stian Berger Rosland, *City of Oslo*

Helena Molin-Valdes initiated the discussion through sharing input on the importance of climate action in the area of solid waste – with this emphasised through the fact that waste generation is increasing at a faster rate than any other pollutant, including CO_2. It was noted that significant work is taking place within the sector, with 1039 of the 8000 climate actions reported in CAM 2.0 relating to waste management, and 65% of these being transformative in nature. Information was also shared on the Municipal Solid Waste Initiative jointly launched by the CCAC Partnership and C40. This initiative focuses on targeting city assessments, providing a platform for the exchange of knowledge and experience, facilitating direct technical assistance, strengthening links with national policy and financing, and serving as a coalition for reporting on actions.

The panel discussion focused on transformative actions taken across cities, alongside lessons and best practice. Key themes from the discussion related to:

- The use of varied and often inter-linked solutions to solid waste management and urban management – e.g. Berlin's focus on backyard bins to encourage separation at source, infra-red sorting technologies, waste incineration, a biogas plant and electronic item deposit sites for recycling. Spin-offs from waste management are used to support city functioning – e.g. biogas is used for municipal vehicles; heat from waste incineration supports district heating; electronic waste recycling results in 70% of items being given a "second life".

- The importance of establishing an understanding among residents that resource conservation is their personal responsibility, with sustainable waste management and environmental care depending on their active involvement. The City of Oslo "knocked on 70 000 doors" to communicate this message, drawing inspiration from the City of London's efforts.

- The value of constantly innovating in the solid waste management space – with the City of Houston "going against the grain", following the acknowledgment that the impact of waste recycling efforts were not exceeding a certain threshold of impact despite significant education efforts. While the programme is still to be implemented, the City plans to revert to 'one bin' – with technology used to sort streams, with food waste composted and processed through a methane digester, while residuals will be addressed via waste to energy options. It was acknowledged that a key risk related to the possibility of losing the sense of individual responsibility with such an approach – with education campaigns therefore focused on re-use.

- An acknowledgment that improved solid waste management make economic sense: reducing costs, facilitating employment opportunities, and providing opportunities for the use of secondary resources.

- The need to focus beyond the question of waste management alone – shifting from an emphasis on 'symptoms', to addressing the primary objective of how to reduce consumption (e.g. encouraging less packaging; building an understanding of shopping 'smartly').

5.3. Bus Rapid Transit and low carbon fleets

Walter Hook, CEO of the Institute for Transportation and Development Policy (ITDP), moderated the session on 'Bus Rapid Transit (BRT) and low carbon fleets', with panellists including:

- Sérgio Póvoa Pires, *President, Urban Planning Institute of Curitiba, City of Curitiba*
- Horacio Rodrigez Larreta, *Chief of Cabinet Ministers, City of Buenos Aires*
- Dr Choi Young Soo, *City of Seoul*

Walter Hook highlighted some of the key issues in CAM 2.0 viewed as being of relevance for the plenary theme, reflecting on the fact that 4 of the top 10 climate change actions undertaken by C40 cities relate to transport – with focus placed on reducing congestion, enhancing travel times, improving economic development and growth, and reducing carbon emissions. In this way, transport interventions were noted as contributing to both the socio-economic and environmental sustainability agenda.

The discussion centred around three cities, Curitiba, Buenos Aires and Seoul, and their experiences in implementing the BRT and other low carbon systems, with the following key themes and ideas highlighted:

- The need to view BRT as more than just the provision of mass transportation. Instead, it was argued that BRT should be seen as representing a holistic approach that includes land use and transit development, ultimately supporting the establishment of city that functions in a better and more socially inclusive way, for all stakeholders.

- The need to counter resistance through:
  - Having a strong political champion on board (a "brave mayor"), to make tough choices and to sell the benefits of the BRT system to communities, with this noted as a non-negotiable in ensuring a successful outcome.
  - Implementing the easiest routes first, so that the benefits can be demonstrated to critics within a short space of time, to allow for further phasing-in of subsequent routes.
  - Ensuring citizens and industry benefit simultaneously from the system due to lower levels of congestion, less time spent travelling and improved opportunities for economic growth – while at the time supporting environmental sustainability through reduced emissions.
  - Encouraging car-users to make the shift through ensuring that the quality of buses is optimal, that the physical system enables buses to travel faster, and that innovative fare models support inter-modal transport and cost management for the user.

Finally, it was argued that the biggest obstacle in relation to efforts to take the BRT and other low carbon approaches forward relates to costs e.g. of hybrid buses. Cities such as Curitiba are working to counter this through shifting to electric buses, although innovative financial models are still required in this regard. It was also argued the cost factor should be considered in the context of longer-term benefits, with the latter including: environmental benefits of reduced emissions; reduced congestion and travel times supporting economic growth; and improved infrastructure enhancing property price.

5.4. Sustainable communities

The 'sustainable communities' network includes the cities of Beijing, Lima, Sao Paulo, Singapore, Stockholm, Sydney and Melbourne. Panel members were as follows, with the discussion moderated by Geoff Lawler, Director of City Planning and Infrastructure, City of Melbourne:

- Sun Kanglin, V*ice Chairman of the Standing Committee of Beijing, Municipal People's Congress, City of Beijing*
- Anna Zucchetti, *Director Natural Resources & Environment Regional Department, City of Lima*
- *Vice Mayor Nádia Campeão, City of São Paulo*
- Benedict Chia, *Director (Strategic Issue), National Climate Change Secretariat, City of Singapore*
- Vice Mayor Per Ankersjö, *City of Stockholm*

In his opening, Geoff Lawler reflected on the indication that a total of 1039 actions focused on community scale development are reported on by C40 Cities, with land use planning (e.g. transit-oriented development; compact-city strategies; eco-district strategies) linked with the majority of 'sustainable community' activities. A positive trend was noted of more actions being at the transformative rather than 'pilot' or 'proposed' stage. With 76% of cities intending to expand a community-scale development action already in progress, it was argued that there was clear evidence that cities were accelerating their response to climate change.

Key themes emerging from the presentations and discussions among network members related to:

- The importance of linking climate change mitigation and adaptation responses to social and economic development – particularly in the context of rapid urbanisation, social change and economic growth. Beijing, for example, reflected on its efforts to reduce air pollution by 25% by 2017 through steps such as phasing out polluting industries or relocating them from densely populated areas, progressively switching from coal to clean energy sources, building energy saving buildings, intensifying the vehicle emission standard, and planting one million hectares of trees. Singapore's communication efforts have focused on the links between environmental initiatives and economic growth (e.g. sharing the message of reduced energy costs, and lowered vulnerability to energy crises).

- The need to promote low-carbon public and non-motorised transport, and to ensure that urban planning efforts support reduced daily travel times.

- The necessity of taking the specificities of the local context into account, and tailoring multiple initiatives to achieve the intended climate action outcomes. Singapore serves as a good case in this regard, with the city adopting an array of mutually reinforcing initiatives in a context of significant geographical constraints faced (limited land, water and other natural resources). Initiatives have included the development of an integrated approach to urban planning, the use of technology to increase efficiency in a range of economic sectors, construction of green buildings, targeted legislation to enforce compliance, and the provision of support to research institutions to promote technological innovation.

