



Cities and climate change

from commitment to action

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Urban Environment, Sustainability and Climate Change
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Current international policies and pledges to mitigate climate change will reduce emissions,

(UNEP, 2016)

*Current international policies and pledges to mitigate climate change will reduce emissions, but only by a **third** of what is required to avoid catastrophic events*

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Global temperature will increase to **3,4°C** above pre-industrial levels

(UNEP, 2016)



Stockholm, Warsaw and Mexico City

Why addressing CC at the local level?

- Even if both mitigation and adaptation strategies are guided by national and international levels, the **implementation will be local** (Corfee-Morlot et al., 2009)
- Local governments are generally responsible for **sectors that can achieve GHG emission reductions**, such as waste management, transportation and land-use planning (Bulkeley et al., 2011, Lee and Erickson, 2014, Erickson et al., 2013)
- The position of cities authorities may **facilitate the engagement with stakeholders** to implement mitigation and adaptation strategies (Corfee-Morlot et al., 2009).

City networks

- By 2012, several thousand of cities signed up for to voluntary frameworks for GHG emissions reduction (Seto et al., 2014)
- Networks of cities encourage much of cities' climate plans and actions: they provide **information** and **guidelines**, and foster the **sharing of best practices** among local governments (Reckien et al., 2015)
- Cities are developing **climate action plans** and strategies to mitigate GHG emissions



City networks



*The development of climate action plans
does not provide evidence
of **execution** of such measures
or success in **achieving** climate goals*

- By 2015, 100 cities had signed up for the ANMC21 emissions reduction target.
- Network of cities sharing climate information and sharing best practices for governance.

- Cities are developing **climate action plans** and strategies to mitigate GHG emissions



In your opinion,
are cities **implementing** their Climate Action Plans
and **achieving** their targets?

Sit down for
YES

Sand up for
NO

*“Thousands of cities are undertaking **climate action plans**,
but their aggregate impact on urban emissions
is **uncertain**”*

(IPCC, 2014)

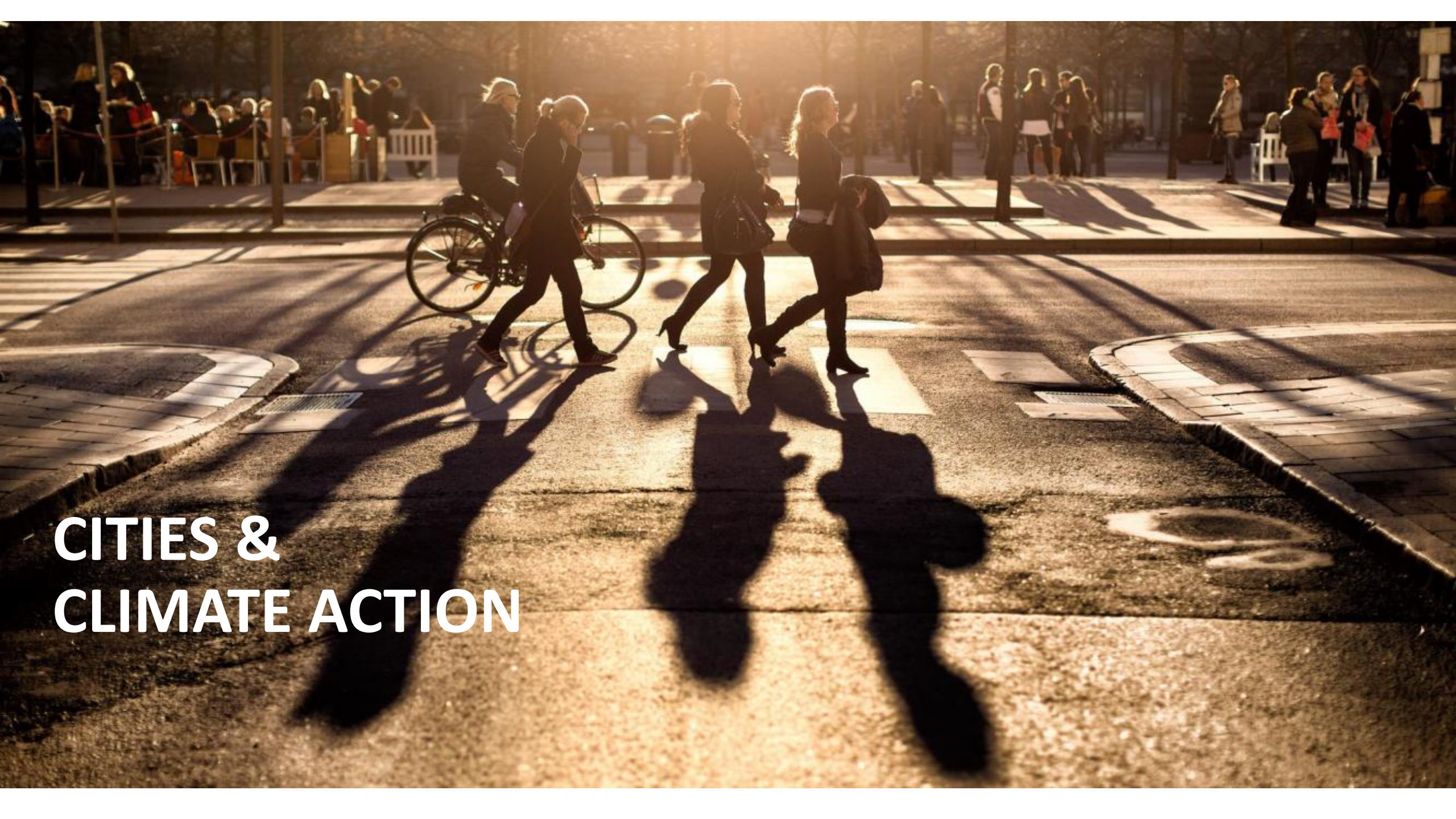
*“Thousands of cities are undertaking **climate action plans**, but their aggregate impact on urban emissions is **uncertain**”*



