

# AN URBAN CENTURY: URBAN CHALLENGES. URBAN SOLUTIONS

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- **David Miller,**
- **Mantova November 29, 2018**





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The science is clear: to avoid catastrophic climate change we need to keep global average temperature rise to 1.5 degrees

***Major Climate Report Describes a  
Strong Risk of Crisis as Early as 2040***



**The New York Times**

WHERE WE ARE AT AND WHERE NEXT

# Inter-governmental climate action is at an impasse

- No progress on ratcheting up action since Paris
- Meanwhile, as Rockstrom set out at the One Planet Summit, science demands a 1.5 degree goal & action
- That is the threshold past which humanity loses any realistic ability to control global warming
- The IPCC report will confirm this and argue that constraining average global temperature rise below 1.5 degrees is still possible



PRESENTATION HEADING

# C40 Cities: Global and Powerful



90+  
Cities

650+  
Million Citizens



1/4 of global economy



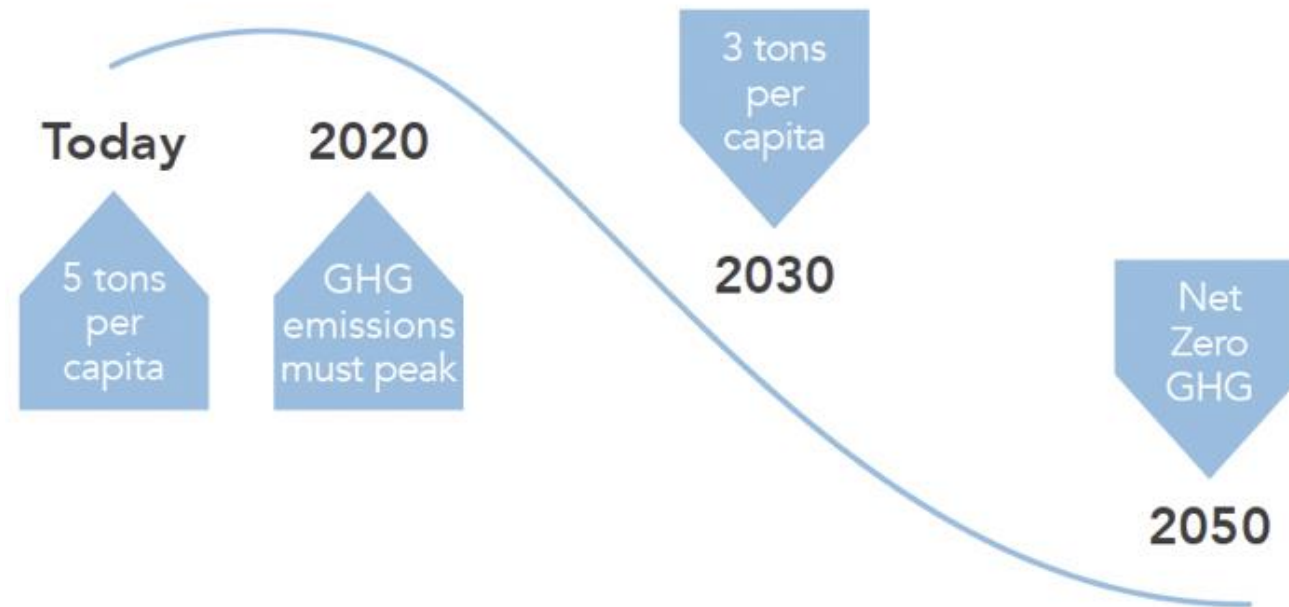
"AS MAYORS, WE ALL FACE SIMILAR CHALLENGES AND HAVE TO INNOVATE TO SOLVE THEM, OFTEN IN THE SAME WAYS. THE C40 NETWORK CONNECTS US ALL, ENABLING US TO SHARE IDEAS AND COLLABORATE, WORKING TOGETHER TOWARDS A GREENER, HEALTHIER FUTURE."

