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Prioritizing climate action

How to select the most appropriate climate actions for your city

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WORLD RESOURCES INSTITUTE | ROSS CENTER

C40 CITIES CLIMATE LEADERSHIP GROUP

ICLEI Local Governments for Sustainability

Focused Acceleration:

a strategic approach to climate action in cities to 2030

Objectives of research

- Understand what are the types of climate action that have biggest impact in terms of emission reduction
- Which actions are appropriate given a city particular context?

Approach to the analysis

The analysis began with a list of 450+ actions that had previously been identified in C40's Deadline 2020 research

450+ actions were assessed based on impact and cost

12 most significant opportunities grouped into 4 categories

Cities mapped by typology and opportunities identified for each city type

Recommended roadmaps developed that are consistent with emissions reductions needed by 2030 and to reach net zero in 2050

The opportunities identified are those that can help:

- catalyse systemic change
- have highest potential to reduce emissions
- An enable cities to focus and avoid spreading their effort over too many things

All opportunities provide a positive return in the mid-to-long-term

- In many cases upfront investment is paid back in 5 to 10 years

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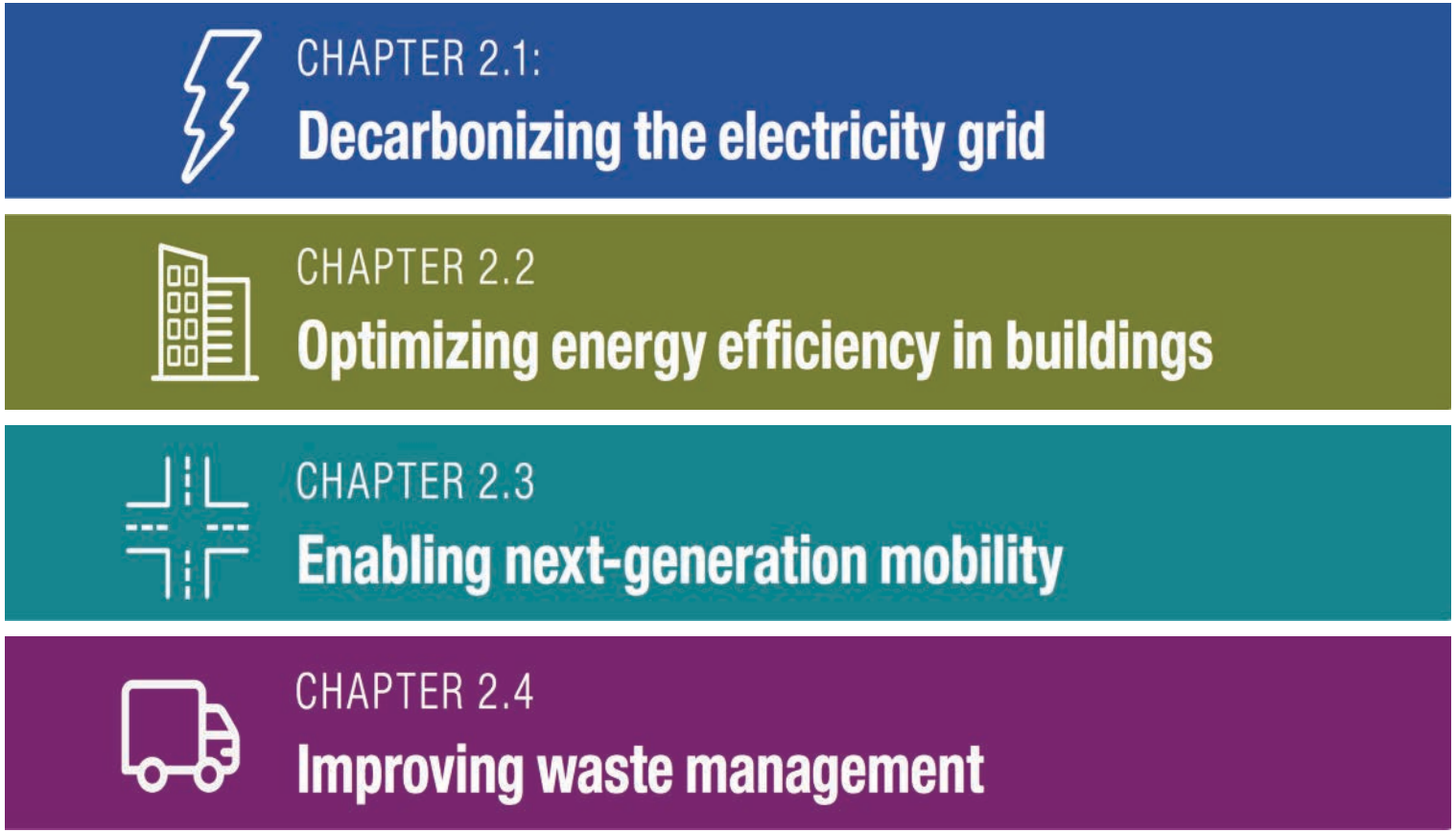
Four big categories of opportunities