Little systematic assessment on:

- their **implementation**
- the extent to which emission **reduction targets** are **being achieved**, or **emissions reduced**

(IPCC, 2014)



CITIES & CLIMATE ACTION

Climate Action Plans (CAPs)

- The benefits
- The process & characteristics
- Factors that influence the implementation of CAPs
- Implementation of CAPs in European Cities
- ★ Implementation of CAPs in YOUR city



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CAPs: the **benefits**

Although Climate Action Plans (CAPs) **lack regulatory force**, Millard-Ball (2012) lists a series of **causal impacts** they might have, such as:

- **Reduce information barriers**, once the CAP contains local knowledge related to climate change and offers a clear list of planned measures
- **Create awareness** and shape the preference of elected officials, residents, and developers
- Include the issues of climate change on the **local agenda**
- Restrict **political backsliding**
- Increase the likelihood of actions **implementation**

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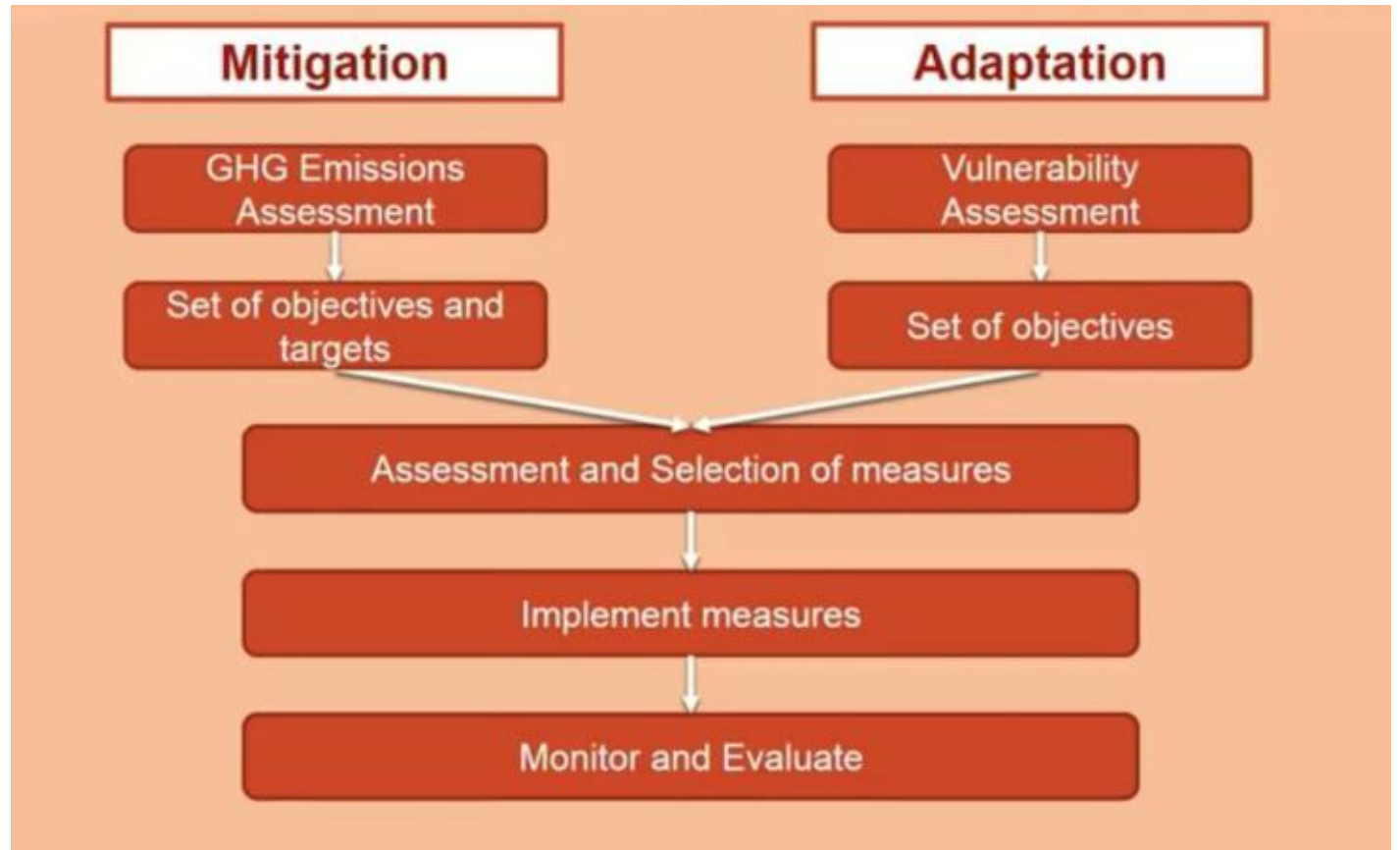
CAPs: the **process**