**Anne Hidalgo**

*Mayor of Paris, host city to the UN climate change conference, COP21*



# Turning high ambition into the new normal – our Deadline 2020 programme



2030: Decarbonize the electricity grid





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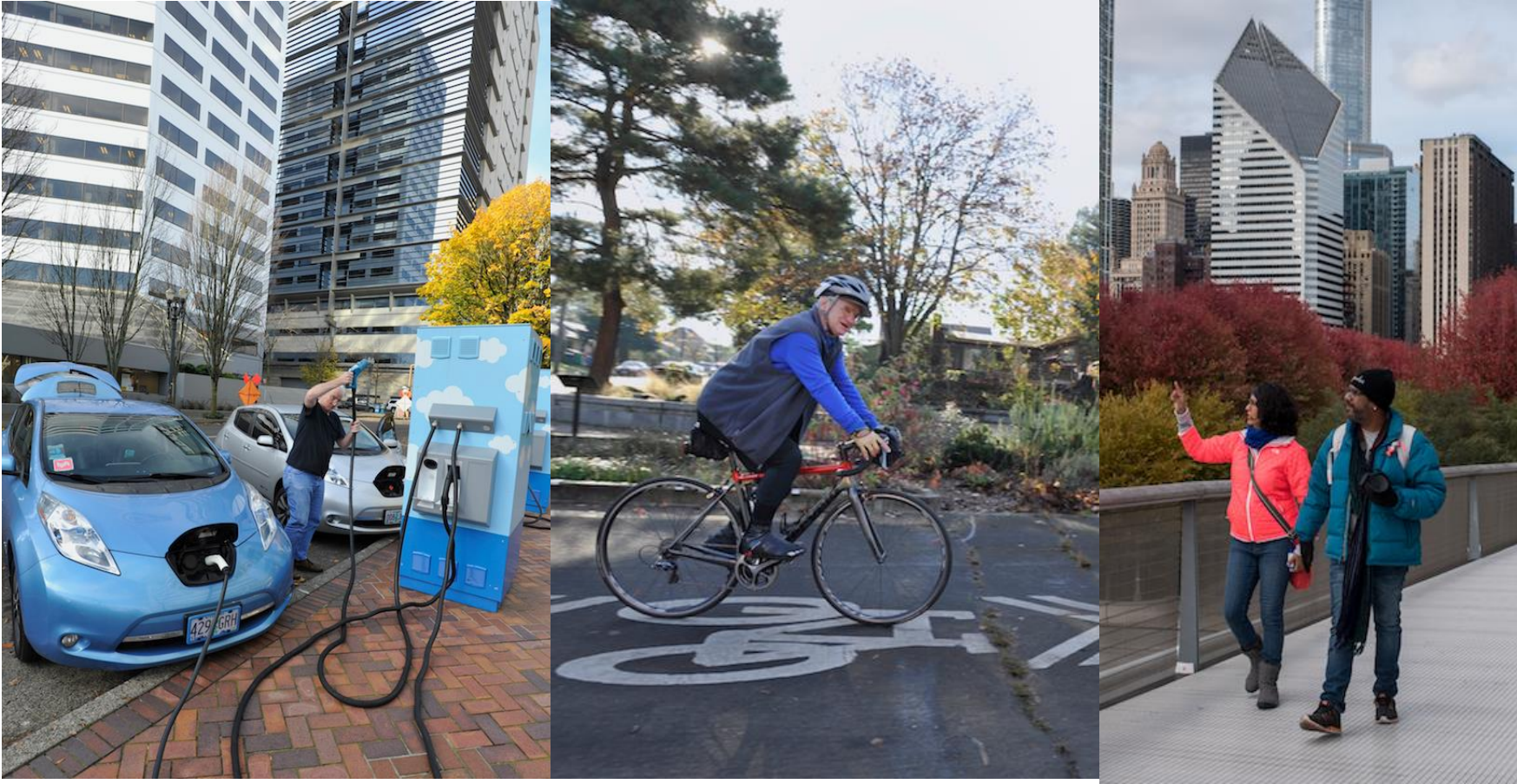
## Minimize energy consumption of existing buildings

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# Enable next-generation mobility



## Improving waste management

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# 73 cities committed to *Deadline 2020*