Analysis indicated four ‘big opportunities’:



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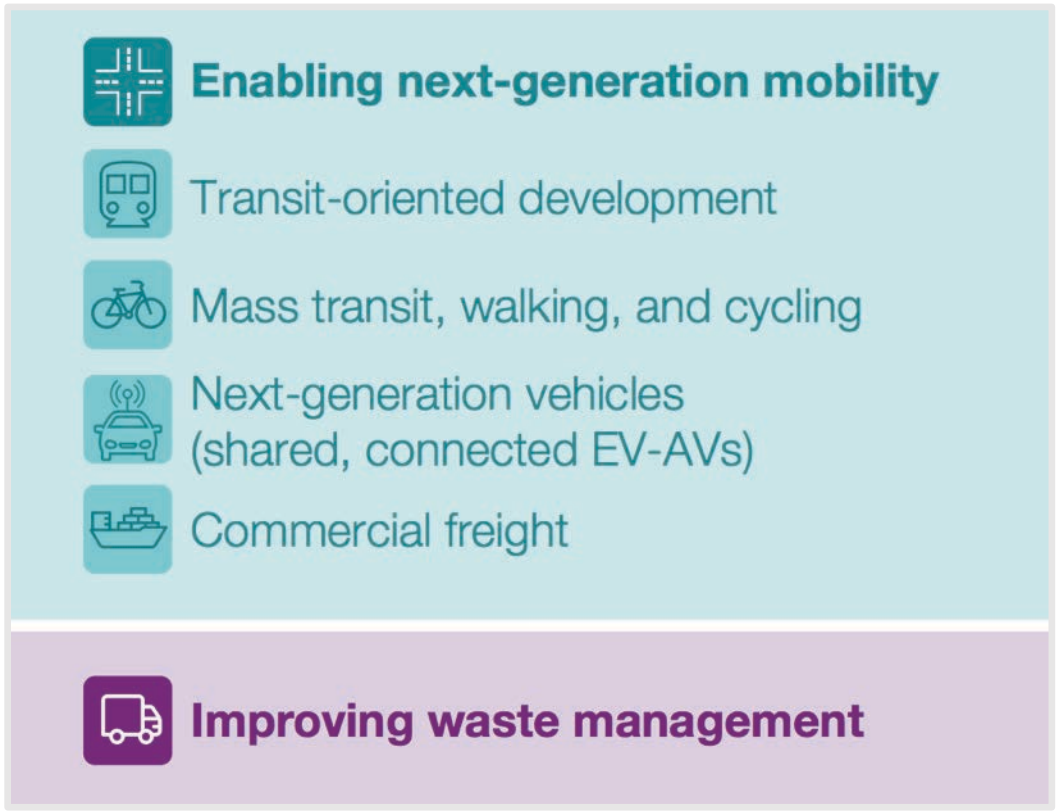
The 12 most important actions



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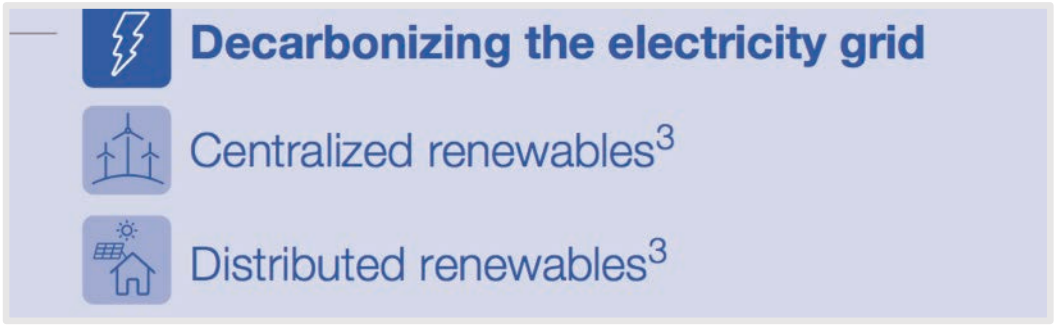
The actions in detail