- The critical role citizen and private sector participation and cooperation plays in the planning, implementation and the ultimate success of climate mitigation or adaptation initiatives.

- An acknowledgement amongst all participants of the non-negotiable focus on sustainable development, in a context of population growth, limited and increasingly-pressurised resources, and the ongoing experience of climate pressures.

6. Plenary Session 3: Climate proofing the world's megacities: Building adaptable and liveable cities

Adam Freed, Director of the Nature Conservancy's Global Securing Water Programme, moderated Plenary Session 3. Panel members included the following, all of which are also members of the C40 Delta Cites Network:

- Mayor Ahmed Aboutaleb, *City of Rotterdam*
- Mayor Debira Kuma, *City of Addis Ababa*

- Mayor Michael Nutter, *City of Philadelphia*
- Mayor Giorgio Orsoni, *City of Venice*
- Mayor Ignazio Marino, *City of Rome*

The session focused on the diverse range of adaptive strategies implemented by a number of cities affected by raising sea levels and flooding, or heightened flooding risk – with innovative technology and the construction of infrastructure forming the foundation of most adaptive strategies. Examples highlighted included: Venice's use of sensors in the ocean to support an early warning system, and the city's roll out of mobile barriers; Rotterdam's use of underground storage systems; and Addis Ababa's focus on the treatment of a water catchment area and construction of diversion channels.

Key themes arising from the discussion related to:

- The critical role multi-stakeholder partnerships play in supporting the climate change agenda – e.g. enabling increased access to research, innovation, and human and financial resources; facilitating buy-in from and participation by communities. In terms of the latter, it was argued that the implementation of mitigation or adaptation initiatives is very often easier when communities are involved in, and hold a clear understanding of how they will benefit from these initiatives (e.g. socio-economic returns; risk minimisation; environmental improvements; improved quality of life).

- The key role megacities and their mayors can play in mobilising national governments to take action against climate change. It was argued that mayors across the globe often hold a clear understanding of the impact of climate change, given their first-hand experience in needing to address an ever-increasing number of risks and disasters arising from climate change.

- The need for adaptation strategies to include both a shorter and a longer-term focus, in order to be successful. In Venice and Addis Ababa, longer-term infrastructural adaptations (e.g. development of large dams in Addis Ababa) are accompanied by shorter-term development efforts (e.g. water catchment treatment), citizen engagement and early warning systems.

- The value of international partnerships, such as the C40 Delta Cities Network, in supporting the knowledge exchange necessary to ensure effective water management, the promotion of international accountability and improved city performance.

- Potential cost and impact-related benefits arising from alternative adaptive strategies – e.g. Philadelphia's focus on employing green infrastructure rather than grey infrastructure, as a key climate action.

- The call for holistic management of climate mitigation and adaptation strategies in a way that balances various objectives (e.g. protection of the environment and protection of jobs).

- The value of sharing a message with citizens about the fact that climate change brings with it the potential for new jobs, innovation and impact – in this way benefiting cities and their people.

7. Video address with President William J. Clinton, ceremonial handover of C40 Chairmanship, and C40 Vision for 2014 – 2016

The ceremonial handover of the C40 Chairmanship was preceded by a video address by former President Bill Clinton, who applauded C40 and its 63 member cities for their results-driven, evidence-based approach to the climate change agenda. Examples emerging from various countries around the globe were acknowledged as demonstrating the manner in which adaptation and mitigation efforts can be used to reduce emissions, while simultaneously creating jobs and improving the economy. Mayor Bloomberg was thanked for his work to date as Chair of C40, with confidence noted in Mayor Paes' ability to take C40's work forward.

In handing over the Chairmanship to Mayor Paes, Michael Bloomberg, President of the C40 Board of Directors and former Mayor of New York City, echoed President Clinton's sentiments and expressed his belief that C40 would continue to flourish under Mayor Paes' leadership. Mayor Paes, in turn, acknowledged the significant work of those who had come before him, and committed to continue these efforts as Chair of C40. In a context where the world faces more complex issues, he noted a need for mayors to demonstrate leadership in taking greater climate action – reminding delegates that "green growth is not utopian", with efforts focused on care for the environment equated to a demonstration of care for people.

In reflecting on C40's vision for the period ahead, a call was made for global cities to fight climate change through sound urban planning, supported by increased collaboration and the replication of lessons learnt. The value of regional networks was highlighted, with an expansion of efforts in this regard noted as critical, given the very specific issues and challenges often confronting different regions. C40 cities were also encouraged to further the use technology in addressing the climate change agenda, with it argued that economic prosperity, social inclusion and environmental protection all require technological support. In line with this idea, he coined a new term: "polic-digitography", with 'polic' referring to 'the city', and 'digitography' referring to the use of technology to support collaboration and improved citizen engagement. Delegates were reminded that without citizen participation, there could be no sustainable development. Finally, big data analysis and open data policies were noted as significant opportunities for government, in driving efforts to address climate change.

8. Welcome: Mayor Eduardo Paes, City of Rio de Janeiro & C40 Chair – and C40 Executive Director's Report: Mark Watts, Executive Director, C40

Eduardo Paes, Mayor of the City of Rio de Janeiro and newly appointed Chair of C40, welcomed delegates back to the third day of the C40 Mayors Summit – reflecting on the calibre of inputs and the benefits of learning and sharing between cities. Delegates were reminded of the variety of actions reflected in the CAM 2.0 report – with city leaders urged to build on this momentum within their own constituencies, with the support of C40. C40 Executive Director Mark Watts provided an overview of the C40 Executive Director's Report, sharing information on:

- C40's mission, with it noted that C40 is organised for cities, by cities, to achieve meaningful reductions in GHG emissions and climate risks.
- The organisation's governance arrangements, including:
  - C40's Steering Committee: constituted of mayors from each of the regions; responsible for the setting the organisation's strategic vision; and
  - C40's Board of Directors: provides over-arching governance support to the Steering Committee; chaired by former Mayor of New York City, Michael Bloomberg.
- C40's staffing and funding arrangements, with gratitude expressed to C40's current funders (including Realdania, the Children's Investment Fund Foundation and Bloomberg Philanthropies), who have assisted in ensuring the full funding of the organisation's strategic plan for a three-year period.
- The organisation's work, with the following areas of work highlighted:
  - Research and knowledge management – with emphasis placed on the value of sharing best practice and experience through direct engagement, research, the C40 website and the C40 Exchange (an intranet service that allows cities to interact in a secure environment). A case study library is under development, to further support cities.
  - Collecting and using data effectively – as a way of demonstrating the actions being taken by C40 and its members, with data supporting decisions regarding the best allocation of resources, while reflecting the actions of individual cities, and enabling assessment of the potential for project scalability and replicability.
  - The C40 networks, as managed by C40's Initiatives Team – with networks focused on facilitating peer to peer exchanges, such as those relating to delta cities and green growth. It was noted that most member cities participate in at least one network.
  - Regional and city support – with City Directors currently being appointed to work directly with cities, as a way of further supporting them in their efforts.
  - Raising city profiles and programmes – using communications tools through partners such as Siemens, to drive positive messages regarding actions undertaken by cities.
  - Recognising success – through awards such as the City Climate Leadership Award.