- |               |                  |                |                |
|---------------|------------------|----------------|----------------|
| Abidjan       | Hanoi            | Nairobi        |                |
| Accra         | Heidelberg       | New York City  |                |
| Addis Ababa   | Hoboken          | Oslo           |                |
| Amman         | Ho Chi Minh City | Paris          |                |
| Austin        | Honolulu         | Philadelphia   |                |
| Barcelona     | Houston          | Pittsburgh     |                |
| Beverly       | Jakarta          | Portland       |                |
| Boston        | Johannesburg     | Qingdao        |                |
| Buenos Aires  | Kampala          | Quezon City    |                |
| Cape Town     | Karachi          | Quito          |                |
| Caracas       | Kuala Lumpur     | Rio de Janeiro |                |
| Chengdu       | Lagos            | Rome           |                |
| Chicago       | Lima             | Salt Lake City |                |
| Copenhagen    | London           | Salvador       | Sydney         |
| Curitiba      | Los Angeles      | San Francisco  | Tokyo          |
| Dakar         | Medellin         | Santa Monica   | Tshwane        |
| Dar es Salaam | Melbourne        | Santiago       | Vancouver      |
| Dhaka         | Mexico City      | Sao Paulo      | Venice         |
| Dubai         | Milan            | Seattle        | Warsaw         |
| Durban        | Montreal         | Seoul          | West Hollywood |
| Guadalajara   | Mosier           | Stockholm      | Yokohama       |



## DEADLINE 2020 SIGNING CEREMONY



# 23 Cities, 4 regions and 12 businesses signing the Zero Emission Building Declaration

**BUILDING UP TO NET ZERO EMISSIONS with London, Copenhagen, Mahindra, Kilroy, Baden-Wurttemberg, Yucatan**

**Businesses**

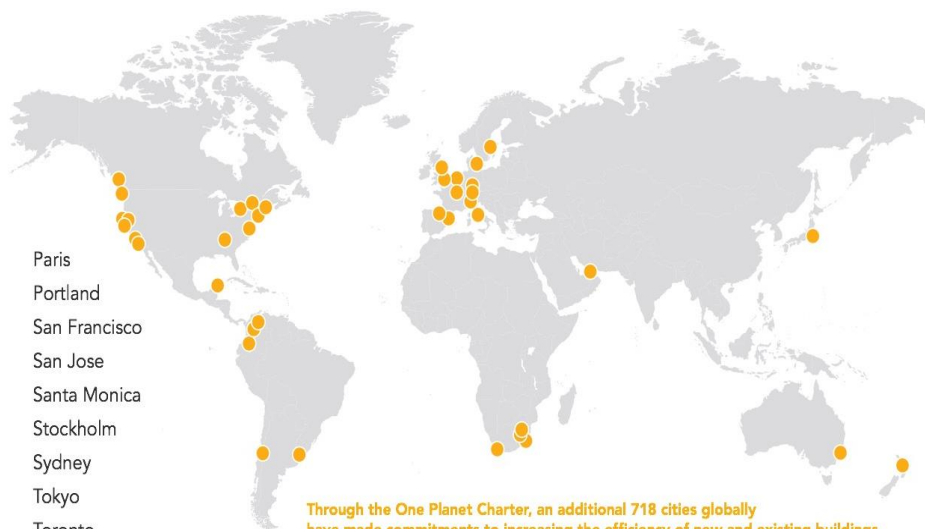
- Majid Al Futtaim - Dubai
- Integral Group - Oakland
- Signify - Amsterdam
- Cundall - Newcastle
- Kilroy Realty Corporation - Los Angeles
- Frasers Property Australia - Sydney
- AMP Capital Wholesale Office Fund - Sydney
- Berkeley Group - London
- Stockland - Sydney
- Shaw Contract - Dalton
- GPT Wholesale Office Fund - Sydney

**States and regions**

- Yucatán, Mexico
- Baden-Württemberg, Germany
- Catalonia, Spain
- Navarra, Spain