Centralized renewables

- Create demand for large-scale clean energy generation through Power Purchase Agreements or by aggregating demand for community energy

Distributed renewables

- Encourage businesses and residents to introduce building-scale renewables (eg, offer incentive)
- Lead by example by installing municipal solar energy
- Promote clean energy sources for heating and cooling buildings (eg, create programs to introduce district heat networks into districts)



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The actions in detail

New building standards

- Develop a net zero carbon buildings codes or integrate performance standards into planning

Existing buildings

- Lead by example by retrofitting net zero carbon municipal buildings
- Create a transparent evidence base with reporting and disclosure requirements
- Set performance requirements that incentivize or require existing buildings to retrofit
- Incentivise and support stakeholders to meet – and exceed – requirements

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The actions in detail

Transit-oriented development (TOD)

- Integrate a TOD approach into urban planning and restrict growth in areas where public transport infrastructure is limited

Mass transit, walking and cycling

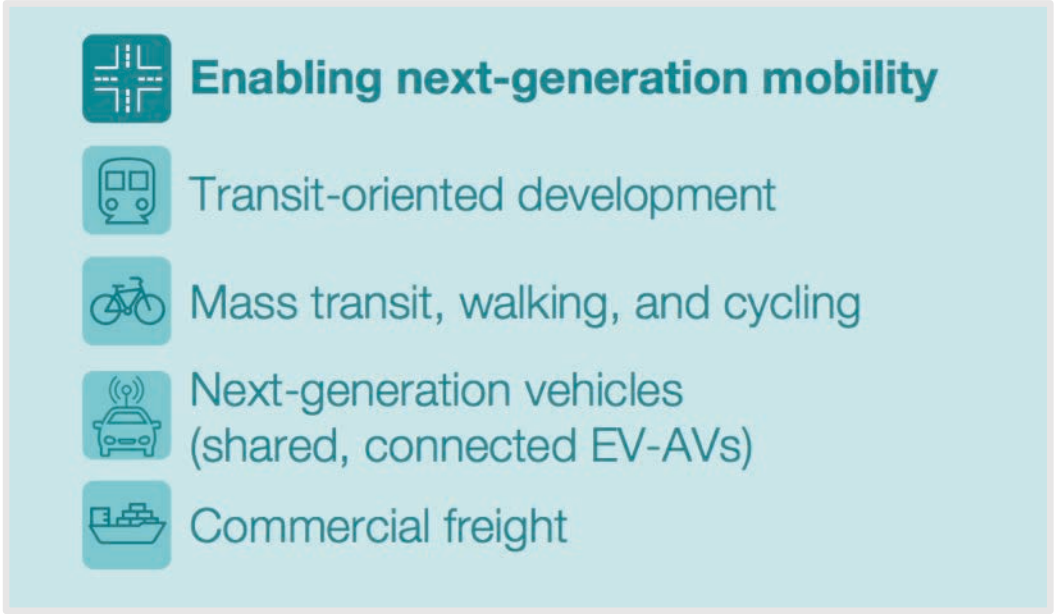
- Promote walking and cycling (cycle lanes, safe streets, cycle hire, etc)
- Drive a modal shift from personal vehicle use to public transport by expanding access, quality, convenience of public transport
- Create a low emission zone to target vehicle emissions

Next generation vehicles

- Shift the vehicles left on the roads to electric

Commercial freight

- Encourage shift to cleaner freight vehicles and reduce the miles they travel (eg, through zero or low emission zones)



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The actions in detail

Improving waste management

- Ensure safe disposal of all residual waste generated in the city
- Divert organics from disposal to avoid future methane emissions
- Capture and utilize landfill gas from all existing and closed landfills
- Encourage businesses and households to reduce generation of waste (eg, single-use plastics)

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Understanding your city's context

The Focused Acceleration study classifies cities by 6 types

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Your city's context affects actions you prioritize