In reflecting on the path ahead, Watts confirmed the important role to be played by C40 in advocating for a city presence in international-level engagements on issues of climate change. He expressed confidence in the C40 leadership, and the potential of what could be achieved, together.

9. Plenary Session 4: Healthier, wealthier cities – Linking growth, prosperity and liveability

Plenary Session 4 was moderated by Jay Carson from Bloomberg Philanthropies, with panel members including:

- Mayor Guy Morin, *City of Basel*
- Executive Mayor Mpho Parks Tau, *City of Johannesburg*
- Mayor Gregor Robertson, *City of Vancouver*

- Hon. Minister Trevor A. Manuel, *Minister in the Presidency: National Planning Commission*

Key themes emerging during the discussion related to:

- The varied mechanisms through which cities are linking the objectives of growth, prosperity and liveability, countering the view of an apparent dichotomy between economic and green development. One example highlighted was that of the City of Johannesburg's 'Corridors of Freedom' approach, where transit oriented development is being used to 're-stitch' the city together, altering the city's apartheid spatial legacy of marginalisation, segregation and inequality through improved connectivity and integration. Higher density, mixed-use and mixed-income areas along strategic corridors, supported by improved access to amenities and services, will enable the city to function in a more sustainable and liveable manner.

- Challenges faced by cities in accessing funding for projects that support sustainability, such as:
    - Difficulties in accessing funding for infrastructure, with the City of Basel viewing this as the main challenge to the achievement of sustainability. To counter this challenge, the City focused on bringing infrastructure programme owners, financial institutions and bodies such as the World Bank together, enabling the establishment of a global infrastructure body. Focus is placed on facilitating funding through ensuring projects are presented in a way that depicts their potential wins and sustainability benefits, thereby enabling possible funders to see them as assets.
    - The challenge of accessing international funding, given: the complexity of financing structures; the need to engage external consultants who understand the funding process of entities such as the UN, prior to proposal submission; the administrative burden associated with such funding.

- The diverse approaches through which mayors have incorporated the sustainability agenda into their delivery commitments:
    - Mayor Gregor Robertson from the City of Vancouver noted that the goal of making the city green while growing the economy and driving job creation was reflected as central to his election campaign – with this commitment prior to appointment enabling focused delivery, while also conferring a responsibility to deliver.
    - In contrast, the City of Johannesburg emphasised growth and development, providing stakeholders with an analysis of problems and opportunities in the context of this objective, as part of the City's broader long-term strategy development process. The concept of the Corridors of Freedom emerged as a product of this effort, alongside other sustainability priorities such as food security.

- The important role to be played by different stakeholders in supporting the establishment of cities with greater growth, prosperity and liveability – with:
    - Emphasis placed on the need for improved partnerships and engagement between city governments and their national counterparts in respect of sustainability issues.
    - The Oxford Martin Commission, on which South Africa's minister for national planning, Minister Manuel, served as a Commissioner, identifying that while the core challenges faced at a global level require multi-lateral decision-making, progress is hampered by the systems such as the UN which limit involvement to a small number of states. To support a different outcome, it was noted that the Oxford Martin Commission

recommended the establishment of a 'C20-C30-C40 Coalition' to counteract climate change, with this coalition to be constituted of G20 countries, 30 companies with the largest emissions, and 40 cities. Such a coalition could create traction for ideas and movement towards Paris 2015, in terms of how cities can be turned into more liveable and healthy spaces. Including cities in the conversation on climate change was noted as a way of incorporating "a level of government that could be a momentum for change". Mayors were encouraged to act, in the absence of action from national government counterparts, while C40 was acknowledged as an entity that could build momentum through demonstrating where the climate change agenda opportunities lie.

The following emerged as focal points for future action:

- A call for mayors to work collaboratively in finding innovative solutions to problems such as funding, and to be more assertive on the international stage – working as willing partners, while demonstrating their interest in sharing their expertise, experience and first-hand knowledge of challenges faced at a city level.

- In terms of funding: encouraging global financing institutions to improve accessibility of funding for local government; continuously gathering data, for potential financiers to understand the value and quality of life improvements of investments; the role of city governments in encouraging corporates to support win-win solutions for the establishment of 'healthier, wealthier cities', through creating local pools of capital linked to behaviour change.

10. Network Breakout Sessions 2

The second set of network breakout sessions focused on 'report-outs' from the following C40 networks: 'climate risk assessments'; 'measurement and reporting'; and 'sustainable infrastructure finance'. A further session was held on the theme of 'ports', given the importance of port-related action in the climate adaptation and mitigation space. Key points of discussion are reflected on below.

10.1. Climate risk assessments

Bruce Hewiston from the Intergovernmental Panel on Climate Change (IPCC) served as moderator of this network breakout session, with the panel including:

- Sandro Caparelli, *Senior City Official: Urban Sustainability, City of Venice*
- Rodrigo Rosa, *Special Advisor to Mayor Paes, City of Rio de Janeiro*
- Leah Cohen, *Deputy Director of Federal Policy, New York City*

Key themes arising in the panel discussion related to:

- The definition of 'resilience' and the implications for action, with it argued that city resilience requires a focus on increasing the capabilities of a city to function on its own – necessitating the establishment of 'backups' and adequate flexibility to deal with the unexpected. Evidence

across all cities was noted as reflecting increased frequency and intensity of extreme weather events – e.g. high temperatures, storms, lightning, flooding, landslides, raised sea levels.

- The adoption of multiple approaches within each city context, in order to build climate change resilience – with each panel member presenting a localised approach. Examples highlighted included: Venice's roll out of mobile barriers, raising of pavements, and use of an early warning system, supported by monitoring and forecasting efforts; the City of Rio de Janeiro's delivery of a short and long-term resilience plan, operationalized through reforestation and greening efforts, collection and analysis of multiple forms of data, significant use of technology, training, and the application of a city-wide risk matrix to support decision-making.

- Across all cities, a core priority shaping the approach to climate change resilience relates to the need to protect human lives – with other concerns such as the preservation of heritage and cultural sites necessitating focused actions (e.g. as per Venice's experience).

- The importance of learning from events such as New York's Hurricane Sandy experience – with adequate reflection and planning allowing cities to rebuild in a way that improves resilience. Insights arising from this particular event included: an acknowledgment that strict building controls do work, when implemented correctly; an improved understanding of the roll-on effect of power outages across all other services; an understanding of the areas at greatest risk (e.g. significant numbers of people living in flood zones); an appreciation of the need to ensure preparedness across all supply chains (e.g. gasoline, liquids, food supplies).

- The need to communicate regularly with citizens: engaging with them when developing plans for improved resilience; ensuring they know the steps to take in the event of a risk or disaster; sharing with them the potential impact of climate change risks, to drive action.

Priority actions and areas for focus in the path ahead were noted as including:

- Collection and use of scientific data – with findings needing to be translated into an accessible format, for use by technical experts and improved understanding by the public.

