C40CITIES

CLIMATE LEADERSHIP GROUP

Urban Resilience Solutions

Roma Resiliente Water Management Workshop

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Cristiana Fragola

Regional Director for Europe

cfragola@c40.org

Megacities and CLIMATE CHANGE

Cities in the New Climate Economy

- ✓ **Between now and 2030 a group of less than 500 key cities (including all 70 C40 members) will be responsible for 60% of GDP growth and 50% of carbon emission growth**
- ✓ **By 2030 60% of the population will be Urban**
- ✓ **Roughly "one Stockholm" x week moves into a city - 1.4 million people**
- ✓ City administrations are often acutely influential, with sharper local powers than national policy-makers

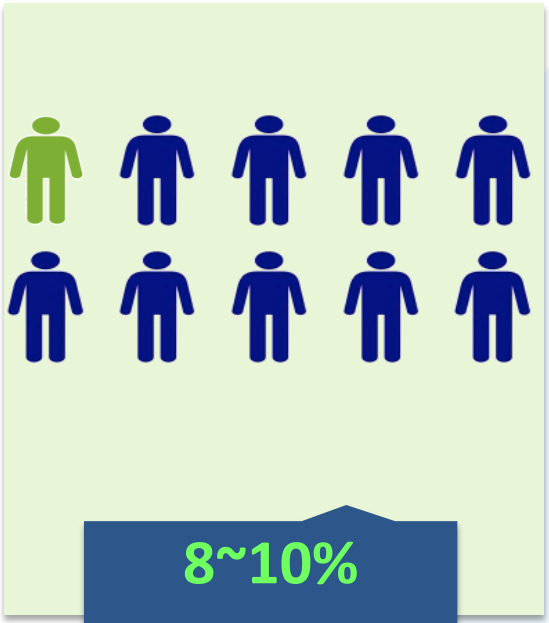
City adaptation challenge

- Annual extreme weather events gradually increasing since 1980s.
- In 2013 alone, the world saw 41 weather disasters that each caused $1bn+ damages (IPCC AR5.0).
- 2 billion people affected by weather related hazards 2000-2009
- Big cities on the frontline