	Indicator	Large Middle Income Semi-Dense City	Small High Income Innovator City	Large High Income Dense City	Low Income Mega-city	Middle Income Mega-city	Large Low-Income Leapfrog City
Energy	% electricity generation that is zero carbon	80	90	70	75	70	75
Buildings	% private buildings that have undergone at least one retrofit	60	100	95	35	80	35
	% post 2017 new builds that are ultra energy efficient	50	95	60	55	65	55
Transportation	% of total distance travelled by transit, walk or bike	70	55	40	75	80	80
	% increase in average density	6	3	4	7	10	8
	% buses zero emission	100	100	100	100	100	100
Waste	% waste diverted from landfill or incinerator	50	70	70	65	40	20

In some cases indictors are uniformly aggressive

- e.g. 100% of buses to be zero emission by 2030.

In other cases local conditions heavily influence indicator targets

- e.g. waste diversion from landfill/incinerator 20 - 70%

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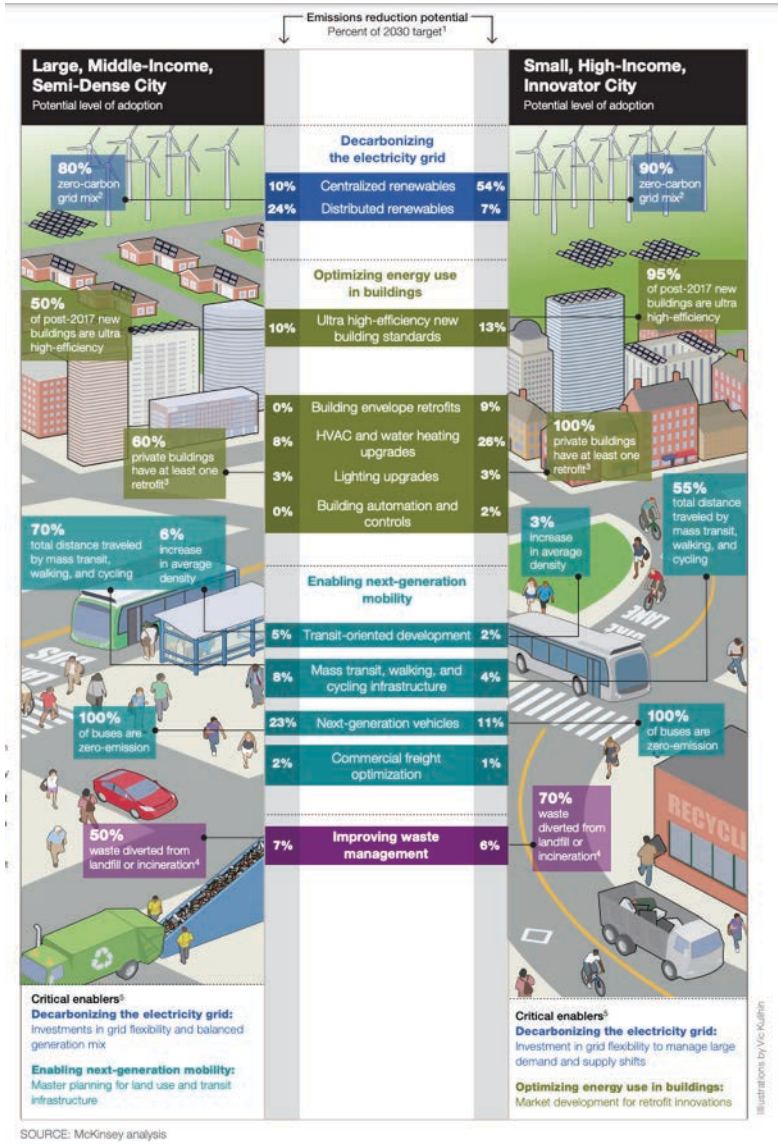
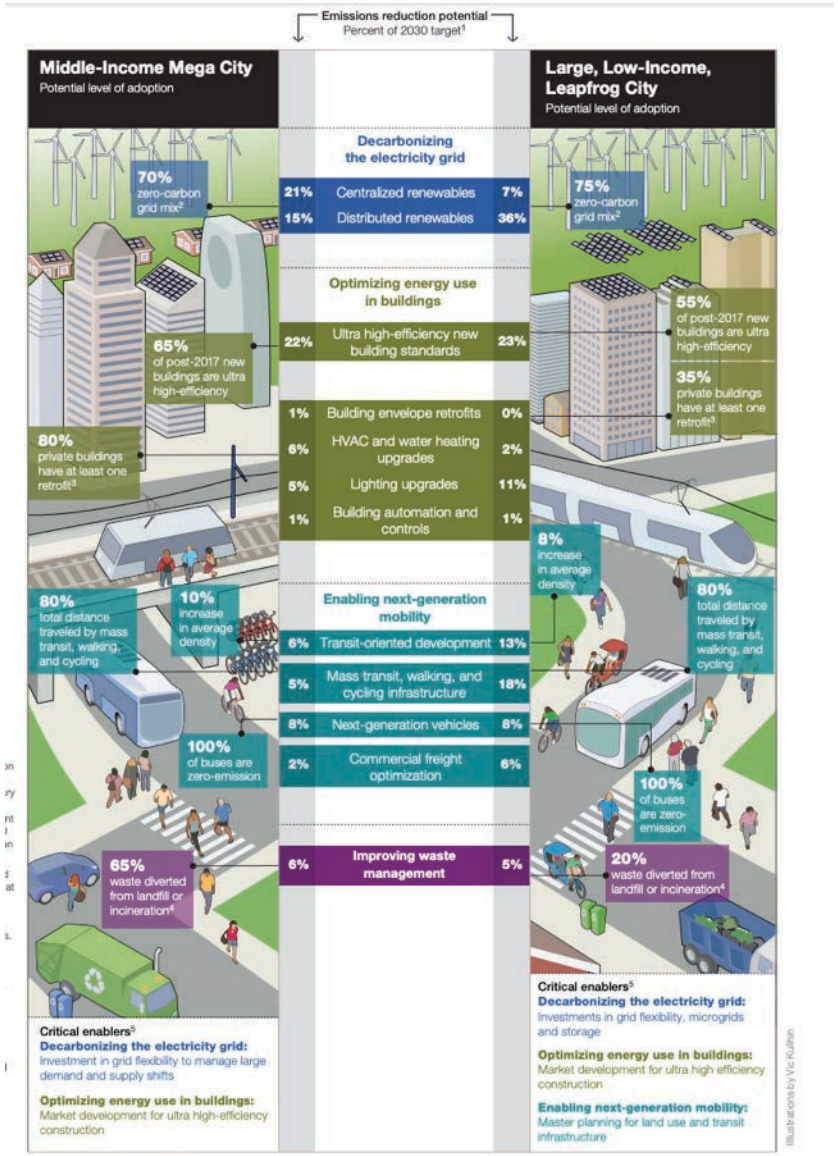
What actions you prioritize depend on city context (ie type)