- The need to improve the understanding amongst potential donors and financial institutions of the critical nature of resilience plans, and the need for associated infrastructure investment.

- Addressing the absence of private insurance for natural disasters.

10.2. Ports

Panellists for the 'ports' breakout session included:

- Paula Verhoeven, *Director of Sustainability and City Planning, Rotterdam*
- Christine Lou, *Under Secretary of the State, Hong Kong*
- Zhou Qiang, *Secretary General of Shanghai Municipal Development and Reform Commission, Shanghai*
- Matt Peterson, *Chief Sustainability Officer, City of Los Angeles*

This session was moderated by Terri Wills, C40's Global Initiative Director. In opening, he reflected on port susceptibility to climate change, by way of their very nature. With ports serving as economic

hubs, finding solutions that address adaptation and mitigation, while building the economy and city liveability, was noted as essential. Key themes arising from the network breakout session related to:

- The need for strong collaboration between public, private and the non-governmental sectors in changing ports (e.g. providing the platform for industry and commercial entities to find ways, together, to reduce energy consumption). While changes across most C40 cities have been driven by government through policies and programmes, Hong Kong is unique, with actions led by industry (e.g. the call for vessels to change to low sulphur fuel in local waters).

- The adoption by many port cities of integrated, holistic climate change strategies that extend beyond water management solutions, simultaneously addressing urban and spatial management issues. The City of Rotterdam, for example, integrated port-related solutions with city-wide mitigation and adaptation efforts (e.g. residual waste from the port is used to heat the city; captured CO2 is used to improve plant-growth in green houses).

- The importance of addressing all aspects of the port when driving sustainability (e.g. lowering coal consumption; increasing renewables; adopting green building codes; promoting low carbon transportation – e.g. trucks; reducing the speed of ocean going vessels entering ports).

- The value of an emissions register when engaging with emitters in terms of changes required.

- The power of incentive schemes that reward changes in approach (e.g. reduced port fees for ships using alternative, clean energy sources; incentives for energy efficient buildings).

Areas identified for future action relate to:

- Hong Kong's request for further input from fellow port cities in terms of soft policy tools to support change (encouraging increased cooperation between government and industry).

- The need for standardised 'green' requirements across ports, to enable the shipping industry to comply more easily.

10.3. Measurement and reporting

The 'measurement and reporting' network session was moderated by Conor Riffle, the Carbon Disclosure Project's (CDP's) Director of Cities and Data Product, with speakers including:

- Dr Didas Massaburi, *Mayor, Dar es Salaam City Council*
- Trevor Fowler, *City Manager, City of Johannesburg*
- Tanya Muller, *Secretary of the Environment, Mexico City*
- Sadhu Johnston, *Deputy City Manager, City of Vancouver*
- Brian Sweat, *Chief of Environment, City of Boston*

The session was closely aligned with the Summit's plenary theme "cities taking measurable action to combat climate change", with delivery in this regard reflected in the CAM 2.0 report itself. Key themes emerging from the session related to:

- The need for inter-city collaboration and knowledge and technology transfer between C40 cities, given that the skills and resources required to engage in accurate measurement and

reporting are not readily available in all participating cities. To support this need, it was noted that C40 has launched a three-part monitoring and planning system, providing: a global standard for measuring GHG emissions; support to cities in terms of data collection and reporting of emissions; assistance with the development of monitoring plans.

- The significant benefits associated with sound measurement and reporting – with it noted that engaging in research, measurement and reporting:

    o Assists cities, mayors and the C40 network to build their profiles in respect of climate change mitigation and adaptation – with a stronger profile, supported by solid evidence from impact assessments, improving the ability of these role-players to influence national governments and citizens in adopting aggressive targets.

    o Enables cities to design and select interventions with maximum impact and lowest cost. Data gives cities the ability to target their efforts and develop the appropriate strategic direction. Examples of good practice relating to the use of measurement data include:

        - Mexico City's ongoing efforts, since 1990, in conducting extensive pollution inventories on a bi-annual basis. The city improves the data collection methodology continuously by using new technologies and subjecting research to external expert reviews. Inventories are used: for evidence-based policy/ programme development and decision-making; to monitor the city's performance in reducing air pollution; and to increase the city's accountability.

        - The City of Boston's work in measuring data since 2007, with this used to develop a community-wide protocol to realise an 80% emission reduction target by 2050.

        - The City of Johannesburg's work in establishing a GHG emissions inventory with the support of C40 and Siemens - with findings supporting targeted interventions.

    o Lays the foundation for improved communication with and information dissemination to citizens (e.g. Mexico City's intention to use a smart phone application to share data on real-time air pollution levels; Boston's focus on sharing data via social media to drive behaviour change – with emphasis placed on non-technical language, for wider access).

    o Improves performance and accountability (e.g. the City of Vancouver's annual reports disseminate adaptation and mitigation data to citizens and the Council, to increase mutual accountability).

- The fact that measurement and reporting is only valuable if methods employed are valid and the data generated is accurate, and easily translatable for users. Cities have embarked on various methods to address this, focusing on technology improvements, partnerships with appropriately skilled experts or institutions with resources, and legislation of measurement and reporting compliance. The City of Johannesburg's work, for example, is located in the context of a national policy and legislative framework that obligates government departments, across spheres, to monitor performance and submit regular compliance reports.

A call was made for the following steps to be pursued in furthering C40's work in this field:

- Contribute to continuous improvement to measurement and reporting techniques.

- Establish a common definition for terms such as "green jobs", so that measures relating to the impact of action in this respect can be communicated in a consistent way.

- Develop common methodologies and protocols for use at an international level.
- Develop approaches through which existing datasets can be combined and used globally, thereby improving sharing and the application of existing knowledge and information.

11.4   Sustainable infrastructure finance

Citi Bank's Director of Corporate Sustainability, Bruce Schlein, moderated this breakout session. Panellists included:

- Mayor Guy Morin, *President of the Executive Council, Canton of Basel-Stadt, City of Basel*
- Michal Olszewski, *Deputy Mayor, City of Warsaw*
- Anton O. Kulbachevskiy, *HOD Natural Resources an Environmental Protection, City of Moscow*
- Keith Anderson, *Director, District Department of the Environment, City of Washington DC*

In opening the session, Bruce Schlein reflected on the climate change actions outlined in the CAM 2.0 report, noting that in delivering on the climate change agenda, cities are increasingly focusing on innovative financial solutions to meet their legal obligations in an environmentally sustainable manner. In this regard, it was noted that 47% of C40 cities have established their own funds to finance for example energy efficiency, renewable energy and carbon reduction projects, 25% have their own municipal bank, and 33.3% have sought funding from multi-lateral funders. Panel discussions highlighted the following ideas for innovative funding solutions, as applied by the respective cities included:

- The City of Basel's application of the 'costs-by-cause' principle, a principle that leads to self-regulation by users, reduced pollution and increased sustainability – with examples including:
  - An 'added value fee', where if the city's efforts result in an increase in property prices, a fee is charged on the added value, to support more investment in sustainable projects;
  - A waste disposal charge, where the more waste a user disposes, the more is charged;
  - A steering tax on electricity, where each consumer pays a few cents per kWh into a fund, with each consumer receiving an equal amount out – with the quantum dependent on consumption;
  - Car park management fees, with money charged for parking in public spaces used to create park and ride facilities, further reducing congestion and pollution.
- The City of Warsaw's use of varied approaches to support sustainable infrastructure investment – e.g. municipal bonds; funds derived from the city's utilities and from a national environmental development fund established through user/ industry penalty payments.
- Moscow's focus on implementing Public Private Partnerships (PPPs).
- Washington DC's mixed funding approach, combining traditional funding sources (e.g. rates and taxes, utility charges, federal grants and municipal bonds) with non-traditional sources (e.g. energy saving contracts; power purchase agreements, 'green' banks and PPPs).