The 70 C40 CITIES

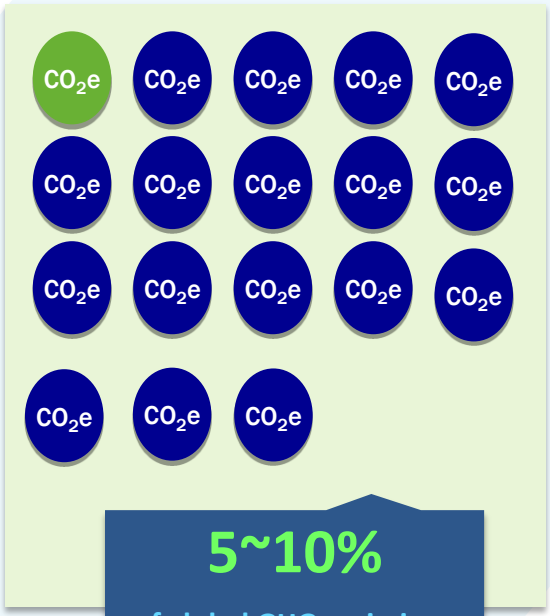
Membership of Mayors & Governors

The Power of C40



8~10%

of all humans



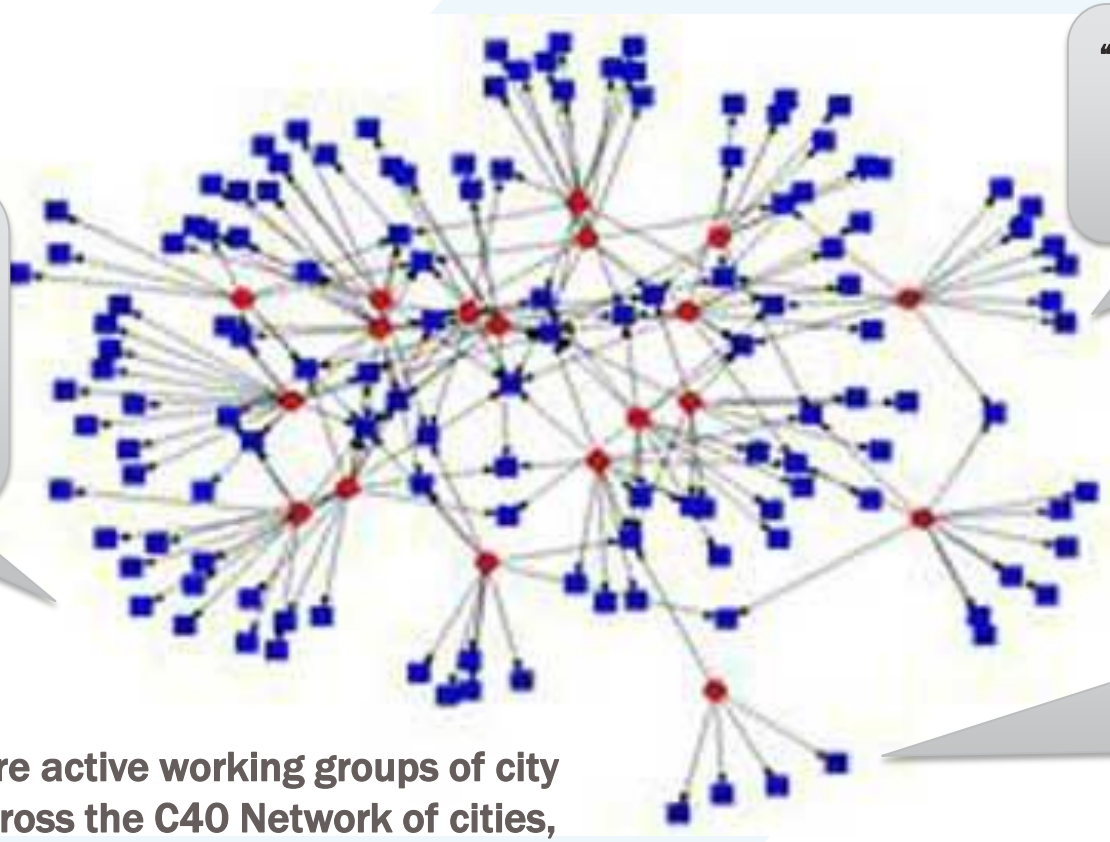
5~10%

of global GHG emissions

20~25%

of global GDP

C40 Network concept: city-to-city sharing



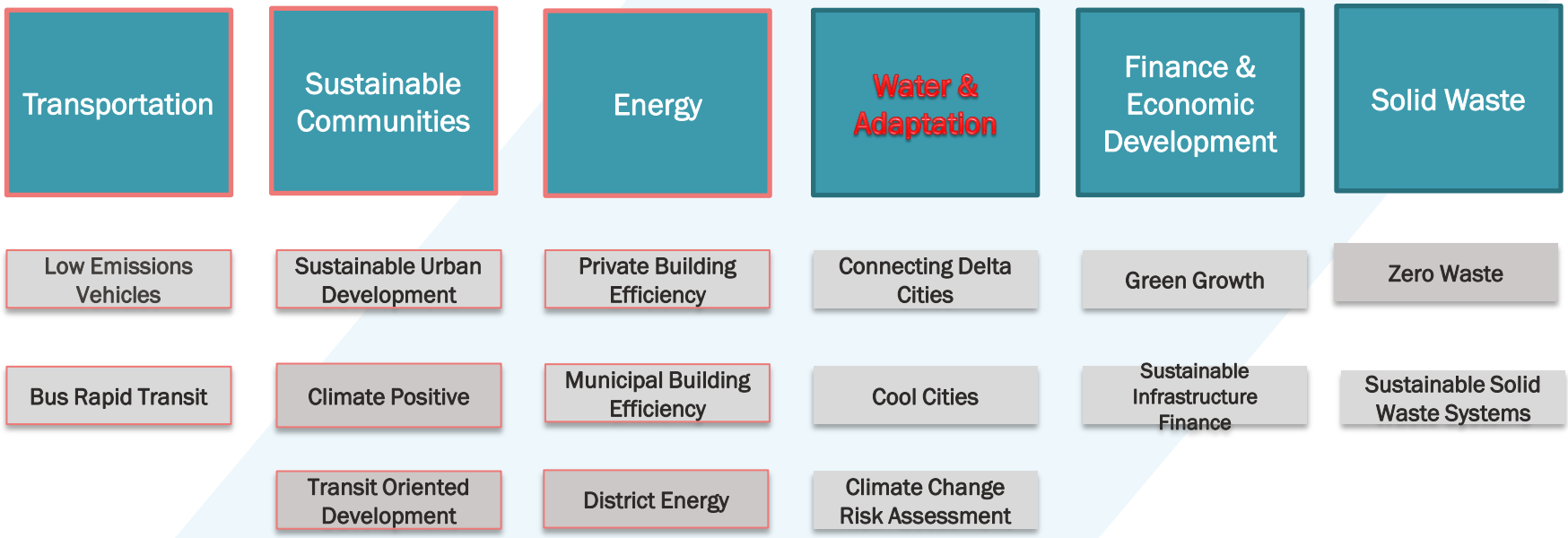
"How do we work together to negotiate better warranties for buses retrofitted to hybrids?"