SOURCE: McKinsey analysis



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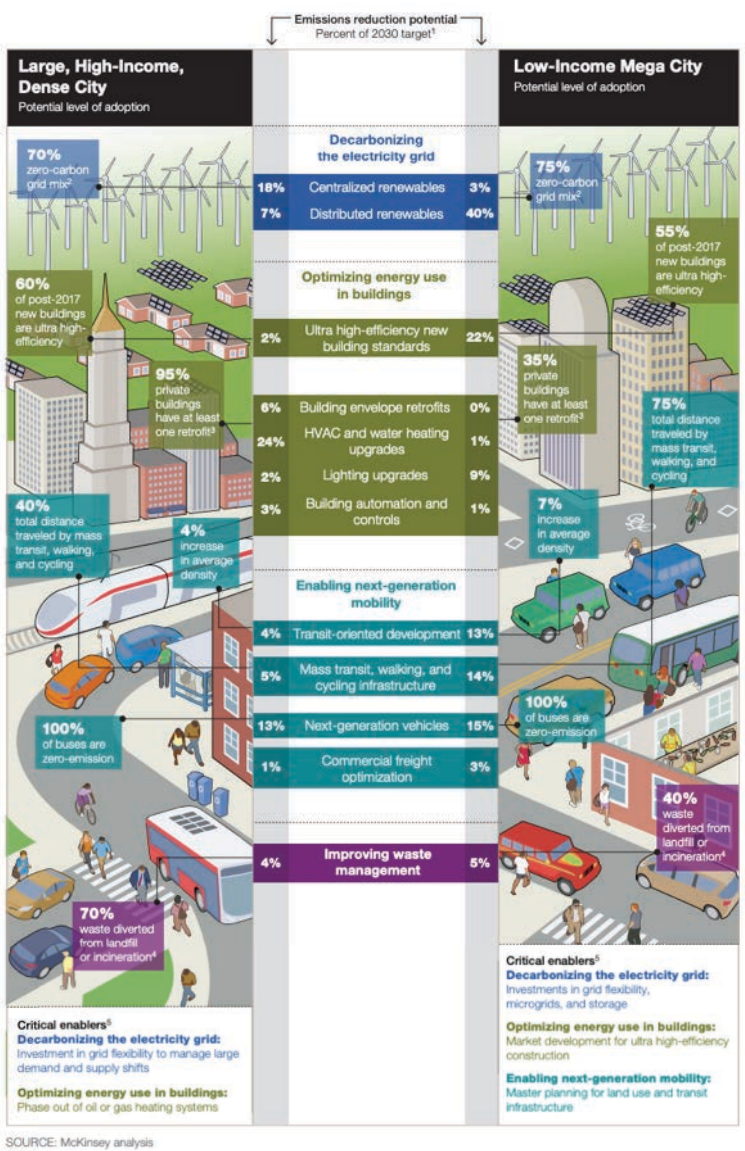