Areas highlighted for future engagement, learning and work in respect of innovative funding include:

- Approaches used by cities when successfully convincing private funders and commercial banks to fund environmentally sustainable infrastructure programmes – e.g. approaches used to communicate the value and risk-reduction attributes associated with sustainable investments.
- Experiences and learnings in relation to successful municipal banks.
- Potential aggregation of efforts across cities on a regional basis, to ensure improved attractiveness to private funders, and to leverage funds.
- Use of the World Bank's planned facility, through which it intends to engage cities directly.

11. Plenary Session 5: Smart planning and infrastructure – building intelligent, liveable cities and neighbourhoods

Plenary Session 5 was moderated by Rodrigo Rosa, Special Advisor to the Mayor, City of Rio de Janeiro. Members of the panel included:

- Mayor Gustavo Fruet, *City of Curitiba*
- Mayor Charlie Hales, *City of Portland*
- Mayor Miguel Angel Mancera, *Mexico City*
- Mayor Giuliano Pisapia, *City of Milan*

The session reflected on the important role that innovation and technology plays in supporting and enabling cities to be more efficient and liveable, through the collection, analysis and communication of data – and the application of such in urban development and delivery. Pertinent issues raised during plenary included the following:

- The value of technology in making cities more liveable – e.g. through using smart phone applications to share real-time information relating to air quality or weather with citizens, warning citizens of potential environmental risks; using environmental data such as water levels to mitigate disasters.
- The potential of tapping into the brain-power of citizens in relation to urban planning and delivery, through events such as the experimental laboratory run by Mexico City, where youngsters participated in developing tools to connect the city with citizens (e.g. in respect of public transport, health, government management).
- The value of using not only new but also old technologies and principles when addressing urban sustainability (e.g. the City of Portland's approach of shifting back to street cars and light rail, and promoting a mixed-use landscape that encourages movement on foot and bike).
- The wide variety of areas in which city governments have the potential and power to intervene, and in which innovation can make a difference e.g. the City of Milan's focus on addressing food security – fighting food waste and building food resilience; the value of new public transport systems in fundamentally supporting economic growth, in addition to shaping city functioning and strengthening sustainability.
- The value of technology in: enabling transparent citizen engagement and participation; gathering ideas, suggestions, feedback (e.g. via public polls) and data relating to problems requiring action; ensuring holistic planning; and improving buy-in for initiatives. A call was

made for traditional forms of public engagement such as meetings to be supported by communication via social media platforms, targeted web-sites and dedicated phone lines. Panellists reflected on the importance of ensuring that:

- o Due consideration is given to the audience making use of each platform – with a range of platforms (modern and more traditional) necessary to address all city stakeholders, with due consideration of translation of messages into different languages.

- o Feedback mechanisms are in place to enable cities to respond to citizens, following input, questions or the identification of concerns.

- o Social media tools such as twitter are managed appropriately, with any mayors noting their own personal involvement in managing their twitter accounts, and in communicating responsibly.

- o City websites are optimised to enable the transfer of information, and to serve as a full source of information for citizens.

- The importance of transparency for cities and citizens, with panellists reflecting on the call from citizens for an ever-increasing disclosure of information – with this demanding improved city accountability, while encouraging greater citizen participation, responsibility and ownership.

In terms of actions for the path ahead, it was noted that:

- Cities should focus on the development of common indicators in respect of 'smart planning and infrastructure', to support the evaluation of progress.

- Greater effort should be placed on communicating meaningfully and responsibly via social media networks, given the increased use of this platform.

12. Network breakout sessions 3

The final set of network breakout sessions took place in the context of the plenary theme on 'smart planning and infrastructure' – with focus placed on the following themes: 'building energy efficiency', 'connecting delta cities', 'transportation demand management', and 'intelligent city infrastructure'. A session was also dedicated to showcasing the work of the host metropolitan city, Johannesburg, in the context of this theme. It should be noted that of the former four areas of discussion, the theme of 'transportation demand management' is not currently organised as a formal network, although there is a move to greater collaboration in the light of its importance. Inputs in terms of themes, successes, good practice and areas for further action are provided below.

12.1. Building energy efficiency

Roger Platt, the U.S. Green Building Council's Senior Vice President, Global Policy and Law, served as moderator for the session on 'building energy efficiency'. Panel members included:

- Matthew Pencharz, *Mayor's Senior Advisor, Environment & Energy, Greater London Authority, City of London*

- Katherine Gajewski, *Director Mayor's Office of Sustainability, City of Philadelphia*
- Claudio Baffioni, *COO, Environmental Observatory for Climate Change, City of Rome*
- Monica Barone, *Chief Executive Officer, City of Sydney Council, City of Sydney*
- Miwa Jinno, *Director of International Environment Cooperation, Urban and Global Environment Division, Bureau of the Environment, Tokyo Metropolitan Government, City of Tokyo*

Key themes and insights arising from the discussion related to:

- The need to make informed decisions when retrofitting buildings – balancing financial implications with possible energy savings, with the support of meaningful data.
- The variety of factors that need to be taken into consideration when improving building energy efficiency e.g. legislation; building codes; local restrictions; requirements in terms of protecting archaeological sites and recognised cultural heritage sites; data regarding most significant sources of emissions, to drive programmes with meaningful impact.
- Approaches adopted by various cities in targeting improved building energy efficiency, with the City of London, for example, focusing on a combination of elements such as air quality, waste management, green energy, urban greening, and climate change mitigation and adaptation, in the context of two central themes: job creation and cost reductions.
- Various mechanisms employed to bring about change – e.g. awards programmes; education campaigns; working with suppliers of renewable energy to subsidise costs of retrofitting; streamlining procurement efforts; making the commercial sector more accountable in terms of reporting energy savings and carbon emission reductions; requiring sellers of buildings to include a building energy efficiency rating (with the latter implemented by the City of Sydney).
- The frequently far-reaching nature of targets in place across the cities profiled – e.g. London's target of a 60% reduction in carbon emissions (with a 20% reduction achieved to date); Tokyo's programme targeting an initial 6% reduction in CO_2 emissions from city buildings with the greatest emissions (for 2010 – 2014) – and a further 15% reduction (for 2015 – 2019).
- In a city context, the importance of leading by example, with a number of cities reflecting on their efforts to set targets and improve energy efficiency in public sector buildings.