**Cities**

- Cape Town
- Copenhagen
- Durban
- Johannesburg
- London
- Los Angeles
- Medellin
- Montreal
- New York City
- Newburyport Massachusetts
- Paris
- Portland
- San Francisco
- San Jose
- Santa Monica
- Stockholm
- Sydney
- Tokyo
- Toronto
- Tshwane
- Vancouver
- Washington DC



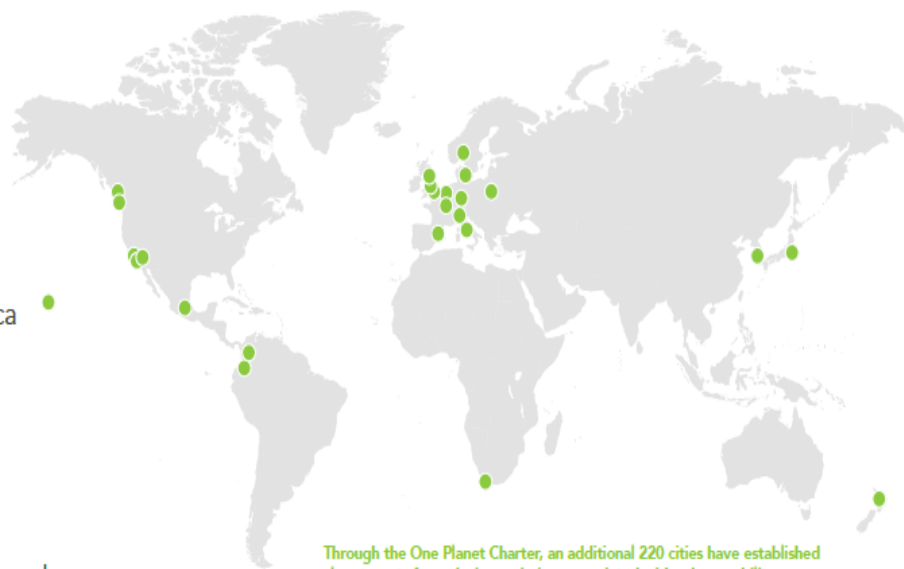
Through the One Planet Charter, an additional 718 cities globally have made commitments to increasing the efficiency of new and existing buildings.





# 26 cities sign the *Green and Healthy Streets Declaration*

- |                    |                |
|--------------------|----------------|
| Auckland           | Oslo           |
| Barcelona          | Oxford         |
| Birmingham         | Paris          |
| Cape Town          | Quito          |
| Copenhagen         | Rome           |
| Greater Manchester | Rotterdam      |
| Heidelberg         | Santa Monica   |
| Honolulu           | Seattle        |
| London             | Seoul          |
| Los Angeles        | Tokyo          |
| Medellin           | Vancouver      |
| Mexico City        | Warsaw         |
| Milan              | West Hollywood |



Through the One Planet Charter, an additional 220 cities have established clear targets for reducing emissions associated with urban mobility

## GREEN AND HEALTHY STREETS with Antha Williams, Mayors of Warsaw, Rotterdam, Medellin, Leaseplane, ITF, Google



# Mayor Breed announces 25 cities and regions signing *Towards Zero Waste Declaration*

## Talking Trash: A Future Without Waste

- Moderated by **Kate Hampton**, CEO, Children’s Investment Fund Foundation  
Welcome from: **Mayor London Breed**, the City of San Francisco
- **Mayor Giuseppe Sala**, The City of Milan,  
**Lesley Griffiths**, Cabinet Secretary  
**Wales**, **Damià Calvet i Valera**, Catalonia
- **Mayor Mukta Tilak**, Pune Municipal Corporation, Pune, India





# 30 cities committed to the *Equity Pledge*: inclusive climate action benefiting low-income and vulnerable groups

- |                  |                |
|------------------|----------------|
| Accra            | Mexico City    |
| Athens           | Milan          |
| Barcelona        | Montreal       |
| Bridgeport       | New York City  |
| Buenos Aires     | Paris          |
| Cape Town        | Philadelphia   |
| Chicago          | Salt Lake City |
| Denver           | San Francisco  |
| Durban           | Santiago       |
| Guadalajara      | Seattle        |
| Hong Kong, China | Sydney         |
| Houston          | Tel Aviv       |
| Johannesburg     | Tokyo          |
| Los Angeles      | Toronto        |
| Medellin         | Washington, DC |