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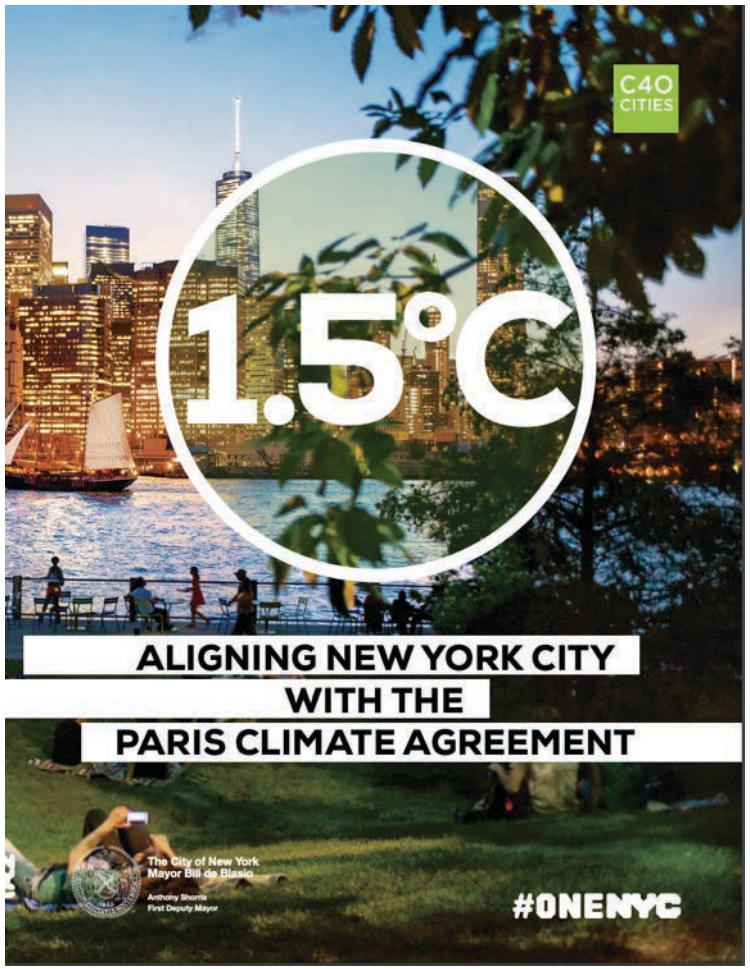
New York City Case Study



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Introduction

NYC was one of 8 pilot cities testing out the approach to develop 1.5 compatible climate action plans. They received support in

- Prioritization of actions for accelerated implementation of the 1.5°C Climate Action Plan
- Development of a detailed implementation strategy for the prioritized actions
- Calculation of the projected emissions reductions by 2020 and beyond based on the 1.5°C Climate Action Plan
- Development of a case study on the methodology used

NY had already developed a plan to reduce emissions 80% by 2050– this effort was to help upgrade that plan to be 1.5 degree compatible