"How did your city persuade major corporate building owners to retrofit?"

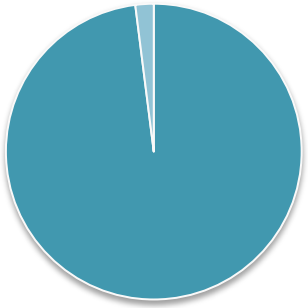
"What did your city find was the best process to procure a concessionaire for a landfill gas capture project?"

C40 Networks are active working groups of city officials from across the C40 Network of cities, with commonly identified opportunities, interests, or priorities.

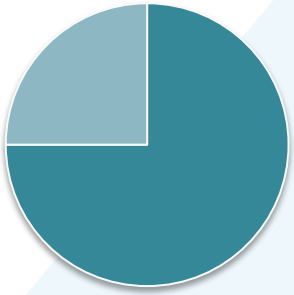
C40 Initiatives and Networks



Cities are prioritising adaptation



98% of C40 cities report climate change presents a significant risk to their city.



75% of reporting cities have assessed risk from climate impacts to their city.

C40 Network: Climate Change Risk Assessment

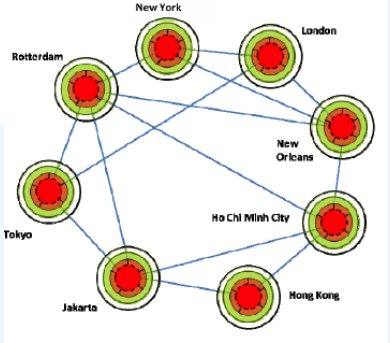
+ ROME

- Forward-thinking cities share best practices for assessing their climate risks. Peer support results:
  - Toronto and London shared innovative approaches engaging community in risk discussions
  - Sao Paulo has redesigned its risk governance
  - Barcelona and Rio are working together to collect and use city data for effective risk management

C40 Network: Connecting Delta Cities

The vanguard of delta cities active in climate change related spatial development, water management and adaptation. Peer support results:

- Ho Chi Minh City has city governance models and assistance in setting up a climate bureau in their city government. Peer reviewed adaptation strategy and implementation.
- Copenhagen was able to make the case to their city council for climate *preparedness in advance* of their recent Cloudburst events.
- Tokyo is piloting public education on rainfall, river levels and climate risks



Water management best practice example

New York: Green Infrastructure Plan

Released in 2010, the NYC Green Infrastructure Plan presents an alternative approach to improving water quality that integrates "**green infrastructure**," such as Right-of-way Bioswales and green roofs, with investments to optimize the existing system and to build targeted, cost-effective "grey" or traditional infrastructure. Goal=>**1 inch of rain managed with impervious surfaces**

Results so far:

- Grants to private property owners (USD 11.5 million since 2011)
- Updated green infrastructure designs
- Community training and tools
- 3 neighborhood demonstration sites
- Stormwater flow monitoring

Water management best practice example

Tokyo: World Leader in Stopping Water Leakage

Tokyo has one of the most efficient water systems in the world with the lowest leakage rates using a method of **real time leak detection and same day leak repair, w**hich greatly reduces damages such as road subsidence and muddy and polluted water.