# One New York

## The Plan for a Strong and Just City



The City of New York  
Mayor Bill de Blasio

Anthony Shorris  
First Deputy Mayor

**NYC**

**C40  
CITIES**





# COOL CITIES NETWORK

Reducing heat vulnerability through green infrastructure in cities





# Greener cities are better places to live

## The World's Most Liveable Cities

Global cities ranked by liveability in 2017 (100=ideal)





# “For Cities, the heat is on”

“THE FUTURE WE DON’T WANT” - Report calculates urban vulnerability to climate change for a range of hazards related to six key factors:

Heat Extremes



Water Availability



Sea Level Rise



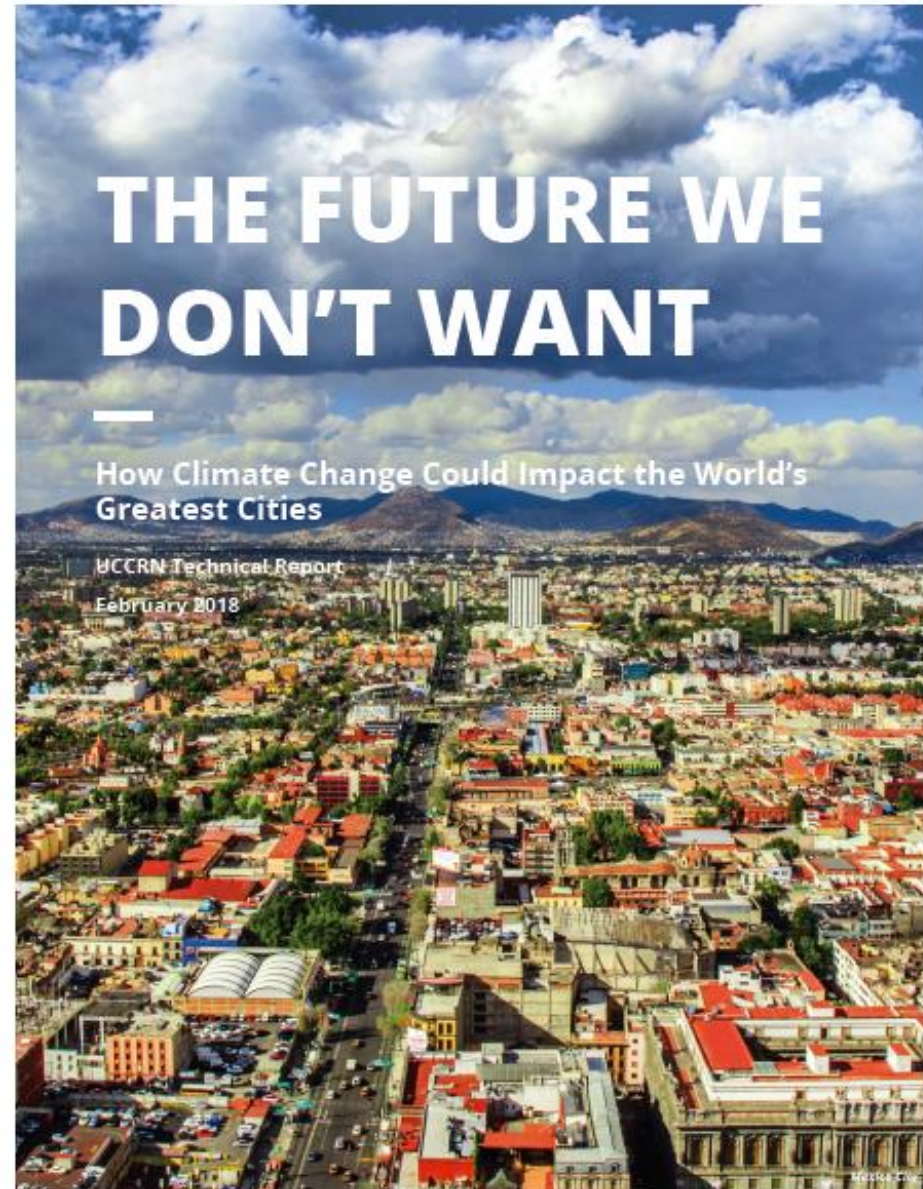
Food Supply



Equity and Environmental  
Justice



Energy Vulnerability



COOL CITIES NETWORK

# Key heat vulnerability findings from the report



## The Future We Don't Want: Cities & heat extremes



By the 2050s

**1.6 BILLION** people could face average summer temperature highs of 35°C (95°F).

- 1.4 billion more people than today.
- 970 cities could be affected, 620 more than today.
- Cairo, Egypt, today has average summer highs of 34°C(93°F).

**70,000** deaths



The 2003 heatwave that hit Europe caused an estimated 70,000 deaths.