In moving forward, a call was made for further engagement on:

- The establishment of meaningful cross-city information for benchmarking purposes.
- The provision of scientific expertise in terms of possible energy efficiency solutions – with C40's role in enabling benchmarking and knowledge-sharing acknowledged.

12.2. Connecting delta cities

Paula Verhoeven, the City of Rotterdam's Director of Sustainability and Climate Change, moderated the session on delta cities – with panellists including:

- Sarwo Handayani, *Deputy Governor, City of Jakarta*
- Cedric Grant, *Deputy Mayor, City of New Orleans*

While cities featured in the discussion included Jakarta, New Orleans, Rotterdam, London and Melbourne, the network is much larger, and includes other coastal cities such as New York, Vancouver, Hong Kong, Tokyo and Copenhagen. The network focusses primarily on adaptation in response to rising sea levels and predicted flooding, although member cities are also affected by related risks (e.g. landslides, extreme weather conditions, seismic activity, drought and fire). Some of the key themes that emerged from the presentations related to:

- The importance of improving resilience through multi-functional innovations. Presentations emphasised technological and infrastructural investments undertaken, including Rotterdam's use of permanent and flexible barriers, the roll out of water storage systems across most cities, and Jakarta's more varied interventions. The latter included, amongst others: construction of a sea wall with gates; land acquisition; large-scale relocation of informally settled communities; construction of blue and green infrastructure; widening of the river to increase water carrying capacity; establishing improved forecasting capabilities.

- The need to include communities from the initial stages of project inception, through to design and implementation, establishing a common vision – with this noted as particularly important in Jakarta, given the need to resettle large communities located in danger zones. In these cases, long-term communication strategies and negotiations have seen less resistance.

- The value of rolling out integrated strategies that align adaptation initiatives with other concerns (e.g. integration of flood management, urban spatial planning and community consultation). For success, such efforts need to take into consideration issues of rapid population growth, ageing infrastructure, and the roles of other national structures and departments (e.g. Jakarta's housing department, given significant resettlement needs).

- The value of creating an understanding of the links between adaptation strategies and the potential for improved quality of life – with this aiding the uptake of such strategies on a local, national and global scale. In Rotterdam, interventions are specifically designed to ensure they make the city both more resilient and more attractive (e.g. through the construction of green routes along the waterways). In New Orleans, initiatives are generally linked to improved economic vitality and quality of life enhancement, with measurement of impact therefore key.

- Lessons emerging from experience – including:
  - New Orleans' realisation of importance of streamlining water-related governance, policy and funding, creating a "one water solution" to address all aspects of resilience.
  - Melbourne's acknowledgement of the need to rethink governance structures for improved planning (e.g. undertaking regional water management planning).
  - The importance of focusing beyond technology alone, ensuring any plan for improved resilience includes and takes people along.
  - The value of quantifying the economic benefits of climate change adaptation, with this being used as a motivator for change (e.g. the City of Melbourne's approach of developing heat maps, providing these to people to inform their resilience actions).
  - The value of city to city knowledge exchange, with reflections included in the network's recent book, 'Connecting Delta Cities: Resilient Cities and Adaptation Strategies'.

12.3. Transportation demand management

The breakout session on 'transportation demand management' was moderated by Holger Dalkmann, Director of EMBARQ. Panel members included:

- Roger Kim, *Senior Advisor, City of San Francisco*
- Garreth Bloor, *Member of the Mayoral Committee (MMC) – Economic, Environment and Spatial Planning, City of Cape Town*
- Susana Muhamad, *District Secretary General, City of Bogota*
- Pierfrancesco Maran, *Commissioner for Environment, City of Milan*

Holger Dalkmann opened the discussion with a reflection on the nature of transportation, noting that where urbanisation represented one of the primary challenges of the 21st century, transportation was both a key contributor to this challenge, and a source for solutions. C40 cities were acknowledged for their efforts in the transport-related space, with the CAM 2.0 report identifying a total of 230 such actions undertaken by cities across the network. Based on experience, it was argued that technical solutions worked best when coupled with strong political leadership.

Members of the panel shared their experiences in implementing transportation demand management strategies, with key themes emerging in respect of:

- The value of smart data – with an example presented in respect of San Francisco's use of parking sensors, used to provide real-time data in relation to demand for parking. It was noted that the data allows for informed decision-making regarding traffic interventions. The roll out of a comprehensive management information system provided the City with the necessary input to implement a demand-responsive pricing strategy, with parking rates adjusted on the basis of demand. The approach was noted as impacting decisions taken by citizens in relation to vehicle usage, with benefits including a reduction in congestion levels and GHG emissions.

- The benefits of ensuring integrated, multi-modal transport systems and policy interventions in addressing climate change. Examples included: the City of Cape Town's focus on linking the BRT system, light rail, taxis, private vehicles and possible congestion pricing; Bogota's emphasis on 'pedestrianisation', bike-ways, delivery of a mass-transit system supported by subsidies for the poor, congestion taxes for private vehicles, and plans for the replacement of old buses with a greener BRT fleet; Milan's introduction of bike-sharing and car-sharing, a congestion charge, and more speed limits as a way to prioritise pedestrians and cyclists.

- The importance of understanding transport patterns in relation to socio-economic conditions (as per Bogota's mobility survey, which highlighted the need to address public transport affordability for the urban poor, given significant volumes of poor commuters who live on the city's outskirts and have no choice but to travel long distances by foot or by bicycle).

- Addressing the above through aligning transport systems with land use planning and economic development efforts, with this being key to ensuring sustainable, equitable and affordable access to opportunity. It was argued that sustainable transit oriented development should focus on three objectives: reducing the need to travel (e.g. through promoting the

development of economic nodes, mixed-use areas and increased densities); improving transport options; enabling a shift to more sustainable and clean forms of transport.

- The need to couple the above with the provision of good quality, convenient public transport, with this seen as key to targeting the use of public transport by all citizens, regardless of class.

- The value of data and measurement in demonstrating the positive impact of transportation demand management efforts, refining efforts and supporting further interventions.

12.4. Intelligent city infrastructure

This network session was moderated by Martin Powell, Siemens' Head of Urban Development. Panellists included:

- Eveline Jonkhoff, *Strategic Advisor of Sustainable Development, City of Amsterdam*
- Lucia Athens, *Chief Sustainability Officer, City of Austin*
- Júlia López Ventura, *Coordinator of the Barcelona Smart City Strategy, City of Barcelona*
- Masato Nobutoki, *Executive Director of Climate Change Policy, City of Yokohama*

This session focused on the ways in which cities are putting 'intelligent city infrastructure' to use to improve sustainability through delivering cleaner and more efficient solutions in areas such as transport and energy. The CAM 2.0 report was noted as reflecting evidence of the increased focus and action in this area, with C40 cities pursuing 348 actions related to intelligent city infrastructure (in the areas of internet infrastructure, smart public transport, smart energy, and smart emergency response capabilities). Key themes arising from the network breakout discussion related to:

- The importance of seeing cities as "networks of networks", with the City of Barcelona using this view as the foundation of its smart city programme, where:
  - The city's 'anatomy' includes multiple layers: structure (environment, infrastructure, built domain); society (public space, functions, people); data (information flows, performance) – with 'smart city' efforts across all areas, in support of sustainability.
  - Emphasis is being placed on removing silos in the city's information infrastructure, facilitating data sharing and creating an open source environment to further city development, and to make informed decisions.