Results so far:

- **Leakage rate reduced from 20% (1956) to 3.6% (in 2006)**
- Water wasted has been halved over the past 10 years from 150 million m^3 water to 68 million m^3 water
- carbon dioxide emissions reduced by about 73,000 t CO_2 annually

Jakarta: Socially-Inclusive Coastal Protection

Jakarta is working to limit the impact that flooding will have on its citizens, restoring water systems and increasing capacity of rivers and canals.

Actions to involve stakeholders include:

- Engaging local community leaders in discussions with Jakarta's Governor
- Securing NGOs to support people during the resettlement process
- Asking private sector companies to support the projects by donating goods and services.

Melbourne: Urban Landscapes Climate Adaptation Program

By increasing green space to 7.6% of municipal space and doubling the tree canopy, Melbourne is aiming to reduce drought vulnerability and cool the city by 4°C.

The city's actions have already led to the planting of 12,000 new trees and the addition of 10,000 square meters of green space. The program includes citizen engagement initiatives, which together with other actions provide benefits including improved air quality and city resilience, reduced energy demand, and reduced heat-related deaths.

New Orleans: Urban Water Plan

RUNNER-UP
2014 City Climate Leadership Awards

The Greater New Orleans Urban Water Plan provides a roadmap for mitigating flood risk, limiting subsidence, and improving the quality of water.

The plan follows the innovative "slow, store & use, and drain" model borrowed from the Dutch:

- using bio-retention and infiltration strategies, including rain gardens and bio swales
- storing it in the landscape longer by retrofitting canals and finding space for new canals and ponds
- draining it only when necessary.

Supporting Rome Resilience

PIONEERED BY THE ROCKEFELLER FOUNDATION

100 RESILIENT CITIES

C40 CITIES
CLIMATE LEADERSHIP GROUP

C40 International Diplomacy – Compact of Mayors

The Pledge

- The Compact of Mayors is an agreement between city networks to support our city members to:
  - Register "City Climate Commitments" (targets for GHG emissions **reduction and plans to adapt to climate change**);
  - Report annually on progress towards achieving GHG emissions reduction targets and assessing climate hazards, using standards established through City Networks; and
  - Disclose this information publicly by reporting through a recognized city platform

http://www.un.org/climatechange/summit/wp-content/uploads/sites/2/2014/09/CITIES-Mayors-compact.pdf

The Intention

- Direct more resources to Cities to appropriately address mitigation and adaptation local climate action

C40 CITIES CLIMATE LEADERSHIP GROUP c40cities.org

ICLEI Local Governments for Sustainability

UCLG United Cities and Local Governments

MICHAEL R. BLOOMBERG | UN Secretary-General's Special Envoy for Cities and Climate Change

UNITED NATIONS Secretary-General Ban Ki-moon

UN HABITAT FOR A BETTER URBAN FUTURE

Global Aggregation of City Climate Commitments

Key Findings

- Significant commitments towards greenhouse gas (GHG) reduction have already been made by cities around the world:
  - 228 global cities, representing 436 million people, have already set GHG reduction goals and targets.
  - The greatest impact of these cumulative commitments will be felt in the period 2030 – 2050.