High temperatures pose a severe risk to human health. The elderly, young children and people with medical conditions are most at risk.



In the US, heatwaves kill more than 600 people per year on average, more than all other climate hazards.



**#1**  
cause of death

Heat affects workforce productivity. By 2030 annual global heat-related productivity losses could cost \$2 trillion.

**\$2 trillion**

Cities can adapt by:

- Improving green, blue and cool infrastructure like parks, lakes and cool roofs. 
- Providing shade spots and access to cool buildings. 

- Preparing Heat Action Plans. 
- Developing early-warning systems. 



# Cool Cities Network – member cities



# Network Topics

01. HEAT VULNERABILITY MAPPING
02. HEATWAVE EMERGENCY MANAGEMENT
03. INTEGRATION HEAT INTO LONG-TERM PLANNING
04. MAKING THE CASE FOR HEAT ACTION: CO-BENEFITS
05. HEAT MITIGATION SOLUTIONS
  - Cooling solutions (cool roofs & pavements)
  - **Greening solutions (green building envelope, trees & urban forest)**
  - Alternative cooling methods (shading, water etc.)
  - Heat sensitive urban planning



# Program Overview

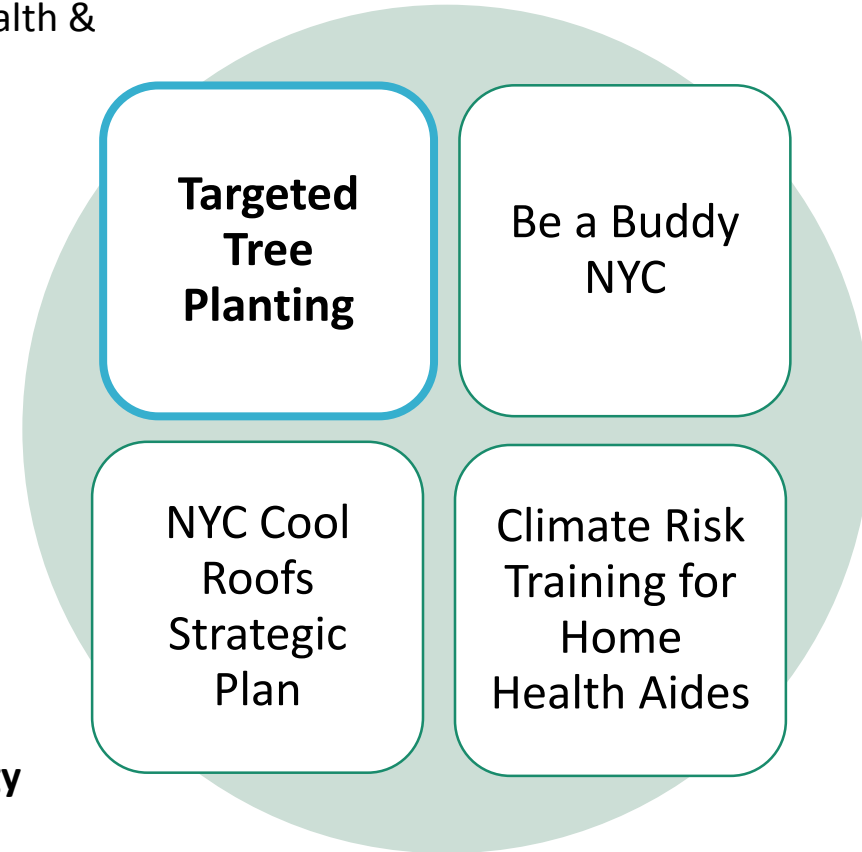
## Cool Neighborhoods NYC

A comprehensive resiliency strategy informed by health & climate data to achieve climate equity goals