- The need to educate citizens for improved uptake of intelligent city infrastructure options.

- The fact that innovative, successful solutions depend on collaboration between government, academia and citizens (with particular emphasis on the role of "tech savvy" youth).

- The importance of addressing intelligent city infrastructure initiatives holistically – with the City of Yokohama's efforts in respect of energy management providing a good practice example of a city-wide approach inclusive of numerous inter-related infrastructures. Examples include shared electric vehicles, multiple forms of renewable energy, and a re-think of infrastructure – establishing waste from one infrastructure as an input into others.

- Benefits derived from creative, innovative city approaches (e.g. the City of Austin's exploration of gamification, where a sustainability app encourages citizens to earn badges for behaviour

change; Amsterdam's three 'urban living labs', focused on testing sustainable technology, services and products within the urban environment).

- The necessity for ongoing monitoring of progress – e.g. via a suitable dashboard.
- Challenges to be overcome in rolling out intelligent city infrastructure, including: quantification of the economic impact of investments, to attract further investment; ensuring political commitment – with this being essential to break silos; establishment of Senior posts (e.g. 'Chief Technology Officer') to drive intelligent city infrastructure commitments.

12.5. City of Johannesburg

Sithole Mbanga, CEO of the South African Cities Network, moderated the 'City of Johannesburg' breakout session, with panel members including:

- Councillor Roslynn Greeff, *MMC: Development Planning, City of Johannesburg*
- Councillor Christine Walters, *MMC: Transportation, City of Johannesburg*
- Councillor Nonceba Molwele, *MMC: Social Development, City of Johannesburg*
- Councillor Matshidiso Mfikoe, *MMC: Environment & Infrastructure, City of Johannesburg*

In opening the session, Sithole Mbanga reflected on the challenges faced by South African municipalities, noting the issue of spatial transformation as being one of the most significant. It was argued that most South Africa cities reflect the same inefficient and inequitable spatial forms as those established through apartheid. The breakout session was therefore intended to serve as a 'laboratory' through which to observe the City of Johannesburg's approach to transformation. Panel members outlined various aspects of the City of Johannesburg's transformation programme – with each aspect providing insights into the City's approach to the aligned challenges of sustainability, climate mitigation and adaptation, socio-economic development and the establishment of a more equitable society. The City's transformation work was highlighted through:

- The 'Corridors of Freedom' initiative, focused on 're-stitching the city' via transit oriented development – with a network of strategically-placed transit corridors envisaged to change the city's spatial realities:
  - Providing a set of conditions for all within the city to achieve a better quality of life, with these conditions including:
    - An efficient, affordable public transport system (with the BRT at its core), connecting the sprawled parts of the city in a way that fosters integration.
    - The promotion of mixed-use developments, high-density rental accommodation, strategic "pulse points", and improved access to facilities and services along the corridors – in this way increasing and spreading socio-economic opportunities across the city, while building more vibrant communities.
    - Infrastructure developments that support a low carbon footprint (e.g. via green building standards, the sound management of waste, the application of new forms of 'smart city' innovations, and establishment of environments where people can live, work and play – without significant travel).

- - Countering present circumstances, where the experience of deprivation aligns directly with where people live (with those living on the periphery becoming poorer, given the high costs of transport, and limited localised socio-economic opportunities).

- The City's efforts in 'greening' mobility and making various transport options more affordable, with emphasis placed on the introduction of an extensive BRT network, the production of biogas and the conversion of all public transport fleets to energy-efficient green fuel. The transformation of the city's transport system was noted as a platform for wider socio-economic transformation (e.g. with the BRT system targeting job creation, and the provision of an opportunity for broad based black economic transformation).

- Efforts undertaken in respect of food insecurity, with climate change acknowledged as impacting the price, availability and quality of food – a reality that sees the poor as being hardest hit. Transformation initiatives were noted as including:
  - - Interventions in the food value chain, with support provided to emerging and micro farmers – simultaneously bolstering local food supply and economic opportunity.
  - - The provision of temporary food relief, linked with subsistence micro-farming opportunities and a food-for-waste exchange programme.

- The City's focus on assessing environmental risks, and establishing an aligned multi-sectoral climate change adaptation plan focused on building resilience in relation to all potential hazards (e.g. possible floods, extreme temperatures, poor air quality, multiple deprivations). While the plan includes mitigation approaches (e.g. early warning systems), it was noted that emphasis is placed on adaptation as an outcome – empowering communities (particularly the poor and vulnerable) to adapt to risks through participating in the development of solutions.

In reflecting on challenges faced in driving the City's transformation agenda, the following was noted:

- The importance of engaging all stakeholders when planning for and delivering transformation projects, with community engagement and communication necessary across all project stages.
- The need for political will when delivering projects that drive fundamental transformation.
- The risk of a change in strategy or direction in the event of a shift in political principals – with the City noting that, while this risk is always real within a city context, it's potential has been lessened as a result of the significant engagement with citizens, extensive research undertaken when setting direction, and efforts to date in embedding the direction via policy.

13. Plenary Session 6: Setting achievable and actionable targets for urban sustainability

C40's Executive Director, Mark Watts, moderated Plenary Session 6, with panel members including:

- Mayor Eduardo Paes, *City of Rio de Janeiro and C40 Chair*
- Executive Mayor Mpho Parks Tau, *City of Johannesburg*
- Dr Joan Clos, Executive Director, *United Nations Human Settlements Programme*

Plenary Session 6 focused specifically on the establishment and achievement of urban sustainability targets. The discussion was framed by the content of a letter to the UN, as drafted by the C40 Cities Climate Leadership Group's new Chair, Mayor Paes, and signed by 41 mayors from megacities within the C40 Cities network. The letter called on the UN to consider the inclusion of a "specific urban goal among the sustainable development goals (SDGs)". This call was noted as being driven by an acknowledgement of the unique characteristics and challenges present within cities – with the necessity of such a goal shaped by the reality that the majority of the global population resides within an urban environment.

In reflecting on the letter, Dr Joan Clos, Executive Director of the United Nations Human Settlements Programme (UN Habitat), placed specific emphasis on the critical challenge of urbanisation and its impact on the planet. Current "models of urbanisation" were noted as unsustainable – with challenges in terms of resource consumption, spatial sprawl, increasing levels of poverty and inequality, financial instability and environmental harm. It was argued that cities are not performing well: socially, there is limited integration, as evidenced by the explosion of gated communities; economically, many cities are bankrupt; environmentally, cities must re-think development patterns in order to accommodate the additional billions of people who will migrate to urban areas. With the UN working towards the establishment of a Climate Change Agreement in Paris in 2015, mayors were reminded of their potential ability to encourage national governments to locate urbanisation as central issue on the climate change and sustainable development agenda, through mobilising social and political energies. Members of the C40 Cities Climate Leadership Group were acknowledged for their role in supporting this effort.