Mitigation

Addresses the **causes** of climate change and aims to **reduce greenhouse gases (GHGs) emissions**

Adaptation

Addresses the **consequences** of global warming by **reducing/mitigating the exposure to hazards**



CAPs: the **characteristics**

Climatic Change (2014) 122:331–340
DOI 10.1007/s10584-013-0989-8

LETTER

Climate change response in Europe: what's the reality? Analysis of adaptation and mitigation plans from 200 urban areas in 11 countries

D. Reckien · J. Flacke · R. J. Dawson · O. Heidrich ·
M. Olazabal · A. Foley · J. J.-P. Hamann · H. Orru ·
M. Salvia · S. De Gregorio Hurtado · D. Geneletti ·
F. Pietrapertosa

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Abstract Urban areas are pivotal to global adaptation and mitigation efforts. But how do cities actually perform in terms of climate change response? This study sheds light on the state of urban climate change adaptation and mitigation planning across Europe. Europe is an excellent test case given its advanced environmental policies and high urbanization. We performed a detailed analysis of 200 large and medium-sized cities across 11 European countries and analysed the cities' climate change adaptation and mitigation plans. We

Electronic supplementary material The online version of this article (doi:10.1007/s10584-013-0989-8) contains supplementary material, which is available to authorized users.

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R. J. Dawson · O. Heidrich ·

Mitigation

- Typically focus on **individual sectors** or urban functions (e.g. increasing bike lanes, efficient heating systems, building insulation) rather than **systematic changes** (zoning regulations or urban planning)

Adaptation

- Generally **less concrete** than mitigation strategies (e.g. calling for more scientific studies, urban greening or better cooperation of urban stakeholders)
- Seem to be often developed for **broader scales** (e.g. adaptation to sea level rise in the Netherlands)

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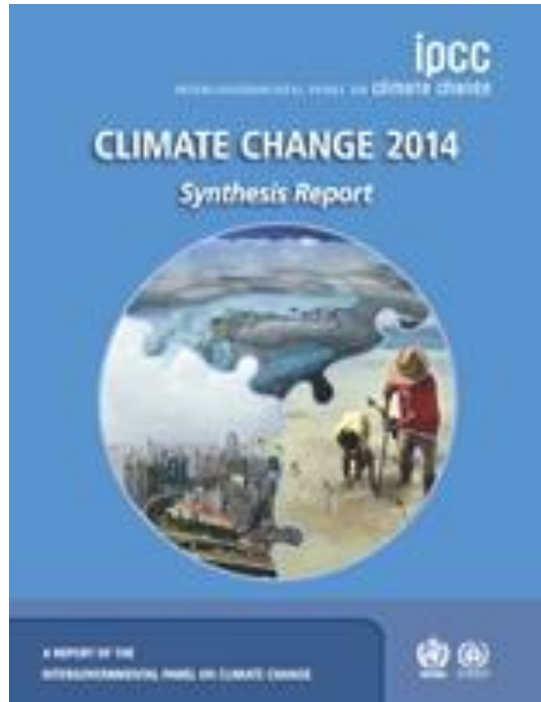
Mitigation plans > **adaptation** plans

- No city has an adaptation plan without a mitigation plan
- In 22% of the cities, the mit/ada plans are integrated into a joint strategy

Most (88%) of the plans **quantify targets** for GHG emission reduction

- Cities vary in magnitude, baseline and target year
- **Many targets aligned with the EU goal** of 20% emissions reduction by 2020 (relative to a 1990 baseline)

CAPs: the **characteristics**



The targets **are often arbitrary or aspirational**

- They don't reflect mitigation potential nor implementation

Many cities, particularly in developing countries, **do not set targets.**

80 German cities

Cities **follow international and national practices** in a climate target setting and targets are external influenced.