### Design principles:

- Protect and prepare New Yorkers
- Focus on vulnerable populations
- Focus on underserved communities
- Enhance quality of life
- Promote community cohesion
- Utilize existing networks and resources
- Disseminate climate information

**\$106 million NYC budget investment; 4 year strategy**



# Urban Heat Island Mitigation through Tree Planting

## **Project Scope:**

Plant trees strategically along city streets and small parks and support forest restoration, targeting heat-vulnerable neighborhoods.

## **Benefits:**

- Mitigate the UHIE.
- Relieve heat stress by increasing shade and providing cool corridors.
- Improve local air quality.
- Reduce ozone and GHG emissions by cooling the atmosphere.
- Capturing social co-benefits of community greening efforts.
- Help to reduce the City's annual average of heat-related illness and heat-related deaths.





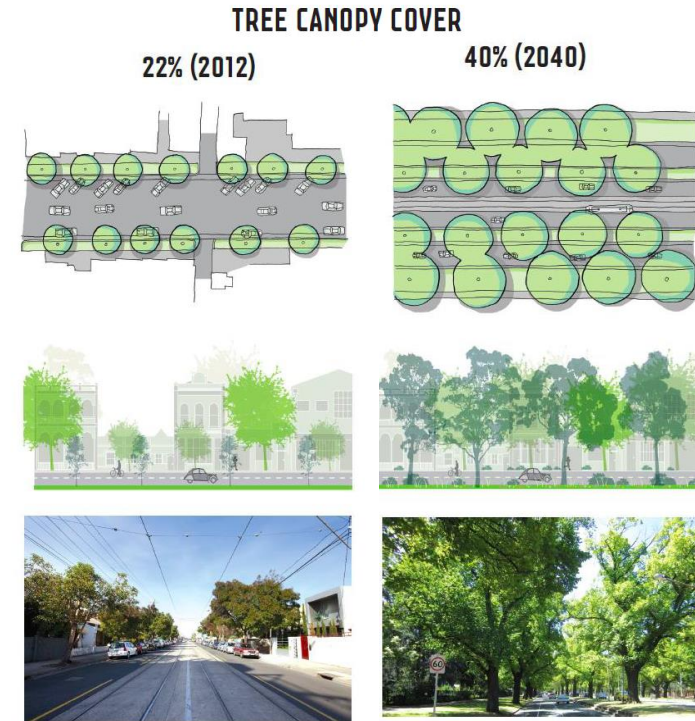
# Greening solutions – city examples



• Barcelona



• Seoul



• Melbourne

# Melbourne

- **Golden Elm, Tree ID 1037148**
- *Dear 1037148,*
- *You deserve to be known by more than a number. I love you.*
- *Always and forever.*
- **Variegated Elm, Tree ID 1033102**
- *Dear Elm, I was delighted to find you alive and flourishing, because a lot of your family used to live in the UK, but they all caught a terrible infection and died.*
- *Do be very careful, and if you notice any unfamiliar insects e-mail an arboriculturist at once.*
- *I miss your characteristic silhouettes and beautifully shaped branches — used to be one of the glories of the English landscape — more than I can say.*
- *Melbourne must be a beautiful city.*
- *Sincere good wishes*
- *D*



# Melbourne

- **English Elm, Tree ID 1032245**
- *Are you and your fellow English elms enjoying the Ashes series as much as we in England are, and are you giving the native Aussie trees some stick over their team's performance?*
- *C*
- **Western red cedar, Tree ID 1058295**
- *Hi Tree,*
- *Are you worried about being affected by the Greek debt crisis? Should Greece be allowed to stay in the European Union?*
- *Regards,*
- *Troy*