Examples of templates and questions used by NYC are included in the case study

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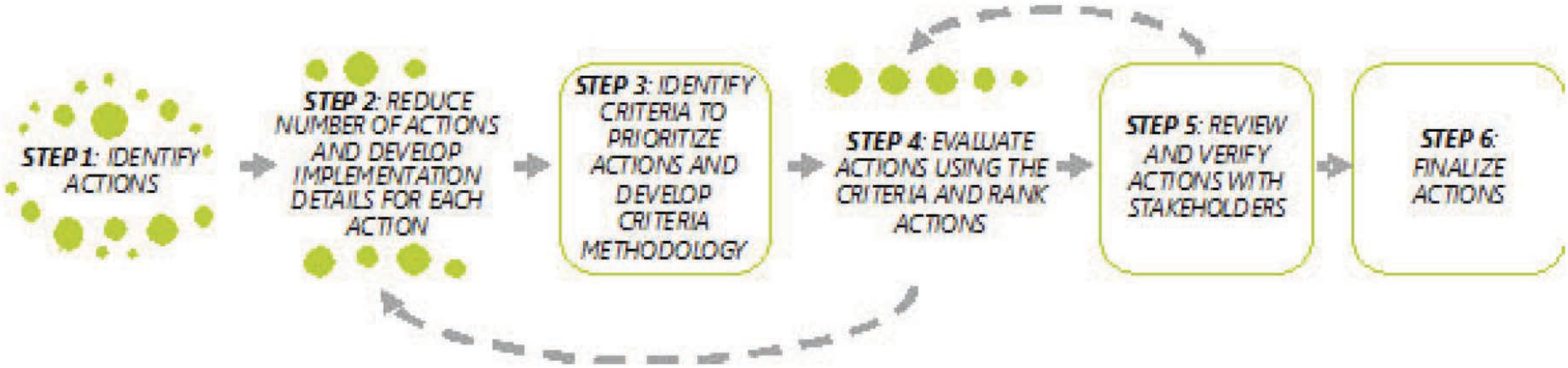
Approach



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Step 1: Identify Actions

Actions are the specific initiatives designed to support long-term mitigation strategies and achieve the desired GHG emissions reductions

They may be stand-alone or they may include sub-actions which are essential to achieve the main action

Different city departments or stakeholders may help a city in identifying potential actions

NY developed a list of 160 actions based primarily on some previous work it had already undertaken
Actions organized into these 3 areas:

- Climate Change Leadership
- Reduced and More Efficient Consumption
- Transition to Clean Energy Sources.

Step 2: Reduce number of actions and develop implementation details for each action

Undertake further discussion with stakeholders to review actions and provide more details on the potential of actions to reduce greenhouse gas emissions

This enables actions to be structured in more cohesive way

It also enables priorities to come forward

NY created a template to help other agencies review, comment and edit actions and sub-actions.

The agencies also provided additional inputs into assumptions for GHG calculations, cost, responsibility, timeline and benefits

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Step 3: Identify criteria to prioritize actions and develop criteria methodology

Criteria analysis is a tool to help evaluate and then prioritize the actions in an Action Plan.

While potential GHG emissions savings is one of the most important criteria, successful implementation of action requires a good understanding of its feasibility and its alignment with a city's other priorities (e.g. economic, health).

Once the key criteria is agreed upon, cities need to establish methodologies for their analyses.

NY used the following criteria:

- **GHG emission** reduction potential in total CO2e over a specific time-period– quantitative
- **Cost/sum** of sub-action costs (total and annual) – quantitative
- **Benefit potential** – qualitative and/or quantitative
- **Feasibility** – includes financial, technical and governance feasibility – qualitative

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Step 4: Evaluate actions using the criteria and rank actions

Once the methodologies are established, the evaluation of each action's performance across the established criteria begins.