Almost 3 out of 4 cities with targets have adopted targets that **are not city specific** and probably **not derived from an analysis of mitigation actions**

Almost half of cities that have targets and report emissions **did not present a baseline emission inventory**

(Sippel, 2011)

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Factors that influence the **implementation** of CAPs

Lack of academic literature regarding the extent **cities implement** mitigation measures, and **which factors influence** implementation.

A few studies in this field assess the implementation of mitigation actions by cities in the **US**.

(Krause, 2012, Krause, 2011a, Krause, 2011b, Millard-Ball, 2012)

In the **European** context, most studies address climate policy planning and climate strategies in general.

(Romero-Lankao, 2012, Heidrich, Dawson, et al., 2013, Reckien, Flacke, et al., 2015, Reckien, Flacke, et al., 2014a, Bulkeley and Betsill, 2003)

Factors that influence the **implementation** of CAPs

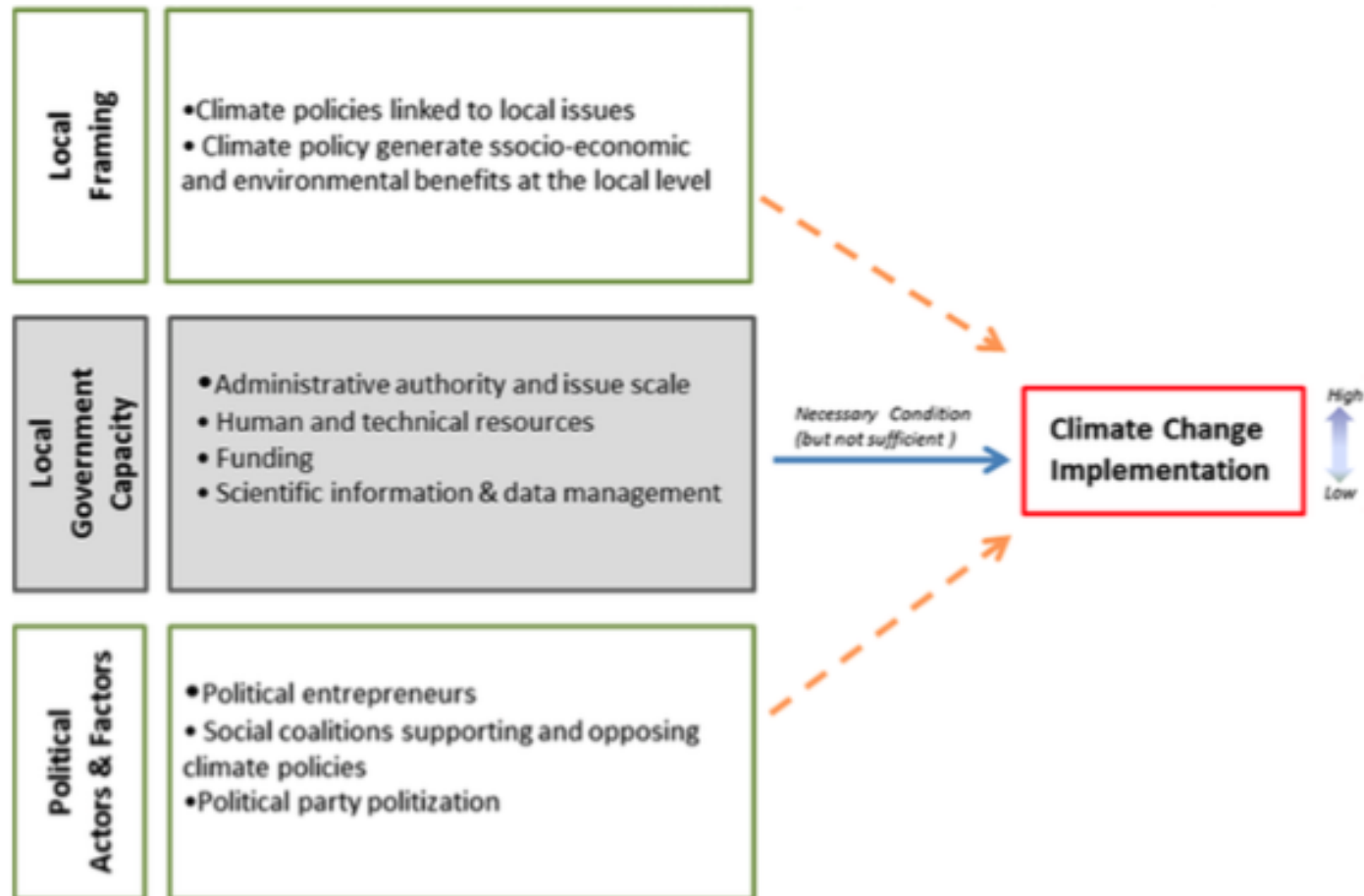
There is a tendency for the literature on climate change and urban issues to fall into the **'everything matters' trap** when analysing policy **development**.