Building on the views reflected by Dr Clos, Mayor Paes argued that the establishment of an urban SDG would assist in focusing the world's attention on the unique set of issues cities and their inhabitants face. Improved collaboration between cities, multi-lateral development banks and national or federal government role-players would enhance the ability of cities to achieve their climate change goals, while promoting the key objectives of equality, opportunity and economic growth. Mayor Tau noted the need for all to take collective responsibility in consolidating efforts and encouraging commitment at a UN level to an urban SDG, with it argued that cities would only be able to take true advantage of their agglomeration effects if they simultaneously supported humanity into the future.

Key ideas highlighted through the panel discussion that followed related to the need for:

- A complete paradigm shift in current thinking on development patterns and the nature of urbanised environments, if the challenges of urbanisation are to be addressed effectively.

- Climate change, sustainability and development to be considered in an integrated way, as a way of targeting a sustainable form of urbanisation.

- All stakeholders to buy into the concept of densification – with sprawled developments simply being too expensive (economically and environmentally) and unsustainable. It was argued that this would require a fundamental shift in culture, away from the drive for "bigger private spaces" – with focus instead to be placed on the value of larger shared open spaces, supportive of improved integration and a smaller carbon footprint. Members of C40 were called on to play an active role in driving this change in perspective.

- Emphasis to be placed on shifting the image that is sold as an "envelope of happiness" – challenging role-players such as real estate agents who perpetuate sprawled, unsustainable developments and the image of a 'normal' family and urban life. Instead, a call was made for renewed focus on the view of a city as a place "where different people live together".
- The reality to be confronted that the poor and marginalised need to be part of the city – with Mayor Tau highlighting the importance of city governments planning and operating differently, with greater consciousness about their role in driving the sustainability and climate change agenda.

14. Closing: Executive Mayor Mpho Parks Tau, City of Johannesburg, and Mayor Eduardo Paes, City of Rio de Janeiro and C40 Chair

In closing the proceedings, Executive Mayor Tau reflected on the value of the C40 Cities Mayors Summit as a forum for networking, collaboration, sharing and agreement setting. The value of participating in a network of cities committed to taking action in relation to climate change was highlighted – with peer support and accountability acknowledged as beneficial in driving action. The importance of ongoing measurement was noted, alongside the significant work to be undertaken in the path towards the World Urban Forum and COP 21.

The C40 Cities' new Chair, Mayor Paes, concluded the proceedings by thanking all those involved in organising and hosting the 2014 C40 Mayors Summit. Climate change actions undertaken to date by member cities were acknowledged – with mayors called on to establish further measurable commitments in respect of the climate change agenda, in the lead up to the September 2014 Climate Change Summit. C40 cities were further encouraged to extend climate action conversations through the C40 Exchange – with technology also noted as a core tool through which to expand efforts. In closing, Mayor Paes reminded participants that while the challenges within the climate change space remain immense, C40 cities continue to demonstrate that solutions are viable.

15. Press conference

The C40 Cities Mayors Summit press conference provided a snapshot account of the key thematic issues that were explored more comprehensively during the three-day summit, as hosted by the City of Johannesburg. Accordingly, the press conference provided a platform for the network to:

- Publicise the release of C40's CAM 2.0 report – sharing some of the key information contained therein, including evidence of improved measurement, reporting and impact on a global scale.

- Demonstrate the measurable progress C40 cities have made with regards to climate change mitigation and adaptation since the previous C40 Cities Mayors Summit in Sao Paulo.

- Emphasise the real power that mayors and megacities have to reduce emissions, improve climate resilience and drive a more significant global response to climate change (e.g. through placing greater emphasis on influencing and engaging national government role-players).

- Welcome additional African cities into the C40 network, and announce the new City Directors Programme.

During the course of the press conference, the Executive Mayor of the City of Johannesburg, Mpho Parks Tau, emphasised the value of C40 as a platform for networking, cooperation, the exchange of best-practice and mutual capacitation. Key opportunities presented through the summit were noted as including:

- The provision of a space within which to review the work undertaken in respect of climate-change related actions;

- Identification of best-practice approaches and possible partnerships through which to deliver on these;

- The definition of a future path for C40 and its respective members, with focus placed on defining meaningful actions to be taken at a city government level in relation to climate change and the reduction of GHG emissions, and establishing a closer relationship between local government role-players and the UN – in this way affording cities a stronger voice and greater impact on the global climate change stage. The presence of the UNFCCC's Executive Secretary, Christina Figueres, was noted as an indication of the importance attributed to local government in addressing climate change prevention, adaption and mitigation.

Christina Figueres highlighted the importance of the C40 Summit taking place in Africa, under the leadership of a new Chair from the global South, Mayor Paes of the City of Rio de Janeiro. She urged mayors of C40 cities to push for the establishment of a strong global climate agreement, with mayors needing to ensure national government leaders understand the importance of this for improved investor support and enhanced liveability.

Michael Bloomberg, President of the C40 Board, former C40 Chair and former Mayor of New York, highlighted the important role to be played by cities in targeting climate change adaptation and mitigation – noting that cities account for 70% of carbon emissions and a significant proportion of energy use. He emphasized the importance of the CAM 2.0 report in promoting research, accountability and the measurement of progress. The data contained therein was noted as beneficial

in identifying the most effective climate agenda actions, while also providing the evidence necessary to mobilise financial resources. C40 cities were acknowledged for undertaking 8 000 actions focused on mitigating or adapting to climate change, and improving city resilience. A call was made for cities to do more, together, under the leadership of the incoming Chair, Mayor Paes.

In addition to reflecting on the value of collaboration and best-practice exchange, the incoming C40 Chair, Eduardo Paes, emphasised the increasing role of African cities in the C40 initiative, welcoming the City of Cape Town and Dar es Salaam on board as the 6th and 7th African C40 member cities (bringing the total membership to 66 cities). An announcement was also made in respect of C40's call to the UN for the establishment of an urban SDG – as reflected in the letter penned by Paes and signed by 41 C40 mayors. This was noted as key in providing local government leaders with a voice on the international 'climate change' stage and promoting an increased focus on the unique challenges faced by those within urban spaces. Emphasis was placed on the fact that cities and their mayors are positioned to deliver initiatives targeting climate change mitigation and adaptation, given their position in relation to the everyday life of citizens.

Finally, the C40 Cities Mayors Summit also marked the launch of a City Directors Programme, focused on providing dedicated on-the-ground staff to selected cities as a further mechanism through which to support local sustainability efforts.

16.   Acronyms and abbreviations

C40	C40 Cities Climate Leadership Group
CACC	Climate and Clean Air Coalition
CAM 2.0	Climate Action in Megacities 2.0
CEO	Chief Executive Officer
GDP	Gross Domestic Product
GHG	Green House Gas
ICT	Information and Communication Technology
IPCC	Intergovernmental Panel on Climate Change
MMC	Member of the Mayoral Committee
PPP	Public Private Partnership
RBT	Rapid Bus Transit
UN	United Nations
UNFCCC	UN Framework Convention on Climate Change