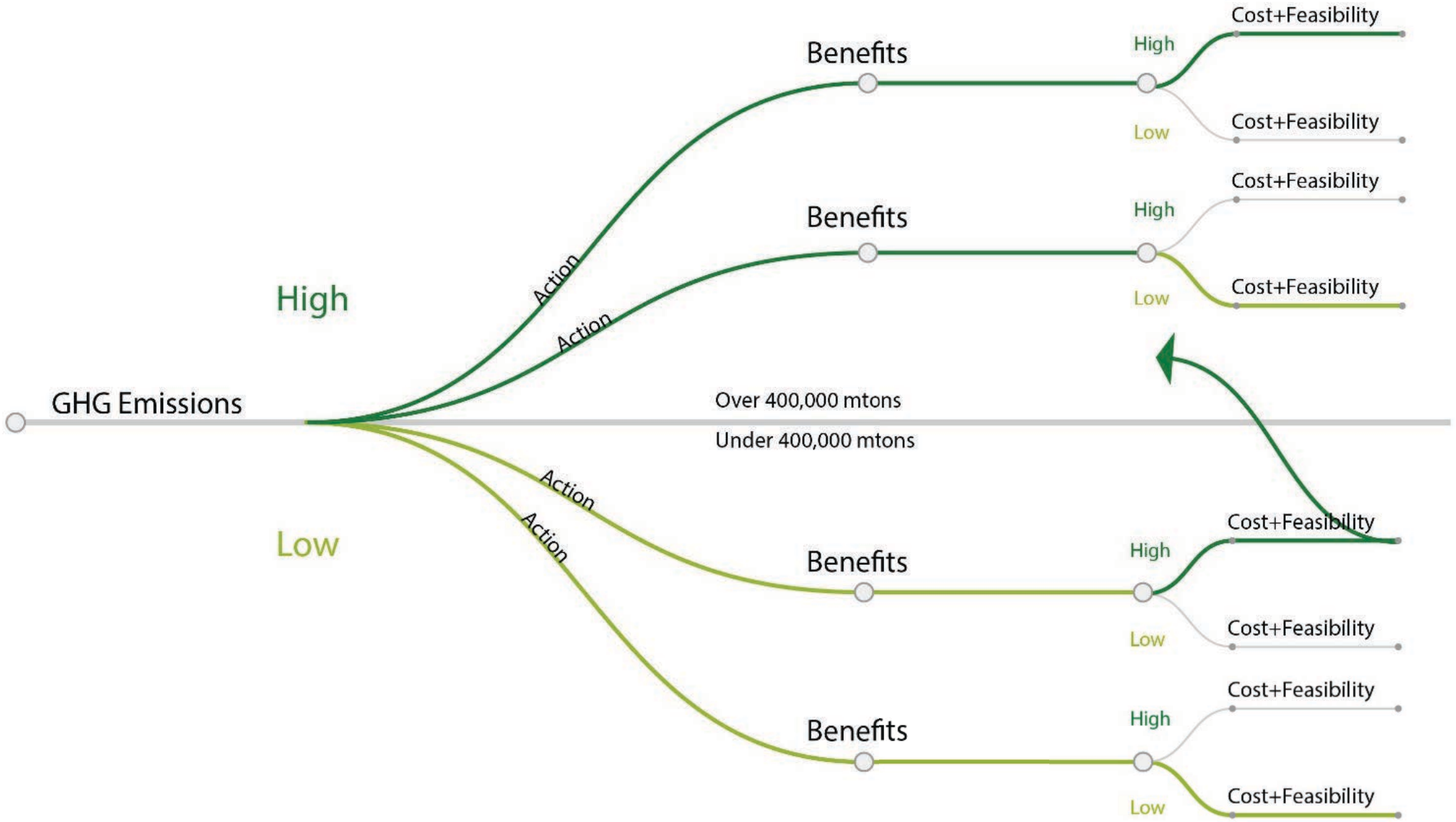
Once the actions are evaluated based on the established criteria, cities can compare and rank (i.e., prioritize) the actions based on the evaluation results.

This requires first ranking the criteria based on importance to the city (e.g., for New York City, the most important criteria is the GHG emissions reduction potential).

Other criteria used by NYC:

- **Growth** - quality jobs, economic innovation, workforce development and long-term societal savings
- **Resiliency** - resiliency, reliability and natural capital
- **Equity** - health and wellbeing, safety, affordability, access and community
- Sustainability – lead by example
- **Necessary investment** - capital, expense and operational costs to city and non-city
- **Feasibility to implement** - existing, expanded or new action
- **City or non-city action**
- **Fundable vs difficult to fund project**
- **Capital or expense cost**

Step 4: Evaluate actions using the criteria and rank actions



Step 5: Review and verify actions with stakeholders

Once the analysis is complete, the internal (agencies and staff) and external stakeholders need to review the assumptions, inputs and outputs of the analysis, action language and action prioritization.

Some stakeholders may have more detailed information to improve the analysis (such as new data or completed studies) while others may have more critical actions that should be prioritized, including enabling actions such as regulatory changes.

This step is essential to gain consensus and support from across city agencies

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Step 6: Finalize actions

Once the prioritized actions and analyses are reviewed by stakeholders, the actions need to be updated and finalized for publication.

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Exercise: prioritizing actions

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