(Ryan, 2015)

Factors that influence the **implementation** of CAPs

Conceptual framework of critical factors that influence implementation

(Ryan, 2015)



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Implementation of CAPs in European Cities

Sample

Selection: purposive

(Only European cities that developed and monitored SEAPs are analysed)

113 cities of 23 countries in Europe

Most of the cities are located in Italy (27), Spain (24), Portugal (11) and Sweden (11).

+ 27 million inhabitants



(Heemann, 2016)

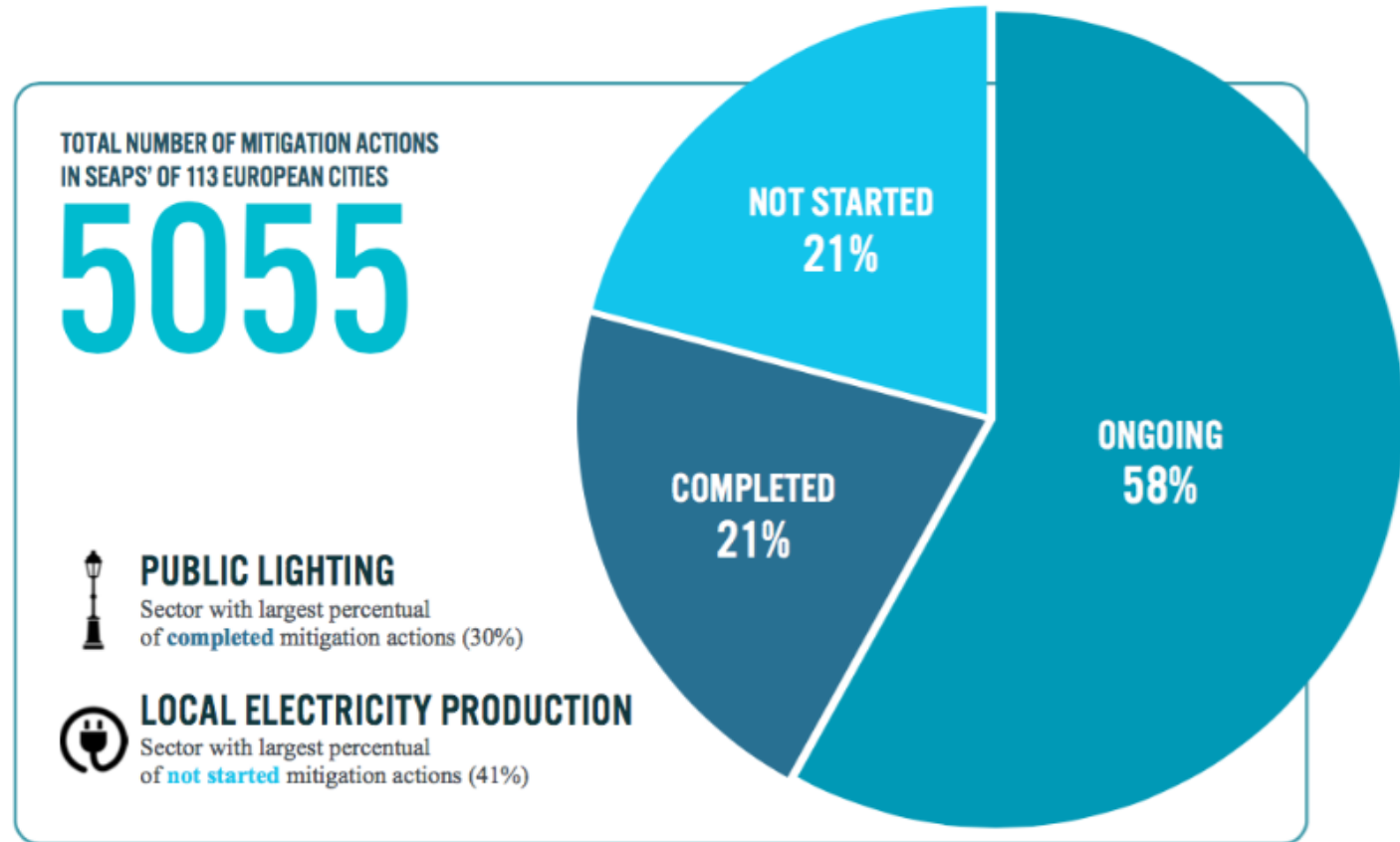
Implementation of CAPs in European Cities