- The cumulative savings in 2050 are equivalent to the combined current annual emissions of China and India, while the annual savings are equivalent to the current annual emissions of South Africa

Annual Results

454 $MtCO_2e$/yr in **2020**

402 $MtCO_2e$/yr in **2030**

430 $MtCO_2e$/yr in **2050**

emissions saved vs. business as usual

Cumulative Results

2.8 $GtCO_2e$ by **2020**

6.1 $GtCO_2e$ by **2030**

13.0 $GtCO_2e$ by **2050**

emissions saved vs. business as usual

C40 has REACH

Media Coverage

The Washington Post

BBC

GreenBiz.com

REUTERS

THE WORLD BANK

The Economist

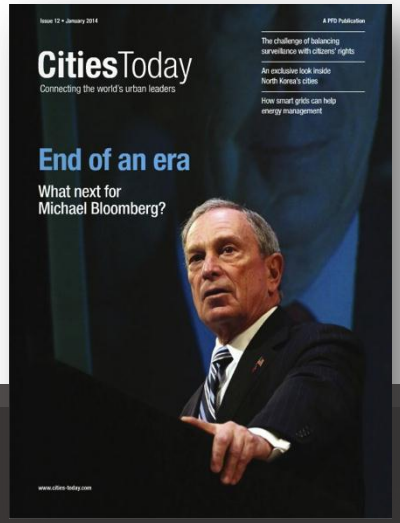
grist
A BEACON IN THE SMOG

Social & Digital Media Channels

Media Partnerships

NATIONAL GEOGRAPHIC
News Watch

City Solutions



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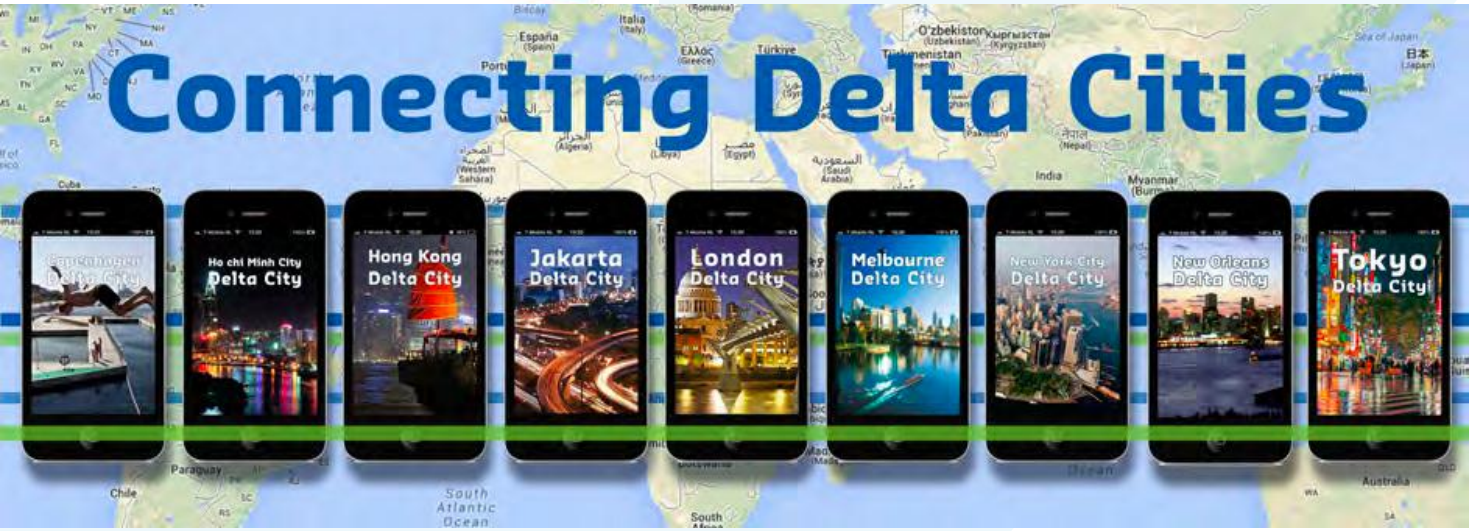
CDC Mobile Application – Delta City App

Facilitating city to city sharing via mobile technology



Grazie infinite Roma!

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Cristiana Fragola
Europe Regional Director
cfragola@c40.org
www.C40.org
@C40Cities