Large cities (250k-500k):

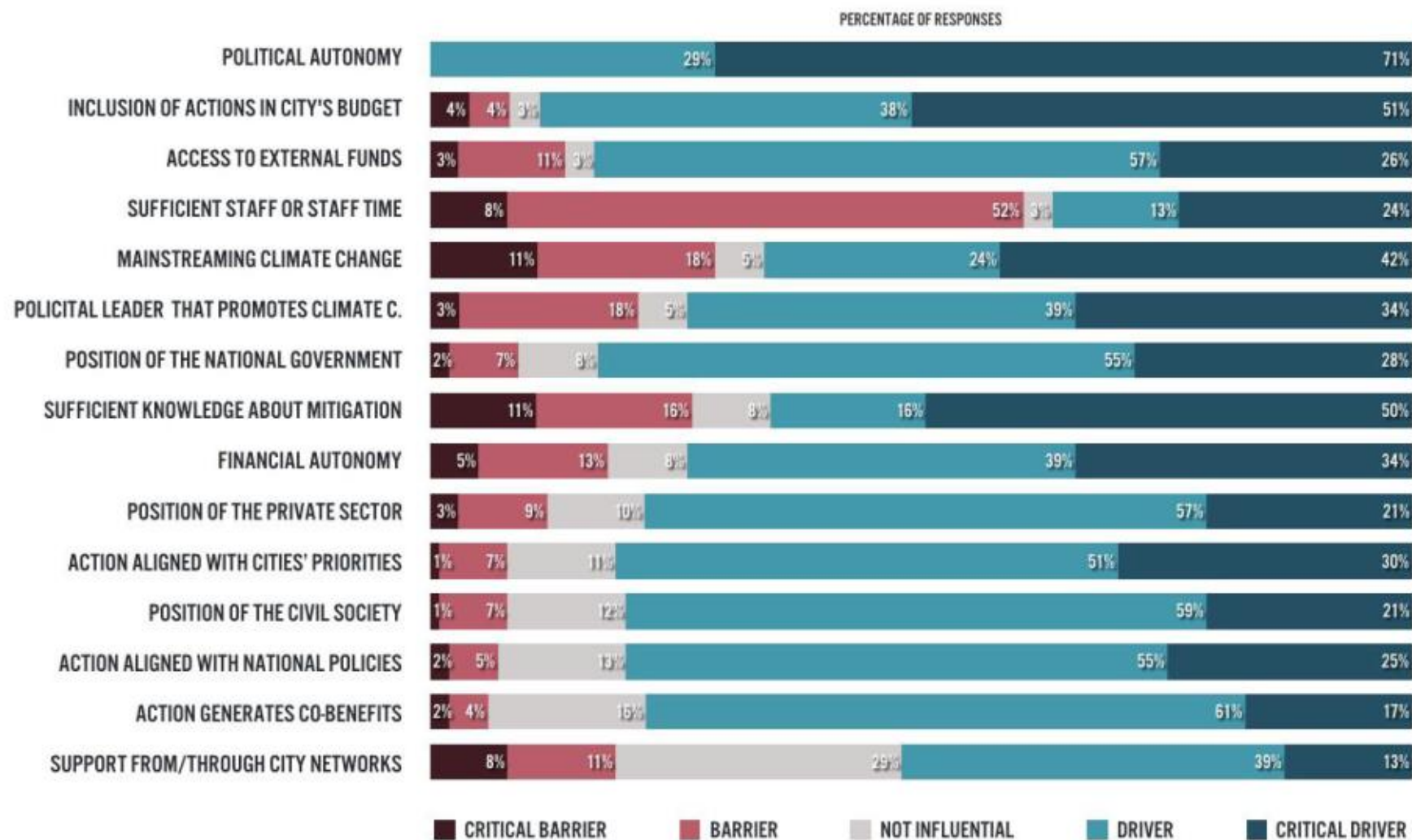
biggest percentage of
completed actions (33%)

Medium cities (<250k): 20%

Extra-large cities (>500k): 10%

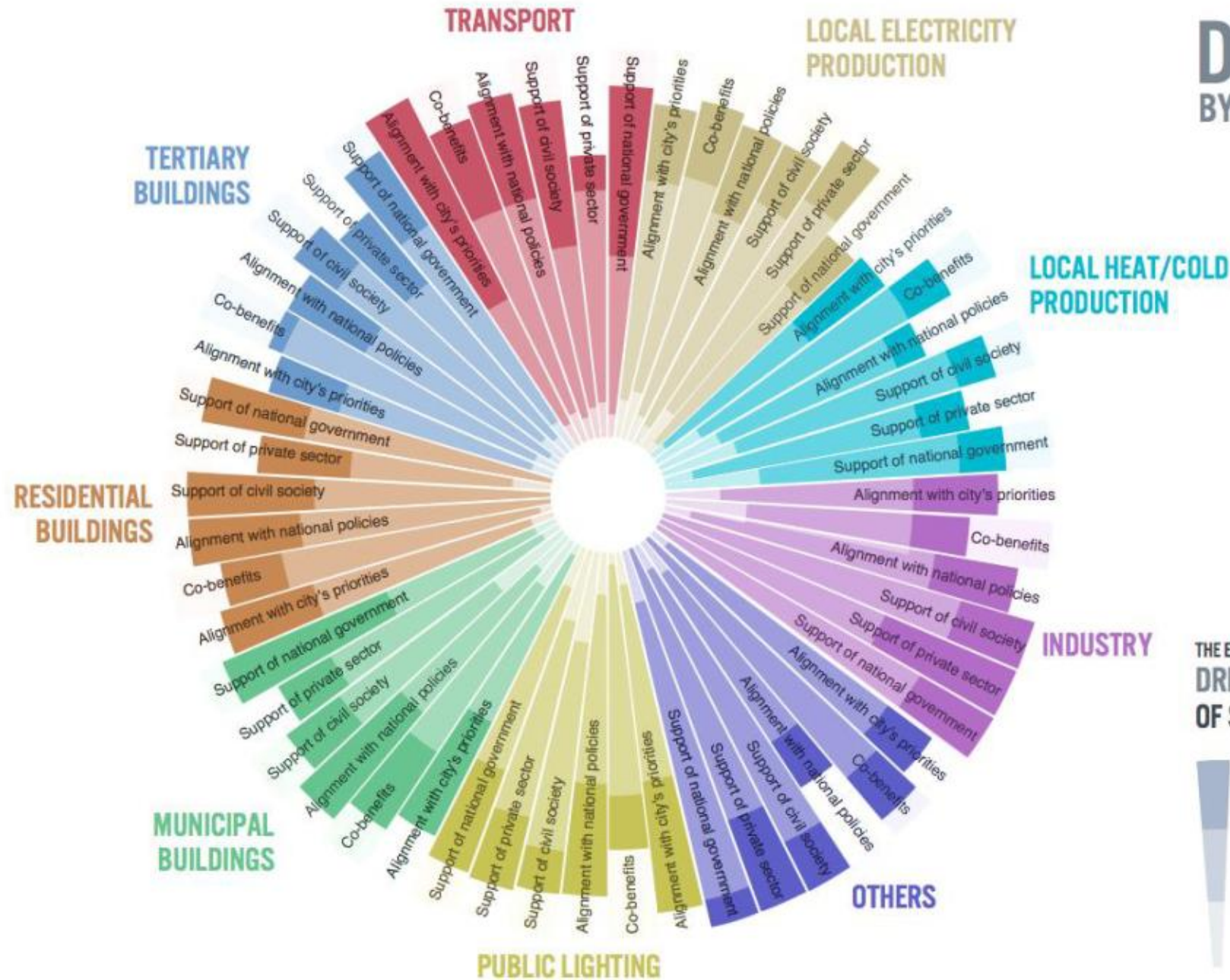


How **factors** influence the implementation of CAPs in European Cities



Influential for the **development** of a CAP.
Not so influential for the **implementation**.

DRIVERS BY SECTOR



THE EXTENT TO WHICH GOVERNANCE FACTORS ARE
DRIVERS OF IMPLEMENTATION
OF SEAPs' MITIGATION ACTIONS

CRITICAL DRIVER

Factor is essential, and actions would not be implemented without it

DRIVER

Factor helps implementation, but actions could be implemented without it

NOT A DRIVER

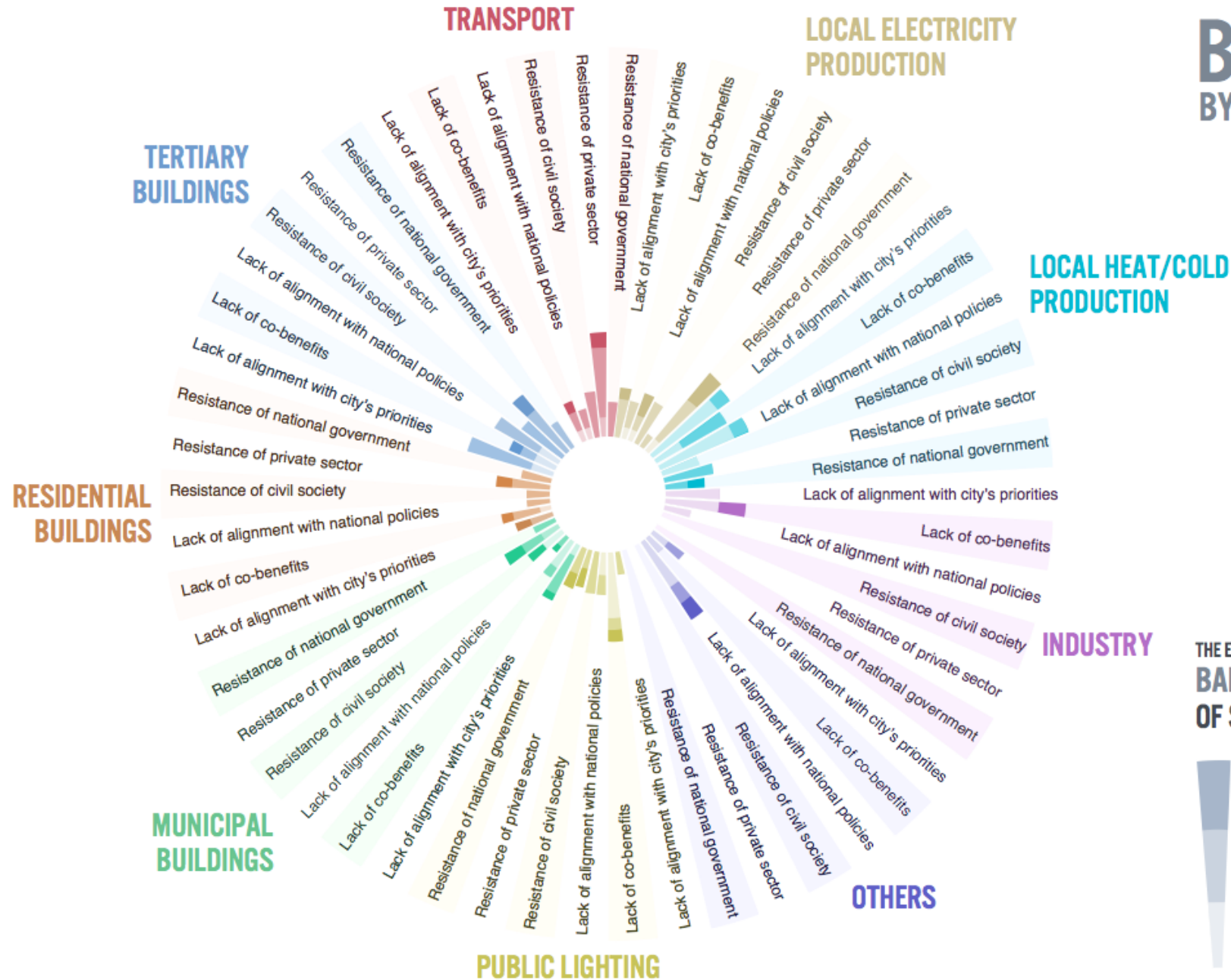
Factor does not influence implementation

2/3 of the sectors:

it seems to be essential that mitigation policies are **aligned with the cities' priorities** and with **national policies**

These two factors can be related to **financial aspects**.

BARRIERS BY SECTOR



THE EXTENT TO WHICH GOVERNANCE FACTORS ARE
BARRIES OF IMPLEMENTATION
OF SEAPS' MITIGATION ACTIONS

- CRITICAL BARRIER**
Factor prevents implementation
Actions are not implemented at all
- BARRIER**
Factor delays or limits implementation
- NOT A BARRIER**
Factor does not influence implementation

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Implementation of CAPs in **YOUR** city

- Organise yourselves into 4 groups of similar countries/context
- During **10 minutes**, reflect on the questions below and discuss in groups
- The groups will have other **2 minutes** to conclude and **write down** the **3 main common factors** of **each question**
- **One representative** of each group will present the 6 factors and conclusion in **3 minutes**

QUESTIONS:

1. Which factors would probably **drive** the **implementation** of climate-related measures in your city?
2. Which factors would probably **constrain** the **implementation** of climate-related measures in your city?



Obrigada!

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